

**FLUXAPYROXAD (256)**

*First draft prepared by Dr Paul Humphrey, Australian Pesticides and Veterinary Medicines Authority, Canberra, Australia*

**EXPLANATION**

Residue and analytical aspects of fluxapyroxad were considered for the first time by the present Meeting. The toxicological and residue evaluation was scheduled by the Forty-second Session of the CCPR (2010) (ALINORM 10/33/24).

Fluxapyroxad is a new active ingredient developed to control a broad spectrum of fungal diseases. It belongs to the carboxamide class of chemicals and its mode of action is inhibition of succinate dehydrogenase in complex II of the mitochondrial respiratory chain, which results in inhibition of spore germination, germ tubes and mycelial growth within the fungus target species.

The manufacturer supplied information on identity, metabolism and environmental fate, methods of residue analysis, freezer storage stability, registered use patterns, supervised residue trials, fate of residues in processing and farm animal feeding studies.

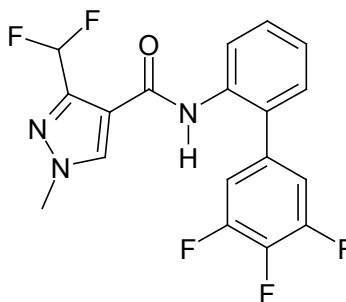
**SPECIFICATIONS**

Specifications for fluxapyroxad have not been developed by FAO.

**IDENTITY**

|                                   |                                                                                                    |
|-----------------------------------|----------------------------------------------------------------------------------------------------|
| ISO common name:                  | Fluxapyroxad                                                                                       |
| IUPAC name:                       | 3-(difluoromethyl)-1-methyl-N- (3',4',5'-trifluoro [1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide |
| Chemical Abstract name:           | 1H-pyrazole-4-carboxamide, 3-(difluoromethyl)-1-methyl-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl   |
| CAS Index Name : (alternative)    |                                                                                                    |
| CAS No.:                          | 907204-31-3                                                                                        |
| CIPAC No.:                        | Not allocated                                                                                      |
| Manufacturer's experimental name: | BAS 700 F                                                                                          |
| Molecular Formula:                | C <sub>18</sub> H <sub>12</sub> F <sub>5</sub> N <sub>3</sub> O                                    |

Structural Formula:



Molecular Weight: 381.31 g/mol

**PHYSICAL AND CHEMICAL PROPERTIES*****Pure Active Ingredient (except as noted)***

| Physical-Chemical Property | Results   | Test material purity and specification | Reference                 |
|----------------------------|-----------|----------------------------------------|---------------------------|
| <i>Fluxapyroxad</i>        |           |                                        |                           |
| Melting point              | 156.8 °C. | L75-16, purity 99.3%                   | Kroehl 2006, 2006/1036276 |

| Physical-Chemical Property                                                             | Results                                                                                                                                                                                                                                       | Test material purity and specification                                      | Reference                                                                                      |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Boiling point                                                                          | Fluxapyroxad has no boiling point at atmospheric pressure. Fluxapyroxad decomposed at a temperature of approx. 230 °C.                                                                                                                        | L75-16, purity 99.3%                                                        | Kroehl 2006, 2006/1036276                                                                      |
| Relative Density                                                                       | Active substance, pure:<br>1.42 g/mL at 20 °C                                                                                                                                                                                                 | L75-16, purity 99.3%                                                        | Kroehl 2006, 2006/1036276                                                                      |
| Vapour pressure                                                                        | Extrapolated:<br>2.7 × 10 <sup>-9</sup> Pa at 20 °C<br>8.1 × 10 <sup>-9</sup> Pa at 25 °C (extrapolated from vapour pressure curve obtained between 125 °C and 155 °C).                                                                       | L75-16, purity 99.3%                                                        | Kroehl 2006, 2006/1036276                                                                      |
| Henry's law constant                                                                   | Henry's law constants at 20 °C:<br>3.028 × 10 <sup>-7</sup> Pa × m <sup>3</sup> × mol <sup>-1</sup> . A vapour pressure of 2.7 × 10 <sup>-9</sup> Pa and a water solubility of 3.4 mg/L were used to calculate the Henry's law constant.      |                                                                             | Brem 2008, 2008/1070047                                                                        |
| Description of the physical state and colour, purity of the ai. and of technical grade | Active substance, pure:<br>white solid (fine crystalline powder)<br><br>Active substance as manufactured:<br>beige solid (fine powder)                                                                                                        | L75-16, purity 99.3%<br><br>COD-001026 99.4%                                | Kroehl 2006, 2006/1036276<br><br>Kroehl 2008, 2008/1014896                                     |
| Solubility of purified active substance in water                                       | pH 5.84 3.88 mg/L at 20 °C (not buffered)<br>pH 4.01 3.78 mg/L at 20 °C<br>pH 7.00 3.44 mg/L at 20 °C<br>pH 9.00 3.84 mg/L at 20 °C                                                                                                           | L75-16, purity 99.3%                                                        | Wilfinger 2008, 2007/1056999                                                                   |
| Solubility in organic solvents                                                         | [g/L at 20 °C]<br>acetone > 250<br>acetonitrile 167.6 ± 0.2<br>dichloromethane 146.1 ± 0.3<br>ethylacetate 123.3 ± 0.2<br>methanol 53.4 ± 0.0<br>toluene 20.0 ± 0.0<br>n-octanol 4.69 ± 0.1<br>n-heptane 0.106 ± 0.001                        | COD-00842 99.2%                                                             | Wilfinger 2008, 2007/1057003                                                                   |
| n-Octanol/ water partition coefficient                                                 | log K <sub>ow</sub> at 20 °C<br><br>deionised water log K <sub>ow</sub> 3.08<br><br>pH 4 log K <sub>ow</sub> 3.09<br><br>pH 7 log K <sub>ow</sub> 3.13<br><br>pH 9 log K <sub>ow</sub> 3.09<br><br>Mean value log K <sub>ow</sub> 3.10 ± 0.02 | L75-16, purity 99.3%                                                        | Wilfinger 2008, 2007/1057001                                                                   |
| Hydrolysis rate at pH 4, 7 and 9 under sterile and dark conditions                     | Fluxapyroxad is stable in aqueous solution at pH 4, 5, 7 and 9 (50 °C) for 5 days. No estimation of half-lives was done since fluxapyroxad is stable in aqueous solution.                                                                     | 900-2101(pyrazole-4- <sup>14</sup> C), 97.7%, specific activity 5.46 MBq/mg | Hassink 2009, 2009/1049061<br><br>Hassink 2011, 2011/1041945<br><br>Hassink 2011, 2011/1109273 |

| Physical-Chemical Property                                         | Results                                                                                                                                                                                                                                                                                                                                             | Test material purity and specification                                                                                                                     | Reference                    |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Direct phototransformation in sterile water using artificial light | It was demonstrated that fluxapyroxad is stable in water at pH 7 with and without the influence of light. Therefore no half-life and no quantum yield were calculated.                                                                                                                                                                              | 900-2011(pyrazole-4- <sup>14</sup> C), 98.6%, specific activity 5.54 MBq/mg;<br>916-1018(anilin-U- <sup>14</sup> C), 98.2%, specific activity 7.62 MBq/mg; | Hassink 2009, 2009/1031228   |
| Dissociation in water of purified active substance                 | pKa = 12.58 ± 0.70 (from validated modelling software)                                                                                                                                                                                                                                                                                              | L75-16, purity 99.3%                                                                                                                                       | Wilfinger 2008, 2007/1057000 |
| pH                                                                 | The following pH values have been determined;<br>pH of pure water 5.6<br>pH of CIPAC water D 6.5<br>pH at 3.1 mg/mL in pure water 5.8<br>pH at 3.1 mg/mL in CIPAC water D 6.4<br>pH at 1% in pure water 5.8<br>pH at 1% in CIPAC water D 6.5<br><br>The substance shows no significant change in pH after accelerated storage at 54 °C for 14 days. | COD-001026<br>Technical Material (TC/TGAI) 99.4%                                                                                                           | Kroehl 2008, 2008/1014896    |
| <i>M700F001 (metabolite of fluxapyroxad)</i>                       |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                            |                              |
| Solubility of purified active substance in water                   | pH 2.90 2.95 mg/L at 20 °C<br>pH 4.01 4.41 mg/L at 20 °C<br>pH 7.04 39.99 mg/L at 20 °C<br>pH 9.04 61.96 mg/L at 20 °C                                                                                                                                                                                                                              | L76-66, purity 99.3%                                                                                                                                       | Wilfinger 2008, 2008/1084086 |
| n-Octanol/ water partition coefficient                             | log K <sub>ow</sub> at 20 °C<br><br>pH 2 and 7 log K <sub>ow</sub> < 0.39                                                                                                                                                                                                                                                                           | L76-66, purity 99.3%                                                                                                                                       | Wilfinger 2008, 2008/1090847 |
| Dissociation in water of purified active substance                 | pKa = 3.89 ± 0.02 (titration method)<br>pKa = 3.12 ± 0.36 (from validated modelling software)                                                                                                                                                                                                                                                       | L76-66, purity 99.3%                                                                                                                                       | Wilfinger 2008, 2008/1090848 |
| <i>M700F002 (metabolite of fluxapyroxad)</i>                       |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                            |                              |
| Solubility of purified active substance in water                   | pH 2.84 3.78 mg/L at 20 °C (not buffered)<br>pH 4.01 4.80 mg/L at 20 °C<br>pH 7.01 31.58 mg/L at 20 °C<br>pH 8.99 50.35 mg/L at 20 °C                                                                                                                                                                                                               | L80-56, purity 98.2%                                                                                                                                       | Wilfinger 2008, 2008/1084088 |
| n-Octanol/ water partition coefficient                             | log K <sub>ow</sub> at 20 °C<br><br>pH 2 and 7 log K <sub>ow</sub> < 0.39                                                                                                                                                                                                                                                                           | L80-56, purity 98.2%                                                                                                                                       | Wilfinger 2008, 2008/1090849 |
| Dissociation in water of purified active substance                 | pKa = 3.92 ± 0.01 (titration method)<br>pKa = 3.04 ± 0.36 (from validated modelling software)                                                                                                                                                                                                                                                       | L80-56, purity 98.2%                                                                                                                                       | Wilfinger 2008, 2008/1090850 |
| <i>M700F007 (metabolite of fluxapyroxad)</i>                       |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                            |                              |
| Solubility of purified active substance in water                   | pH 4.2-4.3 1.83 mg/L at 20 °C (not buffered)<br>pH 4.0-4.1 1.82 mg/L at 20 °C<br>pH 7.1 1.77 mg/L at 20 °C<br>pH 9.1 1.87 mg/L at 20 °C                                                                                                                                                                                                             | L81-108, purity 99.4%                                                                                                                                      | Euler 2009, 2009/1099046     |
| n-Octanol/ water partition coefficient                             | log K <sub>ow</sub> at 23 °C<br><br>pH neutral conditions and pH 4 log K <sub>ow</sub> < 0.3                                                                                                                                                                                                                                                        | L81-108, purity 99.4%                                                                                                                                      | Euler 2009, 2009/1099047     |
| Dissociation in water of purified active substance                 | Determination of the dissociation constant of an aqueous preparation of the test item was not possible, because the test item cannot be protonated or deprotonated in an aqueous environment.                                                                                                                                                       | L81-108, purity 99.4%                                                                                                                                      | Käppel 2009, 2009/1099048    |

### Formulations

Formulations are available for foliar and seed treatment application.

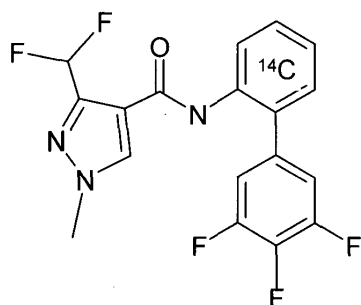
| Formulation type              | Active substance/s and content                                                                                  |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------|
| EC (Emulsifiable Concentrate) | Fluxapyroxad 62.5 g /L                                                                                          |
| EC                            | Fluxapyroxad 62.5 g /L (with 62.5 g/L epoxiconazole)                                                            |
| EC                            | Fluxapyroxad 50 g /L (with 50 g/L epoxiconazole and 81 g/L pyraclostrobin)                                      |
| EC                            | Fluxapyroxad 0.52lb /gallon ( $\equiv$ 62.3 g/L)                                                                |
| SC (Soluble Concentrate)      | Fluxapyroxad 1.39lb /gallon ( $\equiv$ 166.6 g/L) [with 2.78 lb ai/gallon pyraclostrobin ( $\equiv$ 333.1 g/L)] |
| SC                            | Fluxapyroxad 2.09lb /gallon ( $\equiv$ 250.4 g/L) [with 2.09 lb/gallon pyraclostrobin ( $\equiv$ 250.4 g/L)]    |
| SC                            | Fluxapyroxad 2.47lb /gallon ( $\equiv$ 296.0 g/L)                                                               |
| SC (Seed Treatment)           | Fluxapyroxad 2.72 lb /gallon ( $\equiv$ 325.9 g/L)                                                              |
| SC (Seed Treatment)           | Fluxapyroxad 2.78 lb /gallon ( $\equiv$ 333.1 g/L)                                                              |

## METABOLISM AND ENVIRONMENTAL FATE

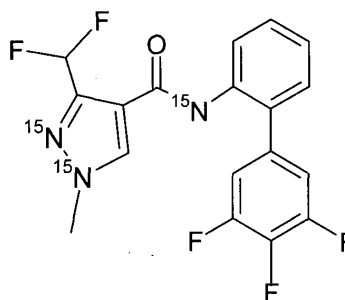
### General

The studies for plant metabolism, animal metabolism and confined rotational crops were conducted with the test materials shown below, with the label position/s indicated in the following structural formulas:

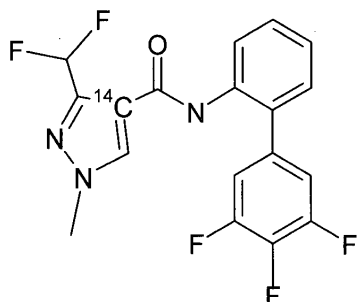
Aniline-U- $C^{14}$  Label (Aniline Label)



Aniline- $N^{15}$ , Pyrazole-1, 2- $N^{15}$  Label ( $^{15}N$ -Label)



Pyrazole-4- $C^{14}$  Label (Pyrazole Label)



Aniline- $N^{15}$ -Label

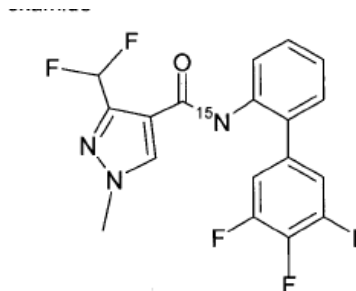


Table 1 summarizes the names, codes, and structures of the parent and principle metabolites found in plant, livestock, rat, rotational crop and soil studies.

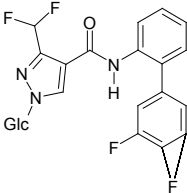
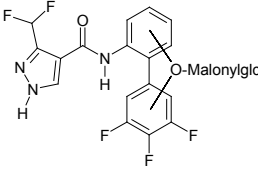
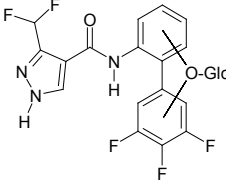
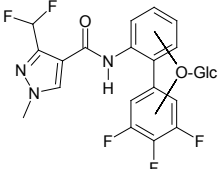
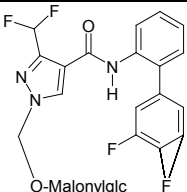
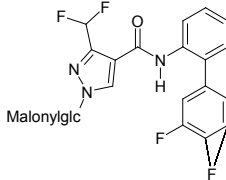
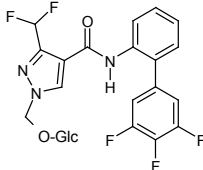
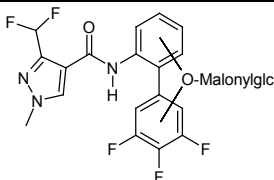
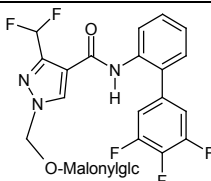
Table 1 Fluxapyroxad and metabolites/degradates found in metabolism and environmental fate studies

| Abbreviation or Code              | Chemical Structure | IUPAC Name                                                                                                                | Found in                                                      |
|-----------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Active substance:<br>Fluxapyroxad |                    | 3-(difluoromethyl)-1-methyl-N-((3,4,5'-trifluoro [1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                          | Rat, Goat, Hen, Tomato, Soya bean, Wheat, Confined Rotational |
| M700F001                          |                    | 3-(difluoromethyl)-1-methyl-1H-pyrazole-4-carboxylic acid                                                                 | Traces in Rat, Wheat, Confined Rotational, Soil               |
| M700F002                          |                    | 3-(difluoromethyl)-1H-pyrazole-4-carboxylic acid                                                                          | Traces in Rat, Soya bean, Wheat, Confined Rotational, Soil    |
| M700F004                          |                    | 3-(difluoromethyl)-1-methyl-N-((1-glucuronid-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide            | Rat, Goat, Hen                                                |
| M700F005                          |                    | 3-(difluoromethyl)-1-methyl-N-((4-hydroxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide               | Rat, Goat, Hen, Wheat, Confined Rotational                    |
| M700F006                          |                    | 3-(difluoromethyl)-1-methyl-N-((hydroxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                 | Rat, Goat, Soya bean, Wheat                                   |
| M700F007                          |                    | 3-(difluoromethyl)-1-methyl-1H-pyrazole-4-carboxamide                                                                     | Wheat                                                         |
| M700F008                          |                    | 3-(difluoromethyl)-N-((3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                                  | Rat, Goat, Hen, Tomato, Soya bean, Wheat, Confined Rotational |
| M700F009                          |                    | 3-(difluoromethyl)-N-((hydroxyl-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                         | Rat, Goat, Hen                                                |
| M700F010                          |                    | 3-(difluoromethyl)-N-((hydroxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                          | Rat, Goat                                                     |
| M700F011                          |                    | 3-(difluoromethyl)-1-methyl-N-((hydroxy-1-glucuronid-3',4' or 5')-difluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide | Rat                                                           |

| Abbreviation or Code | Chemical Structure | IUPAC Name                                                                                                                  | Found in                                      |
|----------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| M700F012             |                    | 3-(difluoromethyl)-N-((1-glucuronyl)oxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                  | Rat                                           |
| M700F013             |                    | 3-(difluoromethyl)-1-methyl-N-((1-glucuronyl)oxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide         | Rat                                           |
| M700F014             |                    | 3-(difluoromethyl)-N-((1-glucuronyl)oxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                  | Rat, Goat                                     |
| M700F015             |                    | 3-(difluoromethyl)-1-methyl-N-((1-glucuronyl)oxy-3',4' or 5'-difluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide       | Rat, Goat                                     |
| M700F016             |                    | 3-(difluoromethyl)-1-methyl-N-(methylthio-hydroxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide        | Rat, Hen                                      |
| M700F019             |                    | 3-(difluoromethyl)-1-methyl-N-((1-glucuronyl)oxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide         | Rat                                           |
| M700F020             |                    | 3-(difluoromethyl)-1-methyl-N-(hydroxy-(1-glucuronyl)oxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide | Rat                                           |
| M700F021             |                    | 3-(difluoromethyl)-N-((1-glucuronyl)oxy-3',4' or 5'-difluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                | Rat                                           |
| M700F022             |                    | 3-(difluoromethyl)-N-((1-glucuronyl)oxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                  | Rat                                           |
| M700F023             |                    | 3-(difluoromethyl)-N-((1-glucuronyl)oxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                  | Rat                                           |
| M700F024             |                    | 3-(difluoromethyl)-1-methyl-N-(hydroxy-3',4' or 5'-difluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                  | Rat, Goat, Hen, Wheat and Confined Rotational |

| Abbreviation or Code | Chemical Structure | IUPAC Name                                                                                                                     | Found in                         |
|----------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| M700F025             |                    | 3-(difluoromethyl)-N-((hydroxysulfonyl)oxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                   | Rat                              |
| M700F026             |                    | 3-(difluoromethyl)-1-methyl-N-((hydroxysulfonyl)oxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide          | Rat                              |
| M700F027             |                    | 3-(difluoromethyl)-1-methyl-N-((hydroxysulfonyl)oxy-3',[4' or 5']-difluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide      | Rat                              |
| M700F028             |                    | 3-(difluoromethyl)-1-methyl-N-(methylthio-(1-glucuronyloxy)-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide | Rat                              |
| M700F029             |                    | 3-(difluoromethyl)-N-(methylthio-(1-glucuronyl)oxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide          | Rat                              |
| M700F031             |                    | 3-(difluoromethyl)-1-methyl-N-(dihydroxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                     | Goat                             |
| M700F032             |                    | 3-(hydroxycarbonyl)-N-(hydroxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide or tautomer                   | Rat, Goat                        |
| M700F033             |                    | 3-(difluoromethyl)-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-5-hydroxy-1H-pyrazole-4-carboxamide or tautomer / isomer         | Goat                             |
| M700F034             |                    | 3-(difluoromethyl)-1-(1-glucuronyl)-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                       | Goat                             |
| M700F036             |                    | 3-(difluoromethyl)-N-(hydroxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                                | Goat, Wheat, Confined Rotational |
| M700F038             |                    | 3-(difluoromethyl)-N-(hydroxy-3',[4' or 5']-difluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                            | Goat, Hen                        |

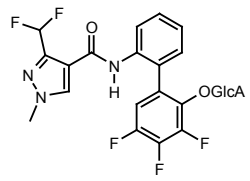
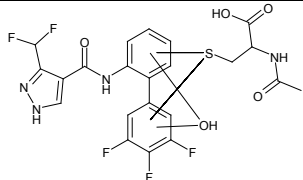
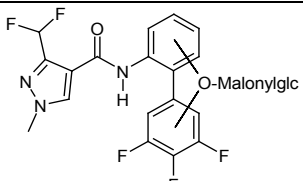
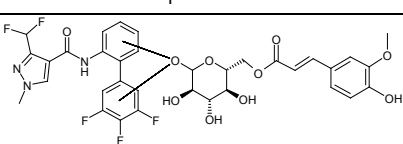
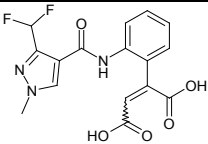
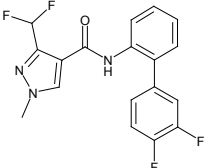
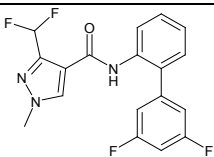
| Abbreviation or Code | Chemical Structure | IUPAC Name                                                                                                             | Found in                                           |
|----------------------|--------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| M700F039             |                    | 3-(difluoromethyl)-N-(dihydroxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                      | Goat, Hen                                          |
| M700F040             |                    | 3-(difluoromethyl)-1-methyl-N-(hydroxy-3',[4' or 5']-difluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide           | Goat, Wheat                                        |
| M700F041             |                    | 3-(difluoromethyl)-1-methyl-N-(hydroxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide               | Goat, Wheat, Confined Rotational                   |
| M700F042             |                    | 3-(difluoromethyl)-1-methyl-N-(hydroxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide               | Rat, Goat, Wheat, Confined Rotational              |
| M700F043             |                    | 3-(hydroxycarbonyl)-1-methyl-N-(hydroxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide              | Goat, Wheat, Confined Rotational                   |
| M700F044             |                    | 3-(hydroxycarbonyl)-1-methyl-N-(hydroxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide              | Goat                                               |
| M700F045             |                    | 3-(difluoromethyl)-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-5-hydroxy-1H-pyrazole-4-carboxamide or tautomer / isomer | Goat                                               |
| M700F046             |                    | 3-(hydroxycarbonyl)-N-(hydroxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide or tautomer           | Rat, Goat                                          |
| M700F047             |                    | 3-(difluoromethyl)-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-5-hydroxy-1H-pyrazole-4-carboxamide or tautomer / isomer | Rat, Goat, Hen                                     |
| M700F048             |                    | 3-(difluoromethyl)-1-(β-D-glucopyranosyl)-N-(3',4',5'-trifluorobiphenyl-2-yl)-1H-pyrazole-4-carboxamide                | Rat, Tomato, Soya bean, Wheat, Confined Rotational |
| M700F050             |                    | 3-(difluoromethyl)-N-((1-glucuronyloxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide               | Rat                                                |

| Abbreviation or Code | Chemical Structure                                                                  | IUPAC Name                                                                                                                     | Found in                              |
|----------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| M700F051             |    | 3-(difluoromethyl)-1-((1-(1-glucosyl)-N-(hydroxy-3',[4' or 5']-difluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide         | Soya bean                             |
| M700F052             |    | 3-(difluoromethyl)-N-((1-(6-malonyl)glucosyl)oxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide             | Soya bean                             |
| M700F053             |    | 3-(difluoromethyl)-N-((1-(1-glucosyl)oxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                     | Soya bean                             |
| M700F054             |    | 3-(difluoromethyl)-1-methyl-N-((1-(1-glucosyl)oxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide            | Soya bean                             |
| M700F055             |  | 3-(difluoromethyl)-1-(1-(6-malonyl)glucosyl)oxymethyl-N-(3',[4' or 5']-difluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide | Soya bean                             |
| M700F056             |  | 3-(difluoromethyl)-1-(1-(6-malonyl)glucosyl)-N-(3',[4' or 5']-difluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide          | Soya bean                             |
| M700F057             |  | 3-(difluoromethyl)-1-(1-(1-glucosyl)oxymethyl-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide             | Soya bean, Wheat, Confined Rotational |
| M700F058             |  | 3-(difluoromethyl)-1-methyl-N-((1-(6-malonyl)glucosyl)oxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide    | Soya bean, Wheat, Confined Rotational |
| M700F059             |  | 3-(difluoromethyl)-1-(1-(6-malonyl)glucosyl)-oxymethyl-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide    | Soya bean, Wheat, Confined Rotational |

| Abbreviation or Code | Chemical Structure | IUPAC Name                                                                                                                  | Found in                              |
|----------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| M700F060             |                    | 3-(difluoromethyl)-1-(1-(6-malonyl)glucosyl)-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide           | Soya bean, Wheat, Confined Rotational |
| M700F061             |                    | 3-(difluoromethyl)-5-(1-glucuroniloxy)-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                 | Rat                                   |
| M700F063             |                    | 3-(difluoromethyl)-1-methyl-N-((S-cysteinyl)-hydroxy-3',[4' or 5']-difluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide | Rat, Hen                              |
| M700F074             |                    | 3-(difluoromethyl)-1-methyl-N-((S-cysteinyl)-hydroxy-3',[4' or 5']-difluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide | Wheat, Confined Rotational            |
| M700F075             |                    | 3-(difluoromethyl)-1-methyl-N-((1-glucosyl)oxy-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide            | Tomato                                |
| M700F076             |                    | 3-(difluoromethyl)-1-methyl-N-((S-cysteinyl)-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide             | Tomato                                |
| M700F082             |                    | 3-(difluoromethyl)-1-methyl-N-((2-hydroxycarbonyl)phenyl)-1H-pyrazole-4-carboxamide                                         | Wheat                                 |
| M700F086             |                    | 3-(difluoromethyl)-1-methyl-N-(mercapto-hydroxy-methoxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide  | Hen                                   |
| M700F094             |                    | 3-(difluoromethyl)-1-methyl-N-(mercapto-hydroxy-3',[4' or 5']-difluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide      | Hen                                   |
| M700F102             |                    | 3-(difluoromethyl)-N-(methylthio-dihydroxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide               | Rat                                   |
| M700F103             |                    | 3-(difluoromethyl)-N-(methylthio-hydroxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                 | Rat                                   |

| Abbreviation or Code | Chemical Structure | IUPAC Name                                                                                                                           | Found in |
|----------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------|
| M700F104             |                    | 3-(difluoromethyl)-N-(methylthio-dihydroxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                        | Rat      |
| M700F105             |                    | 3-(difluoromethyl)-1-methyl-N-(methoxy-hydroxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                    | Rat      |
| M700F106             |                    | 3-(difluoromethyl)-1-methyl-N-(methylthio-hydroxy-3',4' or 5']-difluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide              | Rat      |
| M700F107             |                    | 3-(difluoromethyl)-1-methyl-N-(methylthio-hydroxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                 | Rat      |
| M700F108             |                    | 3-(difluoromethyl)-1-methyl-N-(methylthio-hydroxy-3',4' or 5']-difluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide              | Rat      |
| M700F111             |                    | 3-(difluoromethyl)-1-(1-glucuronyl)-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                             | Goat     |
| M700F113             |                    | 3-(difluoromethyl)-1-methyl-N-((C-glycyl)-S-cysteinyl)-hydroxy-3',4' or 5']-difluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide | Rat      |
| M700F114             |                    | 3-(difluoromethyl)-1-methyl-N-((S-cysteinyl)-(1-glucuronyl)oxy-3',4' or 5']-difluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide | Rat      |
| M700F115             |                    | 3-(difluoromethyl)-1-methyl-N-((C-glycyl)-S-cysteinyl)-hydroxy-3',4' or 5']-difluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide | Rat      |

| Abbreviation or Code | Chemical Structure | IUPAC Name                                                                                                                   | Found in |
|----------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------|----------|
| M700F116             |                    | 3-(difluoromethyl)-N-((S-cysteinyl)-hydroxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide               | Rat      |
| M700F117             |                    | 3-(difluoromethyl)-1-methyl-N-((S-cysteinyl)-hydroxy-3',[4' or 5']-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide | Rat      |
| M700F118             |                    | 3-(difluoromethyl)-1-methyl-N-((S-cysteinyl)-hydroxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide      | Rat      |
| M700F119             |                    | 3-(difluoromethyl)-1-methyl-N-((S-cysteinyl)-hydroxy-3',[4' or 5']-difluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide  | Rat      |
| M700F120             |                    | 3-(difluoromethyl)-1-methyl-N-((S-cysteinyl)-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide              | Rat      |
| M700F121             |                    | 3-(difluoromethyl)-1-methyl-N-((S-cysteinyl)-hydroxy-3',[4' or 5']-difluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide  | Rat      |
| M700F122             |                    | 3-(difluoromethyl)-N-((S-cysteinyl)-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                       | Rat      |
| M700F123             |                    | 3-(difluoromethyl)-N-((1-glucuronyloxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                    | Rat      |
| M700F124             |                    | 3-(difluoromethyl)-N-(2'-(1-glucuronyloxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                 | Rat      |

| Abbreviation or Code | Chemical Structure                                                                  | IUPAC Name                                                                                                               | Found in |
|----------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------|
| M700F125             |    | 3-(difluoromethyl)-1-methyl-N-((2'-(1-glucuronyloxy)-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide  | Rat      |
| M700F127             |    | 3-(difluoromethyl)-N-((S-(N-acetyl)cysteinyl)-hydroxy-3',4',5'-trifluoro-[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide | Rat      |
| M700F130             |    | 3-(difluoromethyl)-N-(1-(6-malonylglucosyl)-3',[4' or 5']-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide       | Wheat    |
| M700F131             |    | 3-(difluoromethyl)-N-((6-feruloylglucosyl)-3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide             | Wheat    |
| M700F132             |   | 3-(difluoromethyl)-1-methyl-N-(2-([Z- or E-]1,2-bis(hydroxycarbonyl)-ethenyl-phenyl)-1H-pyrazole-4-carboxamide           | Wheat    |
| M700F133             |  | 3-(difluoromethyl)-1-methyl-N-(3',4'-difluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                             | Wheat    |
| M700F134             |  | 3-(difluoromethyl)-1-methyl-N-(3',5'-difluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide                             | Wheat    |

## Animal metabolism

### Metabolism in the rat

Evaluation of the metabolism studies in rats was carried out by the WHO Core Assessment Group.

The absorption, distribution, excretion, and metabolism of fluxapyroxad in Wistar rats was investigated using the active substance radiolabelled in the aniline ring or in the 4-position of the pyrazole ring. The test item was either a mixture of  $^{14}\text{C}$ -fluxapyroxad (pyrazole label) and unlabelled fluxapyroxad or  $^{14}\text{C}$ -fluxapyroxad (aniline label),  $^{15}\text{N}$ -fluxapyroxad and unlabelled fluxapyroxad.

Doses of 150 and 7.5 mg/kg bw  $^{14}\text{C}$ -fluxapyroxad were chosen for mass balance, tissue distribution, and biliary excretion studies, based on the results of the plasma kinetic studies and repeated-dose toxicological studies.  $^{14}\text{C}$ -labelled fluxapyroxad was rapidly and moderately well absorbed from the gastrointestinal tract of rats following oral dosing. The extent of absorption was approximately 65–80% of the administered dose, independent of dose and sex. Maximum concentrations of radioactivity in plasma were observed within 1 hour of dosing for the low-dose

group (5 mg/kg bw), 8 hours for the mid-dose group (50 mg/kg bw) and within 24 hours for the high-dose group (500 mg/kg bw). Maximum tissue levels occurred within 16 hours post-dosing, with the highest concentrations of radioactivity found in the liver, thyroid, adrenals and kidneys of rats. Very little fluxapyroxad was retained in the tissues. There were no major sex-related differences in the pattern of excretion. Faecal excretion was the primary route of elimination, and excretion was rapid, with the majority excreted by all routes 48 hours after dosing (61–83%).

Fluxapyroxad is metabolised mainly by hydroxylation at the biphenyl moiety (sometimes repeated), loss of a fluorine atom at the biphenyl ring, N-demethylation at the pyrazole moiety, conjugation of the hydroxyl-groups with glucuronic acid or with sulfate and conjugation with glutathione derivatives.

#### *Metabolism in lactating goats*

Fluxapyroxad labelled in the aniline or pyrazole ring was orally administered by gavage to two lactating goats (*Deutsche Bunte Edelziege*, 40.8–45.2 kg bw at acclimatisation and 35.8–42.3 kg bw at sacrifice) at a level of 12 ppm feed for 8 consecutive days (Grosshans *et al.* 2009, 2009/1074074 and Fabian and Landsiedel 2009, 2009/1065024). For the aniline label, the test item was a mixture of aniline- $^{14}\text{C}$ -fluxapyroxad with aniline- $^{15}\text{N}$ -fluxapyroxad and unlabelled fluxapyroxad. For the pyrazole label, the test item was a mixture of pyrazole-4- $^{14}\text{C}$ -fluxapyroxad with aniline- $^{15}\text{N}$ , pyrazole-1,2- $^{15}\text{N}$ -fluxapyroxad and unlabelled fluxapyroxad. Actual doses were 11.33–11.75 ppm feed based on feed consumption of 1.3–1.4 kg dry matter/ day, or 0.39–0.44 mg/kg bw/day. Milk was sampled twice daily (in the morning before administration of the test substance and in the afternoon after dose administration). The mean milk yield during the dosing period was 0.97–1.6 kg/day. Animals were sacrificed approximately 24 hours after the last dose. Samples of liver, kidney, leg-chest muscle and fat (kidney fat and intraperitoneal fat) were collected.

Overall,  $\geq 80\%$  of the total administered dose was eliminated in excreta. In milk, 0.09–0.10% of the administered dose was detected, with a plateau reached within 24 hours after administration (Table 2). Tissues and organs retained  $< 0.4\%$  of the administered dose. TRRs were 0.007–0.009 mg/kg equiv. in muscle, 0.021–0.025 mg/kg equiv. in fat, 0.036–0.078 mg/kg equiv. in kidney and 0.348–0.555 mg/kg equiv. in liver. The extractability of the radioactive residues in methanol or acetonitrile was  $\geq 79\%$  for all tissues other than liver. In liver, extractability was 30.3–34.2%. A major proportion of the residual radioactive residues (polar components, probably bound to proteins) was released from extracted liver tissue after incubation with protease.

Table 2 Total radioactive residues in milk and tissues of lactating goats after administration of  $^{14}\text{C}$ -fluxapyroxad

| Matrix                      | Aniline label               |             |           |        |                               |
|-----------------------------|-----------------------------|-------------|-----------|--------|-------------------------------|
|                             | TRR measured (mg/kg equiv.) |             | % of Dose |        | TRR calculated (mg/kg equiv.) |
|                             | Goat 1                      | Goat 2      | Goat 1    | Goat 2 | Goats 1&2                     |
| Milk; Application day 1*    | 0.060/0.007                 | 0.038/0.003 | 0.02      | 0.01   | NA                            |
| Milk; Application day 2*    | 0.012/0.004                 | 0.019/0.002 | 0.01      | 0.01   | NA                            |
| Milk; Application day 3*    | 0.026/0.008                 | 0.032/0.003 | 0.01      | 0.01   | NA                            |
| Milk; Application day 4*    | 0.024/0.008                 | 0.038/0.004 | 0.01      | 0.01   | NA                            |
| Milk; Application day 5*    | 0.039/0.005                 | 0.036/0.004 | 0.01      | 0.02   | NA                            |
| Milk; Application day 6*    | 0.028/0.003                 | 0.021/0.003 | 0.01      | 0.01   | NA                            |
| Milk; Application day 7*    | 0.027/0.003                 | 0.029/0.003 | 0.01      | 0.01   | NA                            |
| Milk; Application day 8*    | 0.024/0.009                 | 0.043/0.004 | 0.01      | 0.01   | NA                            |
| Subtotal Milk               |                             |             | 0.09      | 0.10   |                               |
| Milk, pooled sample Day 1–8 | 0.011                       |             | 0.10      |        | 0.011                         |
| Blood                       | 0.007                       | 0.004       | 0.01      | 0.00   | NA                            |
| Liver                       | 0.348                       |             | 0.22      | 0.21   | 0.386                         |
| Bile                        | 7.327                       |             | 0.05      | 0.05   | NA                            |
| Gut/Stomach                 | 0.044                       | 0.032       | 0.19      | 0.16   | NA                            |
| Gut contents                | 1.312                       | 1.519       | 4.13      | 4.72   | NA                            |
| Stomach contents            | 0.129                       | 0.008       | 1.76      | 0.10   | NA                            |
| Kidney                      | 0.036                       |             | 0.00      | 0.00   | 0.038                         |
| Fat (pool)                  | 0.021                       |             | 0.00      | 0.00   | 0.025                         |

| Matrix                      | Aniline label                |             |           |        |                               |
|-----------------------------|------------------------------|-------------|-----------|--------|-------------------------------|
|                             | TRR measured (mg/kg equiv.)  |             | % of Dose |        | TRR calculated (mg/kg equiv.) |
|                             | Goat 1                       | Goat 2      | Goat 1    | Goat 2 | Goats 1&2                     |
| Leg - Chest muscle          | 0.007                        |             | 0.02      | 0.02   | 0.008                         |
| Subtotal Organs/Tissues     |                              |             | 6.38      | 5.26   |                               |
| Matrix                      | Pyrazole label               |             |           |        |                               |
|                             | TRR measured (mg/kg equiv.*) |             | % of Dose |        | TRR calculated (mg/kg equiv.) |
|                             | Goat 3                       | Goat 4      | Goat 3    | Goat 4 | Goats 3 /4                    |
| Milk; Application day 1*    | 0.020/0.008                  | 0.026/0.009 | 0.01      | 0.01   | NA                            |
| Milk; Application day 2*    | 0.030/0.011                  | 0.028/0.010 | 0.01      | 0.01   | NA                            |
| Milk; Application day 3*    | 0.028/0.010                  | 0.029/0.011 | 0.01      | 0.02   | NA                            |
| Milk; Application day 4*    | 0.024/0.011                  | 0.027/0.013 | 0.01      | 0.02   | NA                            |
| Milk; Application day 5*    | 0.026/0.010                  | 0.028/0.012 | 0.01      | 0.02   | NA                            |
| Milk; Application day 6*    | 0.024/0.009                  | 0.028/0.009 | 0.01      | 0.01   | NA                            |
| Milk; Application day 7*    | 0.031/0.011                  | 0.035/0.010 | 0.01      | 0.01   | NA                            |
| Milk; Application day 8*    | 0.042/0.021                  | 0.042/0.012 | 0.02      | 0.01   | NA                            |
| Subtotal Milk               |                              |             | 0.11      | 0.12   |                               |
| Milk, pooled sample Day 1-8 | 0.017                        |             | 0.12      |        | 0.016                         |
| Blood                       | 0.015                        | 0.011       | 0.02      | 0.01   | NA                            |
| Liver                       | 0.555                        |             | 0.33      | 0.33   | 0.548                         |
| Bile                        | 6.557                        |             | 0.02      | 0.03   | NA                            |
| Gut/Stomach                 | 0.036                        | 0.043       | 0.20      | 0.23   | NA                            |
| Gut contents                | 1.226                        | 1.213       | 6.65      | 6.38   | NA                            |
| Stomach contents            | 0.095                        | 0.149       | 1.65      | 2.22   | NA                            |
| Kidney                      | 0.078                        |             | 0.01      | 0.01   | 0.078                         |
| Fat (pool)                  | 0.025                        |             | 0.00      | 0.00   | 0.030                         |
| Leg - Chest muscle          | 0.009                        |             | 0.03      | 0.02   | 0.009                         |
| Subtotal Organs / Tissues   |                              |             | 8.91      | 9.23   |                               |

\* For milk, individual TRR values are depicted for afternoon and morning milk.

NA: not applicable

Identification of the metabolites found in milk and tissues are given in Tables 3 and 4 for each label respectively. Parent compound represented one of the major residues in milk (13.0–19.8% TRRs), muscle (12.0%, aniline label only) and fat (34.1–43.6% TRRs), while accounting for minor proportions in liver and kidney (3.2–7.0% TRRs). The other predominant compound was the desmethyl metabolite M700F008, representing a main proportion in milk (23.9–25.4% TRRs), muscle (54.7–82.9% TRRs), fat (25.8–25.9% TRRs), liver (12.8–16.7% TRRs) and kidney (22.5–25.6% TRRs).

Further metabolites at > 10% of the TRRs were detected in milk, kidney and fat. In milk, the metabolite M700F010 was found at levels of 12.3–15.0% of the TRRs ( $\leq 0.0025$  mg/kg equiv.). The metabolite M700F005 was present in fat at 13.7% of the TRRs (0.0034 mg/kg equiv.) and in kidney at 19.2% of the TRRs (0.015 mg/kg equiv.), with pyrazole label only. The metabolite M700F004 was present in kidney at levels of 12.3–13.1% of the TRRs ( $\leq 0.010$  mg/kg equiv.).

Table 3 Summary of fluxapyroxad and metabolites and of characterised fractions in goat milk, liver, kidney, muscle and fat (aniline label)

| Metabolite/Fraction   | Milk         |       | Liver        |       | Kidney       |       | Muscle       |       | Fat          |       |
|-----------------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                       | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR |
| Fluxapyroxad          | 0.0015       | 13.0  | 0.011        | 3.2   | 0.0025       | 7.0   | 0.0009       | 12.0  | 0.0092       | 43.6  |
| M700F004              | ND           | ND    | 0.007        | 1.9   | 0.0048       | 13.1  | ND           | ND    | ND           | ND    |
| M700F005/M700F024*    | ND           | ND    | 0.022        | 6.4   | 0.0019       | 5.2   | ND           | ND    | 0.0007       | 3.4   |
| M700F008 **           | 0.0027       | 23.9  | 0.058        | 16.7  | 0.0093       | 25.6  | 0.0041       | 54.7  | 0.0054       | 25.9  |
| M700F009              | 0.0006       | 5.5   | 0.008        | 2.3   | 0.0007       | 2.0   | ND           | ND    | ND           | ND    |
| M700F010/M700F040 *** | 0.0014       | 12.3  | 0.002        | 0.7   | 0.0011       | 3.1   | ND           | ND    | ND           | ND    |
| M700F014              | ND           | ND    | ND           | ND    | 0.0013       | 3.5   | ND           | ND    | ND           | ND    |
| M700F015              | ND           | ND    | ND           | ND    | 0.0019       | 5.2   | ND           | ND    | ND           | ND    |
| M700F033              | ND           | ND    | ND           | ND    | ND           |       | ND           | ND    | ND           | ND    |

| Metabolite/Fraction                             | Milk         |       | Liver        |       | Kidney       |       | Muscle       |       | Fat          |       |
|-------------------------------------------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                                                 | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR |
| M700F034/M700F036                               | ND           | ND    | ND           | ND    | 0.0019       | 5.2   | ND           | ND    | ND           | ND    |
| M700F038/M700F039                               | ND           | ND    | ND           | ND    | 0.0033       | 9.0   | ND           | ND    | ND           | ND    |
| M700F041/-042/-043/-044                         | ND           | ND    | ND           | ND    | ND           |       | ND           | ND    | ND           | ND    |
| M700F046/M700F047                               | ND           | ND    | ND           | ND    | 0.0011       | 3.1   | ND           | ND    | ND           | ND    |
| M700F112                                        | ND           | ND    | ND           | ND    | ND           | ND    | ND           | ND    | ND           | ND    |
| Total Identified                                | 0.0061       | 54.7  | 0.108        | 31.1  | 0.0297       | 82.0  | 0.0050       | 66.7  | 0.0153       | 73.0  |
| Total only Characterised by HPLC                | 0.0022       | 19.3  | 0.014        | 4.1   | 0.0023       | 6.2   | NA           | NA    | 0.0039       | 18.5  |
| Total Identified and/or Characterised           | 0.0083       | 74.0  | 0.123        | 35.2  | 0.0320       | 88.2  | NA           | NA    | 0.0192       | 91.5  |
| PES                                             | 0.0003       | 2.8   | 0.267        | 76.6  | 0.0060       | 16.5  | 0.0017       | 22.9  | NA           | NA    |
| Total Characterised from PES                    | NA           | NA    | 0.196        | 56.3  | NA           | NA    | NA           | NA    | NA           | NA    |
| Total Characterised only from extracted and PES | NA           | NA    | 0.211        | 60.4  | NA           | NA    | NA           | NA    | NA           | NA    |
| Total Identified and/or Characterised           | NA           | NA    | 0.319        | 91.5  | NA           | NA    | NA           | NA    | NA           | NA    |
| Grand total [%]                                 | 0.0086       | 76.9  | 0.319        | 91.5  | 0.0380       | 104.7 | 0.0067       | 89.6  | 0.0192       | 91.5  |

ND = not detected

NA = not applicable

PES = Post extraction solids

\* Besides M700F005, minor amounts of M700F024 were detected in a range from 0.065 to 0.035 mg/kg (urine, aniline label) to not detectable (liver, aniline label)

\*\* Besides M700F008, metabolite M700F006 was found as a minor component (6:94) of this peak in in urine (aniline label) and was not detected in milk, liver, kidney, muscle, fat

\*\*\* Besides M700F010, metabolite M700F040 was only found in minor amounts in urine (aniline label)

Table 4 Summary of fluxapyroxad and metabolites and of characterised fractions in goat milk, liver, kidney, muscle and fat (pyrazole label)

| Metabolite/Fraction                             | Milk         |       | Liver        |       | Kidney       |       | Muscle       |       | Fat          |       |
|-------------------------------------------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                                                 | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR |
| Fluxapyroxad                                    | 0.0033       | 19.8  | 0.020        | 3.7   | 0.004        | 5.4   | ND           | ND    | 0.0084       | 34.1  |
| M700F004                                        | ND           | ND    | 0.015        | 2.6   | 0.010        | 12.3  | ND           | ND    | 0.0015       | 6.1   |
| M700F005/M700F024*                              | ND           | ND    | 0.046        | 8.3   | 0.015        | 19.2  | ND           | ND    | 0.0034       | 13.7  |
| M700F008 **                                     | 0.0043       | 25.4  | 0.071        | 12.8  | 0.017        | 22.5  | 0.0078       | 82.9  | 0.0064       | 25.8  |
| M700F009                                        | 0.0010       | 5.7   | 0.014        | 2.5   | 0.003        | 3.6   | ND           | ND    | ND           | ND    |
| M700F010/M700F040 ***                           | 0.0025       | 15.0  | ND           | ND    | 0.003        | 4.0   | ND           | ND    | 0.0009       | 3.7   |
| M700F014                                        | ND           | ND    | ND           | ND    | 0.002        | 3.0   | ND           | ND    | ND           | ND    |
| M700F015                                        | ND           | ND    | ND           | ND    | 0.003        | 4.1   | ND           | ND    | ND           | ND    |
| M700F033                                        | ND           | ND    | ND           | ND    | ND           | ND    | ND           | ND    | ND           | ND    |
| M700F034/M700F036                               | ND           | ND    | ND           | ND    | 0.004        | 4.9   | ND           | ND    | ND           | ND    |
| M700F038/M700F039                               | ND           | ND    | ND           | ND    | 0.004        | 5.1   | ND           | ND    | ND           | ND    |
| M700F041/-042/-043/-044                         | ND           | ND    | ND           | ND    | ND           | ND    | ND           | ND    | ND           | ND    |
| M700F046/M700F047                               | ND           | ND    | ND           | ND    | 0.003        | 4.4   | ND           | ND    | ND           | ND    |
| Total Identified                                | 0.0110       | 66.0  | 0.166        | 29.9  | 0.069        | 88.7  | 0.0078       | 82.9  | 0.0205       | 83.5  |
| Total only Characterised by HPLC                | 0.0014       | 8.2   | 0.018        | 3.2   | NA           | NA    | NA           | NA    | 0.0057       | 23.0  |
| Total Identified and/or Characterised           | 0.0124       | 74.2  | 0.184        | 33.2  | NA           | NA    | NA           | NA    | 0.0262       | 106.4 |
| PES                                             | 0.0008       | 4.9   | 0.380        | 68.4  | 0.007        | 8.5   | 0.0011       | 11.5  | 0.0025       | 10.1  |
| Total Characterised from PES                    | NA           | NA    | NA           | NA    | NA           | NA    | NA           | NA    | NA           | NA    |
| Total Characterised only from extracted and PES | NA           | NA    | NA           | NA    | NA           | NA    | NA           | NA    | NA           | NA    |
| Total Identified and/or Characterised           | NA           | NA    | NA           | NA    | NA           | NA    | NA           | NA    | NA           | NA    |
| Grand total [%]                                 | 0.0132       | 79.0  | 0.564        | 101.6 | 0.075        | 97.2  | 0.0089       | 94.4  | 0.0287       | 116.6 |

ND = not detected

NA = not applicable

\* Besides M700F005, minor amounts of M700F024 were detected in a range from 0.065 to 0.035 mg/kg (urine, aniline label) to not detectable (liver, aniline label)

\*\* Besides M700F008, metabolite M700F006 was found as a minor component (6:94) of this peak in urine (aniline label) and was not detected in milk, liver, kidney, muscle, fat

\*\*\* Besides M700F010, metabolite M700F040 was only found in minor amounts in urine (aniline label). Minor co-eluting metabolites were not further investigated in tissues from animals treated with pyrazole label.

With both labels, comparable metabolic pathways and comparable concentrations of metabolites were observed (Figure 1). Hydrolytic cleavage of fluxapyroxad at the carboxamide bond was not seen. Fluxapyroxad was metabolised *via* two main transformation reactions, N-demethylation of the pyrazole moiety and hydroxylation of the biphenyl moiety. These reactions, occurring also in combination, followed by conjugation with glucuronic acid, led to the main metabolites. Several minor metabolic routes, i.e., hydroxylation at the pyrazole ring, conversion of the pyrazole CHF<sub>2</sub> group into a carboxy group, N-glucuronidation of the desmethyl metabolite and removal of an aromatic fluorine substituent, led to a range of minor components.

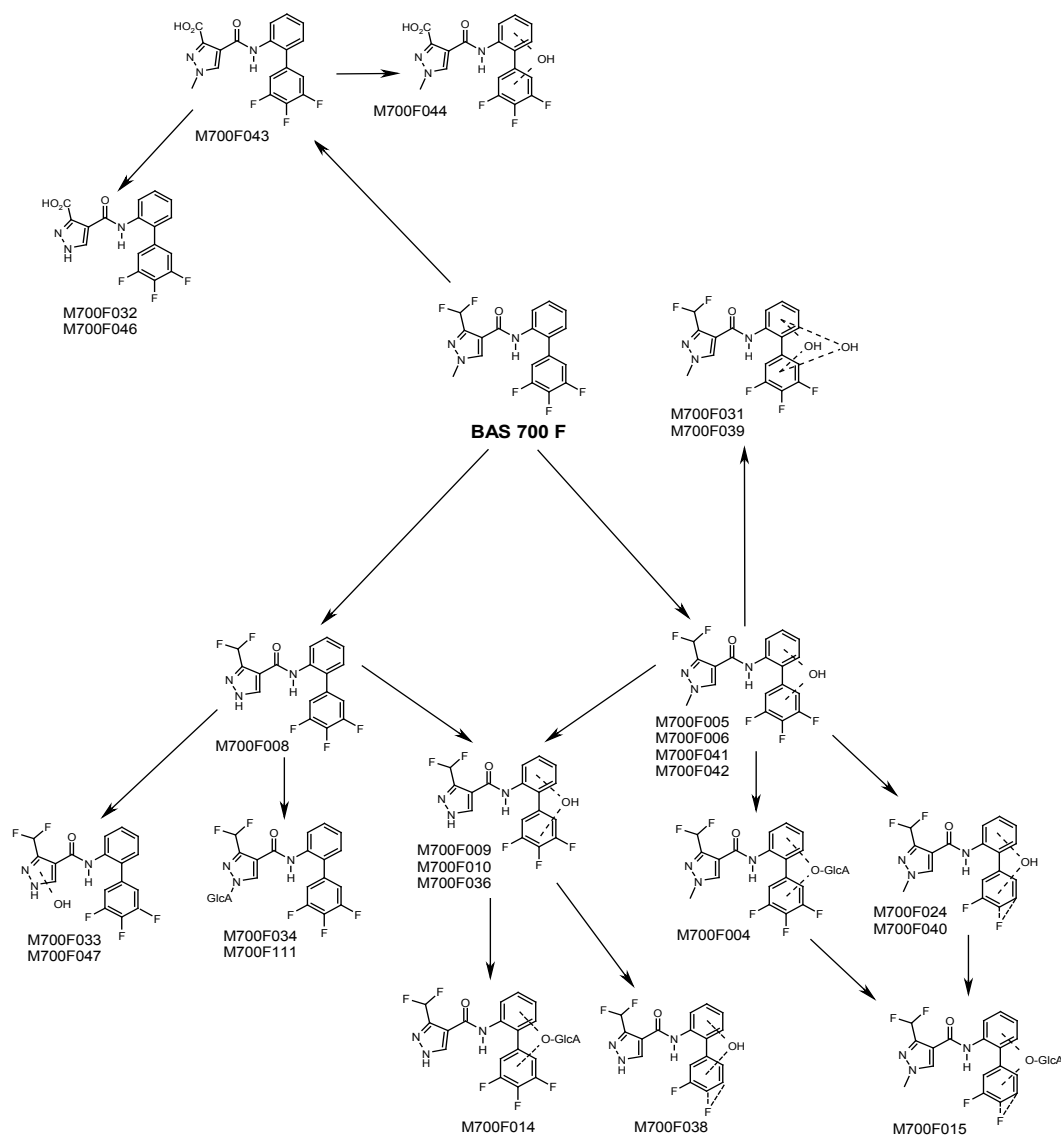
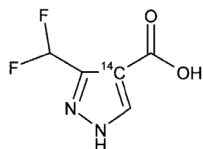


Figure 1 Proposed metabolic pathways for fluxapyroxad (BAS 700 F) in lactating goats

### Studies with metabolite M700F002

Since the metabolite M700F002 was observed in soya bean seed and in confined rotational crop matrices at levels > 10% of the TRRs, livestock metabolism studies were conducted with this compound (Grosshans 2009, 2009/1074682).



The  $^{14}\text{C}$ -labelled test item depicted above was fed to two lactating goats (*Saanen/Toggenburg*, 55–56 kg bw at acclimatisation and 55–61 kg bw at sacrifice) for eight consecutive days at a nominal dose of 12 ppm feed. Actual doses were 11.0–12.5 ppm feed based on feed consumption of 1.9–2.1 kg dry matter/ day or 0.38–0.42 mg/kg bw/day. Milk was collected in the morning before administration of the test item and in the afternoon after dose administration. Animals were sacrificed approximately 4 hours after the final dose. Samples of liver, kidney, muscle and fat were collected.

Of the applied dose, 32% was found in urine and 54% in faeces. Milk contained 0.05% of the applied dose. Residues remaining in whole organs accounted for < 0.04% of the administered dose. Residues were 0.006 mg/kg equiv. in fat, 0.012 mg/kg equiv. in muscle, 0.023 mg/kg equiv. in liver, and 0.146 mg/kg equiv. in kidney. In total, 98% of the applied dose could be recovered.

Table 5 TRRs in milk and edible tissues after dosing of lactating goats with  $^{14}\text{C}$ -M700F002

| Matrix         | TRR measured (mg/kg equiv.) <sup>a</sup> | TRR calculated (mg/kg equiv.) <sup>b</sup> |
|----------------|------------------------------------------|--------------------------------------------|
| Milk           | 0.0055                                   | 0.0048                                     |
| Liver          | 0.0229                                   | 0.0238                                     |
| Kidney         | 0.1461                                   | 0.1509                                     |
| Muscle (flank) | 0.0120                                   | 0.0121                                     |
| Fat            | 0.0056                                   | 0.0053                                     |

<sup>a</sup> Determined by direct measurement (LSC or combustion/LSC)

<sup>b</sup> Calculated from the sum of extracts and extraction residue

Table 6 Identified, characterised and final  $^{14}\text{C}$ -residues after 8 daily doses of  $^{14}\text{C}$ -M700F002 at 12 mg/kg feed

| Designation                                      | Matrix       |       |                    |       |              |       |              |       |              |       |              |       |              |       |
|--------------------------------------------------|--------------|-------|--------------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                                                  | Milk         |       | Liver <sup>a</sup> |       | Kidney       |       | Muscle       |       | Fat          |       | Faeces       |       | Urine        |       |
|                                                  | mg/kg equiv. | % TRR | mg/kg equiv.       | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR |
| Identified                                       |              |       |                    |       |              |       |              |       |              |       |              |       |              |       |
| M700F002                                         | 0.0032       | 66.2  | 0.0158             | 66.3  | 0.1387       | 91.9  | 0.0112       | 92.8  | 0.0042       | 78.2  | 1.864        | 88.7  | 3.443        | 100.0 |
| Total identified                                 | 0.0032       | 66.2  | 0.0158             | 66.3  | 0.1387       | 91.9  | 0.0112       | 92.8  | 0.0042       | 78.2  | 1.864        | 88.7  | 3.443        | 100.0 |
| Total only characterised from extracted residues | 0.0010       | 21.0  | 0.0023             | 9.5   | 0.0056       | 3.7   | 0.0006       | 4.8   | 0.0002       | 2.8   | 0.050        | 2.4   | --           | --    |
| Total identified / characterised                 | 0.0042       | 87.2  | 0.0181             | 75.8  | 0.1443       | 95.6  | 0.0118       | 97.6  | 0.0043       | 81.0  | 1.914        | 91.1  | --           | --    |
| PES                                              | 0.0007       | 13.9  | 0.0041             | 17.2  | 0.0039       | 2.6   | 0.0009       | 7.5   | 0.0008       | 15.0  | 0.062        | 3.0   | --           | --    |
| Grand total                                      | 0.0049       | 101.1 | 0.0233             | 97.6  | 0.1482       | 98.2  | 0.0127       | 105.1 | 0.0051       | 96.0  | 1.977        | 94.1  | 3.443        | 100.0 |

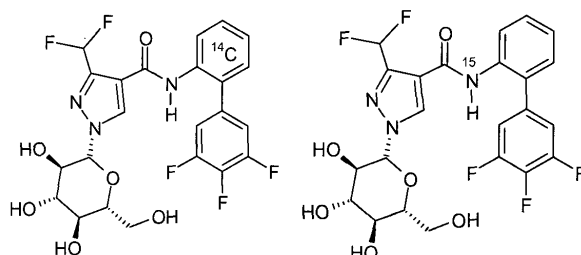
<sup>a</sup> Losses during concentration of extractable radioactivity: 0.0006 mg/kg, 2.6% TRR

Losses during i-hexane / acetonitrile partition of extractable radioactivity: 0.0005 mg/kg, 2.0% TRR

In goat, the test item M700F002 was the only radioactive component detected in the matrices analysed, indicating that M700F002 is not significantly transformed in goat.

### Study with M700F048

Metabolism studies were conducted on lactating goats with M700F048, a plant metabolite of fluxapyroxad which was not observed in animals (Grosshans *et al.* 2010, 2009/1116609 and Fabian and Landsiedel 2010, 2010/1009630).



<sup>14</sup>C-M700F048, labelled in the aniline moiety, was mixed with <sup>15</sup>N-labelled and unlabelled test item and was fed to two lactating goats (*Deutsche Bunte Edelziege*, 39.0–44.1 kg bw at acclimatisation and 37.9–41.8 kg bw at sacrifice) at a nominal dose level of 12 ppm feed for ten consecutive days. Actual doses were 12.94 and 12.80 ppm feed based on feed consumption of 1.2 kg dry matter/ day or 0.39 and 0.40 mg/kg bw/day. Milk was collected in the morning before administration of the test item and in the afternoon after dose administration. The mean milk yield during the dosing period was 0.44–0.57 kg/day. Animals were sacrificed within 20 hours after the last dose. Samples of various tissues and organs were collected, including liver, kidney, muscle and fat.

The pooled milk sample (Days 4–10) contained 0.045% of the applied dose. Overall, < 0.5% of the total administered dose was found in tissues and organs. The TRRs in organs and tissues amounted to 0.575 mg/kg equiv. for liver, 0.075 mg/kg equiv. for kidney, 0.033 mg/kg equiv. for fat and 0.011 mg/kg equiv. for muscle.

Table 7 TRRs in milk and tissues after administration of <sup>14</sup>C-M700F048 to goats

| Matrix                                | Aniline label               |             |           |        |                               |
|---------------------------------------|-----------------------------|-------------|-----------|--------|-------------------------------|
|                                       | TRR measured (mg/kg equiv.) |             | % of Dose |        | TRR calculated (mg/kg equiv.) |
|                                       | Goat 1                      | Goat 2      | Goat 1    | Goat 2 |                               |
| Milk; Application day 1 <sup>a</sup>  | 0.002/0.005                 | 0.008/0.023 | 0.002     | 0.005  | --                            |
| Milk; Application day 2 <sup>a</sup>  | 0.007/0.009                 | 0.030/0.021 | 0.003     | 0.011  |                               |
| Milk; Application day 3 <sup>a</sup>  | 0.010/0.016                 | 0.016/0.016 | 0.005     | 0.008  |                               |
| Milk; Application day 4 <sup>a</sup>  | 0.013/0.012                 | 0.029/0.026 | 0.004     | 0.013  |                               |
| Milk; Application day 5 <sup>a</sup>  | 0.012/0.014                 | 0.027/0.019 | 0.004     | 0.009  |                               |
| Milk; Application day 6 <sup>a</sup>  | 0.013/0.010                 | 0.041/0.026 | 0.003     | 0.012  |                               |
| Milk; Application day 7 <sup>a</sup>  | 0.007/0.010                 | 0.040/0.032 | 0.002     | 0.012  |                               |
| Milk; Application day 8 <sup>a</sup>  | 0.006/0.012                 | 0.032/0.031 | 0.003     | 0.011  |                               |
| Milk; Application day 9 <sup>a</sup>  | 0.008/0.014                 | 0.025/0.021 | 0.003     | 0.007  |                               |
| Milk; Application day 10 <sup>a</sup> | 0.008/0.016                 | 0.022/0.020 | 0.002     | 0.005  |                               |
| Subtotal Milk                         |                             |             | 0.03      | 0.09   |                               |
| Milk, pooled sample Day 4-10          | 0.022                       |             | 0.045     |        | 0.023                         |
| Blood                                 | 0.021                       | 0.022       | 0.02      | 0.01   | --                            |
| Liver                                 | 0.658                       |             | 0.29      | 0.21   | 0.575                         |
| Bile                                  | --                          | 2.709       | --        | 0.05   | --                            |
| Gut/Stomach                           | 0.025                       | 0.024       | 0.11      | 0.10   | --                            |
| Gut contents                          | 0.677                       | 0.879       | 2.28      | 2.76   | --                            |
| Stomach contents                      | 0.055                       | 0.074       | 0.63      | 0.95   | --                            |
| Urine in bladder                      | --                          | 4.036       | --        | 0.11   | --                            |
| Kidney                                | 0.075                       |             | 0.01      | 0.00   | 0.075                         |
| Kidney fat                            | 0.037                       |             | 0.00      | 0.00   | 0.033 <sup>a</sup>            |
| Abdominal fat                         | 0.047                       |             | 0.00      | 0.00   | 0.033 <sup>b</sup>            |
| Leg muscle                            | 0.010                       |             | 0.02      | 0.02   | 0.011 <sup>c</sup>            |
| Chest muscle                          | 0.009                       |             | 0.00      | 0.01   | 0.011 <sup>c</sup>            |

<sup>a</sup> For milk, individual TRR values are depicted for afternoon/morning milk

<sup>b</sup> Value obtained from a pooled kidney/abdominal fat sample

<sup>c</sup> Value obtained from a pooled chest/leg muscle sample

The extractability of radioactive residues with methanol was > 87% of the TRRs in faeces, milk and tissues, except liver. In liver, up to 33% of the TRRs could be extracted with methanol. Additional extraction of the residual radioactive residues with water released portions of 6% of the TRRs from liver and < 3% of the TRRs from all other matrices. The residual radioactive residue of liver after solvent extraction was incubated with pronase, which released 40% of the TRRs. Treatment of the liver residues after solvent extraction with pepsin digestion and subsequently with pancreatin digestion released 37% and 15.0% of the TRRs, respectively.

M700F048 was found at  $\leq 3\%$  of the TRRs in milk and tissues. In muscle and liver, no M700F048 was detected. One of the main components identified in all matrices was the deglycosilated metabolite M700F008, accounting for 14.4–54.1% of the TRRs. Further biotransformation products were the biphenyl-hydroxylated metabolites M700F009 and M700F010. M700F010 was the main metabolite identified in milk (32.1% of the TRRs) and was also detected in higher portions in kidney and urine (13.7% of the TRRs). Three minor biotransformation products (each < 7.6% of the TRRs) were identified as the pyrazole ring hydroxylated metabolites M700F045, M700F047 and M700F136.

Table 8 Summary of M700F048 and metabolites in characterised fractions in goat milk, liver, kidney, muscle and fat

| Metabolite/Fraction                                             | Milk         |       | Liver        |       | Kidney       |       | Muscle       |       | Fat          |       |
|-----------------------------------------------------------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                                                                 | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR |
| M700F048                                                        | 0.0004       | 1.5   | ND           | ND    | 0.0024       | 3.2   | ND           | ND    | 0.0005       | 1.6   |
| M700F008                                                        | 0.0058       | 25.1  | 0.083        | 14.4  | 0.0216       | 29.0  | 0.0055       | 51.9  | 0.0181       | 54.1  |
| M700F009                                                        | 0.0008       | 3.5   | 0.011        | 1.9   | 0.0042       | 5.7   | ND           | ND    | ND           | ND    |
| M700F010                                                        | 0.0074       | 32.1  | 0.009        | 1.5   | 0.0102       | 13.7  | 0.0004       | 3.6   | 0.0008       | 2.3   |
| M700F045                                                        | 0.0018       | 7.6   | ND           | ND    | 0.0012       | 1.5   | ND           | ND    | ND           | ND    |
| M700F047/M700F136 <sup>a</sup>                                  | 0.0008       | 3.4   | ND           | ND    | 0.0018       | 2.4   | ND           | ND    | 0.0009       | 2.7   |
| Total Identified                                                | 0.0169       | 73.4  | 0.102        | 17.8  | 0.0414       | 55.5  | 0.0058       | 55.5  | 0.0203       | 60.7  |
| Total Characterised                                             | 0.0049       | 21.3  | 0.116        | 20.2  | 0.0239       | 32.0  | 0.0024       | 22.2  | 0.0058       | 17.3  |
| Total Identified and/or Characterised                           | 0.0218       | 94.7  | 0.219        | 38.0  | 0.0653       | 87.5  | 0.0082       | 77.7  | 0.0261       | 78.0  |
| PES                                                             | 0.0003       | 1.5   | 0.351        | 61.1  | 0.0042       | 5.6   | 0.0006       | 6.1   | 0.0024       | 7.1   |
| M700F138 identified                                             | NA           | NA    | 0.057        | 9.9   | NA           | NA    | NA           | NA    | NA           | NA    |
| Total Characterised from PES <sup>b</sup>                       | NA           | NA    | 0.173        | 30.0  | NA           | NA    | NA           | NA    | NA           | NA    |
| Total Identified and/or Characterised from Pronase Solubilizate | NA           | NA    | 0.230        | 39.9  | NA           | NA    | NA           | NA    | NA           | NA    |
| Residue after pronase solubilisation                            | NA           | NA    | 0.104        | 18.0  | NA           | NA    | NA           | NA    | NA           | NA    |
| Total Characterised only from extracted and PES                 | 0.0049       | 21.3  | 0.289        | 50.2  | 0.0239       | 32.0  | 0.0024       | 22.2  | 0.0058       | 17.3  |
| Total Identified and/or Characterised                           | 0.0218       | 94.7  | 0.448        | 77.9  | 0.0653       | 87.5  | 0.0082       | 77.7  | 0.0261       | 78.0  |
| Grand total [%]                                                 | 0.0221       | 96.1  | 0.552        | 95.9  | 0.0695       | 93.1  | 0.0088       | 83.7  | 0.0285       | 85.2  |

ND = not detected

NA. = not applicable

<sup>a</sup> M700F047/M700F136 were not separated by the HPLC method used for quantification.

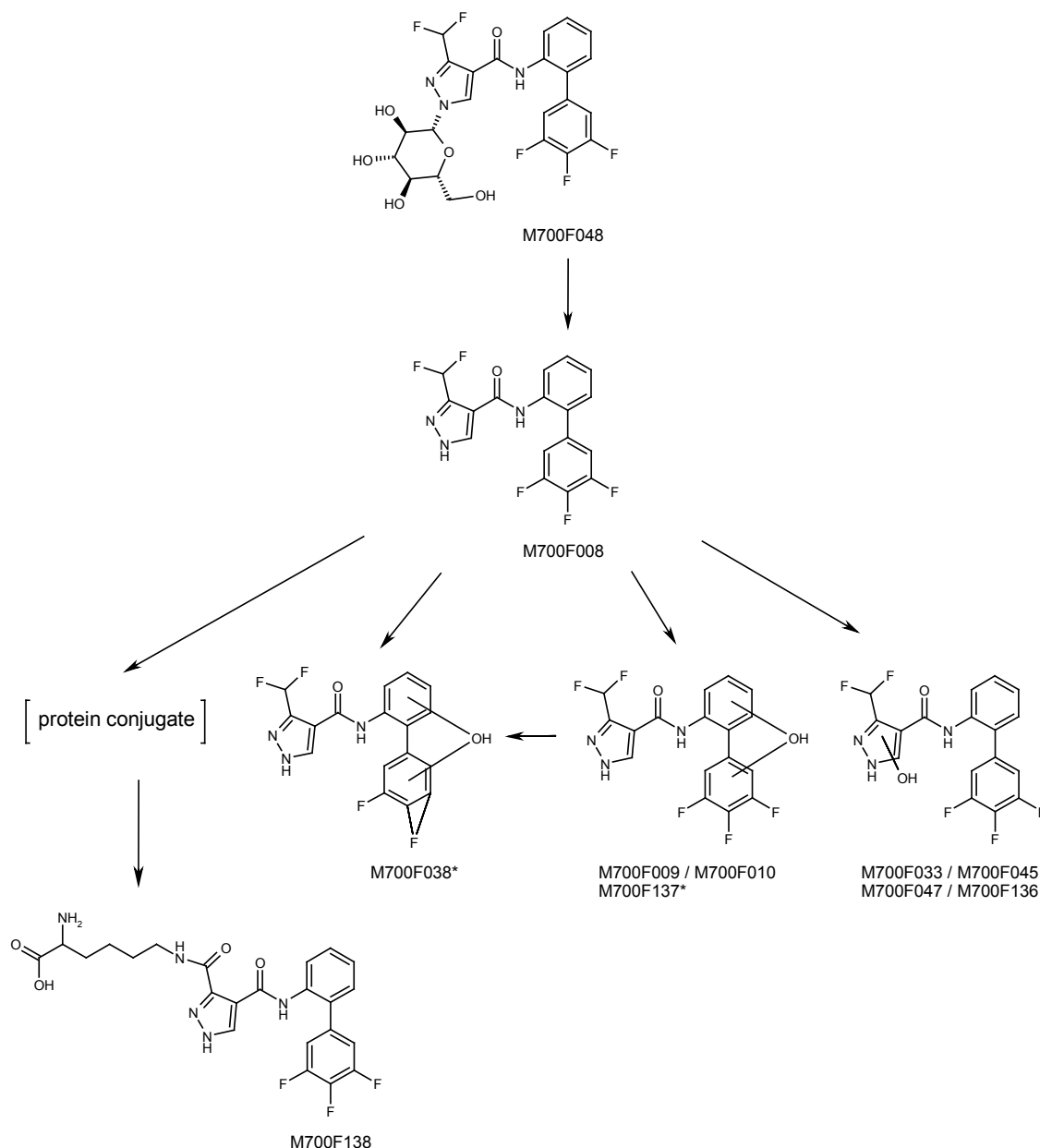
<sup>b</sup> Characterised by HPLC including solubilised radioactivity which precipitated subsequently during centrifugation

M700F048 was found at 6% of the TRRs in faeces but was not observed in urine. The deglycosilated metabolite M700F008 was found in faeces at 49.4% of TRRs and in urine at 25.9% of the TRRs.

In the pronase solubilizate of liver residues after extraction, the lysine conjugate M700F138 was identified (9.9% of the TRRs). In a parallel workup, the liver residues after extraction were processed by pepsin digestion, releasing a precursor of M700F138 (6.7% of the TRRs). Pancreatic

digestion of the residue after pepsin incubation released the lysine conjugate M700F138 (4.4% of the TRRs). The results indicate protein binding of a metabolite formed from M700F048.

The main biotransformation reactions were deglycosylation of M700F048 and hydroxylation at the biphenyl moiety. Further biotransformation reactions observed were hydroxylation at the pyrazole ring, replacement of an aromatic fluorine atom, presumably by a hydroxy group and oxidation and hydrolysis of the CHF<sub>2</sub> group (forming a carboxy group) with subsequent protein conjugation.



\* Metabolites were identified by LC-MS/MS. Identification and quantification with HPLC was not feasible due to negligible amounts.

Figure 2 Proposed metabolic pathways for M700F048 in lactating goats

#### Metabolism in Poultry

Fluxapyroxad labelled in the aniline ring was orally administered by gavage to 12 laying hens (*Leghorn braun*, 25 weeks at acclimatisation, 1.7–2.4 kg bw at acclimatisation and 1.8–2.3 kg bw at sacrifice) at a level of 12 ppm feed for 12 consecutive days (Fabian and Landsiedel 2009, 2009/1065025 and Hafemann and Klöppner 2009, 2009/1069223). The test item was a mixture of

aniline-U- $^{14}$ C-fluxapyroxad with aniline-N $^{15}$ , pyrazole-1,2-N $^{15}$ -fluxapyroxad and unlabelled fluxapyroxad. Actual doses corresponded to 11.5 ppm feed based on mean feed consumption of 0.14 kg/day or 0.76 mg/kg bw (1.59 mg/animal/day). Eggs were collected twice daily (in the afternoon after administration of the test substance and the morning before subsequent administration). Egg yield was 100% for the dose period (100% = 1 egg per hen per day). Animals were sacrificed approximately 23 hours after the last dose. Samples of liver, muscle (leg) and fat were collected.

Overall,  $\geq 86\%$  of the total administered dose was eliminated in excreta. In eggs, 0.18% of the administered dose was detected, with a plateau reached at Day 9 of the dosing period (Table 9). Tissues and organs (with the exception of the GI tract) retained  $< 0.5\%$  of the administered dose. TRRs were 0.010 mg/kg equiv. in leg muscle, 0.059 mg/kg equiv. in fat and 0.210 mg/kg equiv. in liver. The extractability of the radioactive residues was  $\geq 79\%$  for all tissues other than liver. In liver, extractability was 68%. A significant proportion of the residual radioactive residues, probably bound to proteins, was released from extracted liver tissue after incubation with protease.

Table 9 TRRs in eggs and tissues after administration of  $^{14}$ C-fluxapyroxad to hens

| Matrix                                     | TRR measured (mg/kg equiv.) | % of Dose | TRR calculated (mg/kg equiv.) |
|--------------------------------------------|-----------------------------|-----------|-------------------------------|
| Eggs; Application day 1                    | 0.004                       | 0.00      | NA                            |
| Eggs; Application day 2                    | 0.016                       | 0.00      | NA                            |
| Eggs; Application day 3                    | 0.026                       | 0.01      | NA                            |
| Eggs; Application day 4                    | 0.039                       | 0.01      | NA                            |
| Eggs; Application day 5                    | 0.051                       | 0.02      | NA                            |
| Eggs; Application day 6                    | 0.061                       | 0.02      | NA                            |
| Eggs; Application day 7                    | 0.067                       | 0.02      | NA                            |
| Eggs; Application day 8                    | 0.073                       | 0.02      | NA                            |
| Eggs; Application day 9                    | 0.076                       | 0.02      | NA                            |
| Eggs; Application day 10                   | 0.078                       | 0.02      | NA                            |
| Eggs; Application day 11                   | 0.078                       | 0.02      | NA                            |
| Eggs; Application day 12                   | 0.079                       | 0.02      | NA                            |
| Subtotal Eggs                              |                             | 0.18      | NA                            |
| Egg, pooled sample Day 7–12                | 0.077                       |           | 0.077                         |
| Blood                                      | 0.049                       | 0.01      | NA                            |
| Liver                                      | 0.210                       | 0.06      | 0.221                         |
| GI-Tract (skin)                            | 0.152                       | 0.09      | NA                            |
| GI-Tract (contents)                        | 0.795                       | 0.22      | NA                            |
| Leg muscle                                 | 0.010                       | 0.01      | 0.010                         |
| Chest muscle                               | 0.006                       | 0.01      | NA                            |
| Remaining Fat                              | 0.051                       | 0.00      | NA                            |
| Abdominal Fat                              | 0.060                       | 0.02      | NA                            |
| Fat combined (remaining and abdominal fat) | 0.059                       |           | 0.060                         |
| Subtotal Organs                            |                             | 0.42      |                               |

NA: not applicable

Metabolites found in the various matrices are summarized in Table 10. In the extracts of several matrices, a dimer of parent was detected that was identified to be a contaminant in the application solution ( $\sim 1.2\%$  of the total applied amount of test item) and not a metabolite generated by the transformation of fluxapyroxad in hen.

Table 10 Identified, characterised and final  $^{14}$ C-residues from hen matrices after 12 daily doses of  $^{14}$ C-fluxapyroxad at 12 mg/kg feed (% TRR is not corrected for dimer concentration)

| Designation               | Matrix       |       |              |       |              |       |              |       |              |       |
|---------------------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                           | Excreta      |       | Eggs         |       | Liver        |       | Muscle       |       | Fat          |       |
|                           | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR |
| Total Radioactive Residue | 3.640        | 100.0 | 0.077        | 100.0 | 0.210        | 100.0 | 0.010        | 100.0 | 0.059        | 100.0 |

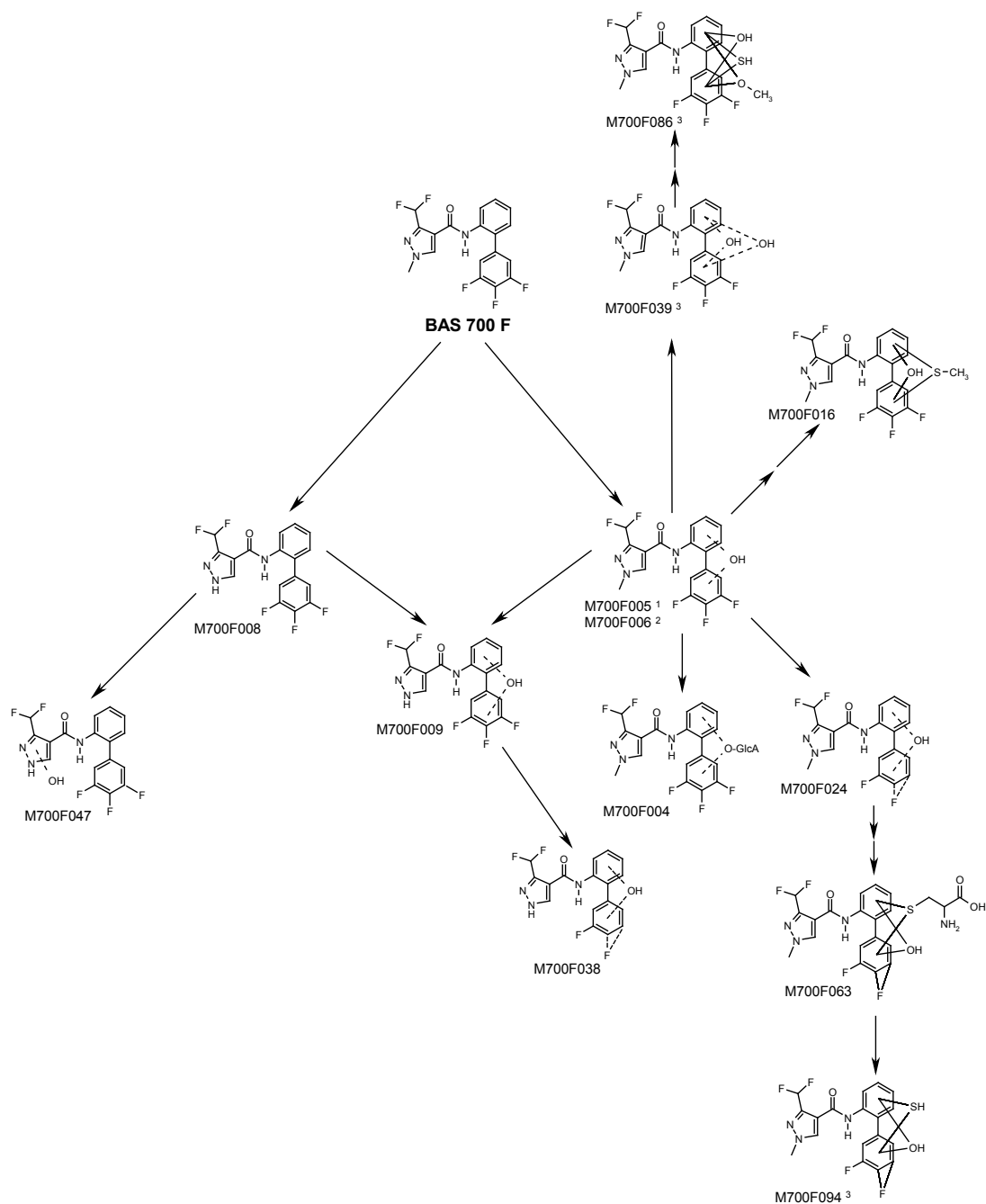
| Designation                                               | Matrix             |                  |              |       |                    |                  |                     |                   |              |       |
|-----------------------------------------------------------|--------------------|------------------|--------------|-------|--------------------|------------------|---------------------|-------------------|--------------|-------|
|                                                           | Excreta            |                  | Eggs         |       | Liver              |                  | Muscle              |                   | Fat          |       |
|                                                           | mg/kg equiv.       | % TRR            | mg/kg equiv. | % TRR | mg/kg equiv.       | % TRR            | mg/kg equiv.        | % TRR             | mg/kg equiv. | % TRR |
| Extractable Radioactive Residues                          | 3.228              | 88.7             | 0.070        | 91.7  | 0.143              | 67.9             | 0.008               | 79.3              | 0.060        | 102.5 |
| Identified                                                |                    |                  |              |       |                    |                  |                     |                   |              |       |
| Fluxapyroxad                                              | 0.271              | 7.4              | 0.009        | 11.8  | 0.002              | 0.9              | 0.0011              | 11.7              | 0.023        | 38.5  |
| M700F004                                                  | —                  | —                | 0.003        | 4.2   | —                  | —                | —                   | —                 | —            | —     |
| M700F005                                                  | 0.630              | 17.3             | 0.005        | 6.6   | 0.009              | 4.1              | 0.0003              | 2.8               | 0.001        | 1.0   |
| M700F008                                                  | 0.228 <sup>a</sup> | 6.3 <sup>a</sup> | 0.033        | 43.5  | 0.009 <sup>a</sup> | 4.1 <sup>a</sup> | 0.0016 <sup>b</sup> | 17.1 <sup>b</sup> | 0.009        | 15.4  |
| M700F009 and/or M700F038                                  | 0.433              | 11.9             | 0.004        | 5.0   | 0.011              | 5.3              | —                   | —                 | —            | —     |
| M700F024                                                  | 0.392              | 10.8             | —            | —     | 0.014              | 6.9              | —                   | —                 | —            | —     |
| M700F047                                                  | 0.134              | 3.7              | —            | —     | 0.003              | 1.6              | —                   | —                 | —            | —     |
| dimer of parent                                           | 0.042              | 1.1              | 0.008        | 10.9  | 0.007              | 3.1              | 0.0020              | 20.8              | 0.021        | 35.7  |
| Total identified                                          | 2.130              | 58.5             | 0.063        | 81.9  | 0.055              | 26.0             | 0.005               | 52.4              | 0.053        | 90.7  |
| Total characterised from extractable radioactive residues | 1.098              | 30.2             | 0.007        | 9.3   | 0.083              | 39.4             | 0.002               | 18.6              | 0.004        | 6.6   |
| Total identified and/or characterised                     | 3.228              | 88.7             | 0.070        | 91.3  | 0.137              | 65.4             | 0.007               | 71.0              | 0.057        | 97.2  |
| PES                                                       | 0.339              | 9.3              | 0.007        | 9.0   | 0.078              | 37.2             | 0.003               | 27.5              | 0.000        | 0.3   |
| Identified in PES supernatant after Pronase treatment     |                    |                  |              |       |                    |                  |                     |                   |              |       |
| M700F063                                                  | —                  | —                | —            | —     | 0.010              | 5.0              | —                   | —                 | —            | —     |
| Total identified from PES                                 | —                  | —                | —            | —     | 0.010              | 5.0              | —                   | —                 | —            | —     |
| Total characterised from PES                              | —                  | —                | —            | —     | 0.046              | 21.8             | —                   | —                 | —            | —     |
| Final residue                                             | —                  | —                | —            | —     | 0.010              | 4.7              | —                   | —                 | —            | —     |
| Grand total                                               | 3.567              | 98.0             | 0.077        | 100.3 | 0.203              | 96.9             | 0.009               | 98.6              | 0.057        | 97.5  |

<sup>a</sup> Includes unknown metabolite and M700F016

<sup>b</sup> Includes M700F016

Correcting for the dimer concentration, parent compound represented one of the major residues in excreta (7.5% of the TRRs, 0.271 mg/kg equiv.), egg (13.5% of the TRRs, 0.009 mg/kg equiv.), leg muscle (17.6% of the TRRs, 0.0011 mg/kg equiv.), fat (63.3% of the TRRs, 0.023 mg/kg equiv.), and was observed in minor amounts in liver (1.0% of the TRRs, 0.002 mg/kg equiv.). The other predominant compound was the desmethyl metabolite M700F008, representing a main proportion in egg (49.9% of the TRRs, 0.033 mg/kg equiv.), leg muscle (together with M700F016 amounting to 25.7% of the TRRs, 0.0016 mg/kg equiv.), and fat (25.3% of the TRRs, 0.009 mg/kg equiv.). M700F008 was detected at minor amounts (< 7%) in excreta (0.228 mg/kg equiv.) and liver (0.009 mg/kg equiv.).

The metabolism of fluxapyroxad in laying hens (Figure 3) mainly proceeds *via* hydroxylation at the biphenyl moiety, loss of a fluorine atom at the biphenyl ring (presumably by substitution with a hydroxyl-group), conjugation of the hydroxyl groups with glucuronic acid, and demethylation at the pyrazole ring. Additionally, conjugates with glutathione derivatives were identified.



<sup>1</sup> M700F005 is hydroxylated in para-position to the amide group, established by <sup>1</sup>H NMR spectroscopy

<sup>2</sup> Proposed intermediate

<sup>3</sup> These metabolites were identified by LC-MS/MS, but they could not unambiguously be assigned to a distinct HPLC peak. They occurred at minor quantities, but they were not listed in metabolite quantification tables, because the correlation to a distinct HPLC peak was not given.

Figure 3 Proposed metabolic pathways of fluxapyroxad (BAS 700 F) in laying hens

#### Study with M700F002

<sup>14</sup>C-M700F002 was fed to 10 laying hens (*Leghorn braun*, 26 weeks at acclimatisation, 1.7–2.2 kg bw at acclimatisation and 1.8–2.3 kg bw at sacrifice) at a nominal dose level of 12 ppm feed for ten consecutive days (Fabian and Landsiedel 2010, 2009/1083000 and Grosshans *et al.* 2010, 2009/1078621). The actual dose was 13.1 ppm feed based on mean feed consumption of 0.13 kg/day or 0.84 mg/kg bw/day (1.66 mg/animal/day). Eggs were sampled in the morning before administration

of the test substance and in the afternoon post dosing. Egg yield was 97% for the dose period. Animals were sacrificed approximately 23 hours after the last dose.

In excreta, 82% of the applied dose was found. Eggs contained 0.009% of the applied dose. Residues were 0.0041 mg/kg equiv. in liver, 0.0022 mg/kg equiv. in chest muscle, 0.0030 mg/kg equiv. in leg muscle, 0.0023 mg/kg equiv. for abdominal fat and 0.0058 mg/kg equiv. for body fat. In total, 84% of the applied dose was recovered in excreta, eggs, blood, tissues, GI tract and cage wash.

Table 11 Total radioactive residues in pooled samples of eggs after dosing with  $^{14}\text{C}$ -M700F002

| Matrix <sup>a</sup> | Sampling Time | TRR measured (mg/kg equiv.) <sup>b</sup> | TRR calculated (mg/kg equiv.) <sup>c</sup> | % Dose <sup>d</sup> |
|---------------------|---------------|------------------------------------------|--------------------------------------------|---------------------|
| Egg                 | Day 4-10      | 0.0037                                   | 0.0039                                     | 0.009               |

<sup>a</sup> Combined sample from all ten animals

<sup>b</sup> Determined by direct measurement (combustion of dried aliquots with subsequent LSC)

<sup>c</sup> Values calculated as sum of extracts and extraction residue (Post Extraction Solid, PES)

<sup>d</sup> # % of the total applied dose of Day 1-10. Calculated for Day 1–10 (Excreta) and Day 4-10 (Egg)

Table 12 Total radioactive residues in organs and tissues after dosing with  $^{14}\text{C}$ -M700F002

| Matrix <sup>a</sup> | TRR measured (mg/kg equiv.) <sup>b</sup> | TRR calculated (mg/kg equiv.) <sup>c</sup> |
|---------------------|------------------------------------------|--------------------------------------------|
| Liver               | 0.0041                                   | 0.0037                                     |
| Chest Muscle        | 0.0020                                   | 0.0022                                     |
| Leg Muscle          | 0.0025                                   | 0.0030                                     |
| Abdominal Fat       | 0.0014                                   | 0.0023                                     |
| Body Fat            | 0.0069                                   | 0.0058                                     |

<sup>a</sup> Organs and tissues of all animals were combined

<sup>b</sup> Determined by direct measurement (LSC after dissolving or combustion with subsequent LSC)

<sup>c</sup> Values calculated as sum of extracts and extraction residue (Post Extraction Solid)

Percent of dose in each tissue was  $\leq 0.02\%$ . Total Percent of Dose in tissue was 0.03%.

The extractability of the radioactive residues with methanol was 49-87% of the TRRs in eggs and tissues, except liver. Liquid/liquid partitioning of the combined methanol extracts between acidified water and ethyl acetate roughly characterised the major part of the extractable radioactive residues as organosoluble. In the case of liver, 39-44% of the TRRs were extracted with methanol, and an additional 10% of the TRRs was subsequently extracted with water. Protease treatment of the residue after extraction with water solubilised the main part of the residual radioactive residues, which had probably been associated with proteins. The extraction efficiency of excreta amounted to 98% of the TRRs.

Table 13 Identified, characterised and final  $^{14}\text{C}$ -residues after 10 daily doses with  $^{14}\text{C}$ -M700F002 at 12 mg/kg feed

| Designation                              | Matrix       |       |              |       |              |       |              |       |              |       |              |       |              |       |
|------------------------------------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                                          | Eggs         |       | Liver        |       | Chest Muscle |       | Leg Muscle   |       | Belly Fat    |       | Body Fat     |       | Excreta      |       |
|                                          | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR |
| Identified                               |              |       |              |       |              |       |              |       |              |       |              |       |              |       |
| M700F002                                 | 0.0012       | 30.3  | 0.0015       | 36.2  | 0.0012       | 53.6  | 0.0018       | 60.0  | 0.0006       | 27.7  | 0.0052       | 90.2  | 5.583        | 97.6  |
| Further HPLC Peaks                       | 0.0016       | 40.9  | 0.0000       | 0.0   | 0.0002       | 8.2   | 0.0000       | 0.0   | 0.0008       | 34.8  | 0.0000       | 0.0   | 0.000        | 0.0   |
| Total Extractable into Isohexane         | 0.0002       | 5.3   | 0.0003       | 7.5   | 0.0001       | 2.9   | 0.0001       | 3.4   | 0.0001       | 2.9   | 0.0001       | 2.2   | 0.000        | 0.0   |
| Total Characterised from further work-up | 0.0000       | 0.0   | 0.0017       | 41.4  | 0.0000       | 0.0   | 0.0000       | 0.0   | 0.0000       | 0.0   | 0.0000       | 0.0   | 0.000        | 0.0   |
| PES                                      | 0.0006       | 15.6  | 0.0004       | 10.1  | 0.0006       | 26.9  | 0.0008       | 27.7  | 0.0008       | 33.2  | 0.0007       | 11.4  | 0.106        | 1.9   |

| Designation | Matrix       |       |              |       |              |       |              |       |              |       |              |       |              |       |
|-------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|             | Eggs         |       | Liver        |       | Chest Muscle |       | Leg Muscle   |       | Belly Fat    |       | Body Fat     |       | Excreta      |       |
|             | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR |
| Grand total | 0.0036       | 92.2  | 0.0039       | 95.1  | 0.0020       | 91.6  | 0.0027       | 91.1  | 0.0022       | 98.7  | 0.0060       | 103.8 | 5.689        | 99.5  |

The unchanged test item M700F002 was the only component identified in the extracts of egg, tissues and excreta and the only component detected in the methanol extracts of liver, leg muscle, body fat and excreta. It was concluded that the test item M700F002 is not considerably metabolised in laying hens.

#### Study with M700F048

<sup>14</sup>C-M700F048, labelled in the aniline moiety, was mixed with <sup>15</sup>N-labelled and unlabelled test item and was fed to 12 laying hens (*Leghorn braun*, 25 weeks at acclimatisation, 1.8–2.2 kg bw at acclimatisation and 1.8–2.3 kg bw at sacrifice) at the nominal dose level of 12 ppm feed for 11 consecutive days (Fabian and Landsiedel 2010, 2010/1009631). The actual dose level was 12.9 ppm feed based on mean feed consumption of 0.13 kg/day or 0.78 mg/kg bw/day. Eggs were collected in the afternoon after administration of the test item and in the morning before the subsequent administration. Egg yield was 89% for the dose period. Animals were sacrificed 18–22 hours after the last dose. Samples of tissues and organs were collected, including breast muscle, leg muscle, remaining fat, abdominal fat and liver.

Overall, excreta contained 91.8% of the M700F048 administered, and excreta and cage wash together amounted to 94.1% of the total administered dose. 0.15% of the total radioactivity administered was found in eggs. Total radioactive residues in eggs increased until day 8 and thereafter remained unchanged until day 11. At sacrifice, 18–22 hours after the last administration, organs and tissues were pooled from all animals. Altogether, < 0.5% of the total administered dose could be found in the tissues and organs. The residue levels in edible tissues and organs were 0.187 mg/kg equiv. for liver, 0.0079 mg/kg equiv. for chest muscle, 0.0091 mg/kg equiv. for leg muscle, 0.033 mg/kg equiv. for abdominal fat and 0.032 mg/kg equiv. for body fat.

Table 14 Total radioactive residues in eggs after dosing with <sup>14</sup>C-M700F048

| Sample             | Sampling Time | TRR (mg/kg equiv.) | % Dose |
|--------------------|---------------|--------------------|--------|
| Application day 1  | Day 1         | 0.002              | 0.000  |
| Application day 2  | Day 2         | 0.014              | 0.004  |
| Application day 3  | Day 3         | 0.022              | 0.006  |
| Application day 4  | Day 4         | 0.032              | 0.010  |
| Application day 5  | Day 5         | 0.046              | 0.014  |
| Application day 6  | Day 6         | 0.057              | 0.018  |
| Application day 7  | Day 7         | 0.057              | 0.018  |
| Application day 8  | Day 8         | 0.062              | 0.020  |
| Application day 9  | Day 9         | 0.061              | 0.018  |
| Application day 10 | Day 10        | 0.062              | 0.020  |
| Application day 11 | Day 11        | 0.060              | 0.019  |
| Sum% Dose:         |               |                    | 0.147  |

Table 15 Total radioactive residues in organs and tissues after dosing with <sup>14</sup>C-M700F048

| Matrix <sup>a</sup> | TRR <sup>b</sup> measured (mg/kg equiv.) | TRR <sup>c</sup> calculated (mg/kg equiv.) |
|---------------------|------------------------------------------|--------------------------------------------|
| Liver               | 0.181                                    | 0.187                                      |
| Chest Muscle        | 0.0086                                   | 0.0079                                     |
| Leg Muscle          | 0.0104                                   | 0.0091                                     |
| Abdominal Fat       | 0.032                                    | 0.033                                      |
| Body Fat            | 0.031                                    | 0.032                                      |
| Blood               | 0.022                                    | NS                                         |

| Matrix <sup>a</sup> | TRR <sup>b</sup> measured<br>(mg/kg equiv.) | TRR <sup>c</sup> calculated<br>(mg/kg equiv.) |
|---------------------|---------------------------------------------|-----------------------------------------------|
| GI tract (Skin)     | 0.142                                       | NS                                            |
| GI tract (Contents) | 0.910                                       | NS                                            |

<sup>a</sup> Pooled sample from organs or tissues of all animals

<sup>b</sup> Determined by direct measurement (LSC after dissolving or combustion with subsequent LSC)

<sup>c</sup> Total Radioactive Residue (TRR) calculated as sum of extracts + Post Extraction Solid (PES). If more than one workup was done, the first workup was taken for TRR calculation. The TRR calculated was used as reference for 100% TRR (in all workups)

The extractability of radioactive residues with methanol was  $\geq 87.3\%$  of the TRRs, except in liver. In liver, up to 63.2% of the TRRs could be extracted with methanol. Additional residues were solubilized with protease/pronase, simulated gastric fluid and simulated intestinal fluid treatment (resulting in 9.5–17.6% of the TRRs in the solubilizates). Characterisation of the solubilizates of the liver extracted residues demonstrated the presence of multiple polar components. Solvent extraction (and enzyme treatment) led to further residue characterization of 1.4–12.7% of the TRRs.

Table 16 Identified components in hen matrices after dosing with <sup>14</sup>C-M700F048 at 12 mg/kg feed for 11 days

| Component Structure                                                            | Eggs                   | Liver                        | Chest Muscle           | Leg Muscle             | Belly Fat              | Body Fat               | Excreta                      |
|--------------------------------------------------------------------------------|------------------------|------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------------|
|                                                                                | mg/kg equiv.<br>(%TRR) | mg/kg equiv.<br>(%TRR)       | mg/kg equiv.<br>(%TRR) | mg/kg equiv.<br>(%TRR) | mg/kg equiv.<br>(%TRR) | mg/kg equiv.<br>(%TRR) | mg/kg equiv.<br>(%TRR)       |
| M700F048                                                                       | 0.001<br>(2.0)         | 0.004<br>(2.2)               | 0.0003<br>(3.7)        | 0.0003<br>(3.0)        | 0.0005<br>(1.4)        | 0.0010<br>(3.2)        | 2.429<br>(48.8)              |
| M700F009                                                                       | 0.004<br>(6.0)         | 0.012<br>(6.5)               | 0.0003<br>(4.0)        | 0.0003<br>(3.6)        | N.O. <sup>a</sup>      | 0.0005<br>(1.7)        | 0.479<br>(9.6)               |
| M700F010                                                                       | 0.001<br>(1.0)         | 0.003<br>(1.6)               | 0.0001<br>(1.0)        | 0.0001<br>(0.7)        | N.O.                   | N.O.                   | 0.047<br>(0.9)               |
| M700F008                                                                       | 0.047<br>(77.9)        | 0.042<br>(22.6)              | 0.0052<br>(66.8)       | 0.0067<br>(73.2)       | 0.0316<br>(96.0)       | 0.0291<br>(90.1)       | 0.765<br>(15.4)              |
| M700F047                                                                       | 0.001<br>(1.6)         | 0.019<br>(10.0)              | 0.0002<br>(2.0)        | 0.0002<br>(2.0)        | N.O.                   | N.O.                   | N.O.                         |
| M700F047/M700F136 (isomers)                                                    | N.O.                   | N.O.                         | N.O.                   | N.O.                   | N.O.                   | N.O.                   | 0.600 <sup>b</sup><br>(12.0) |
| Other unidentified HPLC components<br>N.A.                                     | 0.001<br>(0.9)         | 0.029<br>(15.7)              | 0.0005<br>(6.1)        | 0.0002<br>(2.4)        | 0.0009<br>(2.7)        | N.O.                   | 0.259<br>(5.2)               |
| Water Extract                                                                  | N.O.                   | 0.008 (4.5)                  | N.O.                   | N.O.                   | N.O.                   | N.O.                   | N.O.                         |
| Isohexane Phase                                                                | N.O.                   | 0.002 (1.2)                  | 0.0001<br>(0.8)        | 0.0001<br>(1.0)        | 0.0003<br>(0.8)        | 0.0002<br>(0.5)        | N.O.                         |
| Protease/Pronase solubilizate                                                  | N.O.                   | 0.021 <sup>c</sup><br>(11.4) | N.O.                   | N.O.                   | N.O.                   | N.O.                   | N.O.                         |
| Unextractable Residue                                                          | 0.006<br>(9.7)         | 0.039<br>(20.9)              | 0.0010<br>(12.7)       | 0.0009<br>(10.0)       | 0.0006<br>(1.7)        | 0.0005<br>(1.4)        | 0.303<br>(6.1)               |
| Total Identified and Characterised<br>from Extractable Radioactive<br>Residues | 0.059<br>(99.1)        | 0.178<br>(96.7)              | 0.0076<br>(97.1)       | 0.0087<br>(95.8)       | 0.0337<br>(102.6)      | 0.0313<br>(96.9)       | 4.882<br>(98.0)              |

<sup>a</sup> N.O.: Metabolite not seen in this tissue.

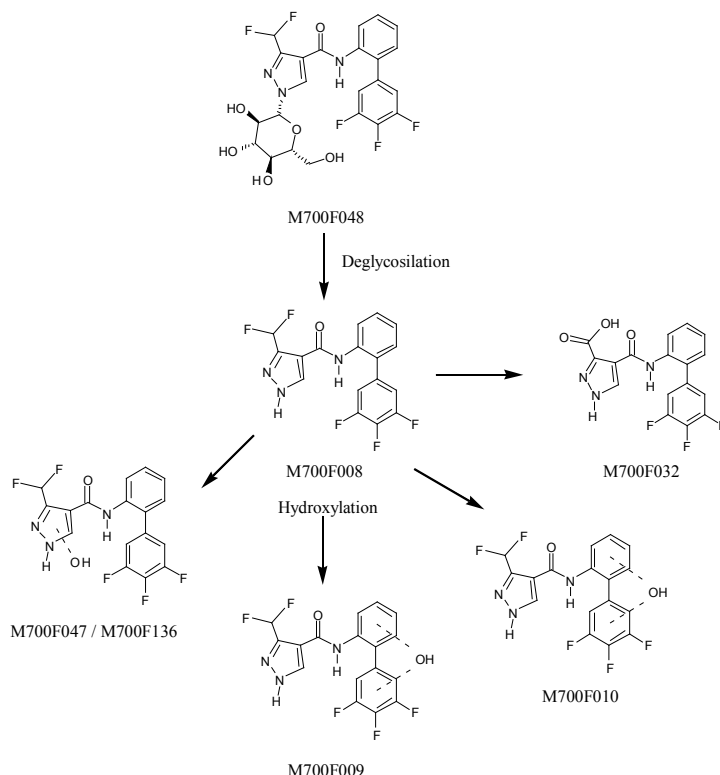
<sup>b</sup> Found at an M700F047/M700F136 ratio of 84:16

<sup>c</sup> 72.8% of the protease solubilizate remained behind in the water phase after partitioning with various organic solvents which removed up to 4.9% of the radiation in the water extract. Three minor polar metabolites were separated by HPLC of the water phase but they could not be identified.

The unchanged test item M700F048 accounted for 48.8% of the TRRs in excreta, whereas it was present in only minor amounts in eggs and tissues (< 4% of the TRRs). The main metabolite in eggs and all tissues was the deglycosilated component M700F008, accounting for  $\geq 66.8\%$  of the TRRs (except in liver, where it accounted for 22.6% of the TRRs). Metabolites M700F047 (/M700F136) and M700F009 were identified in excreta, egg, liver, chest muscle and leg muscle. In body fat, only M700F009 was identified. The amount of the metabolites M700F047 (/M700F136) and

M700F009 ranged from a minimum of 1.7% of the TRRs (M700F009 in body fat) to a maximum of 12.0% of the TRRs (M700F047/M700F136 in excreta). Metabolite M700F010 was the least abundant component identified (present in all matrices except fat) and was found at up to 1.6% of the TRRs (liver).

The results show that M700F048 is metabolised in hens mainly by the splitting-off of the sugar moiety. All metabolites identified in edible matrices (M700F008, M700F047, M700F009 and M700F010) were also found upon administration of M700F048 to rats (2009/1074686). Metabolites M700F136 and M700F032 (identified in excreta, M700F032 only in trace amounts) are isomers of M700F047 and M700F046, respectively, which were also found in rats upon M700F048 administration.



\*Trace amounts of M700F032 were identified by HPLC-MS in excreta

Figure 4 Proposed metabolic pathways of M700F048

### Summary of animal metabolism

Rat and goat metabolism studies were carried out with aniline and pyrazole labels and for hen, aniline label only. In the goat metabolism studies, fluxapyroxad represented one of the major residues in milk (13.0–19.8% of the TRRs), muscle (12.0%, aniline label only) and fat (34.1–43.6% of the TRRs), while accounting for minor proportions in liver and kidney (3.2–7.0% of the TRRs). The other predominant compound was the desmethyl metabolite M700F008, representing a main proportion in milk (23.9–25.4% of the TRRs), muscle (54.7–82.9% of the TRRs), fat (25.8–25.9% of the TRRs), liver (12.8–16.7% of the TRRs) and kidney (22.5–25.6% of the TRRs).

In the hen metabolism study, fluxapyroxad represented one of the major residues in egg (13.5% of the TRRs, 0.009 mg/kg), leg muscle (17.6% of the TRRs, 0.0011 mg/kg equiv.), fat (63.3% of the TRRs, 0.023 mg/kg equiv.), and was observed in minor amounts in liver (1.0% of the TRRs, 0.002 mg/kg equiv.). The other predominant compound was the desmethyl metabolite M700F008,

representing a main proportion in egg (49.9% of the TRRs, 0.033 mg/kg equiv.), leg muscle (together with M700F016 amounting to 25.7% of the TRRs, 0.0016 mg/kg equiv.), and fat (25.3% of the TRRs, 0.009 mg/kg equiv.). M700F008 was detected at minor amounts (4%) in liver (0.009 mg/kg equiv.).

The metabolic pathways of fluxapyroxad in rats, goats and poultry were similar. The metabolism of fluxapyroxad mainly proceeds *via* hydroxylation at the biphenyl moiety, loss of a fluorine atom at the biphenyl ring, conjugation of the hydroxyl groups with glucuronic acid and demethylation at the pyrazole ring. Additionally, conjugates with glutathione derivatives were identified in rat and hen metabolism. The metabolism of rats was more complex than the metabolism of goats and hens, with a much larger number of metabolites observed.

### Plant metabolism

The metabolism of fluxapyroxad in soya beans, tomato and wheat was investigated. For the aniline label studies, the test item was a mixture of aniline-U- $C^{14}$ -fluxapyroxad and aniline-N $^{15}$ , pyrazole-1,2-N $^{15}$ -fluxapyroxad. For the pyrazole studies, the test item was a mixture of pyrazole-4- $C^{14}$ -fluxapyroxad with unlabelled fluxapyroxad.

#### Soya bean

Aniline or pyrazole labelled fluxapyroxad was applied by foliar methods to soya beans at a rate of  $3 \times 60$  g ai/ha (Bretz *et al.* 2009, 2009/1017387). Applications were made at BBCH 16/17, 51–59 and 71–75. Samples of soya bean forage were taken after the first application (0 days after treatment; DAT) and immediately before the third application (21 days after the first treatment; 14 days after the second treatment). Soya bean hay, straw, hull and seed were harvested at BBCH 89, approximately a month after the third application.

The total radioactive residues (TRRs) are summarized below in Table 17. Comparable levels of radioactivity were found in matrices from the application of the two labelled forms. The TRRs in forage sampled directly after the first treatment (0 DAT) accounted for 6.413 mg/kg equiv. and 4.368 mg/kg equiv. (aniline and pyrazole label, respectively). Directly before the last application (21 DAT), the TRRs in forage accounted for 5.091 mg/kg equiv. and 4.665 mg/kg equiv. The highest levels of TRRs were found in soya bean hay (22–34 DALA), amounting to 61.238 mg/kg equiv. for the aniline label and 54.294 mg/kg equiv. for the pyrazole label. In soya bean straw (34 DALA), residue levels of 1.006 mg/kg equiv. and 0.837 mg/kg equiv. were found, and soya bean hull contained 2.737 mg/kg equiv. and 2.237 mg/kg equiv. (aniline and pyrazole label, respectively). In soya bean seed, the residue levels were much lower, accounting for 0.115 mg/kg equiv. (aniline label) and 0.260 mg/kg equiv. (pyrazole label), respectively. The higher residue levels in hay compared to forage was proposed to be due to the loss of water.

Table 17 Total radioactive residues in soya bean samples following foliar applications of fluxapyroxad

| Matrix | Sampling interval * | Aniline label                                       |                                   | Pyrazole label                                      |                                   |
|--------|---------------------|-----------------------------------------------------|-----------------------------------|-----------------------------------------------------|-----------------------------------|
|        |                     | TRRs determined by direct combustion (mg/kg equiv.) | TRRs calculated (mg/kg equiv.) ** | TRRs determined by direct combustion (mg/kg equiv.) | TRRs calculated (mg/kg equiv.) ** |
| Forage | 0 DAT               | 8.828                                               | 6.413                             | 5.890                                               | 4.368                             |
| Forage | 21 DAT              | 4.124                                               | 5.091                             | 6.087                                               | 4.665                             |
| Hay    | 22-34 DALA          | 64.166                                              | 61.238                            | 60.660                                              | 54.294                            |
| Straw  | 34 DALA             | 1.238                                               | 1.006                             | 0.850                                               | 0.837                             |
| Hull   | 34 DALA             | 3.298                                               | 2.737                             | 2.180                                               | 2.237                             |
| Seed   | 34 DALA             | 0.114                                               | 0.115                             | 0.242                                               | 0.260                             |

\* DAT = Days after treatment; DALA = Days After Last Application (or PHI = Pre-Harvest Interval); 34 DALA = 55 days after the first treatment.

\*\* Sum of extractable residues (methanol extract and water extract) and PES

In general, the extractability of the radioactive residues with methanol and water was high for soya bean forage, hay and straw (> 93% of the TRRs) and only slightly lower for hull and seed (> 77% of the TRRs). The majority of the radioactive residues was extracted with methanol, and only minor portions were extracted with water. The PES left after solvent extraction were < 7% of the TRRs for forage, hay and straw, ~20% of the TRRs for soya bean hull, and 22.3% and 7.7% of the TRRs (aniline label and pyrazole label, respectively) for seed.

Metabolites identified are summarized below in Table 18. Parent compound represented the main component in all soya bean matrices (53.9–97.7% of the TRRs) except for seed (7.4–21.2% of the TRRs). The main transformation product in seed was the metabolite M700F002 (33.4% of the TRRs) resulting from cleavage of fluxapyroxad and thus only detectable with the pyrazole label. This metabolite was also found in hulls (2.0% of the TRRs). The N-glucoside M700F048 was present in all matrices (8.8–19.9% of the TRRs in seed, 0.6–3.1% in other soya bean matrices). Another peak was assigned to metabolite M700F008/M700F006 (0.2–5.4% of the TRRs). In addition, several minor, non-quantifiable metabolites were identified in hay.

Table 18 Metabolites detected in soya bean matrices after foliar treatment with fluxapyroxad

| Soya bean Matrix | Fluxapyroxad |       | M700F002 *           |       | M700F048     |       |
|------------------|--------------|-------|----------------------|-------|--------------|-------|
|                  | mg/kg equiv. | % TRR | mg/kg equiv.         | % TRR | mg/kg equiv. | % TRR |
| Aniline label    |              |       |                      |       |              |       |
| Forage 0 DAT     | 6.264        | 97.7  | Not detected         |       | Not detected |       |
| Forage 21 DAT    | 4.774        | 93.8  |                      |       | 0.032        | 0.6   |
| Hay              | 54.259       | 88.6  |                      |       | 0.994        | 1.6   |
| Straw            | 0.931        | 92.5  |                      |       | 0.008        | 0.8   |
| Hull **          | 1.755        | 64.1  |                      |       | 0.071        | 2.6   |
| Seed             | 0.024        | 21.2  |                      |       | 0.023        | 19.9  |
| Pyrazole label   |              |       |                      |       |              |       |
| Forage 0 DAT     | 4.264        | 97.6  | Not detected         |       | Not detected |       |
| Forage 21 DAT    | 4.277        | 91.7  |                      |       | 0.056        | 1.2   |
| Hay              | 46.932       | 86.4  |                      |       | 1.188        | 2.2   |
| Straw            | 0.749        | 89.5  |                      |       | Not detected |       |
| Hull             | 1.207        | 53.9  | 0.045 (0.019)<br>*** | 2.0   | 0.071        | 3.1   |
| Seed             | 0.019        | 7.4   | 0.087 (0.037)<br>*** | 33.4  | 0.023        | 8.8   |

\* The metabolite M700F002 is only detectable with the pyrazole label

\*\* In the case of soya bean hull, the sum of identified components in the extracted residues and those in PES

\*\*\* Values in brackets: re-calculated using the actual molecular weight of the metabolite M700F002

The proposed metabolic pathways of fluxapyroxad in soya bean (Figure 5) are mainly by demethylation of the pyrazole moiety, hydroxylation of the biphenyl moiety, and hydroxylation of the methyl group at the pyrazole ring. These derivatives subsequently conjugate with glucose and malonic acid. Furthermore, specifically in seeds, significant amounts of M700F002, a metabolite known to be generated by cleavage of the carboxamide bond of fluxapyroxad in the soil, were detected. The absence of any cleavage products carrying the aniline label suggested that M700F002 is generated by cleavage of fluxapyroxad in the soil and subsequent uptake into the plant rather than by cleavage in the plant.

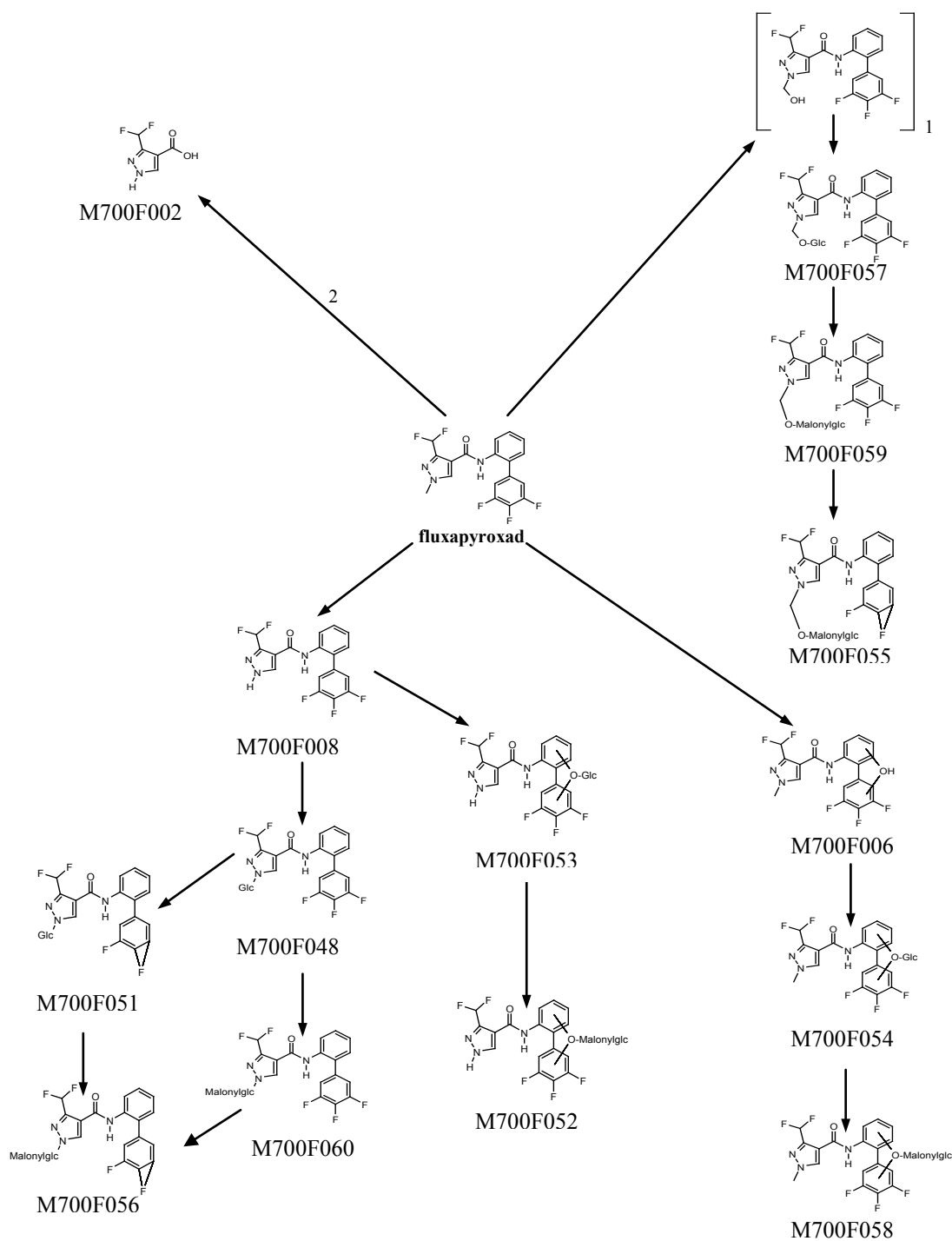


Figure 5 Proposed metabolic pathways of fluxapyroxad in soya beans

### Tomatoes

Aniline or pyrazole labelled fluxapyroxad was applied by foliar methods to tomatoes at a rate of  $3 \times 100$  g ai/ha (Rabe and Kuhnke 2009, 2009/1017901). Applications took place 17, 10 and 3 days before harvest (55, 62 and 69 days after planting). Ripe tomato fruit were sampled 3 days after the last treatment. Other green parts of the plants (stem, panicles and leaves - referred to as tomato leaves) were also sampled.

The TRRs are summarized below in Table 19. TRRs of 6.703 mg/kg equiv. (aniline label) and 4.456 mg/kg equiv. (pyrazole label) were found in tomato leaves, and TRRs of 0.166 mg/kg equiv. (aniline label) and 0.112 mg/kg equiv. (pyrazole label) were found in tomato fruits.

Table 19 Total radioactive residues (TRRs) in tomato samples following foliar application of fluxapyroxad

| Matrix        | DALA* | Aniline label                            |                                  | Pyrazole label                           |                                  |
|---------------|-------|------------------------------------------|----------------------------------|------------------------------------------|----------------------------------|
|               |       | TRRs by direct combustion (mg/kg equiv.) | TRRs calculated (mg/kg equiv.)** | TRRs by direct combustion (mg/kg equiv.) | TRRs calculated (mg/kg equiv.)** |
| Tomato leaves | 3     | 6.734                                    | 6.703                            | 4.429                                    | 4.456                            |
| Tomato fruits | 3     | 0.160                                    | 0.166                            | 0.115                                    | 0.112                            |

\* DALA = Days after Last Application

\*\* Sum of ERR (methanol extract and water extract) and RRR (extraction residue)

The extractability of radioactive residues with methanol and water was > 98% of the TRRs in tomato leaves and fruits. Thus, the residual radioactive residues were low, being < 1.7% of the TRRs for both matrices.

Metabolites observed are summarized below in Table 20. Fluxapyroxad was the only compound observed at levels > 10% of the TRRs in tomato matrices, amounting to > 94% of the TRRs in tomato fruits and > 90% of the TRRs in tomato leaves. In addition, minor amounts of the desmethyl metabolite M700F008 were identified (1.4% of the TRRs in fruits, aniline label only; 2.7% and 2.8% of the TRRs in leaves, aniline and pyrazole label, respectively). Minor amounts of the N-glucoside M700F048 were detected in leaves (0.8% of the TRRs, aniline label only). In extracts of leaves, two putative metabolite structures were assigned to a further peak (1.4% of the TRRs, 0.097 mg/kg equiv., aniline label and 0.1% of the TRRs, 0.004 mg/kg equiv., pyrazole label): M700F075 representing an O-glucoside and M700F076 representing a cysteine conjugate at the aniline moiety.

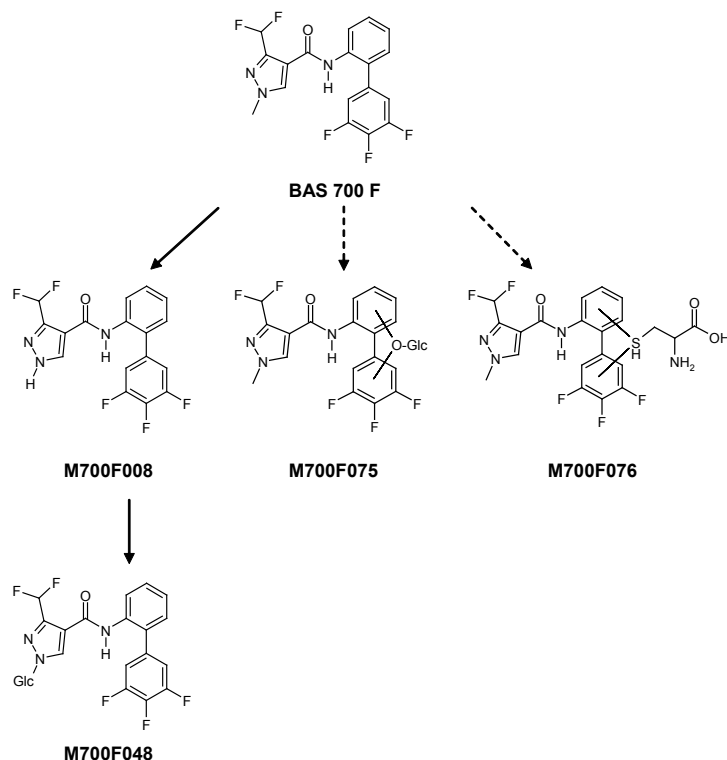
Table 20 Metabolites detected in tomato leaves and fruits following foliar treatment with fluxapyroxad

| Metabolite          | Tomato leaves (3 DALA *) |       | Tomato fruits (3 DALA *) |       |
|---------------------|--------------------------|-------|--------------------------|-------|
|                     | mg/kg equiv.             | % TRR | mg/kg equiv.             | % TRR |
| Aniline label       |                          |       |                          |       |
| Fluxapyroxad        | 6.039                    | 90.1  | 0.156                    | 94.4  |
| M700F075 / M700F076 | 0.097                    | 1.4   | ND**                     | ND    |
| M700F048            | 0.050                    | 0.8   | ND                       | ND    |
| M700F008            | 0.179                    | 2.7   | 0.002                    | 1.4   |
| Pyrazole label      |                          |       |                          |       |
| Fluxapyroxad        | 4.099                    | 92.0  | 0.111                    | 98.5  |
| M700F075 / M700F076 | 0.004                    | 0.1   | ND                       | ND    |
| M700F008            | 0.123                    | 2.8   | ND                       | ND    |

\* Days After Last Application

\*\* Not detected

The proposed metabolic pathway for fluxapyroxad in tomatoes is shown below in Figure 6. In both tomato leaves and fruits, metabolite M700F008, resulting from demethylation of the pyrazole moiety of fluxapyroxad, was observed. Subsequent conjugation resulted in several minor metabolites present in leaves, but not in fruits. M700F048 resulted from N-glucosidation at the pyrazole moiety. The putative structure of M700F075 would result from O-glucosylation (biphenyl moiety) and the putative structure of M700F076 from conjugation with a cysteine group (biphenyl moiety). The investigation of metabolite patterns did not indicate any label-specific metabolites (in contrast to soya beans).



Dotted arrows: putative routes

Figure 6 Proposed metabolic pathways of fluxapyroxad (BAS 700 F) in tomatoes

#### Wheat - Foliar treatment

Aniline or pyrazole labelled fluxapyroxad was applied by foliar methods to spring wheat (*Thassos*) at a rate of  $2 \times 125$  g ai/ha (Bross and Kuhnke 2009, 2009/1048403). Applications were made at BBCH 30/35 and 69. Wheat forage samples were collected 36 days after the first application at BBCH 59. Wheat hay was sampled at 4 DALA (BBCH 73–75); straw, chaff and grain samples were collected at 34 and 35 DALA for the aniline and pyrazole label, respectively (BBCH 89).

The TRRs in wheat samples are summarized below in Table 21. The TRRs in wheat forage (BBCH 59; 36 days after the first application) accounted for 0.885 mg/kg equiv. for the aniline label and 1.057 mg/kg equiv. for the pyrazole label. In wheat hay (BBCH 73–75; 4 DALA), residue levels of 10.211 mg/kg equiv. for the aniline label and 10.318 mg/kg equiv. for the pyrazole label were found. The TRRs in wheat straw at harvest (BBCH 89) amounted to 19.291 mg/kg equiv. for the aniline label (34 DALA) and 17.398 mg/kg equiv. for the pyrazole label (35 DALA). In wheat chaff, TRRs of 6.733 mg/kg equiv. for the aniline label (34 DALA) and 7.396 mg/kg equiv. for the pyrazole label (35 DALA) were detected. The TRRs in wheat grain accounted for 0.045 mg/kg equiv. for the aniline label (34 DALA) and 0.057 mg/kg equiv. for the pyrazole label (35 DALA). In general, the TRRs in various matrices were comparable for both labels.

Table 21 Total radioactive residues in wheat after foliar application of fluxapyroxad

| Matrix        | DALA *  | TRRs determined by direct combustion (mg/kg equiv.) | TRRs calculated (mg/kg equiv.)** |
|---------------|---------|-----------------------------------------------------|----------------------------------|
| Aniline label |         |                                                     |                                  |
| Forage        | -13 *** | 1.816                                               | 0.885****                        |
| Hay           | 4       | 9.408                                               | 10.211                           |
| Straw         | 34      | 20.215                                              | 19.291                           |
| Chaff         | 34      | 6.794                                               | 6.733                            |
| Grain         | 34      | 0.045                                               | 0.045                            |

| Matrix         | DALA *  | TRRs determined by direct combustion (mg/kg equiv.) | TRRs calculated (mg/kg equiv.)** |
|----------------|---------|-----------------------------------------------------|----------------------------------|
| Pyrazole label |         |                                                     |                                  |
| Forage         | -13 *** | 1.215                                               | 1.057                            |
| Hay            | 4       | 8.688                                               | 10.318                           |
| Straw          | 35      | 19.342                                              | 17.398                           |
| Chaff          | 35      | 7.220                                               | 7.396                            |
| Grain          | 35      | 0.059                                               | 0.057                            |

\* DALA = Days after Last Application

\*\* Sum of extracted residues (methanol extract and water extract) and PES

\*\*\* Forage was sampled 36 days after 1st application and 13 days prior to second application, i.e. forage samples received only one application.

\*\*\*\* When sample was re-analysed after 16 months as part of the storage stability investigation the calculated TRR was found to be 1.743 mg/kg which is much closer to the combustion value.

The extractability of the radioactive residues with methanol and water was 87.7–97.7% for wheat forage, hay, straw and chaff, and 75.5–84.6% for wheat grain. The majority of the radioactive residues was extracted with methanol, leaving minor portions for a subsequent extraction with water. The residual radioactive residues (RRR) were < 6% of the TRRs for forage, hay and straw, < 13% of the TRRs for chaff, and 15.4–24.5% of the TRRs for grain.

Fluxapyroxad (parent) was the only compound observed at levels > 10% of the TRRs in wheat matrices, amounting to 60.2% to 91.3% of the TRRs (Table 22). The group of metabolites M700F008, M700F043, M700F041 and M700F006 was found to occur in all matrices as the second most abundant peak, representing 2.4–6.5% of the TRRs. Several other minor metabolites were identified occurring at ≤ 1.2% of the TRRs.

Table 22 Summary of identified components in wheat matrices after treatment with <sup>14</sup>C-fluxapyroxad

| Metabolite                              | Wheat matrix* |       |              |       |                    |       |              |       |              |       |
|-----------------------------------------|---------------|-------|--------------|-------|--------------------|-------|--------------|-------|--------------|-------|
|                                         | Forage **     |       | Hay          |       | Straw              |       | Chaff        |       | Grain        |       |
|                                         | mg/kg equiv.  | % TRR | mg/kg equiv. | % TRR | mg/kg equiv.       | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR |
| Aniline label                           |               |       |              |       |                    |       |              |       |              |       |
| M700F074                                | 0.002         | 0.3   | 0.023        | 0.2   | 0.060              | 0.3   | 0.028        | 0.4   | ND           | ND    |
| M700F058                                | 0.003         | 0.3   | 0.021        | 0.2   | 0.050              | 0.3   | 0.017        | 0.3   | ND           | ND    |
| M700F131/M700F041/<br>M700F130/M700F058 | ND            | ND    | ND           | ND    | 0.041              | 0.2   | ND           | ND    | 0.000        | 0.3   |
| M700F048/M700F057                       | 0.005         | 0.5   | 0.054        | 0.5   | 0.113              | 0.6   | 0.042        | 0.6   | ND           | ND    |
| M700F059/M700F060                       | 0.002         | 0.2   | 0.014        | 0.1   | 0.062              | 0.3   | 0.005        | 0.1   | ND           | ND    |
| M700F082                                | ND            | ND    | ND           | ND    | ND                 | ND    | 0.009        | 0.1   | ND           | ND    |
| M700F042/M700F024/<br>M700F005          | 0.002         | 0.3   | 0.033        | 0.3   | 0.134              | 0.7   | 0.041        | 0.6   | ND           | ND    |
| M700F008/M700F043/<br>M700F041/M700F006 | 0.037         | 4.2   | 0.248        | 2.4   | 0.546              | 2.8   | 0.421        | 6.2   | 0.003        | 6.5   |
| M700F134/M700F133                       | ND            | ND    | 0.026        | 0.3   | 0.052              | 0.3   | 0.025        | 0.4   | ND           | ND    |
| Fluxapyroxad                            | 0.808         | 91.3  | 9.124        | 89.4  | 16.15 <sub>8</sub> | 83.8  | 5.517        | 81.9  | 0.028        | 63.0  |
| Pyrazole label                          |               |       |              |       |                    |       |              |       |              |       |
| M700F007/M700F002                       | 0.005         | 0.5   | 0.031        | 0.3   | 0.084              | 0.5   | 0.039        | 0.5   | 0.000        | 0.5   |
| M700F001                                | ND            | ND    | 0.001        | 0.0   | 0.020              | 0.1   | 0.021        | 0.3   | ND           | ND    |
| M700F036/M700F132                       | 0.007         | 0.6   | 0.012        | 0.1   | ND                 | ND    | ND           | ND    | ND           | ND    |
| M700F074                                | 0.007         | 0.6   | 0.027        | 0.3   | 0.059              | 0.3   | 0.015        | 0.2   | ND           | ND    |
| M700F058                                | 0.012         | 1.2   | 0.042        | 0.4   | 0.075              | 0.4   | 0.009        | 0.1   | ND           | ND    |
| M700F131/M700F041/M700F130/M<br>700F058 | ND            | ND    | ND           | ND    | ND                 | ND    | ND           | ND    | 0.000        | 0.6   |
| M700F048/M700F057                       | 0.011         | 1.1   | 0.059        | 0.6   | 0.089              | 0.5   | 0.035        | 0.5   | ND           | ND    |
| M700F059/M700F060                       | ND            | ND    | 0.010        | 0.1   | 0.032              | 0.2   | ND           | ND    | ND           | ND    |
| M700F082                                | ND            | ND    | 0.014        | 0.1   | 0.039              | 0.2   | 0.016        | 0.2   | ND           | ND    |
| M700F042/M700F024/M700F005              | ND            | ND    | 0.059        | 0.6   | 0.122              | 0.7   | 0.050        | 0.7   | ND           | ND    |
| M700F008/M700F043/M700F041/M<br>700F006 | 0.061         | 5.8   | 0.346        | 3.3   | 0.644              | 3.7   | 0.427        | 5.8   | 0.004        | 6.5   |

| Metabolite        | Wheat matrix* |       |              |       |              |       |              |       |              |       |
|-------------------|---------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                   | Forage **     |       | Hay          |       | Straw        |       | Chaff        |       | Grain        |       |
|                   | mg/kg equiv.  | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR |
| M700F134/M700F133 | 0.000         | 0.0   | 0.024        | 0.2   | 0.070        | 0.4   | 0.047        | 0.6   | ND           | ND    |
| Fluxapyroxad      | 0.923         | 87.3  | 8.937        | 86.6  | 14.896       | 85.6  | 5.635        | 76.2  | 0.034        | 60.2  |

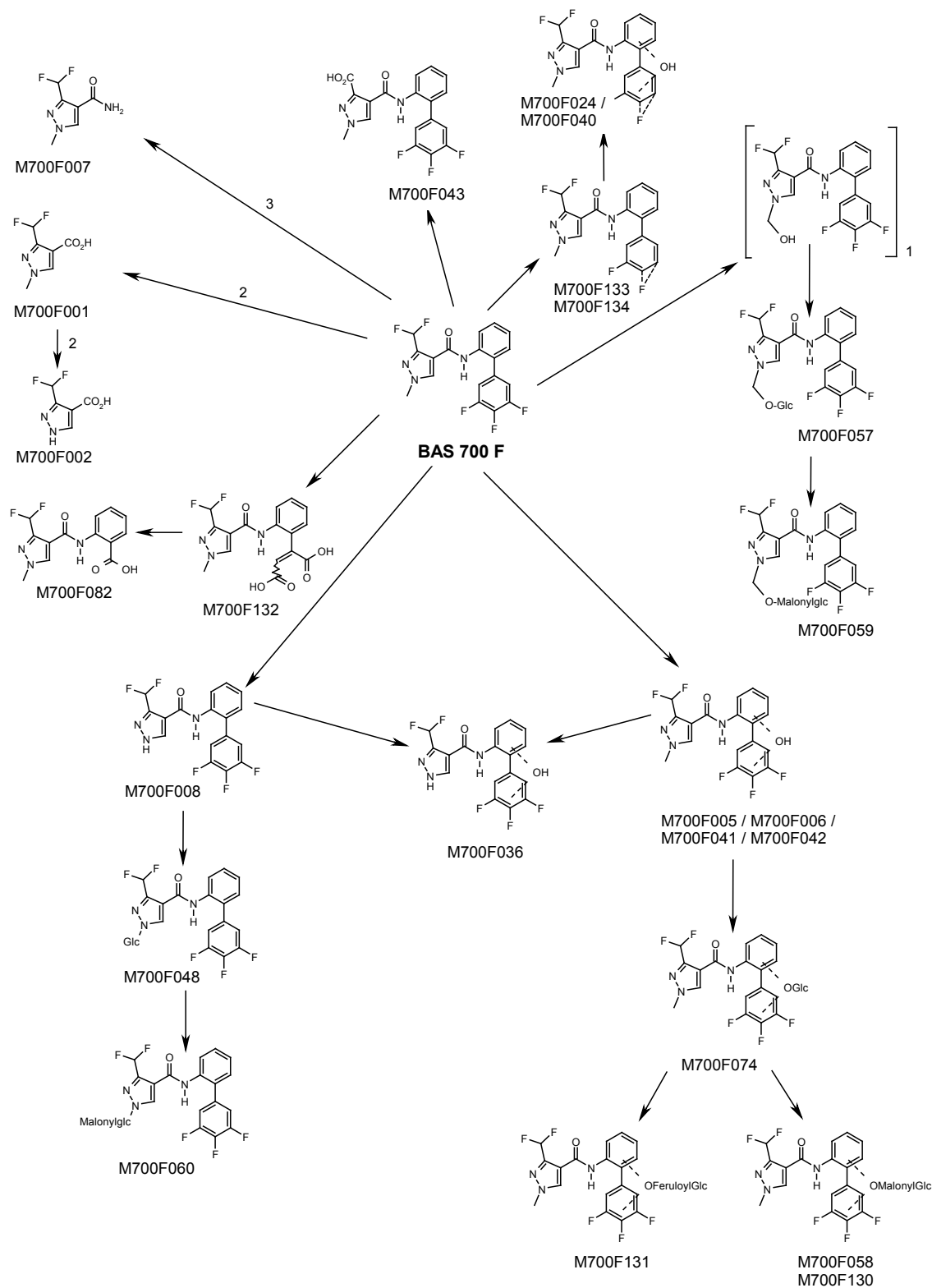
\* Added from extracted residues and the fractions solubilised from the PES

\*\* Forage was sampled 36 days after 1st application and 13 days prior to second application, i.e. forage samples received only one application

ND = not detected

The residual radioactive residues of wheat chaff and grain were characterised using a sequential solubilisation procedure. Each treatment released part of the residual radioactivity resulting in final residues of  $\leq 1.6\%$  of the TRRs. In chaff, the nature of solubilised residues after ammonia and enzyme treatments was investigated by HPLC. Mainly fluxapyroxad and already known or characterised metabolites were found. In grain, the solubilised residues after ammonia and macerozyme treatment were analysed by HPLC. No peaks above background were detected for the ammonia solubilisate. For the macerozyme solubilisate some very polar compounds (probably carbohydrates) were found.

The proposed metabolic pathways of fluxapyroxad in wheat (Figure 7) are mainly by N-demethylation of the pyrazole moiety, hydroxylation of the biphenyl moiety, combinations thereof and subsequent O- and N-conjugation reactions (glucose and/or malonic acid). Additional metabolites resulted from minor transformation reactions, the substitution of a fluorine atom, conversion of the CHF<sub>2</sub> group into a carboxyl group and hydroxylation followed by conjugation of the methyl group at the pyrazole. Low amounts of cleavage products were detected: M700F001 and M700F002 (metabolites generated by cleavage of fluxapyroxad in the soil), as well as M700F007 (generated in an irradiated water sediment study) were detected. Oxidative cleavage of the trifluorophenyl ring system led to M700F132 and M700F082.



<sup>1</sup> Proposed intermediate

<sup>2</sup> Transformation steps presumably occurring in soil

<sup>3</sup> Known from irradiated water sediment study

Figure 7 Proposed metabolic pathways of fluxapyroxad (BAS 700 F) in wheat

*Wheat - Seed treatment*

Aniline or pyrazole labelled fluxapyroxad was applied by seed treatment to spring wheat (*WS Thasos*) at a rate of 75 g ai/100 kg seed (equivalent to an application rate of 135 g ai/ha) (Grosshans *et al.* 2010, 2009/1112531). Wheat forage samples were collected at BBCH 59, wheat hay was sampled at BBCH 73–75 while straw, chaff and grain samples were collected at BBCH 89.

The TRRs in wheat samples are summarized below in Table 23. The TRRs in wheat forage (BBCH 59; 93 days after application) accounted for 0.285 mg/kg equiv. for the aniline label and 0.288 mg/kg equiv. for the pyrazole label. In wheat hay (BBCH 73–75; 112 DAA), residue levels of 1.115 mg/kg equiv. for the aniline label and 0.886 mg/kg equiv. for the pyrazole label were found. The TRRs in wheat straw at harvest (BBCH 89) amounted to 1.685 mg/kg equiv. for the aniline label (162 DAA) and 1.871 mg/kg equiv. for the pyrazole label (161 DAA). In wheat chaff, TRRs of 0.307 mg/kg equiv. for the aniline label (162 DAA) and 0.261 mg/kg equiv. for the pyrazole label (161 DAA) were detected. The TRRs in wheat grain accounted for 0.019 mg/kg equiv. for the aniline label (162 DAA) and 0.032 mg/kg equiv. for the pyrazole label (161 DAA). In general, the TRRs in various matrices were comparable for both labels.

Table 23 Total radioactive residues in wheat after seed treatment application of fluxapyroxad

| Matrix                | DAT * | TRRs determined by direct combustion (mg/kg equiv.) | TRRs calculated (mg/kg equiv.)** |
|-----------------------|-------|-----------------------------------------------------|----------------------------------|
| <b>Aniline label</b>  |       |                                                     |                                  |
| Forage                | 93    | 0.348                                               | 0.285                            |
| Hay                   | 112   | 1.075                                               | 1.115                            |
| Straw                 | 162   | 2.240                                               | 1.665                            |
| Chaff                 | 162   | 0.293                                               | 0.307                            |
| Grain                 | 162   | 0.020                                               | 0.019                            |
| <b>Pyrazole label</b> |       |                                                     |                                  |
| Forage                | 93    | 0.290                                               | 0.288                            |
| Hay                   | 112   | 1.173                                               | 0.886                            |
| Straw                 | 161   | 1.848                                               | 1.871                            |
| Chaff                 | 161   | 0.210                                               | 0.261                            |
| Grain                 | 161   | 0.033                                               | 0.032                            |

\* DAT = Days after treatment

\*\* Sum of extractable radioactive residues (methanol extract and water extract) and PES

The extractability of the radioactive residues with methanol and water was 87.7–95.9% for wheat forage, hay and straw, 74.1–80.2% for chaff, and 35.9–39.0% for wheat grain. The major part of the radioactive residues was extracted with methanol, leaving minor portions for a subsequent extraction with water. The residual radioactive residues (RRR) were < 13% of the TRRs for forage, hay and straw, < 26% of the TRRs for chaff and 61.0–64.1% of the TRRs for grain.

Fluxapyroxad (parent) was observed at 58.3% to 78.8% of the TRRs of forage, hay, straw and chaff and between 7.1–16.6% of the TRRs of grain (Table 24).

With the exception of M700F008 in wheat hay, no metabolite was present at levels > 10% of the TRRs in wheat matrices. M700F008 was observed in all matrices for both labels as the second most abundant peak, representing 2.4–10.6% of the TRRs. Other minor metabolites were identified occurring at ≤ 4.2% of the TRRs.

Table 24 Summary of identified components in wheat matrices after treatment with <sup>14</sup>C- fluxapyroxad

| Metabolite           | Wheat matrix* |       |              |       |              |       |              |       |              |       |
|----------------------|---------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                      | Forage        |       | Hay          |       | Straw        |       | Chaff        |       | Grain        |       |
|                      | mg/kg equiv.  | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR |
| <b>Aniline label</b> |               |       |              |       |              |       |              |       |              |       |
| M700F007             | ND            | ND    | ND           | ND    | ND           | ND    | ND           | ND    | ND           | ND    |
| M700F036             | 0.002         | 0.8   | 0.020        | 1.8   | 0.029        | 1.7   | ND           | ND    | ND           | ND    |
| M700F074             | 0.003         | 1.2   | 0.022        | 2.0   | 0.019        | 1.1   | 0.002        | 0.6   | ND           | ND    |

| Metabolite         | Wheat matrix* |       |              |       |              |       |              |       |              |       |
|--------------------|---------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|                    | Forage        |       | Hay          |       | Straw        |       | Chaff        |       | Grain        |       |
|                    | mg/kg equiv.  | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR | mg/kg equiv. | % TRR |
| M700F058           | 0.007         | 2.6   | 0.037        | 3.4   | 0.053        | 3.2   | ND           | ND    | ND           | ND    |
| M700F048/M700F057  | 0.006         | 2.0   | 0.022        | 2.0   | 0.038        | 2.3   | ND           | ND    | ND           | ND    |
| M700F059           | ND            | ND    | ND           | ND    | ND           | ND    | ND           | ND    | ND           | ND    |
| M700F042/ M700F005 | 0.004         | 1.5   | 0.011        | 1.0   | ND           | ND    | 0.002        | 0.7   | ND           | ND    |
| M700F008           | 0.026         | 9.0   | 0.118        | 10.6  | 0.133        | 8.0   | 0.029        | 9.5   | 0.0008       | 4.5   |
| Fluxapyroxad       | 0.225         | 78.8  | 0.789        | 70.8  | 1.052        | 63.1  | 0.217        | 70.6  | 0.0032       | 16.8  |
| Pyrazole label     |               |       |              |       |              |       |              |       |              |       |
| M700F007           | 0.003         | 1.1   | ND           | ND    | ND           | ND    | ND           | ND    | ND           | ND    |
| M700F036           | 0.005         | 1.6   | 0.017        | 1.9   | 0.042        | 2.3   | ND           | ND    | ND           | ND    |
| M700F074           | 0.006         | 2.2   | 0.019        | 2.1   | 0.045        | 2.4   | ND           | ND    | ND           | ND    |
| M700F058           | 0.010         | 3.3   | 0.032        | 3.6   | 0.079        | 4.2   | ND           | ND    | ND           | ND    |
| M700F048/M700F057  | 0.006         | 2.0   | 0.031        | 3.5   | 0.035        | 1.9   | ND           | ND    | ND           | ND    |
| M700F059           | 0.003         | 1.2   | 0.011        | 1.2   | 0.028        | 1.5   | ND           | ND    | ND           | ND    |
| M700F042/ M700F005 | 0.002         | 0.8   | 0.010        | 1.1   | ND           | ND    | ND           | ND    | ND           | ND    |
| M700F008           | 0.024         | 8.4   | 0.072        | 8.1   | 0.114        | 6.1   | 0.025        | 9.6   | 0.0007       | 2.2   |
| Fluxapyroxad       | 0.202         | 70.3  | 0.520        | 58.7  | 1.217        | 65.1  | 0.152        | 58.3  | 0.0023       | 7.1   |

\* Added from extracted residues and the fractions solubilised from the PES

ND = not detected

The radioactive residues left after solvent extraction (PES) of all matrices were characterised using a sequential solubilisation procedure. Treatment with aqueous ammonia solution released further portions of the radioactive residues which may have been incompletely extracted with methanol and water or associated with insoluble plant material (*e.g.*, with proteins). Additional portions were solubilised by incubation with various enzymes. These portions of the radioactive residues had possibly been associated with or embedded/ incorporated in insoluble cell wall carbohydrates. Due to low residues levels, no HPLC analyses of these extracts was performed or quantitatively evaluated. Further portions of radioactivity from chaff (aniline label) could be solubilised by microwave extraction. The metabolite pattern of the microwave extract was analysed by HPLC showing one peak corresponding to fluxapyroxad.

The proposed metabolic pathways of fluxapyroxad in wheat (Figure 8) after seed treatment are comparable to those observed for wheat, soya bean and tomatoes after foliar treatment. Main pathways observed include N-demethylation of the pyrazole moiety leading to M700F008, hydroxylation of the biphenyl moiety leading to M700F005 and M700F042 and N-glucosylation of the demethylated pyrazole moiety gave M700F048. Hydroxylated derivatives of fluxapyroxad were found to be conjugated with glucose (M700F057 and M700F074) and malonylglucose (M700F059 and M700F058). A derivative of fluxapyroxad which is demethylated at the pyrazole ring and hydroxylated at the biphenyl moiety is M700F036.

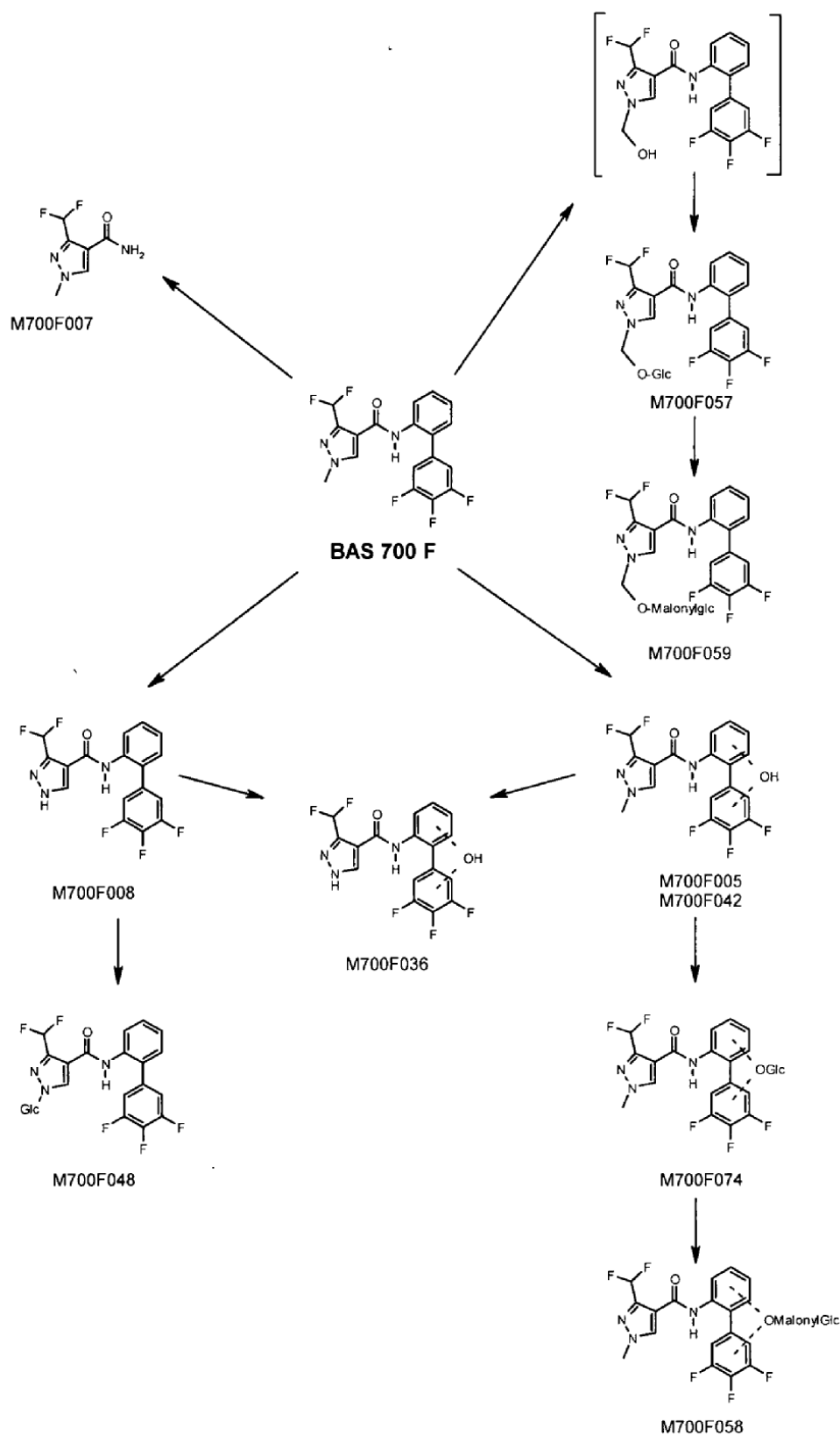


Figure 8 Proposed metabolic pathways of fluxapyroxad (BAS 700 F) in wheat after seed treatment

### *Summary of plant metabolism*

Soya bean, tomato, wheat (foliar treatment) and wheat (seed treatment) metabolism studies were carried out with aniline and pyrazole labels. Parent compound was generally the main component of the TRR. In the tomato and foliar wheat studies, parent was the only component observed at > 10% of the TRR. In tomatoes parent accounted for > 94% of the TRR in fruit and > 90% TRR in leaves. In wheat parent accounted for 60.2–91.3% of the TRR after foliar treatment and 58.3–78.8% TRR for forage, hay, straw and chaff after seed treatment, but only 7.1–16.6% TRR in grain after seed treatment. The group of metabolites M700F008, M700F043, M700F041 and M700F006 was found to occur in all wheat matrices after foliar treatment as the second most abundant peak, representing 2.4–6.5% of the TRRs. After seed treatment, M700F008 was observed in all wheat matrices for both labels as the second most abundant peak, representing 2.4–10.6% of the TRRs.

In the soya bean studies, parent accounted for 53.9–97.7% of the TRR in all matrices except seed, where it accounted for 7.4–21% of the TRR. The major metabolite in soya bean seed was M700F002 at 33% of the TRR (0.087 mg/kg equiv.) which is specific for the pyrazole label only. As the corresponding cleavage product was not observed for the aniline label, and M700F002 is known to be formed in the soil, it is likely that this metabolite was not formed in the plant. An additional metabolite, M700F048 accounted for 8.8–19.9% (0.023 mg/kg equiv.) of the TRR in soya bean seed.

Two plant metabolites which were not observed in the animal metabolism studies with fluxapyroxad were M700F002 and M700F048. For M700F048, separate goat and hen metabolism studies have confirmed that M700F048 follows the same route of metabolism as fluxapyroxad. Both fluxapyroxad and M700F048 are degraded to the common metabolite M700F008, followed by hydroxylation of the biphenyl moiety and conjugation steps. Separate goat and hen metabolism studies for M700F002 have shown that M700F002 is not significantly transformed in goat or hen.

### *Environmental fate in soil*

The Meeting received information on soil photolysis, aerobic and anaerobic soil metabolism, field dissipation and adsorption/desorption behaviour in different soils, confined rotational crops and field crop rotation. Only those studies relevant to the current evaluation are reported here.

#### *Soil photolysis*

The phototransformation of [pyrazole-<sup>14</sup>C]- and [aniline-<sup>14</sup>C]- fluxapyroxad was studied on loamy sand soil (pH 7.9, organic carbon 2.40%) for seven days at 20 ± 1 °C (Hassink 2009, 2009/1013342). The test item was added to soil in small steel dishes corresponding to a recommended field application rate of 150 g/ha. The dark controls were stored at 22 ± 1 °C. Sampling times were 0, 4, 6, 8, 12 and 15 days after treatment (DAT) for the pyrazole-labelled experiment and 0, 1, 2, 8, 10 and 15 DAT for the aniline-labelled experiment.

In the [pyrazole-<sup>14</sup>C]-fluxapyroxad study the concentration of the fluxapyroxad was determined to be in the range of 89–92% total applied radioactivity (TAR), 8–15 days after treatment. Small amounts of M700F001 were detected (maximum 2.8% TAR, 15 days after treatment). No significant degradation of fluxapyroxad occurred in the dark controls with 95% of TAR present at the end of the study.

In the [aniline-<sup>14</sup>C]-fluxapyroxad study the concentration of the fluxapyroxad was determined to be in the range of 91–97% TAR, 2–15 days after treatment. No significant degradation of fluxapyroxad occurred in the dark controls with 95–96% of TAR present between 2–15 days after treatment.

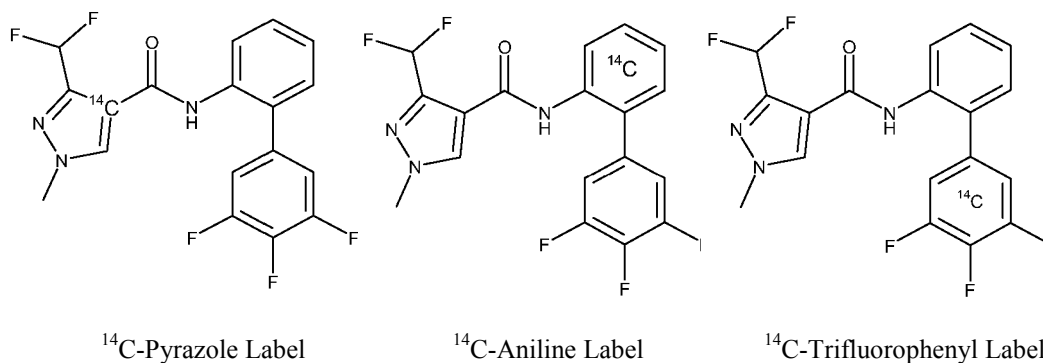
These results show that light has little influence on the behaviour and degradation of fluxapyroxad in soil.

#### *Aerobic soil metabolism*

Degradation of fluxapyroxad was studied under laboratory aerobic conditions in numerous soils from the USA and EU at various temperatures between 10 and 27 °C. In addition the degradation of the soil

metabolites M700F001 and M700F002 was studied in the same soil types. Application rates of radiolabelled fluxapyroxad to soils were 150 g/ ha (Unold and Bayer 2009, 2009/1050247; Unold and Staudenmaier 2009, 2009/1069339 and Ebert 2009, 2009/1004083) or 300 g/ ha (Malinsky 2010, 2009/7003246 and Ta 2010, 2009/7006123). The duration of these studies was 120 days, except for one study which ran for 360 days (Malinsky 2010, 2009/7003246).

The following three labels were used for these experiments.



Best fit  $\text{DT}_{50}$  and  $\text{DT}_{90}$  values for various soils determined using various kinetic models are shown in Table 25. Under aerobic laboratory conditions at 20–27 °C fluxapyroxad degrades at a moderate to slow rate with  $\text{DT}_{50}$  values ranging from 69 to 689 days. There was no apparent correlation between half-lives and soil characteristics of pH and organic carbon. Generally the  $\text{DT}_{90}$  values (> 120 to > 1000 days) and residues at the end of study periods indicated that fluxapyroxad has a potential for residue carry over in soil to the following cropping season if application is performed annually.

Cleavage of the carboxamide bridge produced M700F001, followed by demethylation to form M700F002. Both metabolites were observed at levels greater than 10% TAR in some soils and both declined over time. Laboratory aerobic soil degradation studies were conducted on both metabolites (Tables 26 and 27 respectively). Metabolite M700F001 degraded rapidly with  $\text{DT}_{50}$  values ranging from 2.3–9.3 days (Unold and Bayer 2009, 2009/1070321) while  $\text{DT}_{50}$  values for M700F002 ranged from 76.6–197.3 days (Unold and Bayer 2009, 2009/1070322). The duration of these studies was 120 days.

Table 25 Best fit  $\text{DT}_{50}$  and  $\text{DT}_{90}$  values for fluxapyroxad in aerobic soil (20 °C unless otherwise noted)

| SOIL                                                        | $\text{DT}_{50}$ (day) | $\text{DT}_{90}$ (day) | $\chi^2$ Error % | Model used | Reference                          |
|-------------------------------------------------------------|------------------------|------------------------|------------------|------------|------------------------------------|
| <i>[Pyrazole-4-<math>^{14}\text{C}</math>]-Fluxapyroxad</i> |                        |                        |                  |            |                                    |
| Idaho, USA [sandy loam; pH 6.9; OC 1.3%] - 25°C             | > 368                  | > 368                  | 2.26             | SFO        | Malinsky 2010, 2009/7003246        |
| Illinois, USA [loam; pH 5.4; OC 1.6%] - 25°C                | > 368                  | > 368                  | 3.40             | SFO        |                                    |
| New Jersey, USA [loam; pH 6.9; OC 1.3%] - 25°C              | 118                    | > 368                  | 3.61             | FOMC       |                                    |
| Wisconsin, USA [loamy sand; pH 6.4; OC 0.7%] - 25°C         | > 368                  | > 368                  | 4.39             | SFO        |                                    |
| Bruch West, Germany [sandy loam; pH 7.8; OC 2.20%]          | 68.8                   | 228.7                  | 2.0              | SFO        | Unold and Bayer 2009, 2009/1050247 |
| California, USA [sandy loam pH 7.6; OC 0.5%]                | > 120                  | > 120                  | 1.81             | SFO        | Ta 2010, 2009/7006123              |
| Georgia, USA [sandy loam; pH 6.9; OC 0.3%]                  | > 120                  | > 120                  | 5.96             | SFO        |                                    |
| Indiana, USA [loam; pH 6.4; OC 1.2%]                        | > 120                  | > 120                  | 3.03             | SFO        |                                    |
| North Carolina, USA [sandy loam; pH 5.9; OC 0.9%]           | > 120                  | > 120                  | 4.65             | SFO        |                                    |
| California, USA [sandy loam pH 7.6; OC 0.5%] - 27°C         | > 120                  | > 120                  | 1.52             | SFO        |                                    |
| Georgia, USA [sandy loam; pH 6.9; OC 0.3%] -                | > 120                  | > 120                  | 6.71             | SFO        |                                    |

| SOIL                                                      | DT <sub>50</sub> (day) | DT <sub>90</sub> (day) | χ <sup>2</sup> Error % | Model used | Reference                                    |
|-----------------------------------------------------------|------------------------|------------------------|------------------------|------------|----------------------------------------------|
| 27°C                                                      |                        |                        |                        |            | Ebert 2009,<br>2009/1004083                  |
| Indiana, USA [loam; pH 6.4; OC 1.2%] - 27°C               | > 120                  | > 120                  | 4.02                   | SFO        |                                              |
| North Carolina, USA [sandy loam; pH 5.9; OC 0.9%] - 27°C  | > 120                  | > 120                  | 6.04                   | SFO        |                                              |
| Arahal, Spain [silty clay loam; pH 8.1; OC 2.94%]         | 357.1                  | > 1000                 | 2.27                   | DFOP       |                                              |
| Kleve Keeken, Germany [loam; pH 7.4; OC 1.59%]            | 688.6                  | > 1000                 | 2.16                   | SFO        |                                              |
| Nierswalde, Germany [silt loam; pH 6.8; OC 1.68%]         | 598.8                  | > 1000                 | 1.09                   | DFOP       |                                              |
| Nierswalde, Germany [silt loam; pH 6.8; OC 1.68%] - 10°C* | 810.4                  | > 1000                 | 1.83                   | SFO        |                                              |
| <i>[Aniline-U-<sup>14</sup>C]-Fluxapyroxad</i>            |                        |                        |                        |            |                                              |
| Bruch West, Germany [sandy loam; pH 7.8; OC 2.20%]        | 71.9                   | 455.0                  | 1.0                    | FOMC       | Unold and Bayer 2009,<br>2009/1050247        |
| <i>[Trifluorophenyl-U-<sup>14</sup>C]</i>                 |                        |                        |                        |            |                                              |
| Bruch West, Germany [sandy loam; pH 8.0; OC 1.50%]        | 144                    | 478.4                  | 1.43                   | SFO        | Unold and Staudenmaier 2009,<br>2009/1069339 |

OC = Organic Carbon, SFO = Single Phase First Order, FOMC = First Order Multi Compartment, DFOP = Double First Order in Parallel

\*Formation of non-extractable radioactive residues appeared to have slowed at the lower incubation temperature.

Table 26 Best fit DT<sub>50</sub> and DT<sub>90</sub> values for M700F001 in aerobic soil

| SOIL                                                          | DT <sub>50</sub> (day) | DT <sub>90</sub> (day) | $\chi^2$ Error % | Model used | Reference                          |
|---------------------------------------------------------------|------------------------|------------------------|------------------|------------|------------------------------------|
| <i>Soil aerobic: [Pyrazole-4-<sup>14</sup>C]-Fluxapyroxad</i> |                        |                        |                  |            |                                    |
| Bruch West, Germany [sandy loam; pH 7.8; OC 2.20%]            | 10.0                   | 33.1                   | 25.1             | SFO        | Unold and Bayer 2009, 2009/1050247 |
| <i>Soil aerobic: [<sup>14</sup>C]-M700F001</i>                |                        |                        |                  |            |                                    |
| Li10, Germany [loamy sand pH 7.0; OC 1.0%]                    | 9.3                    | 30.7                   | 2.9              | SFO        | Unold and Bayer 2009, 2009/1070321 |
| LUFA 2.2, Germany [sand; pH 6.5; OC 1.7%]                     | 6.5                    | 21.5                   | 1.1              | SFO        |                                    |
| Wisconsin, USA [loamy sand; pH 6.4; OC 2.6%]                  | 2.3                    | 9.2                    | 3.1              | FOMC       |                                    |

OC = Organic Carbon, SFO = Single Phase First Order, FOMC = First Order Multi Compartment

Table 27 Best fit DT<sub>50</sub> and DT<sub>90</sub> values for M700F002 in aerobic soil

| SOIL                                              | DT <sub>50</sub> (day) | DT <sub>90</sub> (day) | $\chi^2$ Error % | Model used | Reference                          |
|---------------------------------------------------|------------------------|------------------------|------------------|------------|------------------------------------|
| <i>[<sup>14</sup>C]-M700F002</i>                  |                        |                        |                  |            |                                    |
| Li10, Germany [loamy sand pH 7.0; OC 1.0%]        | 167.5                  | 556.5                  | 2.2              | SFO*       | Unold and Bayer 2009, 2009/1070321 |
| LUFA 2.2, Germany [sand; pH 6.5; OC 1.7%]         | 147.5                  | 490.0                  | 2.1              | SFO*       |                                    |
| Wisconsin, USA [loamy sand; pH 6.4; OC 2.6%]      | 127.5                  | 423.5                  | 3.5              | SFO*       |                                    |
| Li10, Germany [loamy sand pH 7.0; OC 1.0%]        | 152.3                  | 566.9                  | 0.4              | DFOP       | Unold and Bayer 2009, 2009/1070322 |
| LUFA 2.2, Germany [sand; pH 6.5; OC 1.7%]         | 147.2                  | > 1000                 | 1.9              | FOMC       |                                    |
| Wisconsin, USA [loamy sand; pH 6.4; OC 2.6%]      | 76.6                   | > 1000                 | 2.2              | FOMC       |                                    |
| Bruch West, Germany [sandy loam; pH 8.0; OC 1.5%] | 197.3                  | > 1000                 | 2.0              | FOMC       |                                    |

FOMC = First Order Multi Compartment, SFO = Single Phase First Order, OC = Organic Carbon

\* M700F002 as metabolite - kinetic model of parent compound (M700F001) as given above

The first step in the degradation of fluxapyroxad in aerobic soil is hydrolytic cleavage of the carboxamide bond to form the N-methyl pyrazole carboxylic acid M700F001. This compound is not

stable in soil and is readily demethylated to the pyrazole carboxylic acid M700F002 which is finally mineralised to CO<sub>2</sub> or incorporated into bound residues.

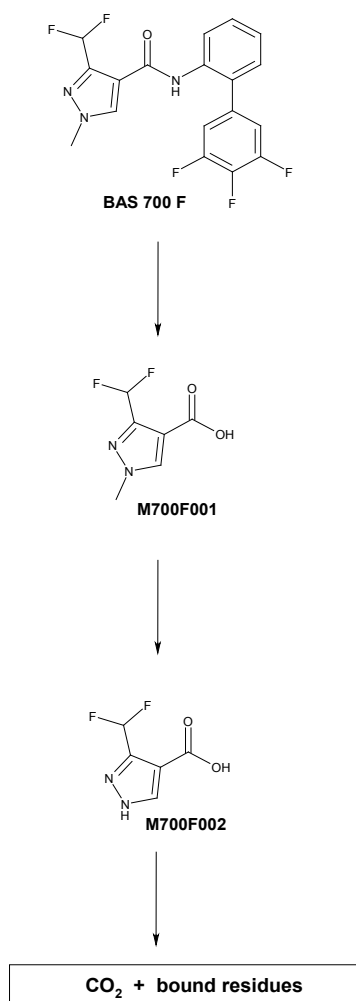


Figure 9 Proposed metabolic pathway for fluxapyroxad (BAS 700 F) in soil

#### *Field dissipation studies*

The degradation behaviour (field dissipation) of fluxapyroxad was investigated at six different European sites (Bayer 2009, 2009/1070324). An EC formulation was applied to bare soil in a single application at 124–127 g ai/ha using a target water volume of 300 L/ha (boom sprayer). Soil specimens were taken at intervals up to one year and down to a depth of up to 50 cm. Soil cores were cut into 10 cm sections. Soil segments of the same depth were pooled and homogenised and a representative sub-sample of each depth was taken for residue analysis. All soil specimens were frozen until analysis.

Soil specimens were analysed for fluxapyroxad and metabolites M700F001 and M700F002 and the potential intermediary metabolite M700F003 (not detected in any laboratory soil study) using Method L0092/02. The LOQ was 0.001 mg/kg for each analyte. Analysis of soil specimens, originating from treated plots was conducted down to a maximum soil depth of 50 cm, or to a depth when at least two segments were free of quantifiable residues.

Fluxapyroxad degraded slowly but steadily at all sites. Total residues detected in soil profiles decreased from 101–178 g fluxapyroxad/ha on the day of application to 23–71 g fluxapyroxad/ha

after about one year. Most of the fluxapyroxad detected was found in the upper 10 cm of the soils and only trace amounts were observed in deeper soil layers indicating a low potential of fluxapyroxad to leach to groundwater. The presence of the soil metabolites M700F001 and M700F002 was monitored in this study. M700F001 was detected only in two of the six trials at concentrations  $\geq$  LOQ (Spain and Italy). It was found exclusively in the top 0–10 cm soil layer at  $\leq 0.005$  mg/kg and was not detected after half a year. M700F002 was detected only once at the LOQ in one sample at the Italian site. Therefore, concentrations of both metabolites remain very low under field conditions. M700F003 was not detected at any of the sites. A kinetic modelling study re-evaluated the data from the European field soil dissipation studies (Hardy 2009, 2009/1071711). Results are shown in Table 28.

A number of field dissipation studies were carried out in North America. A study was carried out in Manitoba, Canada (Jordan and Warren 2010, 2009/7006030) in which an SC formulation was broadcast applied to bare soil two times at a target rate of 200 g ai/ha to determine the dissipation of fluxapyroxad in legume row crop use patterns. Another study was carried out under bare ground conditions at three sites in Texas, Illinois and New York, USA (Jordan and Warren 2010, 2009/7006032) in which an EC (Texas) or SC (Illinois and New York) formulation was broadcast applied to bare soil three times (7-day interval) at a target rate of 100 g ai/ha to determine the dissipation of fluxapyroxad in vegetable use patterns. A third study was carried out under bare ground conditions at two sites in California and Washington, USA (Jordan and Warren 2010, 2009/7006033) in which an SC formulation was broadcast applied to bare soil four times (7-day interval) at a target rate of 125 g ai/ha to determine the dissipation of fluxapyroxad in orchard use patterns. Five soil core samples were taken from each plot from the soil surface to a depth of 121.9 cm, before and after application and at various times to 456 DALA (Manitoba – 17 samples), 450/451 DALA (Illinois – 21 samples and New York – 21 samples), 229 DALA (Texas – 19 samples) and 449–451 DALA (California and Washington – both 23 samples). Soil samples were extracted with methanol/water (1:1, v/v) by shaking and centrifuge. Residues were diluted with methanol/water (5:95, v/v) with 0.01% formic acid and analysed for fluxapyroxad, M700F001 and M700F002 (LC-MS/MS, LOQ=0.001 mg/kg).

Manitoba: Fluxapyroxad was observed in the 0–7.6 cm soil depth at a maximum mean concentration of 0.395 mg/kg at 1 DALA, which declined to 0.070 mg/kg 456 DALA. It was observed at up to 0.046 mg/kg in the 7.6–15.2 cm soil depth (456 DALA). It was observed twice in the 15.2–30.5 cm soil depth (mean concentration 0.001 mg/kg at 14 and 288 DALA) but was not observed at  $>$  LOQ in soil below that depth. M700F001 was not observed at  $>$  LOQ below the 0–7.6 cm depth (maximum mean concentration of 0.003 mg/kg) while M700F002 (maximum mean concentration of 0.003 mg/kg) was not observed  $>$  LOQ below 15.2–30.5 cm depth.

Texas: Fluxapyroxad was observed in the 0–7.6 cm soil depth at a maximum mean concentration of 0.272 mg/kg 1 DALA, which declined to 0.069 mg/kg 229 DALA. It was observed at up to 0.008 mg/kg in the 7.6–15.2 cm soil depth. It was not observed at  $>$  LOQ in soil below that depth. M700F001 was observed at a maximum mean concentration of 0.005 mg/kg (14 and 30 DALA) but was  $<$  0.001 mg/kg from 90–229 DALA. It was observed at 7.6–15.2 cm depth once (one replicate at 0.001 mg/kg, 60 DALA) and was not  $>$  LOQ that depth. M700F002 reached a mean concentration of 0.003 mg/kg at 60 DALA and was 0.001–0.003 mg/kg at 120–229 DALA. It was not observed at  $>$  LOQ below 0–7.6 cm depth.

Illinois: Fluxapyroxad was observed in the 0–7.6 cm soil depth at a maximum mean concentration of 0.176 mg/kg 1 DALA which declined to 0.022 mg/kg at 360 and 451 DALA. It was observed at up to 0.006 mg/kg in the 7.6–15.2 cm soil depth (271 DALA) and was observed once in 15.2–30.5 cm depth soil (0.001 mg/kg, 271 DALA). It was not observed at  $>$  LOQ in soil below that depth. M700F001 was observed at a maximum mean concentration of 0.004 mg/kg (21 DALA) at 0–7.6 cm depth, but was  $<$  LOQ below that depth. M700F002 reached a maximum mean concentration of 0.003 mg/kg at 60 DALA and 0.002 mg/kg at 7.6–15.2 cm depth (28 DALA). It was not observed at  $>$  LOQ below that depth.

New York: Fluxapyroxad was observed in the 0–7.6 cm soil depth at a maximum mean concentration of 0.220 mg/kg 0 DALA, which declined to 0.036 mg/kg at 450 DALA. It was

observed at mean concentrations up to 0.011, 0.008 and 0.002 mg/kg in the 7.6–15.2 cm, 15.2–30.5 cm and 30.5–45.7 cm soil depths respectively (178, 360 and 120 DALA). It was not observed at > LOQ in soil below that depth except in single replicates and was not observed below the 91.4–106.7 cm soil depth. M700F001 was observed once at 0.001 mg/kg (single replicate at 21 DALA) at 0–7.6 cm depth, but was < LOQ below that depth. M700F002 was not observed (LOQ=0.001 mg/kg) at this site.

California: Fluxapyroxad was observed in the 0–7.6 cm soil depth at a maximum mean concentration of 0.307 mg/kg 3 DALA which declined to 0.099 mg/kg at 449 DALA. It was observed at mean concentrations up to 0.018 mg/kg in the 7.6–15.2 cm soil depth (14 DALA) and 0.006 mg/kg in the 15.2–30.5 cm depth (89 DALA), but was not observed > LOQ below that depth. M700F001 was observed at a maximum mean concentration of 0.018 mg/kg (61 DALA) at 0–7.6 cm depth and 0.005 mg/kg at 7.6–15.2 cm soil depth (89 DALA) but was not found > LOQ below that depth. M700F002 was at a maximum mean concentration of 0.007 mg/kg (61 DALA) at 0–7.6 cm depth and at 0.005, 0.004 and 0.001 mg/kg at 7.6–15.2 cm, 15.2–30.5 cm and 30.5–45.7 cm inch soil depths respectively by 271 days post-treatment. It was not observed >LOQ below that depth.

Washington: Fluxapyroxad was observed in the 0–7.6 cm soil depth at a maximum mean concentration of 0.264 mg/kg 0 DALA which declined to 0.027 mg/kg at 451 DALA. It was observed at mean concentrations up to 0.058, 0.011 and 0.004 mg/kg in the 7.6–15.2 cm, 15.2–30.5 cm and 30.5–45.7 soil depths respectively (451 DALA), but was not observed > LOQ below that depth. M700F001 was observed sporadically at a maximum mean concentration of 0.001 mg/kg at 0–7.6 cm depth. It was observed at or slightly above the LOQ in isolated replicates in the 7.6–15.2 cm and 15.2–30.5 cm soil depths but was not found >LOQ below that depth. M700F002 was at a maximum mean concentration of 0.001 mg/kg (59 DALA) at 0–7.6 cm depth, 0.002 mg/kg at 7.6–15.2 cm soil depth (91 DALA) and 0.001 mg/kg at the 15.2–30.5 cm soil depth (196 DALA). It was observed in isolated replicates in the 30.5–45.7 cm and 61.0–76.2 cm soil depths and then only at 268 days post-treatment.

The major route of dissipation of fluxapyroxad was transformation by aerobic soil metabolism processes with observation of the two transformation products expected from the aerobic soil metabolism studies. In Manitoba, M700F001 and M700F002 were observed at up to 1 and 2% of the applied fluxapyroxad respectively. At the Texas and Illinois sites, M700F001 and M700F002 were observed at up to 2–3% (parent-equivalent molar weight basis) of the applied fluxapyroxad. At the New York site, M700F001 was observed at a maximum of <1% of the applied fluxapyroxad. M700F002 was not observed. At the California site, M700F001 and M700F002 were observed at up to 10% (parent-equivalent molar weight basis) of the applied fluxapyroxad. At the Washington site, M700F001 and M700F002 were observed at maximums of 1 and 2% respectively (parent-equivalent molar weight basis) of the applied fluxapyroxad. Leaching was not considered to be an important dissipation route at any site.

DT<sub>50</sub> and DT<sub>90</sub> values obtained for fluxapyroxad, M700F001 and M700F002 from kinetic calculations are shown in Tables 28–30.

Table 28 Dissipation rates of fluxapyroxad in various terrestrial field dissipation studies

| Site<br>[parameters at 0–15.2 cm (USA) or 0–35 cm (Europe)] | DT <sub>50</sub> [days] | DT <sub>90</sub> [days] | $\chi^2$ Error % | Model | Reference                           |
|-------------------------------------------------------------|-------------------------|-------------------------|------------------|-------|-------------------------------------|
| Manitoba [clay loam, pH 7.5, OC 4.4%]                       | 11.5                    | > 455                   | 22.2             | FOMC  | Jordan and Warren 2010 2009/7006030 |
| Texas [clay loam, pH 7.2, OC 1.6%]                          | 13.9                    | > 229                   | 27.0             | FOMC  | Jordan and Warren 2010 2009/7006032 |
| Illinois [silt loam, pH 7.2, OC 1.2%]                       | 120                     | > 451                   | 8.86             | FOMC  |                                     |
| New York [sandy loam, pH 5.9, OC 1.7%]                      | 330                     | > 450                   | 14.4             | SFO   | Jordan and Warren 2010 2009/7006033 |
| California [sandy loam, pH 8.4, OC 0.3%]                    | 314                     | > 449                   | 11.5             | SFO   |                                     |
| Washington [sand, pH 8.1, OC 0.3%]                          | 363                     | > 451                   | 11.1             | DFOS  |                                     |
| France [silt loam, pH 8.1, OC 1.26%]                        | 284                     | > 1000                  | 7.0              | FOMC  | Bayer 2009,                         |

| Site<br>[parameters at 0-15.2 cm (USA) or 0-35 cm (Europe)] | DT <sub>50</sub> [days] | DT <sub>90</sub> [days] | $\chi^2$ Error % | Model | Reference                                                  |
|-------------------------------------------------------------|-------------------------|-------------------------|------------------|-------|------------------------------------------------------------|
| Germany (East) [loamy sand, pH 5.6, OC 0.68%]               | 139.6                   | > 1000                  | 8.5              | FOMC  | 2009/1070324<br>(Dissipation study)                        |
| Germany (West) [silt loam, pH 6.5, OC 1.76%]                | 131.7                   | > 1000                  | 6.4              | FOMC  |                                                            |
| Italy [silt loam, pH 8.1, OC 1.65%]                         | 38.9                    | 854                     | 6.7              | DFOP  | Hardy 2009<br>2009/1071711<br>(Kinetic modelling analysis) |
| Spain [silty clay loam, pH 8.4, OC 1.35%]                   | 9.9                     | > 1000                  | 11.7             | FOMC  |                                                            |
| UK [loam, pH 7.3, OC 2.4%]                                  | 369.6                   | > 1000                  | 6.8              | FOMC  |                                                            |

OC = Organic Carbon, SFO = Single Phase First Order, FOMC = First Order Multi Compartment, DFOP = Double First Order in Parallel, DFOS = Double First Order in Series

The field dissipation of M700F002 (metabolite of fluxapyroxad) was investigated at four different European sites (Unold *et al.* 2009, 2009/1070325). An SC formulation was broadcast applied to bare soil in a single application at a nominal rate of 200 g ai/ha (actual 196–201 g ai/ha) using a target water volume of 300 L/ha (boom sprayer). Soil specimens (taken at intervals up to one year and down to 90 cm and frozen until analysis) were analysed for M700F002 and the potential metabolite M700F003 (not detected in any laboratory soil study). Method L0092/02 was used for analysis with final determination by UPLC-MS/MS. The LOQ for M700F002 in soil was 0.001 mg/kg. Procedural recovery experiments were acceptable.

M700F002 degraded fast under field conditions at all sites. Total residues detected in soil profiles, after correction for degradation due to storage, decreased from 187–273 g M700F002/ ha on the day of application to 0–17 g M700F002/ ha after about one year. At the Germany and Southern France sites no residues above the LOQ (0.001 mg/kg) were detectable after 280 days and 185 days respectively. Most of the M700F002 detected was found in the upper 30 cm of the soils. Small amounts of M700F002, generally at or close to the LOQ, were observed down to 70cm. No residues of M700F002 above the LOQ were observed below 70 cm in any sample at any site.

A kinetic modelling study re-evaluated the data from the European field soil dissipation studies for M700F002 (Hardy 2009, 2009/1071712). Results are shown in Table 30.

Table 29 Dissipation rates of M700F001 in various terrestrial field dissipation studies

| Site<br>[parameters at 0-15.2 cm (USA)]  | DT <sub>50</sub> [days] | DT <sub>90</sub> [days] | $\chi^2$ Error % | Model | Reference                              |
|------------------------------------------|-------------------------|-------------------------|------------------|-------|----------------------------------------|
| Manitoba [clay loam, pH 7.5, OC 4.4%]    | 10.5                    | 34.8                    | 33.3             | SFO   | Jordan and Warren 2010<br>2009/7006030 |
| Texas [clay loam, pH 7.2, OC 1.6%]       | 18.8                    | 62.6                    | 24.4             | SFO   | Jordan and Warren 2010<br>2009/7006032 |
| Illinois [silt loam, pH 7.2, OC 1.2%]    | 23.1                    | 76.7                    | 35.8             | SFO   |                                        |
| California [sandy loam, pH 8.4, OC 0.3%] | 21.5                    | 153                     | 8.92             | FOMC  | Jordan and Warren 2010<br>2009/7006033 |

OC = Organic Carbon, SFO = Single Phase First Order, FOMC = First Order Multi Compartment

Table 30 Dissipation rates of M700F002 in various terrestrial field dissipation studies

| Site<br>[parameters at 0-15.2 cm (USA) or 0-35 cm (Europe)] | DT <sub>50</sub> [days] | DT <sub>90</sub> [days] | $\chi^2$ Error % | Model | Reference                           |
|-------------------------------------------------------------|-------------------------|-------------------------|------------------|-------|-------------------------------------|
| Denmark [loamy sand, pH 6.5, OC 1.68%]                      | 39.2                    | 188.4                   | 12.0             | FOMC  | 2009/1070325<br>(Dissipation study) |
| Germany [silt loam, pH 6.8, OC 1.51%]                       | 38.0                    | 154.5                   | 5.7              | FOMC  |                                     |
| Italy [silt loam, pH 8.2, OC 1.65%]                         | 37.4                    | 185.9                   | 7.0              | FOMC  | 2009/1071712                        |

| Site<br>[parameters at 0-15.2 cm (USA) or 0-35 cm (Europe)] | DT <sub>50</sub> [days] | DT <sub>90</sub> [days] | $\chi^2$ Error % | Model | Reference                           |
|-------------------------------------------------------------|-------------------------|-------------------------|------------------|-------|-------------------------------------|
| France [loam, pH 6.2, OC 1.1%]                              | 25.5                    | 84.8                    | 6.9              | SFO   |                                     |
| Manitoba [clay loam, pH 7.5, OC 4.4%]                       | > 398                   | > 398                   | 6.00             | SFO   | Jordan and Warren 2010 2009/7006030 |
| Illinois [silt loam, pH 7.2, OC 1.2%]                       | 55.2                    | 183                     | 13.6             | SFO   | Jordan and Warren 2010 2009/7006032 |
| California [sandy loam, pH 8.4, OC 0.3%]                    | 145                     | > 178                   | 6.69             | SFO   | Jordan and Warren 2010              |
| Washington [sand, pH 8.1, OC 0.3%]                          | 109                     | 362                     | 22.5             | SFO   | 2009/7006033                        |

OC = Organic Carbon, SFO = Single Phase First Order, FOMC = First Order Multi Compartment

In general the field behaviour of fluxapyroxad was consistent with the model developed from the laboratory studies. Fluxapyroxad dissipated by aerobic soil processes and formed M700F001 and M700F002. These metabolites also dissipated presumably mineralised to CO<sub>2</sub> and/or incorporated into soil organic fractions as observed in radiolabelled laboratory studies. Neither fluxapyroxad nor the metabolites appeared to be susceptible to leaching.

Fluxapyroxad dissipated with DT<sub>50</sub> values of 9.9 to 370 days in the field studies (69–689 days in the aerobic laboratory studies). In many cases there was considerable slowing of the degradation of fluxapyroxad and regardless of the DT<sub>50</sub> value, all of the test sites had DT<sub>90</sub> values for fluxapyroxad of over 1 year (DT<sub>90</sub> values > 450 – > 1000 days, except Texas was > 229 days).

### ***Confined rotational crop studies***

#### ***Aniline label***

The metabolism of fluxapyroxad was investigated in three representative succeeding crops, spinach (leafy vegetable), radish (root vegetable) and wheat (cereal grain) (Schopfer *et al.* 2009, 2009/1074684). The study was performed with the test substance labelled in the aniline ring applied to bare soil, at a rate of 250 g ai/ha (2 × seasonal application rate), followed by soil aging intervals of 30, 120 and 365 days. Crops were planted at each of the above intervals after application, to determine whether fluxapyroxad residues or degradates appear in follow crops.

Mature (BBCH Growth Stage 49) and immature spinach leaves were harvested. The roots remained in the soil. Immature white radishes were sampled as whole “white radish plants” (thinning out). Ripe white radishes (Growth stage (GS) 49) were pulled from the soil and separated into the edible parts (root) and the remaining green parts (top). Immature green wheat plants (GS 39) were harvested (forage and hay after drying). Ears of mature wheat (GS 89) were cropped with scissors and separated by threshing into chaff and grain. Mature wheat (GS 89) was harvested by cutting the plants just above the soil line (wheat straw). The roots remained in the soil.

At all three replant intervals, significant transfer of radioactivity from soil into plant was observed, with radioactive residues in wheat straw up to 2.65 mg/kg and in spinach up to 0.10 mg/kg (Table 31). Lower residues were observed in radish roots (maximum of 0.015 mg/kg) and wheat grain (maximum of 0.020 mg/kg). The TRR in wheat straw was higher at 365 DAT (days after treatment), than at 30 or 120 DAT.

Table 31 TRRs in rotational crop matrices following cultivation in soil treated with aniline labelled <sup>14</sup>C-fluxapyroxad after plant back intervals of 30, 120 and 365 days

| Crop parts                  | Combustion value [mg/kg] | TRR [mg/kg] |
|-----------------------------|--------------------------|-------------|
| Plant back interval: 30 DAT |                          |             |
| Immature spinach            | 0.093                    | 0.089       |
| Mature spinach              | 0.103                    | 0.101       |
| White radish plant          | 0.081                    | 0.084       |
| White radish top            | 0.073                    | 0.069       |

| Crop parts                   | Combustion value [mg/kg] | TRR [mg/kg] |
|------------------------------|--------------------------|-------------|
| White radish root            | 0.015                    | 0.015       |
| Spring wheat forage          | 0.154                    | 0.143       |
| Spring wheat hay             | 1.378                    | 1.079       |
| Spring wheat straw           | 2.444                    | 1.875       |
| Spring wheat chaff           | 0.419                    | 0.398       |
| Spring wheat grain           | 0.020                    | 0.020       |
| Plant back interval: 120 DAT |                          |             |
| Immature spinach             | 0.083                    | 0.084       |
| Mature spinach               | 0.076                    | 0.073       |
| White radish plant           | 0.042                    | 0.044       |
| White radish top             | 0.097                    | 0.090       |
| White radish root            | 0.011                    | 0.010       |
| Spring wheat forage          | 0.190                    | 0.180       |
| Spring wheat hay             | 1.164                    | 1.088       |
| Spring wheat straw           | 1.210                    | 1.565       |
| Spring wheat chaff           | 0.596                    | 0.581       |
| Spring wheat grain           | 0.014                    | 0.014       |
| Plant back interval: 365 DAT |                          |             |
| Immature spinach             | 0.038                    | 0.041       |
| Mature spinach               | 0.029                    | 0.028       |
| White radish plant           | 0.029                    | 0.027       |
| White radish top             | 0.063                    | 0.064       |
| White radish root            | 0.008                    | 0.007       |
| Spring wheat forage          | 0.167                    | 0.143       |
| Spring wheat hay             | 0.996                    | 1.012       |
| Spring wheat straw           | 2.664                    | 2.653       |
| Spring wheat chaff           | 0.538                    | 0.528       |
| Spring wheat grain           | 0.019                    | 0.019       |

The extractability of the radioactive residues with methanol and water was high for all matrices (77–98% of the TRRs), except for spring wheat grain (49–60% of the TRRs). In most cases, the major part of the radioactive residues was extracted with methanol.

No metabolites specific to rotational crops were found. As observed in foliar-treated plants, fluxapyroxad was the main component of the residue (Tables 32 and 33). The main metabolite in rotational immature spinach (30 DAT and 120 DAT) was the biphenyl-hydroxylated derivative M700F042 which is conjugated to O-glucoside as M700F074 and the respective malonylglucoside as M700F058. The latter two conjugated metabolites are the main conversion products found in immature spinach (365 DAT) and in mature spinach of all plant back intervals (PBIs). The main metabolite in rotational immature white radish plant and mature white radish root was the demethylated derivative M700F008, accompanied by metabolites M700F048 (N-glucoside) and M700F057 (O-glucoside of the N-methyl group at the pyrazole ring) at lower concentrations. In mature white radish top, the metabolites M700F036 (demethylated and hydroxylated), M700F059 (malonylated derivative of M700F057) and M700F074 (biphenyl-O-glucoside) were additionally found in significant portions. The main biotransformation product in spring wheat was the demethylated metabolite M700F008.

Table 32 Summary of identified components in spinach and white radish following cultivation in soil treated with aniline labelled  $^{14}\text{C}$ -fluxapyroxad after plant back intervals of 30, 120 and 365 days

| Metabolite                  | Crop parts       |       |                |       |                    |       |                  |       |                   |       |
|-----------------------------|------------------|-------|----------------|-------|--------------------|-------|------------------|-------|-------------------|-------|
|                             | Immature spinach |       | Mature spinach |       | White radish plant |       | White radish top |       | White radish root |       |
|                             | mg/kg            | % TRR | mg/kg          | % TRR | mg/kg              | % TRR | mg/kg            | % TRR | mg/kg             | % TRR |
| Plant back interval: 30 DAT |                  |       |                |       |                    |       |                  |       |                   |       |
| Fluxapyroxad                | 0.027            | 30.6  | 0.022          | 21.7  | 0.034              | 40.7  | 0.013            | 18.2  | 0.008             | 53.4  |
| M700F008 *                  | 0.008            | 9.3   | 0.003          | 3.1   | 0.020              | 24.2  | 0.018            | 25.6  | 0.004             | 26.1  |
| M700F036                    | 0.003            | 2.9   | 0.008          | 7.8   | 0.002              | 1.9   | 0.006            | 8.9   | ND                | ND    |
| M700F042 **                 | 0.013            | 14.7  | 0.003          | 3.1   | 0.001              | 1.1   | 0.0005           | 0.7   | ND                | ND    |
| M700F048 /<br>M700F057      | 0.011            | 11.8  | 0.005          | 4.5   | 0.008              | 9.5   | 0.009            | 12.8  | 0.001             | 4.9   |
| M700F058                    | 0.005            | 5.5   | 0.012          | 11.5  | ND                 | ND    | 0.001            | 0.9   | ND                | ND    |

| Metabolite                   | Crop parts       |       |                |       |                    |       |                  |       |                   |       |
|------------------------------|------------------|-------|----------------|-------|--------------------|-------|------------------|-------|-------------------|-------|
|                              | Immature spinach |       | Mature spinach |       | White radish plant |       | White radish top |       | White radish root |       |
|                              | mg/kg            | % TRR | mg/kg          | % TRR | mg/kg              | % TRR | mg/kg            | % TRR | mg/kg             | % TRR |
| M700F059 ***                 | ND               | ND    | ND             | ND    | 0.001              | 1.0   | 0.008            | 11.4  | ND                | ND    |
| M700F074                     | 0.006            | 6.6   | 0.017          | 16.4  | 0.002              | 2.6   | 0.002            | 3.3   | ND                | ND    |
| Sum of identified components | 0.073            | 81.5  | 0.069          | 68.2  | 0.068              | 81.1  | 0.056            | 81.7  | 0.013             | 84.4  |
| Plant back interval: 120 DAT |                  |       |                |       |                    |       |                  |       |                   |       |
| Fluxapyroxad                 | 0.026            | 30.9  | 0.012          | 16.3  | 0.022              | 49.1  | 0.008            | 8.5   | 0.004             | 42.2  |
| M700F008 *                   | 0.009            | 10.6  | 0.002          | 2.6   | 0.011              | 23.9  | 0.020            | 22.5  | 0.004             | 36.6  |
| M700F036                     | ND               | ND    | 0.005          | 7.5   | ND                 | ND    | 0.009            | 9.8   | ND                | ND    |
| M700F042 **                  | 0.021            | 25.2  | 0.003          | 3.6   | 0.002              | 4.3   | 0.001            | 1.2   | ND                | ND    |
| M700F048 / M700F057          | 0.009            | 10.6  | 0.002          | 3.3   | 0.004              | 8.5   | 0.027            | 30.5  | 0.001             | 6.8   |
| M700F058                     | 0.001            | 1.3   | 0.011          | 14.8  | ND                 | ND    | 0.001            | 0.6   | ND                | ND    |
| M700F059 ***                 | 0.004            | 5.0   | ND             | ND    | ND                 | ND    | 0.006            | 6.7   | ND                | ND    |
| M700F074                     | 0.002            | 2.9   | 0.009          | 12.8  | ND                 | ND    | 0.003            | 3.0   | ND                | ND    |
| Sum of identified components | 0.072            | 86.4  | 0.044          | 61.0  | 0.038              | 85.8  | 0.074            | 82.7  | 0.009             | 85.6  |
| Plant back interval: 365 DAT |                  |       |                |       |                    |       |                  |       |                   |       |
| Fluxapyroxad                 | 0.010            | 25.2  | 0.005          | 17.3  | 0.008              | 30.4  | 0.007            | 11.5  | 0.003             | 37.7  |
| M700F008 *                   | 0.003            | 7.8   | 0.001          | 4.1   | 0.008              | 30.4  | 0.010            | 15.1  | 0.003             | 38.2  |
| M700F036                     | 0.002            | 5.8   | 0.002          | 5.6   | 0.001              | 4.6   | 0.013            | 19.5  | 0.00003           | 0.5   |
| M700F042 **                  | 0.001            | 3.4   | 0.001          | 2.7   | ND                 | ND    | ND               | ND    | ND                | ND    |
| M700F048 / M700F057          | 0.002            | 5.2   | 0.001          | 4.6   | 0.003              | 10.6  | 0.008            | 12.7  | 0.001             | 10.8  |
| M700F058                     | 0.004            | 9.6   | 0.004          | 14.1  | ND                 | ND    | 0.001            | 1.6   | ND                | ND    |
| M700F059 ***                 | ND               | ND    | ND             | ND    | 0.0005             | 1.7   | 0.012            | 18.2  | ND                | ND    |
| M700F074                     | 0.005            | 13.1  | 0.005          | 18.4  | 0.001              | 3.0   | 0.003            | 4.1   | ND                | ND    |
| Sum of identified components | 0.029            | 70.1  | 0.019          | 66.9  | 0.021              | 80.7  | 0.053            | 82.7  | 0.006             | 87.2  |

\* Chromatographic peak for M700F008 might also contain minor portions of M700F043 and M700F041

\*\* Chromatographic peak for M700F042 might also contain minor portions of M700F024 and M700F005

\*\*\* Chromatographic peak for M700F059 might also contain minor portions of M700F060

Table 33 Summary of identified components in spring wheat following cultivation in soil treated with aniline labelled <sup>14</sup>C-fluxapyroxad after plant back intervals of 30, 120 and 365 days

| Metabolite                   | Crop parts          |       |                  |       |                    |       |                    |       |                    |       |
|------------------------------|---------------------|-------|------------------|-------|--------------------|-------|--------------------|-------|--------------------|-------|
|                              | Spring wheat forage |       | Spring wheat hay |       | Spring wheat straw |       | Spring wheat chaff |       | Spring wheat grain |       |
|                              | mg/kg               | % TRR | mg/kg            | % TRR | mg/kg              | % TRR | mg/kg              | % TRR | mg/kg              | % TRR |
| Plant back interval: 30 DAT  |                     |       |                  |       |                    |       |                    |       |                    |       |
| Fluxapyroxad                 | 0.121               | 84.5  | 0.876            | 81.2  | 1.206              | 64.3  | 0.214              | 53.6  | 0.006              | 28.5  |
| M700F008 *                   | 0.008               | 5.6   | 0.067            | 6.2   | 0.143              | 7.6   | 0.018              | 4.5   | 0.001              | 6.4   |
| M700F036                     | 0.001               | 0.6   | ND               | ND    | ND                 | ND    | ND                 | ND    | ND                 | ND    |
| M700F042 **                  | ND                  | ND    | 0.007            | 0.6   | 0.113              | 6.0   | 0.001              | 0.3   | 0.0001             | 0.3   |
| M700F048 / M700F057          | 0.001               | 1.0   | 0.010            | 0.9   | 0.036              | 1.9   | ND                 | ND    | ND                 | ND    |
| M700F058                     | ND                  | ND    | ND               | ND    | ND                 | ND    | 0.007              | 1.7   | ND                 | ND    |
| M700F059 ***                 | ND                  | ND    | ND               | ND    | ND                 | ND    | ND                 | ND    | ND                 | ND    |
| M700F074                     | 0.001               | 1.0   | ND               | ND    | ND                 | ND    | 0.012              | 3.1   | ND                 | ND    |
| Sum of identified components | 0.133               | 92.7  | 0.960            | 88.9  | 1.498              | 79.9  | 0.252              | 63.2  | 0.007              | 35.2  |
| Plant back interval: 120 DAT |                     |       |                  |       |                    |       |                    |       |                    |       |
| Fluxapyroxad                 | 0.131               | 72.7  | 0.775            | 71.2  | 1.137              | 72.6  | 0.432              | 74.4  | 0.004              | 28.2  |
| M700F008 *                   | 0.011               | 6.3   | 0.079            | 7.2   | 0.096              | 6.1   | 0.049              | 8.5   | 0.001              | 7.5   |
| M700F036                     | 0.002               | 1.4   | ND               | ND    | ND                 | ND    | ND                 | ND    | ND                 | ND    |
| M700F042 **                  | ND                  | ND    | 0.040            | 3.7   | 0.046              | 2.9   | 0.006              | 1.1   | ND                 | ND    |

| Metabolite                   | Crop parts          |       |                  |       |                    |       |                    |       |                    |       |
|------------------------------|---------------------|-------|------------------|-------|--------------------|-------|--------------------|-------|--------------------|-------|
|                              | Spring wheat forage |       | Spring wheat hay |       | Spring wheat straw |       | Spring wheat chaff |       | Spring wheat grain |       |
|                              | mg/kg               | % TRR | mg/kg            | % TRR | mg/kg              | % TRR | mg/kg              | % TRR | mg/kg              | % TRR |
| M700F048 / M700F057          | 0.001               | 0.6   | 0.014            | 1.3   | 0.023              | 1.4   | 0.0002             | 0.03  | 0.0001             | 0.6   |
| M700F058                     | 0.003               | 1.7   | ND               | ND    | 0.008              | 0.5   | ND                 | ND    | ND                 | ND    |
| M700F059 ***                 | 0.002               | 1.3   | ND               | ND    | ND                 | ND    | ND                 | ND    | ND                 | ND    |
| M700F074                     | 0.006               | 3.3   | 0.029            | 2.6   | 0.037              | 2.4   | ND                 | ND    | 0.00003            | 0.2   |
| Sum of identified components | 0.157               | 87.2  | 0.936            | 86.0  | 1.346              | 86.0  | 0.488              | 84.0  | 0.005              | 36.5  |
| Plant back interval: 365 DAT |                     |       |                  |       |                    |       |                    |       |                    |       |
| Fluxapyroxad                 | 0.110               | 77.4  | 0.811            | 80.1  | 1.722              | 64.9  | 0.329              | 62.3  | 0.008              | 39.8  |
| M700F008 **                  | 0.008               | 5.5   | 0.074            | 7.3   | 0.273              | 10.3  | 0.053              | 10.0  | 0.001              | 6.0   |
| M700F036                     | ND                  | ND    | ND               | ND    | 0.032              | 1.2   | 0.003              | 0.6   | ND                 | ND    |
| M700F042 ***                 | ND                  | ND    | 0.001            | 0.1   | 0.096              | 3.6   | 0.006              | 1.1   | ND                 | ND    |
| M700F048 / M700F057          | 0.001               | 0.9   | 0.010            | 1.0   | 0.083              | 3.1   | 0.002              | 0.3   | ND                 | ND    |
| M700F058                     | 0.001               | 0.8   | 0.009            | 0.8   | 0.052              | 1.9   | ND                 | ND    | ND                 | ND    |
| M700F059 ***                 | ND                  | ND    | ND               | ND    | ND                 | ND    | ND                 | ND    | ND                 | ND    |
| M700F074                     | 0.002               | 1.1   | 0.010            | 1.0   | 0.019              | 0.7   | 0.004              | 0.7   | ND                 | ND    |
| Sum of identified components | 0.122               | 85.6  | 0.915            | 90.4  | 2.277              | 85.8  | 0.396              | 75.1  | 0.009              | 45.9  |

\* Chromatographic peak for M700F008 might also contain minor portions of M700F043 and M700F041

\*\* Chromatographic peak for M700F042 might also contain minor portions of M700F024 and M700F005

\*\*\* Chromatographic peak for M700F059 might also contain minor portions of M700F060

### Pyrazole label

The metabolism of fluxapyroxad labelled in the pyrazole ring was investigated in three representative succeeding crops: spinach (leafy vegetable), radish (root vegetable) and wheat (cereal grain) (Schopfer *et al.* 2009, 2009/1074683). The test substance was applied to bare soil, at a rate of 250 g ai/ha, followed by soil aging intervals of 30, 149 and 365 days. Crops were planted at each interval after application. Samples of mature crops and immature stages were analysed. At all three PBIs, significant translocation of radioactivity from soil into plant was observed, with radioactive residues in wheat straw up to 2.2 mg/kg, and in spinach up to 0.18 mg/kg (Table 34). Lower residues were observed in radish roots (maximum of 0.014 mg/kg) and wheat grain (maximum of 0.043 mg/kg).

Table 34 TRRs in rotational crop matrices following cultivation in soil treated with pyrazole labelled <sup>14</sup>C-fluxapyroxad after plant back intervals of 30, 120 and 365 days

| Crop parts                   | Combustion value (mg/kg) | TRR [mg/kg] |
|------------------------------|--------------------------|-------------|
| Plant back interval: 30 DAT  |                          |             |
| Mature spinach               | 0.175                    | 0.175       |
| White radish root            | 0.014                    | 0.014       |
| Spring wheat forage          | 0.283                    | 0.288       |
| Spring wheat straw           | 2.681                    | 2.238       |
| Spring wheat chaff           | 1.105                    | 0.824       |
| Spring wheat grain           | 0.033                    | 0.039       |
| Plant back interval: 149 DAT |                          |             |
| Mature spinach               | 0.094                    | 0.087       |
| White radish plant           | 0.070                    | 0.066       |
| White radish top             | 0.022                    | 0.020       |
| White radish root            | 0.008                    | 0.009       |
| Spring wheat forage          | 0.261                    | 0.209       |
| Spring wheat straw           | 0.858                    | 0.838       |
| Spring wheat chaff           | 0.194                    | 0.220       |
| Spring wheat grain           | 0.053                    | 0.043       |
| Plant back interval: 365 DAT |                          |             |

| Crop parts          | Combustion value (mg/kg) | TRR [mg/kg] |
|---------------------|--------------------------|-------------|
| Immature spinach    | 0.074                    | 0.070       |
| Mature spinach      | 0.075                    | 0.077       |
| White radish plant  | 0.035                    | 0.030       |
| White radish top    | 0.048                    | 0.046       |
| White radish root   | 0.014                    | 0.014       |
| Spring wheat forage | 0.123                    | 0.109       |
| Spring wheat straw  | 2.148                    | 1.637       |
| Spring wheat chaff  | 0.318                    | 0.298       |
| Spring wheat grain  | 0.044                    | 0.039       |

The main metabolites in mature and immature spinach leaves were fluxapyroxad and the cleavage product M700F002 (Table 35). In immature white radish plant and mature white radish tops, the most abundant components were fluxapyroxad and the metabolites M700F008 and M700F002. In mature white radish roots, fluxapyroxad and the metabolite M700F008 were the main components. In wheat forage, straw, chaff and grain, fluxapyroxad was the most abundant component. The O-glucoside M700F074 was detected in wheat forage (149 DAT only), and other components were present in wheat matrices in low amounts ( $\leq 10\%$  of the TRRs) (Table 36).

Table 35 Summary of identified components in spinach and white radish following cultivation in soil treated with pyrazole labelled  $^{14}\text{C}$ -fluxapyroxad after plant back intervals of 30, 120 and 365 days

| Metabolite                         | Crop parts                |       |                         |       |                             |       |                           |                    |                            |       |
|------------------------------------|---------------------------|-------|-------------------------|-------|-----------------------------|-------|---------------------------|--------------------|----------------------------|-------|
|                                    | Immature spinach<br>mg/kg | % TRR | Mature spinach<br>mg/kg | % TRR | White radish plant<br>mg/kg | % TRR | White radish top<br>mg/kg | % TRR              | White radish root<br>mg/kg | % TRR |
| Plant back interval: 30 DAT        |                           |       |                         |       |                             |       |                           |                    |                            |       |
| Fluxapyroxad                       | no samples taken          |       | 0.017                   | 9.6   | no samples taken            |       | no samples taken          |                    | 0.006                      | 42.9  |
| M700F001                           |                           |       | 0.002<br>(0.001) °      | 1.0   |                             |       |                           | 0.000<br>(0.000) ° | 1.4                        |       |
| M700F002                           |                           |       | 0.086<br>(0.036) °      | 48.8  |                             |       |                           | 0.000<br>(0.000) ° | 1.7                        |       |
| M700F008 *                         |                           |       | 0.009                   | 4.9   |                             |       |                           | 0.004              | 29.0                       |       |
| M700F036                           |                           |       | ND                      | ND    |                             |       |                           | ND                 | ND                         |       |
| M700F042 **                        |                           |       | 0.014                   | 8.1   |                             |       |                           | ND                 | ND                         |       |
| M700F048 /<br>M700F057             |                           |       | 0.005                   | 3.1   |                             |       |                           | 0.001              | 5.9                        |       |
| M700F058                           |                           |       | ND                      | ND    |                             |       |                           | ND                 | ND                         |       |
| M700F059 ***                       |                           |       | ND                      | ND    |                             |       |                           | ND                 | ND                         |       |
| M700F074                           |                           |       | 0.008                   | 4.7   |                             |       |                           | ND                 | ND                         |       |
| Sum of<br>identified<br>components |                           |       | 0.140                   | 80.1  |                             |       |                           | 0.011              | 80.9                       |       |
| Plant back interval: 149 DAT       |                           |       |                         |       |                             |       |                           |                    |                            |       |
| Fluxapyroxad                       | no samples taken          |       | 0.011                   | 12.6  | 0.009                       | 13.3  | 0.006                     | 30.7               | 0.006                      | 68.6  |
| M700F001                           |                           |       | 0.005<br>(0.002) °      | 5.2   | 0.001<br>(0.000) °          | 1.6   | ND                        | ND                 | 0.000<br>(0.000) °         | 1.3   |
| M700F002                           |                           |       | 0.054<br>(0.023) °      | 61.9  | 0.040<br>(0.017) °          | 61.1  | 0.003<br>(0.001) °        | 12.5               | 0.000<br>(0.000) °         | 1.9   |
| M700F008 *                         |                           |       | ND                      | ND    | 0.005                       | 7.0   | 0.004                     | 17.8               | 0.001                      | 15.2  |
| M700F036                           |                           |       | ND                      | ND    | ND                          | ND    | 0.001                     | 7.4                | ND                         | ND    |
| M700F042 **                        |                           |       | 0.010                   | 11.3  | 0.001                       | 1.3   | ND                        | ND                 | ND                         | ND    |
| M700F048 /<br>M700F057             |                           |       | 0.002                   | 2.0   | 0.005                       | 7.7   | 0.002                     | 11.9               | 0.000                      | 2.8   |
| M700F058                           |                           |       | ND                      | ND    | ND                          | ND    | ND                        | ND                 | ND                         | ND    |
| M700F059 ***                       |                           |       | ND                      | ND    | ND                          | ND    | 0.000                     | 2.1                | ND                         | ND    |
| M700F074                           |                           |       | ND                      | ND    | ND                          | ND    | 0.001                     | 2.6                | ND                         | ND    |
| Sum of<br>identified<br>components |                           |       | 0.081                   | 93.0  | 0.060                       | 92.0  | 0.017                     | 85.0               | 0.008                      | 89.9  |
| Plant back interval: 365 DAT       |                           |       |                         |       |                             |       |                           |                    |                            |       |
| Fluxapyroxad                       | 0.010                     | 14.8  | 0.010                   | 12.9  | 0.009                       | 30.2  | 0.007                     | 15.5               | 0.006                      | 38.9  |

| Metabolite                         | Crop parts                         |      |                                  |      |                                      |      |                                    |      |                                     |      |
|------------------------------------|------------------------------------|------|----------------------------------|------|--------------------------------------|------|------------------------------------|------|-------------------------------------|------|
|                                    | Immature spinach<br>mg/kg    % TRR |      | Mature spinach<br>mg/kg    % TRR |      | White radish plant<br>mg/kg    % TRR |      | White radish top<br>mg/kg    % TRR |      | White radish root<br>mg/kg    % TRR |      |
| M700F001                           | 0.002<br>(0.001) °                 | 2.9  | 0.003<br>(0.002) °               | 4.3  | 0.000<br>(0.000) °                   | 1.0  | ND                                 | ND   | ND                                  | ND   |
| M700F002                           | 0.022<br>(0.009) °                 | 31.8 | 0.017<br>(0.007) °               | 22.6 | 0.007<br>(0.003) °                   | 24.5 | 0.005<br>(0.002) °                 | 10.2 | 0.000<br>(0.000) °                  | 1.4  |
| M700F008 *                         | 0.003                              | 4.6  | 0.002                            | 3.0  | 0.006                                | 18.4 | 0.006                              | 12.9 | 0.002                               | 12.0 |
| M700F036                           | 0.002                              | 2.7  | 0.004                            | 4.6  | 0.001                                | 3.8  | 0.002                              | 3.3  | ND                                  | ND   |
| M700F042 **                        | ND                                 | ND   | 0.001                            | 1.6  | ND                                   | ND   | ND                                 | ND   | ND                                  | ND   |
| M700F048 /<br>M700F057             | 0.002                              | 3.2  | 0.002                            | 2.8  | 0.002                                | 7.2  | 0.004                              | 8.4  | 0.000                               | 2.6  |
| M700F058                           | 0.003                              | 4.1  | 0.004                            | 5.6  | ND                                   | ND   | 0.001                              | 1.8  | ND                                  | ND   |
| M700F059 ***                       | ND                                 | ND   | ND                               | ND   | 0.001                                | 1.7  | 0.003                              | 7.2  | ND                                  | ND   |
| M700F074                           | 0.008                              | 11.2 | 0.007                            | 9.2  | 0.001                                | 2.2  | 0.001                              | 1.9  | ND                                  | ND   |
| Sum of<br>identified<br>components | 0.053                              | 75.3 | 0.051                            | 66.7 | 0.027                                | 89.0 | 0.028                              | 61.2 | 0.008                               | 54.9 |

\* Chromatographic peak for M700F008 might also contain minor portions of M700F043 and M700F041

\*\* Chromatographic peak for M700F042 might also contain minor portions of M700F024 and M700F005

\*\*\* Chromatographic peak for M700F059 might also contain minor portions of M700F060

° Concentrations (mg/kg) of metabolites M700F001 and M700F002 (given in brackets) were re-calculated using the molecular masses of M700F001 and M700F002, respectively.

Table 36 Summary of identified components in spring wheat following cultivation in soil treated with pyrazole labelled <sup>14</sup>C-fluxapyroxad after plant back intervals of 30, 120 and 365 days

| Metabolite                         | Crop parts                   |       |                  |  |                    |      |                    |      |                    |      |
|------------------------------------|------------------------------|-------|------------------|--|--------------------|------|--------------------|------|--------------------|------|
|                                    | Spring wheat forage<br>mg/kg | % TRR |                  |  |                    |      |                    |      |                    |      |
| Plant back interval: 30 DAT        |                              |       |                  |  |                    |      |                    |      |                    |      |
| Fluxapyroxad                       | 0.219                        | 76.0  | no samples taken |  | 1.217              | 54.4 | 0.530              | 64.3 | 0.009              | 24.1 |
| M700F001                           | ND                           | ND    |                  |  | 0.011<br>(0.005) ° | 0.5  | 0.005<br>(0.003) ° | 0.7  | ND                 | ND   |
| M700F002                           | 0.012<br>(0.005) °           | 4.2   |                  |  | 0.046<br>(0.020) ° | 2.0  | 0.049<br>(0.021) ° | 5.9  | ND                 | ND   |
| M700F008 *                         | 0.017                        | 6.0   |                  |  | 0.099              | 4.4  | 0.064              | 7.8  | 0.002              | 4.0  |
| M700F036                           | ND                           | ND    |                  |  | ND                 | ND   | ND                 | ND   | ND                 | ND   |
| M700F042 **                        | ND                           | ND    |                  |  | 0.020              | 0.9  | 0.004              | 0.5  | ND                 | ND   |
| M700F048 /<br>M700F057             | 0.003                        | 1.0   |                  |  | 0.050              | 2.2  | 0.006              | 0.8  | ND                 | ND   |
| M700F058                           | ND                           | ND    |                  |  | 0.053              | 2.4  | ND                 | ND   | ND                 | ND   |
| M700F059 ***                       | ND                           | ND    |                  |  | ND                 | ND   | ND                 | ND   | ND                 | ND   |
| M700F074                           | 0.003                        | 1.0   |                  |  | 0.054              | 2.4  | ND                 | ND   | ND                 | ND   |
| Sum of<br>identified<br>components | 0.254                        | 88.1  |                  |  | 1.550              | 69.3 | 0.658              | 79.9 | 0.011              | 28.1 |
| Plant back interval: 149 DAT       |                              |       |                  |  |                    |      |                    |      |                    |      |
| Fluxapyroxad                       | 0.119                        | 57.1  | no samples taken |  | 0.267              | 31.9 | 0.094              | 42.7 | 0.004              | 9.5  |
| M700F001                           | 0.002<br>(0.001) °           | 1.2   |                  |  | 0.028<br>(0.013) ° | 3.4  | 0.003<br>(0.001) ° | 1.2  | 0.002<br>(0.001) ° | 3.7  |
| M700F002                           | 0.011<br>(0.005) °           | 5.4   |                  |  | 0.054<br>(0.023) ° | 6.4  | 0.016<br>(0.007) ° | 7.4  | 0.001<br>(0.000) ° | 1.8  |
| M700F008 *                         | 0.007                        | 3.5   |                  |  | 0.045              | 5.4  | 0.021              | 9.3  | 0.001              | 2.0  |
| M700F036                           | ND                           | ND    |                  |  | ND                 | ND   | ND                 | ND   | ND                 | ND   |
| M700F042 **                        | 0.006                        | 3.0   |                  |  | 0.061              | 7.3  | 0.002              | 0.9  | ND                 | ND   |
| M700F048 /<br>M700F057             | ND                           | ND    |                  |  | 0.001              | 0.1  | 0.008              | 3.7  | ND                 | ND   |
| M700F058                           | 0.009                        | 4.5   |                  |  | 0.020              | 2.4  | ND                 | ND   | ND                 | ND   |
| M700F059 ***                       | ND                           | ND    |                  |  | ND                 | ND   | ND                 | ND   | ND                 | ND   |
| M700F074                           | 0.044                        | 20.9  |                  |  | 0.080              | 9.5  | 0.005              | 2.3  | ND                 | ND   |

| Metabolite                   | Crop parts                   |       | Spring wheat hay |       | Spring wheat straw |       | Spring wheat chaff |       | Spring wheat grain |       |
|------------------------------|------------------------------|-------|------------------|-------|--------------------|-------|--------------------|-------|--------------------|-------|
|                              | Spring wheat forage<br>mg/kg | % TRR | mg/kg            | % TRR | mg/kg              | % TRR | mg/kg              | % TRR | mg/kg              | % TRR |
| Sum of identified components | 0.200                        | 95.7  |                  |       | 0.557              | 66.5  | 0.149              | 67.6  | 0.006              | 14.8  |
| Plant back interval: 365 DAT |                              |       |                  |       |                    |       |                    |       |                    |       |
| Fluxapyroxad                 | 0.083                        | 76.4  | no samples taken |       | 1.052              | 64.3  | 0.121              | 40.6  | 0.002              | 5.5   |
| M700F001                     | ND                           | ND    |                  |       | ND                 | ND    | ND                 | ND    | 0.000 (0.000) °    | 0.3   |
| M700F002                     | 0.002 (0.001) °              | 2.3   |                  |       | 0.037 (0.016) °    | 2.2   | 0.002 (0.001) °    | 0.7   | 0.001 (0.000) °    | 2.6   |
| M700F008 *                   | 0.005                        | 4.8   |                  |       | 0.117              | 7.2   | 0.013              | 4.4   | 0.001              | 1.4   |
| M700F036                     | ND                           | ND    |                  |       | 0.005              | 0.3   | ND                 | ND    | ND                 | ND    |
| M700F042 **                  | ND                           | ND    |                  |       | 0.019              | 1.1   | 0.001              | 0.3   | ND                 | ND    |
| M700F048 / M700F057          | 0.001                        | 1.2   |                  |       | 0.015              | 0.9   | ND                 | ND    | ND                 | ND    |
| M700F058                     | ND                           | ND    |                  |       | ND                 | ND    | ND                 | ND    | ND                 | ND    |
| M700F059 ***                 | ND                           | ND    |                  |       | ND                 | ND    | ND                 | ND    | ND                 | ND    |
| M700F074                     | 0.002                        | 1.4   |                  |       | 0.017              | 1.0   | 0.001              | 0.3   | 0.000              | 0.2   |
| Sum of identified components | 0.093                        | 86.0  |                  |       | 1.262              | 77.1  | 0.138              | 46.3  | 0.003              | 7.9   |

\* Chromatographic peak for M700F008 might also contain minor portions of M700F043 and M700F041

\*\* Chromatographic peak for M700F042 might also contain minor portions of M700F024 and M700F005

\*\*\* Chromatographic peak for M700F059 might also contain minor portions of M700F060

° Concentrations (mg/kg) of metabolites M700F001 and M700F002 (given in brackets) were re-calculated using the molecular masses of M700F001 and M700F002, respectively.

As observed in the aniline labelled study, the metabolite pattern was similar to that identified for primary crops. No compounds specific to rotational crops were found. In contrast to the aniline study, two metabolites resulting from cleavage of the carboxamide bond of fluxapyroxad were identified, the pyrazole acid M700F001 and its demethylation product M700F002. As both were identified as metabolites in soil metabolism studies with fluxapyroxad, it is assumed they are generated by cleavage in the soil and subsequently taken up by the plant rather than being generated by cleavage within the plant.

The metabolic pathway for fluxapyroxad in rotational crops is summarized below in Figure 10. The two key transformation reactions observed in rotational crops were hydroxylation of the biphenyl moiety and N-demethylation of the pyrazole moiety. N-demethylation of the pyrazole moiety leads to the metabolite M700F008, a precursor for a series of other identified metabolites. N-demethylation, hydroxylation, their combination and subsequent O- or N-conjugation results in a series of structurally related metabolites: M700F048 is a glucoside of M700F008 while M700F036 is a hydroxylated derivative of M700F008. Hydroxylation of fluxapyroxad leads to M700F042 (and isomers) and its O-glycosides M700F074 and M700F058. Hydroxylation of the pyrazole methyl group leads to M700F057 and M700F059. Similar to the metabolism observed in primary crops, further minor routes of metabolisation might occur, notably conversion of the CHF<sub>2</sub> group at the pyrazole moiety into a carboxy group (M700F043) or the removal of a fluorine substituent of the biphenyl moiety (M700F024).

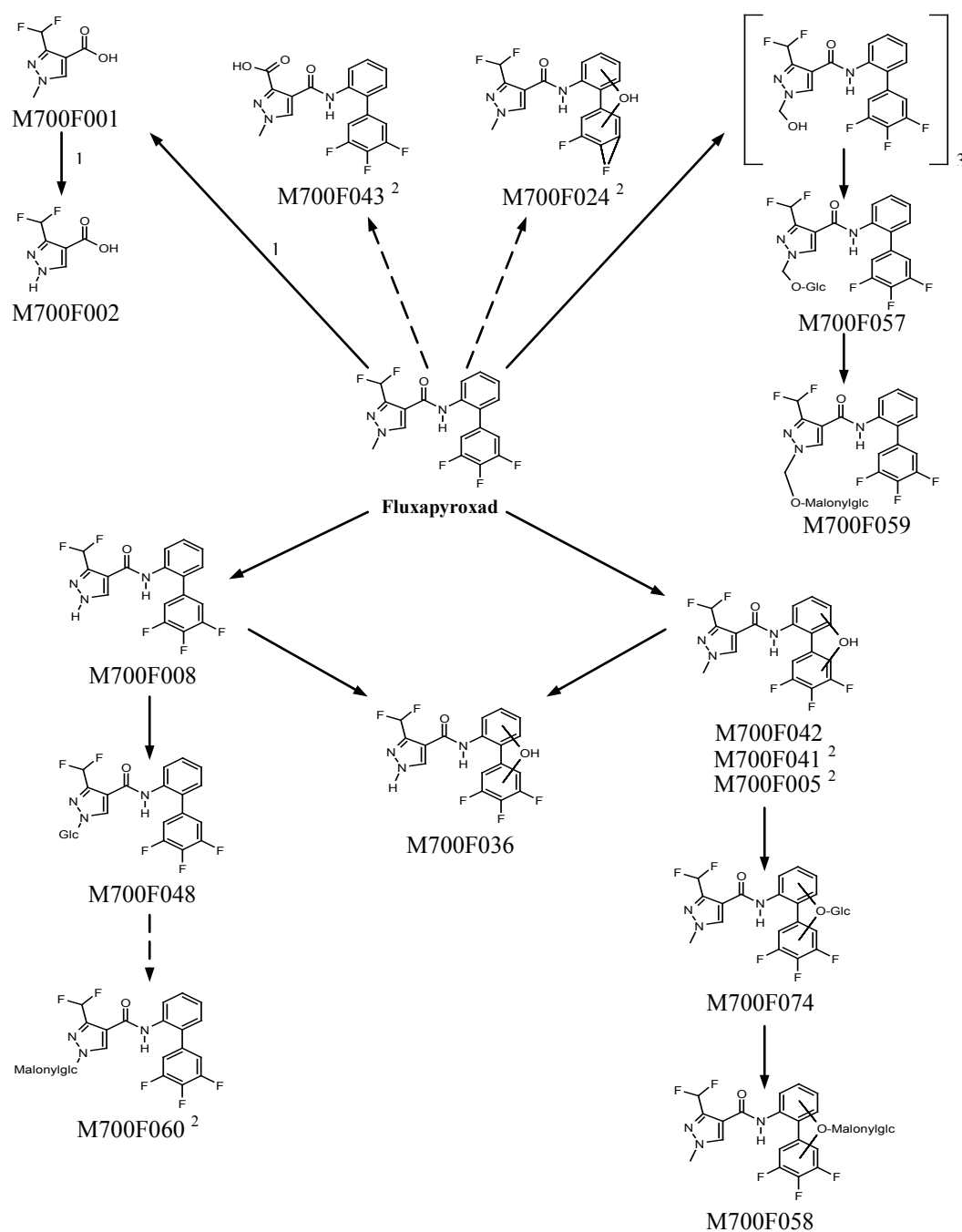


Figure 10 Proposed metabolic pathway for fluxapyroxad in rotational crops (M700F001 and M700F002 were observed for pyrazole label only and are thought to be formed in soil)

### Field accumulation in rotational crops

Field rotational crop studies for fluxapyroxad were conducted in both the USA and Europe.

#### US Study— application to bare soil (wheat, radish, lettuce)

In a US study conducted in the 2008–2009 growing season, treated plots received 2 applications of a 62.5 g/L EC formulation of fluxapyroxad to bare soil at 99–101 g ai/ha/application with a 13–15 day retreatment interval (198 g ai/ha/season) (Norris and Saha 2009, 2009/7004936). An adjuvant was added to the spray mixture. Radish (representative of root and tuber vegetables), wheat (cereals) and

lettuce (leafy vegetables) were planted after 4 different plant back intervals (29–30, 60, 90–91 and 120–121 DALA).

The rotational wheat samples were harvested at commercial maturity, 129–144 days after planting (DAP) for forage and hay and 217–248 DAP for grain and straw. The forage samples were collected from wheat at a growth stage ranging from BBCH 49 (first awns visible) to BBCH 59 (inflorescence fully emerged) by cutting whole immature green plants above soil surface using a sickle or knife. Hay samples were harvested in the same manner and timing as forage and were allowed to dry under ambient conditions (protected from rain) for 6–20 days prior to sampling. Grain and straw (dried stalks or stems with leaves left after grain harvested) were collected at crop maturity. The rotational radish samples (tops and roots) were harvested 57–92 DAP. The samples were collected at commercial maturity, between growth stages BBCH 45 to 49 (50–100% of the expected root diameter reached), before the crop began to go to seed. The rotational leaf lettuce samples (leaves) were harvested 59–122 DAP. The samples were collected at commercial maturity, between growth stages BBCH 45 to 49 (50–100% of the leaf mass typical for the variety reached), before the crop began to go to seed.

Residues were quantitated by LC/MS/MS (Method L0137/01). The LOQ is 0.01 mg/kg for parent fluxapyroxad and the metabolites M700F002, M700F008 and M700F048 in plant matrices. Concurrent method recovery data were collected in rotational crop matrices at spiking levels of 0.01–5.0 mg/kg and were acceptable.

Table 37 Residue Data from Rotational Crop Field Trials with Fluxapyroxad

| Study No.<br>Trial No.<br>Location<br>Year       | Crop  | Matrix | Total<br>Rate<br>(g<br>ai/ha) | Harvest<br>DAP <sup>a</sup> | PBI <sup>b</sup><br>(days) | Rep | Residues (mg/kg) <sup>c</sup> |              |              |              |
|--------------------------------------------------|-------|--------|-------------------------------|-----------------------------|----------------------------|-----|-------------------------------|--------------|--------------|--------------|
|                                                  |       |        |                               |                             |                            |     | Fluxapyroxad                  | M700<br>F002 | M700<br>F008 | M700<br>F048 |
| 2009/7004936<br>R080487<br>Tift, Georgia<br>2008 | Wheat | Forage | 201                           | 144                         | 30                         | A   | 0.02                          | < 0.01       | < 0.01       | ND           |
|                                                  |       |        |                               |                             |                            | B   | 0.02                          | < 0.01       | < 0.01       | ND           |
|                                                  |       |        | 201                           | 144                         | 60                         | A   | < 0.01                        | ND           | ND           | ND           |
|                                                  |       |        |                               |                             |                            | B   | 0.01                          | ND           | ND           | ND           |
|                                                  |       |        | 200                           | 144                         | 91                         | A   | < 0.01                        | ND           | ND           | ND           |
|                                                  |       |        |                               |                             |                            | B   | < 0.01                        | ND           | ND           | ND           |
|                                                  |       |        | 201                           | 144                         | 120                        | A   | < 0.01                        | ND           | ND           | ND           |
|                                                  |       |        |                               |                             |                            | B   | < 0.01                        | ND           | ND           | ND           |
| 2009/7004936<br>R080487<br>Tift, Georgia<br>2008 | Wheat | Hay    | 201                           | 144                         | 30                         | A   | 0.05                          | < 0.01       | < 0.01       | ND           |
|                                                  |       |        |                               |                             |                            | B   | 0.06                          | < 0.01       | < 0.01       | ND           |
|                                                  |       |        | 201                           | 144                         | 60                         | A   | 0.04                          | < 0.01       | < 0.01       | ND           |
|                                                  |       |        |                               |                             |                            | B   | 0.04                          | < 0.01       | < 0.01       | ND           |
|                                                  |       |        | 200                           | 144                         | 91                         | A   | 0.02                          | ND           | ND           | ND           |
|                                                  |       |        |                               |                             |                            | B   | 0.04                          | < 0.01       | < 0.01       | ND           |
|                                                  |       |        | 201                           | 144                         | 120                        | A   | 0.03                          | ND           | ND           | ND           |
|                                                  |       |        |                               |                             |                            | B   | 0.03                          | ND           | ND           | ND           |
| 2009/7004936<br>R080487<br>Tift, Georgia<br>2008 | Wheat | Grain  | 201                           | 217                         | 30                         | A   | ND                            | ND           | ND           | ND           |
|                                                  |       |        |                               |                             |                            | B   | ND                            | ND           | ND           | ND           |
|                                                  |       |        | 201                           | 217                         | 60                         | A   | ND                            | ND           | ND           | ND           |
|                                                  |       |        |                               |                             |                            | B   | ND                            | ND           | ND           | ND           |
|                                                  |       |        | 200                           | 217                         | 91                         | A   | ND                            | ND           | ND           | ND           |
|                                                  |       |        |                               |                             |                            | B   | ND                            | ND           | ND           | ND           |
|                                                  |       |        | 201                           | 217                         | 120                        | A   | ND                            | ND           | ND           | ND           |
|                                                  |       |        |                               |                             |                            | B   | ND                            | ND           | ND           | ND           |
| 2009/7004936<br>R080487<br>Tift, Georgia<br>2008 | Wheat | Straw  | 201                           | 217                         | 30                         | A   | 0.07                          | ND           | 0.02         | ND           |
|                                                  |       |        |                               |                             |                            | B   | 0.08                          | ND           | 0.02         | ND           |
|                                                  |       |        | 201                           | 217                         | 60                         | A   | 0.04                          | ND           | < 0.01       | ND           |
|                                                  |       |        |                               |                             |                            | B   | 0.07                          | ND           | 0.02         | ND           |
|                                                  |       |        | 200                           | 217                         | 91                         | A   | 0.05                          | ND           | < 0.01       | ND           |
|                                                  |       |        |                               |                             |                            | B   | 0.04                          | ND           | 0.01         | ND           |
|                                                  |       |        | 201                           | 217                         | 120                        | A   | 0.04                          | ND           | 0.01         | ND           |
|                                                  |       |        |                               |                             |                            | B   | 0.05                          | ND           | 0.01         | ND           |

| Study No.<br>Trial No.<br>Location<br>Year               | Crop    | Matrix | Total<br>Rate<br>(g<br>ai/ha) | Harvest<br>DAP <sup>a</sup> | PBI <sup>b</sup><br>(days) | Rep | Residues (mg/kg) <sup>c</sup> |              |                |                |
|----------------------------------------------------------|---------|--------|-------------------------------|-----------------------------|----------------------------|-----|-------------------------------|--------------|----------------|----------------|
|                                                          |         |        |                               |                             |                            |     | Fluxapyroxad                  | M700<br>F002 | M700<br>F008   | M700<br>F048   |
| 2009/7004936<br>R080488<br>Fresno,<br>California<br>2008 | Wheat   | Forage | 0.202                         | 129                         | 29                         | A   | 0.03                          | ND           | ND             | ND             |
|                                                          |         |        |                               |                             |                            | B   | 0.03                          | ND           | ND             | ND             |
|                                                          |         |        | 0.201                         | 140                         | 60                         | A   | (0.08, 0.07)<br>0.08          | ND           | < 0.01         | ND             |
|                                                          |         |        |                               |                             |                            | B   | (0.08, 0.08)<br>0.08          | ND           | < 0.01         | ND             |
|                                                          |         |        | 200                           | 129                         | 90                         | A   | 0.03                          | ND           | ND             | ND             |
|                                                          |         |        |                               |                             |                            | B   | 0.03                          | ND           | ND             | ND             |
|                                                          |         |        | 198                           | 140                         | 121                        | A   | (0.05, 0.05)<br>0.05          | ND           | < 0.01         | ND             |
|                                                          |         |        |                               |                             |                            | B   | (0.04, 0.05)<br>0.05          | ND           | < 0.01         | ND             |
| 2009/7004936<br>R080488<br>Fresno,<br>California<br>2008 | Wheat   | Hay    | 202                           | 129                         | 29                         | A   | 0.11                          | < 0.01       | < 0.01         | ND             |
|                                                          |         |        |                               |                             |                            | B   | 0.11                          | < 0.01       | < 0.01         | ND             |
|                                                          |         |        | 201                           | 140                         | 60                         | A   | 0.18                          | < 0.01       | < 0.01         | < 0.01         |
|                                                          |         |        |                               |                             |                            | B   | 0.18                          | < 0.01       | < 0.01         | < 0.01         |
|                                                          |         |        | 200                           | 129                         | 90                         | A   | 0.09                          | < 0.01       | < 0.01         | ND             |
|                                                          |         |        |                               |                             |                            | B   | 0.09                          | < 0.01       | < 0.01         | ND             |
|                                                          |         |        | 198                           | 140                         | 121                        | A   | 0.14                          | ND           | < 0.01         | 0.01           |
|                                                          |         |        |                               |                             |                            | B   | (0.09, 0.09)<br>0.09          | ND           | < 0.01         | ND             |
| 2009/7004936<br>R080488<br>Fresno,<br>California<br>2008 | Wheat   | Grain  | 202                           | 248                         | 29                         | A   | ND                            | ND           | ND             | ND             |
|                                                          |         |        |                               |                             |                            | B   | ND                            | ND           | ND             | ND             |
|                                                          |         |        | 201                           | 217                         | 60                         | A   | < 0.01                        | ND           | ND             | ND             |
|                                                          |         |        |                               |                             |                            | B   | < 0.01                        | ND           | ND             | ND             |
|                                                          |         |        | 200                           | 248                         | 90                         | A   | ND                            | ND           | ND             | ND             |
|                                                          |         |        |                               |                             |                            | B   | ND                            | ND           | ND             | ND             |
|                                                          |         |        | 198                           | 217                         | 121                        | A   | (ND, < 0.01)<br>< 0.01        | ND           | (ND,<br>ND) ND | (ND,<br>ND) ND |
|                                                          |         |        |                               |                             |                            | B   | (< 0.01, < 0.01)<br>< 0.01    | ND           | (ND,<br>ND) ND | ND             |
| 2009/7004936<br>R080488<br>Fresno,<br>California<br>2008 | Wheat   | Straw  | 202                           | 248                         | 29                         | A   | 0.28                          | ND           | 0.02           | ND             |
|                                                          |         |        |                               |                             |                            | B   | 0.20                          | < 0.01       | 0.01           | ND             |
|                                                          |         |        | 201                           | 217                         | 60                         | A   | 0.48                          | < 0.01       | 0.03           | < 0.01         |
|                                                          |         |        |                               |                             |                            | B   | 0.54                          | < 0.01       | 0.03           | < 0.01         |
|                                                          |         |        | 200                           | 248                         | 90                         | A   | 0.14                          | < 0.01       | < 0.01         | ND             |
|                                                          |         |        |                               |                             |                            | B   | 0.16                          | < 0.01       | < 0.01         | ND             |
|                                                          |         |        | 198                           | 217                         | 121                        | A   | 0.31                          | < 0.01       | 0.02           | ND             |
|                                                          |         |        |                               |                             |                            | B   | 0.25                          | < 0.01       | 0.01           | ND             |
| 2009/7004936<br>R080487<br>Tift, Georgia<br>2008         | Lettuce | Leaves | 201                           | 73                          | 30                         | A   | < 0.01                        | < 0.01       | ND             | ND             |
|                                                          |         |        |                               |                             |                            | B   | < 0.01                        | < 0.01       | ND             | ND             |
|                                                          |         |        | 201                           | 73                          | 60                         | A   | < 0.01                        | < 0.01       | ND             | ND             |
|                                                          |         |        |                               |                             |                            | B   | < 0.01                        | ND           | ND             | ND             |
|                                                          |         |        | 200                           | 73                          | 91                         | A   | < 0.01                        | ND           | ND             | ND             |
|                                                          |         |        |                               |                             |                            | B   | < 0.01                        | ND           | ND             | ND             |
|                                                          |         |        | 201                           | 73                          | 120                        | A   | < 0.01                        | ND           | ND             | ND             |
|                                                          |         |        |                               |                             |                            | B   | < 0.01                        | ND           | ND             | ND             |
| 2009/7004936<br>R080487<br>Tift, Georgia<br>2008         | Radish  | Tops   | 201                           | 70                          | 30                         | A   | < 0.01                        | < 0.01       | 0.01           | < 0.01         |
|                                                          |         |        |                               |                             |                            | B   | < 0.01                        | ND           | < 0.01         | < 0.01         |
|                                                          |         |        | 201                           | 70                          | 60                         | A   | < 0.01                        | ND           | < 0.01         | ND             |
|                                                          |         |        |                               |                             |                            | B   | < 0.01                        | ND           | < 0.01         | ND             |
|                                                          |         |        | 200                           | 70                          | 91                         | A   | < 0.01                        | ND           | < 0.01         | ND             |
|                                                          |         |        |                               |                             |                            | B   | < 0.01                        | ND           | < 0.01         | < 0.01         |
|                                                          |         |        | 201                           | 70                          | 120                        | A   | ND                            | ND           | ND             | ND             |
|                                                          |         |        |                               |                             |                            | B   | ND                            | ND           | < 0.01         | ND             |

| Study No.<br>Trial No.<br>Location<br>Year                | Crop    | Matrix | Total<br>Rate<br>(g<br>ai/ha) | Harvest<br>DAP <sup>a</sup> | PBI <sup>b</sup><br>(days) | Rep | Residues (mg/kg) <sup>c</sup>         |              |              |                                    |
|-----------------------------------------------------------|---------|--------|-------------------------------|-----------------------------|----------------------------|-----|---------------------------------------|--------------|--------------|------------------------------------|
|                                                           |         |        |                               |                             |                            |     | Fluxapyroxad                          | M700<br>F002 | M700<br>F008 | M700<br>F048                       |
| 2009/7004936<br>R080487<br>Tift, Georgia<br>2008          | Radish  | Root   | 201                           | 70                          | 30                         | A   | 0.02                                  | ND           | < 0.01       | ND                                 |
|                                                           |         |        |                               |                             |                            | B   | 0.01                                  | ND           | < 0.01       | ND                                 |
|                                                           |         |        | 201                           | 70                          | 60                         | A   | < 0.01                                | ND           | < 0.01       | ND                                 |
|                                                           |         |        |                               |                             |                            | B   | < 0.01                                | ND           | < 0.01       | ND                                 |
|                                                           |         |        | 200                           | 70                          | 91                         | A   | < 0.01                                | ND           | < 0.01       | ND                                 |
|                                                           |         |        |                               |                             |                            | B   | < 0.01                                | ND           | < 0.01       | ND                                 |
| 2009/7004936<br>R080488<br>Fresno,<br>California<br>2008  | Lettuce | Leaves | 202                           | 59                          | 29                         | A   | < 0.01                                | < 0.01       | ND           | ND                                 |
|                                                           |         |        |                               |                             |                            | B   | < 0.01                                | < 0.01       | ND           | ND                                 |
|                                                           |         |        | 201                           | 122                         | 60                         | A   | 0.02                                  | < 0.01       | < 0.01       | ND                                 |
|                                                           |         |        |                               |                             |                            | B   | 0.02                                  | < 0.01       | < 0.01       | ND                                 |
|                                                           |         |        | 200                           | 59                          | 90                         | A   | (< 0.01,<br>< 0.01, < 0.01)<br>< 0.01 | < 0.01       | ND           | ND                                 |
|                                                           |         |        |                               |                             |                            | B   | (< 0.01,<br>< 0.01, < 0.01)<br>< 0.01 | < 0.01       | ND           | ND                                 |
| 2009/7004936<br>R080488<br>Fresno,<br>California<br>2008  | Radish  | Tops   | 198                           | 122                         | 121                        | A   | (0.01, 0.02,<br>0.02) 0.02            | < 0.01       | < 0.01       | ND                                 |
|                                                           |         |        |                               |                             |                            | B   | (0.01, 0.02,<br>0.02) 0.02            | < 0.01       | < 0.01       | ND                                 |
|                                                           |         |        | 202                           | 57                          | 29                         | A   | < 0.01                                | ND           | 0.01         | < 0.01                             |
|                                                           |         |        |                               |                             |                            | B   | < 0.01                                | < 0.01       | 0.01         | < 0.01                             |
|                                                           |         |        | 201                           | 92                          | 60                         | A   | < 0.01                                | ND           | 0.02         | < 0.01                             |
|                                                           |         |        |                               |                             |                            | B   | < 0.01                                | ND           | 0.02         | < 0.01                             |
| 2009/7004936<br>R080488<br>Fresno,<br>California<br>2008` | Radish  | Root   | 200                           | 57                          | 90                         | A   | < 0.01                                | ND           | 0.02         | (0.01,<br>0.02,<br>0.01)<br>0.01   |
|                                                           |         |        |                               |                             |                            | B   | < 0.01                                | < 0.01       | 0.02         | (0.01,<br>< 0.01,<br>0.01)<br>0.01 |
|                                                           |         |        | 0.198                         | 92                          | 121                        | A   | < 0.01                                | < 0.01       | 0.02         | < 0.01                             |
|                                                           |         |        |                               |                             |                            | B   | < 0.01                                | ND           | 0.02         | < 0.01                             |
|                                                           |         |        | 202                           | 57                          | 29                         | A   | 0.01                                  | ND           | < 0.01       | ND                                 |
|                                                           |         |        |                               |                             |                            | B   | < 0.01                                | ND           | < 0.01       | ND                                 |
| 2009/7004936<br>R080488<br>Fresno,<br>California<br>2008` | Radish  | Root   | 201                           | 92                          | 60                         | A   | 0.01                                  | ND           | < 0.01       | ND                                 |
|                                                           |         |        |                               |                             |                            | B   | 0.01                                  | ND           | < 0.01       | ND                                 |
|                                                           |         |        | 200                           | 57                          | 90                         | A   | 0.01                                  | ND           | < 0.01       | ND                                 |
|                                                           |         |        |                               |                             |                            | B   | 0.01                                  | ND           | < 0.01       | ND                                 |
|                                                           |         |        | 198                           | 92                          | 121                        | A   | (< 0.01,<br>< 0.01, < 0.01)<br>< 0.01 | ND           | < 0.01       | ND                                 |
|                                                           |         |        |                               |                             |                            | B   | (0.01, 0.01,<br>0.01) 0.01            | ND           | < 0.01       | ND                                 |

<sup>a</sup> DAP = Days After Planting

<sup>b</sup> PBI = Plant Back Interval (in days)

<sup>c</sup> All analytes are reported in terms of themselves. The LOQ is 0.01 mg/kg each for fluxapyroxad and the metabolites M700F008, M700F002 and M700F048 in/on rotational crop samples. The LOD is 0.002 mg/kg for fluxapyroxad and the metabolites M700F008, M700F002 and M700F048.

The maximum residues of fluxapyroxad and its metabolites in/on treated rotational crops grown at plant back intervals of approximately 1, 2, 3 and 4 months are summarized below in Table 38.

Table 38 Summary of residue data in rotational crops following primary treatment with fluxapyroxad in US study

| Commodity       | Total Appl. Rate<br>g ai/ha | PBI <sup>a</sup><br>(days) | Maximum Residues <sup>b</sup> (mg/kg) |              |          |          |          |
|-----------------|-----------------------------|----------------------------|---------------------------------------|--------------|----------|----------|----------|
|                 |                             |                            | n                                     | Fluxapyroxad | M700F002 | M700F008 | M700F048 |
| Wheat, forage   | 198-202                     | 29-30                      | 4                                     | 0.03         | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 60                         | 4                                     | 0.08         | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 90-91                      | 4                                     | 0.03         | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 120-121                    | 4                                     | 0.05         | < 0.01   | < 0.01   | < 0.01   |
| Wheat, hay      | 198-202                     | 29-30                      | 4                                     | 0.11         | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 60                         | 4                                     | 0.18         | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 90-91                      | 4                                     | 0.09         | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 120-121                    | 4                                     | 0.14         | < 0.01   | < 0.01   | 0.01     |
| Wheat, grain    | 198-202                     | 29-30                      | 4                                     | < 0.01       | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 60                         | 4                                     | < 0.01       | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 90-91                      | 4                                     | < 0.01       | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 120-121                    | 4                                     | < 0.01       | < 0.01   | < 0.01   | < 0.01   |
| Wheat, straw    | 198-202                     | 29-30                      | 4                                     | 0.28         | < 0.01   | 0.02     | < 0.01   |
|                 |                             | 60                         | 4                                     | 0.54         | < 0.01   | 0.03     | < 0.01   |
|                 |                             | 90-91                      | 4                                     | 0.16         | < 0.01   | 0.01     | < 0.01   |
|                 |                             | 120-121                    | 4                                     | 0.31         | < 0.01   | 0.02     | < 0.01   |
| Radish, tops    | 198-202                     | 29-30                      | 4                                     | < 0.01       | < 0.01   | 0.01     | < 0.01   |
|                 |                             | 60                         | 4                                     | < 0.01       | < 0.01   | 0.02     | < 0.01   |
|                 |                             | 90-91                      | 4                                     | < 0.01       | < 0.01   | 0.02     | 0.01     |
|                 |                             | 120-121                    | 4                                     | < 0.01       | < 0.01   | 0.02     | < 0.01   |
| Radish, root    | 198-202                     | 29-30                      | 4                                     | 0.02         | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 60                         | 4                                     | 0.01         | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 90-91                      | 4                                     | 0.01         | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 120-121                    | 4                                     | 0.01         | < 0.01   | < 0.01   | < 0.01   |
| Lettuce, leaves | 198-202                     | 29-30                      | 4                                     | < 0.01       | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 60                         | 4                                     | 0.02         | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 90-91                      | 4                                     | < 0.01       | < 0.01   | < 0.01   | < 0.01   |
|                 |                             | 120-121                    | 4                                     | 0.02         | < 0.01   | < 0.01   | < 0.01   |

<sup>a</sup> Plant Back Interval<sup>b</sup> All analytes are reported in terms of themselves. The LOQ is 0.01 mg/kg each for fluxapyroxad and the metabolites M700F008, M700F002 and M700F048 in/on rotational crop samples.

The maximum fluxapyroxad residues observed at the maximum PBI of 4 months were 0.05 mg/kg in wheat forage, 0.14 mg/kg in wheat hay, 0.31 mg/kg in wheat straw, 0.01 mg/kg in radish roots and 0.02 mg/kg in lettuce leaves. In wheat grain, residues of fluxapyroxad and the metabolites were < 0.01 mg/kg at all PBIs. In radish tops, residues of fluxapyroxad were < 0.01 mg/kg and maximum residues of M700F008 were 0.02 mg/kg at the 4-month PBI.

*European study – application to bare soil (wheat, carrot/radish, cauliflower/broccoli, lettuce)*

Seven trials were conducted in Italy, Spain, Greece and Germany during 2008–2009 to investigate residues of fluxapyroxad in succeeding crops, grown in soil previously treated with fluxapyroxad (Erdmann 2011, 2010/1144335). A 62.5 g/L EC formulation of fluxapyroxad was applied once to bare soil at a rate of 250 g ai/ha. Treated plots were planted after three different time intervals, nominally 30, 120 and 365 days after treatment. The crops investigated were wheat, carrot/radish, cauliflower/broccoli and lettuce.

Wheat whole plant samples were collected at growth stage 30–33 and 65 (33 to 51 and 65 in trial L080024). Grain and straw were collected at GS 89. For the other crops, whole plant samples were collected at GS 41. At final harvest/growth stage 49, carrot/radish root and tops, cauliflower/broccoli inflorescence and lettuce heads were collected (except in L080024, L080450 and L080531 in which no specimens of carrots could be collected). Soil samples were also taken on the day of application, at seeding/planting and at crop harvest.

Residues were quantitated by LC/MS/MS (Method L0137/01). Concurrent method recovery data were collected in rotational crop matrices at spiking levels of 0.01 or 0.1 mg/kg and are considered acceptable.

Table 39 Residues of fluxapyroxad in rotational crops after 30, 120 and 365 day re-planting intervals

| Study No.<br>Trial No.<br>Location                | Crop,<br>Variety                | Appln<br>rate<br>(g<br>ai/ha) | Replant<br>interval           | Portion<br>analysed           | Days after<br>treatment | Growth<br>Stage<br>(BBCH)<br>at<br>sampling | Residues (mg/kg) |                  |                  |                  |
|---------------------------------------------------|---------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------|---------------------------------------------|------------------|------------------|------------------|------------------|
|                                                   |                                 |                               |                               |                               |                         |                                             | Fluxapy<br>roxad | M700F008         | M700F048         | M700F002         |
| 2010/114433<br>5<br>L080021<br>Germany            | Wheat<br>(Thasos)               | 250                           | 30 days                       | Whole plant                   | 60                      | 33                                          | 0.04             | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Whole plant                   | 90                      | 65                                          | 0.05             | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Grain                         | 120                     | 89                                          | < 0.01           | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Straw                         | 120                     | 89                                          | 0.17             | 0.02             | < 0.01           | < 0.01           |
|                                                   | Carrot<br>(Zina)                | 250                           | 30 days                       | Whole plant                   | 92                      | 41                                          | 0.03             | < 0.01           | < 0.01           | 0.01             |
|                                                   |                                 |                               |                               | Roots                         | 113                     | 49                                          | 0.04             | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Tops                          | 113                     | 49                                          | 0.03             | < 0.01           | < 0.01           | 0.01             |
|                                                   | Cauliflower<br>(Lecanau)        | 250                           | 30 days                       | Whole plant<br>Inflorescences | 85<br>100               | 41<br>49                                    | 0.01<br>< 0.01   | < 0.01<br>< 0.01 | 0.02<br>< 0.01   | 0.01<br>< 0.01   |
| Lettuce<br>(Gisela)                               | 250                             | 30 days                       | Whole plant<br>Heads          | 58<br>83                      | 41<br>49                | < 0.01<br>< 0.01                            | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 |                  |
| 2010/114433<br>5<br>L080022<br>Germany            | Wheat<br>(Triso)                | 250                           | 30 days                       | Whole plant                   | 63                      | 32                                          | 0.06             | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Whole plant                   | 88                      | 65                                          | 0.05             | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Grain                         | 130                     | 89                                          | < 0.01           | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Straw                         | 130                     | 89                                          | 0.33             | 0.02             | < 0.01           | < 0.01           |
|                                                   | Carrots<br>(Damco<br>F1)        | 250                           | 30 days                       | Whole plant                   | 78                      | 41                                          | 0.06             | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Roots                         | 130                     | 49                                          | 0.02             | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Tops                          | 130                     | 49                                          | 0.03             | < 0.01           | < 0.01           | < 0.01           |
|                                                   | Cauliflower<br>(Chambord<br>F1) | 250                           | 30 days                       | Whole plant<br>Inflorescences | 66<br>92                | 41<br>49                                    | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 |
| Lettuce<br>(Gisela)                               | 250                             | 30 days                       | Whole plant<br>Heads          | 57<br>83                      | 41<br>49                | 0.02<br>< 0.01                              | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 |                  |
| 2010/114433<br>5<br>L080023<br>Spain              | Wheat<br>(Califa Sur)           | 250                           | 29 days                       | Whole plant                   | 77                      | 33                                          | 0.12             | 0.01             | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Whole plant                   | 94                      | 65                                          | 0.07             | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Grain                         | 134                     | 89                                          | < 0.01           | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Straw                         | 134                     | 89                                          | 0.42             | 0.02             | < 0.01           | < 0.01           |
|                                                   | Carrots<br>(Cabsna)             | 250                           | 29 days                       | Whole plant                   | 85                      | 41                                          | 0.10             | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Roots                         | 109                     | 49                                          | 0.08             | < 0.01           | < 0.01           | < 0.01           |
| Tops                                              | 109                             | 49                            | 0.07                          | < 0.01                        | < 0.01                  | < 0.01                                      |                  |                  |                  |                  |
| Cauliflower<br>(Sirante)                          | 250                             | 29 days                       | Whole plant<br>Inflorescences | 85<br>109                     | 41<br>49                | 0.06<br>< 0.01                              | < 0.01<br>< 0.01 | 0.02<br>< 0.01   | < 0.01<br>< 0.01 |                  |
|                                                   | Lettuce<br>(Filipus)            | 250                           | 29 days                       | Whole plant<br>Heads          | 77<br>98                | 41<br>49                                    | 0.03<br>< 0.01   | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 |
| 2010/114433<br>5<br>L080450 +<br>L080531<br>Italy | Wheat<br>(Saragolla)            | 250                           | 31 days                       | Whole plant                   | 249                     | 33-51                                       | 0.02             | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Whole plant                   | 257                     | 65                                          | 0.02             | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Grain                         | 301                     | 89                                          | < 0.01           | < 0.01           | < 0.01           | < 0.01           |
|                                                   | Lettuce<br>(Romana)             | 250                           | 30 days                       | Whole plant                   | 86                      | 41                                          | < 0.01           | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Heads                         | 101                     | 49-51                                       | < 0.01           | < 0.01           | < 0.01           | < 0.01           |
|                                                   | Cauliflower<br>(Candido)        | 250                           | 30                            | Whole plant<br>Inflorescences | 163<br>186              | 41-43<br>49                                 | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 |
| 2010/114433<br>5<br>L080532                       | Carrots<br>(Nantese)            | 250                           | 30 days                       | Whole plant                   | 86                      | 41                                          | 0.01             | < 0.01           | < 0.01           | 0.01             |
|                                                   |                                 |                               |                               | Roots                         | 107                     | 49                                          | < 0.01           | < 0.01           | < 0.01           | < 0.01           |
|                                                   |                                 |                               |                               | Tops                          | 107                     | 49                                          | < 0.01           | < 0.01           | < 0.01           | < 0.01           |

| Study No.<br>Trial No.<br>Location                | Crop,<br>Variety                 | Appln<br>rate<br>(g<br>ai/ha) | Replant<br>interval | Portion<br>analysed                          | Days after<br>treatment  | Growth<br>Stage<br>(BBCH)<br>at<br>sampling | Residues (mg/kg)                 |                                      |                                      |                                      |
|---------------------------------------------------|----------------------------------|-------------------------------|---------------------|----------------------------------------------|--------------------------|---------------------------------------------|----------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
|                                                   |                                  |                               |                     |                                              |                          |                                             | Fluxapy<br>roxad                 | M700F008                             | M700F048                             | M700F002                             |
| Greece                                            | Broccoli<br>(Leoanau)            | 250                           | 30 days             | Whole plant<br>Inflorescences                | 93<br>107                | 41<br>49                                    | < 0.01<br>< 0.01                 | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     |
|                                                   | Lettuce<br>(Paria<br>Island Cos) | 250                           | 30 days             | Whole plant<br>Heads                         | 82<br>93                 | 41<br>49                                    | < 0.01<br>< 0.01                 | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     |
|                                                   | Wheat<br>(Ritmo)                 | 250                           | 117 days            | Whole plant<br>Whole plant<br>Grain<br>Straw | 328<br>376<br>431<br>431 | 31<br>65<br>89<br>89                        | 0.02<br>0.01<br>< 0.01<br>0.03   | < 0.01<br>< 0.01<br>< 0.01<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01<br>< 0.01 |
| 2010/114433<br>5<br>L080021<br>Germany            | Radish<br>(Cyros)                | 250                           | 117 days            | Whole plant<br>Roots<br>Tops                 | 144<br>158<br>158        | 41<br>49<br>49                              | 0.02<br>< 0.01<br>< 0.01         | < 0.01<br>< 0.01<br>< 0.01           | < 0.01<br>< 0.01<br>< 0.01           | < 0.01<br>< 0.01<br>< 0.01           |
|                                                   | Cauliflower<br>(Mayfair)         | 250                           | 117 days            | Whole plant<br>Inflorescences                | 340<br>361               | 41<br>49                                    | < 0.01<br>< 0.01                 | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     |
|                                                   | Lettuce<br>(Analena)             | 250                           | 117 days            | Whole plant<br>Heads                         | 144<br>158               | 41<br>49                                    | < 0.01<br>< 0.01                 | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     | 0.01<br>< 0.01                       |
|                                                   | Wheat<br>(Toras)                 | 250                           | 120 days            | Whole plant<br>Whole plant<br>Grain<br>Straw | 338<br>379<br>441<br>441 | 32<br>65<br>89<br>89                        | 0.02<br>< 0.01<br>< 0.01<br>0.07 | < 0.01<br>< 0.01<br>< 0.01<br>0.01   | < 0.01<br>< 0.01<br>< 0.01<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01<br>< 0.01 |
| 2010/114433<br>5<br>L080022<br>Germany            | Carrots<br>(Damco<br>F1)         | 250                           | 120 days            | Whole plant<br>Roots<br>Tops                 | 170<br>197<br>197        | 41<br>49<br>49                              | 0.05<br>0.03<br>0.02             | 0.03<br>< 0.01<br>< 0.01             | < 0.01<br>< 0.01<br>< 0.01           | 0.01<br>< 0.01<br>< 0.01             |
|                                                   | Cauliflower<br>(Grogor)          | 250                           | 120 days            | Whole plant<br>Inflorescences                | 163<br>197               | 41<br>49                                    | < 0.01<br>< 0.01                 | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     |
|                                                   | Lettuce<br>(Gisela)              | 250                           | 120 days            | Whole plant<br>Heads                         | 150<br>156               | 41<br>49                                    | < 0.01<br>< 0.01                 | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     |
|                                                   | Wheat<br>(Califa Sur)            | 250                           | 119 days            | Whole plant<br>Whole plant<br>Grain<br>Straw | 174<br>119<br>239<br>239 | 33<br>65<br>88<br>89                        | 0.02<br>0.03<br>< 0.01<br>0.04   | < 0.01<br>< 0.01<br>< 0.01<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01<br>< 0.01 |
| 2010/114433<br>5<br>L080023<br>Spain              | Carrots<br>(Cabana<br>RZ)        | 250                           | 119 days            | Whole plant<br>Roots<br>Tops                 | 190<br>217<br>217        | 41<br>49<br>49                              | 0.02<br>0.02<br>0.02             | < 0.01<br>< 0.01<br>< 0.01           | < 0.01<br>< 0.01<br>< 0.01           | < 0.01<br>< 0.01<br>< 0.01           |
|                                                   | Cauliflower<br>(Sirante)         | 250                           | 119 days            | Whole plant<br>Inflorescences                | 174<br>199               | 41<br>49                                    | 0.02<br>< 0.01                   | < 0.01<br>< 0.01                     | 0.01<br>< 0.01                       | < 0.01<br>< 0.01                     |
|                                                   | Lettuce<br>(Candela)             | 250                           | 119 days            | Whole plant<br>Heads                         | 189<br>190               | 41<br>49                                    | 0.01<br>< 0.01                   | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     |
|                                                   | Wheat<br>(Saragolla)             | 250                           | 123                 | Whole plant<br>Whole plant<br>Grain<br>Straw | 305<br>333<br>369<br>369 | 33<br>65<br>89<br>89                        | 0.01<br>0.01<br>< 0.01<br>0.06   | < 0.01<br>< 0.01<br>< 0.01<br>0.01   | < 0.01<br>< 0.01<br>< 0.01<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01<br>< 0.01 |
| 2010/114433<br>5<br>L080450 +<br>L080531<br>Italy | Lettuce<br>(Romana)              | 250                           | 124 days            | Whole plant<br>Heads                         | 173<br>188               | 41<br>49                                    | < 0.01<br>< 0.01                 | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     |
|                                                   | Cauliflower<br>(Candido)         | 250                           | 124                 | Whole plant<br>Inflorescence                 | 250<br>273               | 41-43<br>49                                 | < 0.01<br>< 0.01                 | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     |
|                                                   | Wheat<br>(Thasos)                | 250                           | 365 days            | Whole plant<br>Whole plant<br>Grain<br>Straw | 406<br>433<br>477<br>477 | 31<br>65<br>89<br>89                        | 0.03<br>0.02<br>< 0.01<br>0.04   | < 0.01<br>< 0.01<br>< 0.01<br>0.02   | < 0.01<br>< 0.01<br>< 0.01<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01<br>< 0.01 |
|                                                   | Radish<br>(Cyros F1)             | 250                           | 365 days            | Whole plant<br>Roots<br>Tops                 | 394<br>405<br>405        | 41<br>49<br>49                              | 0.02<br>< 0.01<br>< 0.01         | < 0.01<br>< 0.01<br>< 0.01           | < 0.01<br>< 0.01<br>< 0.01           | < 0.01<br>< 0.01<br>< 0.01           |
| 2010/114433<br>5<br>L080021<br>Germany            | Cauliflower<br>(Vinson)          | 250                           | 365 days            | Whole plant<br>Inflorescences                | 413<br>428               | 41<br>49                                    | < 0.01<br>< 0.01                 | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     |
|                                                   | Lettuce<br>(Analena)             | 250                           | 365 days            | Whole plant<br>Heads                         | 392<br>398               | 41<br>49                                    | 0.01<br>< 0.01                   | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     | < 0.01<br>< 0.01                     |

| Study No.<br>Trial No.<br>Location     | Crop,<br>Variety              | Appln<br>rate<br>(g<br>ai/ha) | Replant<br>interval | Portion<br>analysed | Days after<br>treatment | Growth<br>Stage<br>(BBCH)<br>at<br>sampling | Residues (mg/kg) |          |          |          |
|----------------------------------------|-------------------------------|-------------------------------|---------------------|---------------------|-------------------------|---------------------------------------------|------------------|----------|----------|----------|
|                                        |                               |                               |                     |                     |                         |                                             | Fluxapy<br>roxad | M700F008 | M700F048 | M700F002 |
| 2010/114433<br>5<br>L080022<br>Germany | Wheat<br>(Triso)              | 250                           | 365 days            | Whole plant         | 414                     | 32                                          | 0.03             | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Whole plant         | 441                     | 65                                          | 0.01             | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Grain               | 491                     | 89                                          | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Straw               | 491                     | 89                                          | 0.08             | 0.01     | < 0.01   | < 0.01   |
|                                        | Carrots<br>(Damco<br>F1)      | 250                           | 365 days            | Whole plant         | 429                     | 41                                          | 0.03             | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Roots               | 463                     | 49                                          | 0.02             | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Tops                | 463                     | 49                                          | 0.03             | < 0.01   | < 0.01   | < 0.01   |
|                                        | Cauliflower<br>(Chambord<br>) | 250                           | 360                 | Whole plant         | 413                     | 41                                          | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
| Inflorescenc<br>e                      |                               |                               |                     | 428                 | 49                      | < 0.01                                      | < 0.01           | < 0.01   | < 0.01   |          |
| 2010/114433<br>5<br>L080023<br>Spain   | Wheat<br>(Califa Sur)         | 250                           | 365 days            | Whole plant         | 420                     | 33                                          | 0.03             | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Whole plant         | 445                     | 65                                          | 0.02             | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Grain               | 485                     | 89                                          | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Straw               | 485                     | 89                                          | 0.05             | < 0.01   | < 0.01   | < 0.01   |
|                                        | Carrots<br>(Cabana<br>RZ)     | 250                           | 365 days            | Whole plant         | 436                     | 41                                          | 0.02             | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Roots               | 463                     | 49                                          | 0.02             | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Tops                | 463                     | 49                                          | 0.02             | < 0.01   | < 0.01   | < 0.01   |
|                                        | Cauliflower<br>(Sirante)      | 250                           | 365 days            | Whole plant         | 420                     | 41                                          | 0.02             | < 0.01   | 0.01     | < 0.01   |
| Inflorescenc<br>es                     |                               |                               |                     | 445                 | 49                      | < 0.01                                      | < 0.01           | < 0.01   | < 0.01   |          |
| 2010/114433<br>5<br>L080024<br>Italy   | Wheat<br>(Blasco)             | 250                           | 367 days            | Whole plant         | 429                     | 33-51                                       | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Whole plant         | 444                     | 65-69                                       | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Grain               | 464                     | 89                                          | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Straw               | 464                     | 89                                          | 0.02             | < 0.01   | < 0.01   | < 0.01   |
|                                        | Cauliflower<br>(Candido)      | 250                           | 367                 | Whole plant         | 506                     | 41-43                                       | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Inflorescenc<br>s   | 529                     | 49                                          | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                        | Lettuce<br>(Romama)           | 250                           | 367                 | Whole plant         | 429                     | 41                                          | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                        |                               |                               |                     | Heads               | 444                     | 49                                          | < 0.01           | < 0.01   | < 0.01   | < 0.01   |

Residues found are summarized below in Table 40.

Table 40 Summary of fluxapyroxad residues in rotational crops from European study

| Crop                        | Portion analysed     | Growth stage (BBCH) | Residues as parent equivalents (mg/kg) |             |             | Residues of M700F002 (mg/kg) |
|-----------------------------|----------------------|---------------------|----------------------------------------|-------------|-------------|------------------------------|
|                             |                      |                     | Fluxapyroxad                           | M700F008    | M700F048    |                              |
| 30 day replanting interval  |                      |                     |                                        |             |             |                              |
| Wheat                       | Wh. Plant w/o root   | 32-51               | 0.02-0.12                              | < 0.01-0.01 | < 0.01      | < 0.01                       |
|                             | Wh. Plant w/o root   | 65                  | 0.02-0.07                              | < 0.01      | < 0.01      | < 0.01                       |
|                             | Grain                | 89                  | < 0.01                                 | < 0.01      | < 0.01      | < 0.01                       |
|                             | Straw                | 89                  | 0.04-0.42                              | < 0.01-0.03 | < 0.01      | < 0.01                       |
| Carrot                      | Wh. Plant with roots | 41                  | 0.01-0.10                              | < 0.01      | < 0.01      | < 0.01-0.01                  |
|                             | Tops                 | 49                  | < 0.01-0.07                            | < 0.01      | < 0.01      | < 0.01-0.01                  |
|                             | Roots                | 49                  | < 0.01-0.08                            | < 0.01      | < 0.01      | < 0.01                       |
| Cauliflower/ broccoli       | Wh. Plant w/o root   | 41-43               | < 0.01-0.06                            | < 0.01      | < 0.01-0.02 | < 0.01-0.01                  |
|                             | Inflorescence        | 49                  | < 0.01                                 | < 0.01      | < 0.01      | < 0.01                       |
| Lettuce                     | Wh. Plant w/o root   | 41                  | < 0.01-0.03                            | < 0.01      | < 0.01      | < 0.01                       |
|                             | Head                 | 49-51               | < 0.01                                 | < 0.01      | < 0.01      | < 0.01                       |
| 120 day replanting interval |                      |                     |                                        |             |             |                              |
| Wheat                       | Wh. Plant w/o root   | 31-33               | 0.01-0.02                              | < 0.01      | < 0.01      | < 0.01                       |
|                             | Wh. Plant w/o root   | 65                  | < 0.01-0.03                            | < 0.01      | < 0.01      | < 0.01                       |
|                             | Grain                | 89                  | < 0.01                                 | < 0.01      | < 0.01      | < 0.01                       |
|                             | Straw                | 89                  | 0.03-0.07                              | < 0.01-0.01 | < 0.01      | < 0.01                       |
| Carrot/radish               | Wh. Plant with roots | 41                  | 0.02-0.05                              | < 0.01-0.03 | < 0.01      | < 0.01-0.01                  |
|                             | Tops                 | 49                  | < 0.01-0.02                            | < 0.01      | < 0.01      | < 0.01                       |
|                             | Roots                | 49                  | < 0.01-0.03                            | < 0.01      | < 0.01      | < 0.01                       |
| Cauliflower                 | Wh. Plant w/o root   | 41                  | < 0.01-0.02                            | < 0.01      | < 0.01-0.01 | < 0.01                       |

| Crop                        | Portion analysed     | Growth stage (BBCH) | Residues as parent equivalents (mg/kg) |             |             | Residues of M700F002 (mg/kg) |
|-----------------------------|----------------------|---------------------|----------------------------------------|-------------|-------------|------------------------------|
|                             |                      |                     | Fluxapyroxad                           | M700F008    | M700F048    |                              |
|                             | Inflorescence        | 49                  | < 0.01                                 | < 0.01      | < 0.01      | < 0.01                       |
| Lettuce                     | Wh. Plant w/o root   | 41                  | < 0.01-0.01                            | < 0.01      | < 0.01      | < 0.01-0.01                  |
|                             | Head                 | 49                  | < 0.01                                 | < 0.01      | < 0.01      | < 0.01                       |
| 365 day replanting interval |                      |                     |                                        |             |             |                              |
| Wheat                       | Wh. Plant w/o root   | 31-33               | < 0.01-0.03                            | < 0.01      | < 0.01      | < 0.01                       |
|                             | Wh. Plant w/o root   | 65                  | < 0.01-0.02                            | < 0.01      | < 0.01      | < 0.01                       |
|                             | Grain                | 89                  | < 0.01                                 | < 0.01      | < 0.01      | < 0.01                       |
|                             | Straw                | 89                  | 0.02-0.08                              | < 0.01-0.02 | < 0.01      | < 0.01                       |
| Carrot/radish               | Wh. Plant with roots | 41                  | 0.02-0.03                              | < 0.01      | < 0.01      | < 0.01                       |
|                             | Tops                 | 49                  | < 0.01-0.03                            | < 0.01      | < 0.01      | < 0.01                       |
|                             | Roots                | 49                  | < 0.01-0.02                            | < 0.01      | < 0.01      | < 0.01                       |
| Cauliflower/broccoli        | Wh. Plant w/o root   | 41                  | < 0.01-0.02                            | < 0.01      | < 0.01-0.01 | < 0.01                       |
|                             | Inflorescence        | 49                  | < 0.01                                 | < 0.01      | < 0.01      | < 0.01                       |
| Lettuce                     | Wh. Plant w/o root   | 41                  | 0.01-0.02                              | < 0.01      | < 0.01      | < 0.01                       |
|                             | Head                 | 49                  | < 0.01                                 | < 0.01      | < 0.01      | < 0.01                       |

Conversion factor for calculation of M700F008 to parent equivalents is 1.038

Conversion factor for calculation of M700F048 to parent equivalents is 0.720

Residues of parent fluxapyroxad and metabolites above the LOQ were not observed in wheat grain after a 30, 120 or 365 day replanting interval. In wheat straw fluxapyroxad was found at up to 0.42, 0.07 and 0.08 mg/kg after 30, 120 and 365 day replanting intervals respectively. The metabolite M700F008 was observed in straw at up to 0.03 mg/kg for a 30 day replanting interval. In wheat plant material harvested at earlier growth stages, residues of parent were found at up to 0.12, 0.03 and 0.03 mg/kg after 30, 120 and 365 replanting intervals respectively. Metabolites in whole plants were at or below the LOQ.

In carrot/radish roots fluxapyroxad was found at up to 0.08, 0.03 and 0.02 mg/kg respectively after 30, 120 and 365 day replanting intervals. The metabolites were not observed above the LOQ in carrot or radish roots at harvest.

In cauliflower / broccoli and lettuce at harvest residues of fluxapyroxad and metabolites were below the LOQ for all replanting intervals. (Low residues of parent and M700F048 were observed in some immature plants harvested at early growth stages, up to 0.06 mg/kg parent in cauliflower/broccoli whole plants at BBCH 41–43, 30 day replanting interval; up to 0.02 mg/kg M700F048 in cauliflower/broccoli whole plants at BBCH 41–43, 30 day replanting interval).

#### *European study – application to bare soil (oilseed rape)*

A rotational crop study was conducted at 4 sites in Italy, Spain and Germany (2) in 2009 and 2010 to investigate residues in oilseed rape grown in soil previously treated with fluxapyroxad (Erdmann 2011, 2010/1159931). At each site an EC formulation of fluxapyroxad was applied once to bare soil at a rate corresponding to 250 g ai/ha. Applications were made at 28 days prior to planting in a spray volume of 200 L/ha. Oilseed rape whole plant samples were taken at BBCH growth stage 16–19 and 55–59. Seed and the rest of plant were collected at growth stage 89. Residues found are summarized below:

Table 41 Residues of fluxapyroxad and metabolites in oilseed rape planted 30 days after treatment of bare soil with 250 g ai/ha fluxapyroxad

| Crop, Variety, Location, Year           | Method of treatment                            | Application rate (g ai/ha) | Portion analysed | DAT | Residues (mg/kg) |          |          |          |
|-----------------------------------------|------------------------------------------------|----------------------------|------------------|-----|------------------|----------|----------|----------|
|                                         |                                                |                            |                  |     | Fluxapyroxad     | M700F008 | M700F048 | M700F002 |
| Oilseed rape, Titan, Germany, 2009-2010 | Bare soil application, 28 days before planting | 250                        | Whole plant      | 70  | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                         |                                                |                            | Whole plant      | 246 | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                         |                                                |                            | Seed             | 336 | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                         |                                                |                            | Rest of plant    | 336 | < 0.01           | < 0.01   | 0.01     | < 0.01   |

| Crop, Variety, Location, Year             | Method of treatment                            | Application rate (g ai/ha) | Portion analysed | DAT | Residues (mg/kg) |          |          |          |
|-------------------------------------------|------------------------------------------------|----------------------------|------------------|-----|------------------|----------|----------|----------|
|                                           |                                                |                            |                  |     | Fluxapyroxad     | M700F008 | M700F048 | M700F002 |
| Oilseed rape, Visby, Germany, 2009-2010   | Bare soil application, 28 days before planting | 250                        | Whole plant      | 84  | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                           |                                                |                            | Whole plant      | 263 | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                           |                                                |                            | Seed             | 353 | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                           |                                                |                            | Rest of plant    | 353 | < 0.01           | < 0.01   | 0.01     | < 0.01   |
| Oilseed rape, Kabel, Spain, 2009-2010     | Bare soil application, 28 days before planting | 250                        | Whole plant      | 92  | 0.02             | < 0.01   | 0.02     | < 0.01   |
|                                           |                                                |                            | Whole plant      | 119 | 0.01             | < 0.01   | < 0.01   | < 0.01   |
|                                           |                                                |                            | Seed             | 242 | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                           |                                                |                            | Rest of plant    | 242 | 0.02             | 0.01     | 0.07     | < 0.01   |
| Oilseed rape, Excalibur, Italy, 2009-2010 | Bare soil application, 28 days before planting | 250                        | Whole plant      | 161 | 0.03             | < 0.01   | < 0.01   | < 0.01   |
|                                           |                                                |                            | Whole plant      | 188 | 0.02             | < 0.01   | 0.03     | < 0.01   |
|                                           |                                                |                            | Seed             | 254 | < 0.01           | < 0.01   | < 0.01   | < 0.01   |
|                                           |                                                |                            | Rest of plant    | 254 | 0.01             | < 0.01   | 0.06     | < 0.01   |

Residues of parent and metabolites were all < 0.01 mg/kg in rape seed at harvest from each of the 4 sites. Low residues of parent and M700F048 were observed in immature plants at up to 0.03 mg/kg for each. For the rest of the plant at harvest residues of parent were up to 0.02 mg/kg, while residues of M700F048 were up to 0.07 mg/kg. The remaining metabolites were < 0.01 mg/kg.

*European study – application to bare soil (corn, potato, sugar beet, sunflower)*

Four trials were conducted in 2010 and 2011 in Italy, Spain and Germany to investigate the residue behaviour of fluxapyroxad in different succeeding crops (corn, potato, sugar beet and sunflower), which were grown in soil previously treated with fluxapyroxad (Erdmann 2011, 2011/1150133). An EC formulation of fluxapyroxad was applied once to bare soil at a rate of 250 g ai/ha. Applications were made 29–31 days prior to planting in a spray volume of 200 L/ha. For the corn trials, samples of cobs without husk and rest of plant with husk no roots were taken at growth stage BBCH 85. At BBCH 89 samples of grain and rest of plant without roots were taken. For the potato trials, samples of tubers were taken at growth stage BBCH 47 and BBCH 49. Sugar beet whole plant without roots samples were collected at BBCH 39 and sugar beet roots and leaves with top specimens were taken at growth stage BBCH 49. Sunflower seed and rest of plant without roots specimens were collected at growth stage BBCH 89.

Table 42 Fluxapyroxad residues in rotational crops grown on treated plots

| Location, year | Commodity, variety   | Appln rate (kg ai/ha) | Replant interval (days) | Portion analysed | Days after appln | Residue (mg/kg) |          |          |          |
|----------------|----------------------|-----------------------|-------------------------|------------------|------------------|-----------------|----------|----------|----------|
|                |                      |                       |                         |                  |                  | Fluxapyroxad    | M700F008 | M700F048 | M700F002 |
| Germany, 2010  | Corn, Progress       | 0.250 (bare soil)     | 31                      | Cobs w/o husks   | 151              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                      |                       |                         | Rest of plant    | 151              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                      |                       |                         | Grain            | 179              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                      |                       |                         | Rest of plant    | 179              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                | Potato, Solara       | 0.250 (bare soil)     | 29                      | Tuber            | 113              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                      |                       |                         | Tuber            | 143              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                | Sugar beet, Pauletta | 0.250 (bare soil)     | 29                      | Whole plant      | 106              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                      |                       |                         | Roots            | 176              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                      |                       |                         | Leaves with tops | 176              | 0.013           | < 0.01   | < 0.01   | < 0.01   |
| Germany, 2010  | Corn, ES Palazzo     | 0.250 (bare soil)     | 29                      | Cobs w/o husks   | 162              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                      |                       |                         | Rest of plant    | 162              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                      |                       |                         | Grain            | 197              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |

| Location, year | Commodity, variety  | Appln rate (kg ai/ha) | Replant interval (days) | Portion analysed | Days after appln | Residue (mg/kg) |          |          |          |
|----------------|---------------------|-----------------------|-------------------------|------------------|------------------|-----------------|----------|----------|----------|
|                |                     |                       |                         |                  |                  | Fluxapyroxad    | M700F008 | M700F048 | M700F002 |
| Spain, 2010    | Potato, Gala        | 0.250 (bare soil)     | 29                      | Rest of plant    | 197              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Tuber            | 118              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Tuber            | 162              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                | Sugar beet, Beretta | 0.250 (bare soil)     | 29                      | Whole plant      | 92               | < 0.01          | < 0.01   | < 0.01   | 0.015    |
|                |                     |                       |                         | Roots            | 192              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Leaves with tops | 192              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                | Corn, PR31D58       | 0.250 (bare soil)     | 29                      | Cobs w/o husks   | 131              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Rest of plant    | 131              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Grain            | 172              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Rest of plant    | 172              | 0.011           | < 0.01   | < 0.01   | < 0.01   |
| Spain, 2010    | Potato, Spunta      | 0.250 (bare soil)     | 29                      | Tuber            | 99               | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Tuber            | 121              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                | Sunflower, Oleko    | 0.250 (bare soil)     | 29                      | Seed             | 145              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Rest of plant    | 145              | 0.038           | < 0.01   | < 0.01   | < 0.013  |
|                | Corn, Quadro        | 0.250 (bare soil)     | 30                      | Cobs w/o husks   | 134              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Rest of plant    | 134              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Grain            | 149              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Rest of plant    | 149              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                | Potato, Jelly       | 0.250 (bare soil)     | 30                      | Tuber            | 114              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Tuber            | 134              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                | Sunflower, Sultim   | 0.250 (bare soil)     | 30                      | Seed             | 158              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |
|                |                     |                       |                         | Rest of plant    | 158              | < 0.01          | < 0.01   | < 0.01   | < 0.01   |

Residues found in the succeeding crops are summarized below in Table 43.

Table 43 Residues of fluxapyroxad in corn, potato, sugar beet and sunflower planted 30 days after treatment of bare soil with 250 g ai/ha fluxapyroxad

| Crop       | Portion analysed        | Growth Stage (BBCH) | n | Residues as parent equivalents (mg/kg) |          |          | M700F002     |
|------------|-------------------------|---------------------|---|----------------------------------------|----------|----------|--------------|
|            |                         |                     |   | Fluxapyroxad                           | M700F008 | M700F048 |              |
| Corn       | Cobs without husks      | 85                  | 4 | < 0.01                                 | < 0.01   | < 0.01   | < 0.01       |
|            | Rest of plant with husk | 85                  | 4 | < 0.01                                 | < 0.01   | < 0.01   | < 0.01       |
|            | Grain                   | 89                  | 4 | < 0.01                                 | < 0.01   | < 0.01   | < 0.01       |
|            | Rest of plant           | 89                  | 4 | < 0.01-0.011                           | < 0.01   | < 0.01   | < 0.01       |
| Potato     | Tuber                   | 47                  | 4 | < 0.01                                 | < 0.01   | < 0.01   | < 0.01       |
|            | Tuber                   | 49                  | 4 | < 0.01                                 | < 0.01   | < 0.01   | < 0.01       |
| Sugar beet | Whole plant             | 39                  | 2 | < 0.01                                 | < 0.01   | < 0.01   | < 0.01-0.015 |
|            | Roots                   | 49                  | 2 | < 0.01                                 | < 0.01   | < 0.01   | < 0.01       |
|            | Leaves with tops        | 49                  | 2 | < 0.01-0.013                           | < 0.01   | < 0.01   | < 0.01       |
| Sunflower  | Seed                    | 89                  | 2 | < 0.01                                 | < 0.01   | < 0.01   | < 0.01       |
|            | Rest of plant           | 89                  | 2 | < 0.01-0.038                           | < 0.01   | < 0.01   | < 0.01-0.013 |

Residues of fluxapyroxad and its metabolites were below the LOQ in corn cobs and grain, potato tubers, sugar beet roots and sunflower seed at harvest. Low residues of parent were detected in some plant material / leaf samples at up to 0.011 mg/kg in corn plant material, up to 0.013 mg/kg in sugar beet leaves with tops and up to 0.038 mg/kg in sunflower plant material. Low residues of M700F002 were detected in sugar beet whole plants at an early growth stage (up to 0.015 mg/kg) and sunflower plant material at harvest (up to 0.013 mg/kg). Residues of the metabolites M700F008 and M700F048 were < 0.01 mg/kg in all samples.

*European study - application to a primary cereal crop (followed by lettuce, carrot, radish)*

A rotational crop study was conducted at sites in Germany and the UK where application was made to a primary cereal crop. In the 2008 growing season fluxapyroxad was applied twice to barley (German trial) or wheat (UK trial) at a single rate equivalent to 125 g ai/ha (Erdmann 2011, 2010/1159929). (Plant samples for this season were not analysed). In the 2009 growing season fluxapyroxad was applied twice to barley or wheat at single rate equivalent to 125 g ai/ha. In both trials applications were made at cereal crop growth stages 24–32 and 65–69. The spray volume used was 200 L/ha for the German trial and about 180 L/ha for the UK trial. Samples of grain and straw of barley and wheat were collected at BBCH growth stage 89 from the crops of the 2009 growing season. After harvest of the cereals, the rotational crops lettuce, radish and carrots were cultivated as secondary crops which were not treated with the test item (The rotational crops were sown 2 days after harvest of the cereal crop in the German trial and approximately 2 months after harvest of the cereal crop in the UK trial). Residues found in the primary and secondary crops are summarized below:

Table 44 Residues of fluxapyroxad and metabolites in wheat, barley and rotational crops

| Location, year  | Commodity | Appln rate kg ai/ha | No. of appln | Portion analysed | DALA | Residues (mg/kg) |          |          |          |
|-----------------|-----------|---------------------|--------------|------------------|------|------------------|----------|----------|----------|
|                 |           |                     |              |                  |      | Fluxapyroxad     | M700F008 | M700F048 | M700F002 |
| Germany, 2008/9 | Barley    | 0.125               | 2            | -                | -    | -                | -        | -        | -        |
|                 | Barley    | 0.125               | 2            | grain            | 50   | 0.19             | < 0.01   | < 0.01   | < 0.01   |
|                 |           |                     |              | straw            | 50   | 0.98             | 0.03     | < 0.01   | 0.01     |
|                 | Lettuce   | -                   | -            | leaves           | 106  | 0.02             | < 0.01   | < 0.01   | 0.02     |
|                 | Carrots   | -                   | -            | roots            | 183  | 0.02             | < 0.01   | < 0.01   | < 0.01   |
|                 |           |                     |              | tops             | 183  | 0.02             | < 0.01   | < 0.01   | < 0.01   |
|                 | Radish    | -                   | -            | roots            | 112  | 0.01             | < 0.01   | < 0.01   | < 0.01   |
|                 |           |                     |              | tops             | 112  | < 0.01           | 0.02     | 0.01     | 0.03     |
| UK, 2008/9      | Wheat     | 0.125               | 2            | -                | -    | -                | -        | -        | -        |
|                 | Wheat     | 0.125               | 2            | grain            | 81   | 0.05             | 0.01     | < 0.01   | < 0.01   |
|                 |           |                     |              | straw            | 81   | 3.28             | 0.23     | < 0.01   | < 0.01   |
|                 | Lettuce   | -                   | -            | leaves           | 302  | 0.01             | < 0.01   | < 0.01   | < 0.01   |

Low residues of parent were observed in lettuce, carrots and radish grown after treatment of a primary cereal crop. In lettuce parent was found at up to 0.02 mg/kg, in carrot and radish roots parent was found at 0.02 and 0.01 mg/kg respectively. Metabolites were not detected in lettuce leaves or carrot and radish roots with the exception M700F002 at 0.02 mg/kg in lettuce leaves. For radish tops low levels of the metabolites were detected (up to 0.03 mg/kg for M700F002).

The field rotational crop studies suggest that residues of fluxapyroxad may occur in succeeding crops.

## RESIDUE ANALYSIS

### Analytical methods

Details of analytical methods including validation data were supplied for the determination of fluxapyroxad and key metabolites in plant and animal matrices, soil and water and were considered satisfactory. A summary of all analytical methods for plants and animals is given in Table 45.

Table 45 Summary of analytical methods developed for plant and animal matrices

| Matrix | Analyte      | Method No.       | Detection system         | LOQ                                                                                                                                   | Reference                              |
|--------|--------------|------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Plant  | Fluxapyroxad | 535/3 (L0076/03) | HPLC-MS/MS<br>UPLC-MS/MS | Wheat (whole plant, grain, straw), tomato, onion, grape, soya bean seed, apple, dried pea, lemon, avocado, potato<br>LOQ = 0.01 mg/kg | Hopf and Mackenroth 2009, 2009/1074615 |
| Plant  | Fluxapyroxad | L0137/01         | HPLC-MS/MS               | Wheat (whole plant, grain,                                                                                                            | Lehmann and Mackenroth                 |

| Matrix | Analyte                                                        | Method No.                 | Detection system | LOQ                                                                                                                                                                                                                           | Reference                                                                                                                                                                                                                      |
|--------|----------------------------------------------------------------|----------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        | M700F002<br>M700F008<br>M700F048                               |                            | UPLC-MS/MS       | straw), soya bean seed, field pea (dried seed), potato, onion, cauliflower, avocado, lemon, apple, tomato, grape, coffee (green bean), apple juice, beer, raisin, potato crisps and soya bean refined oil<br>LOQ = 0.01 mg/kg | 2009, 2009/1074617<br><br>Class and Jooß 2009, 2009/1074618 (ILV for Fluxapyroxad)<br><br>Class and Jooß 2009, 2009/1074614 (ILV for M700F002)<br><br>Class and Jooß 2009, 2009/1091115 (ILV for M700F008)                     |
| Animal | Fluxapyroxad<br>M700F002 (except eggs)<br>M700F008<br>M700F048 | L0140/01                   | HPLC-MS/MS       | 0.01 mg/kg for bovine muscle, liver, kidney and fat<br><br>0.001 mg/kg each metabolite in milk, milk products and egg                                                                                                         | Macdougall 2009, 2009/1074797 (Contains method + ILV)                                                                                                                                                                          |
| Animal | M700F002                                                       | Cram No. 1515<br>Version 1 | HPLC-MS/MS       | 0.001 mg/kg in egg                                                                                                                                                                                                            | Macdougall 2009, 2009/1074797                                                                                                                                                                                                  |
| Animal | Fluxapyroxad<br>M700F002<br>M700F008<br>M700F048               | L0140/02                   | HPLC-MS/MS       | 0.01 mg/kg each metabolite in cow muscle, kidney, fat and liver<br><br>0.001 mg/kg each metabolite in cow milk, skim milk, cream and hen egg                                                                                  | Hopf and Mackenroth 2009, 2009/1074613<br><br>Class and Jooß 2009, 2009/1074618 (ILV for Fluxapyroxad)<br><br>Class and Jooß 2009, 2009/1074614 (ILV for M700F002)<br><br>Class and Jooß 2009, 2009/1091115 (ILV for M700F008) |

### Plant commodities

#### Method L0076/03

Method L0076/03 (previously Method 535/3) for the determination of fluxapyroxad in plant matrices by means of high performance liquid chromatography with tandem mass spectrometry (HPLC-MS/MS) or ultra performance liquid chromatography with tandem mass spectrometry (UPLC-MS/MS) was reported by Hopf and Mackenroth (2009, 2009/1074615).

Fluxapyroxad is extracted from sample material with a mixture of methanol, water and hydrochloric acid (MeOH/ H<sub>2</sub>O/ 2N HCl, 70/25/5, v/v/v) using a Polytron. An aliquot of the extract is centrifuged and partitioned under alkaline conditions with cyclohexane. An aliquot is evaporated to dryness and dissolved in methanol/ H<sub>2</sub>O (1/1, v/v). Final determination of the analyte is performed by HPLC-MS/MS or UPLC-MS/MS using a C18 column and gradient elution using 0.1% formic acid in water to 0.1% formic acid in acetonitrile as the mobile phase. MS/MS detection in the positive ionization mode was used to monitor ion transitions 382→342 and 382→362 for fluxapyroxad.

Since the HPLC-MS/MS determination is highly selective, and quantitation was possible for the compound at two different transitions, a confirmatory technique was not required. For fluxapyroxad, the transition 382→362 was recommended for quantitation, and 382→342 was used for confirmation. Recoveries were provided for both transitions and found to be acceptable.

Samples of wheat (whole plant, grain and straw), tomato, onion, grape, soya bean seed, apple, dried pea, lemon, avocado and potato were spiked with fluxapyroxad at levels of 0.01 and 0.1 mg/kg, and extracted and analysed using Method L0076/03 (HPLC-MS/MS and UPLC-MS/MS). Recoveries were provided for both transitions and found to be within acceptable ranges. In all matrices tested, the individual recovery values were in the acceptable range of 70–120%. The relative standard deviations (RSD, %) for all commodities and all spiking levels were below 20%. The mean recovery data for the quantitation transition are summarized in Table 46. The reported range of % recoveries and % RSDs showed that the method has satisfactory accuracy and precision in the range of spiking levels studied. The LOQ was reported as 0.01 mg/kg in all matrices. Method linearity was validated over the range from 0.05 to 2.5 ng/mL for fluxapyroxad. Correlation coefficients (*r*) were > 0.99, demonstrating the linearity of the detector response to analyte amount.

Table 46 Method recoveries for L0076/03: fluxapyroxad in plants (quantitation transition)

| Matrix             | Analyte      | No. of tests | Spiking level [mg/kg] | Transition 382 → 362* |               |         | Transition 382 → 362* |               |         |
|--------------------|--------------|--------------|-----------------------|-----------------------|---------------|---------|-----------------------|---------------|---------|
|                    |              |              |                       | Range [%]             | Mean ± SD [%] | RSD [%] | Range [%]             | Mean ± SD [%] | RSD [%] |
|                    |              |              |                       | HPLC-MS/MS            |               |         | UPLC-MS/MS            |               |         |
| Wheat, whole plant | Fluxapyroxad | 5            | 0.01                  | 71-87                 | 77.3±6.4      | 8.2     | 77-82                 | 79.3±1.6      | 2.1     |
|                    |              | 5            | 0.1                   | 76-85                 | 81.1±4.0      | 4.9     | 79-83                 | 81.6±1.5      | 1.8     |
| Wheat, grain       | Fluxapyroxad | 5            | 0.01                  | 72-94                 | 84.9±9.1      | 10.7    | 84-94                 | 87.5±4.1      | 4.7     |
|                    |              | 5            | 0.1                   | 78-106                | 93.7±11.1     | 11.9    | 79-88                 | 84.6±3.3      | 3.9     |
| Wheat, straw       | Fluxapyroxad | 5            | 0.01                  | 87-92                 | 88.7±2.1      | 2.3     | 72-81                 | 75.8±3.1      | 4.1     |
|                    |              | 5            | 0.1                   | 90-98                 | 93.7±3.2      | 3.4     | 79-87                 | 82.4±3.2      | 3.9     |
| Tomato, fruit      | Fluxapyroxad | 5            | 0.01                  | 82-89                 | 84.5±3.0      | 3.5     | 80-83                 | 81.6±1.0      | 1.3     |
|                    |              | 5            | 0.1                   | 79-93                 | 88.1±6.0      | 6.9     | 83-89                 | 85.3±2.2      | 2.6     |
| Onion, bulb        | Fluxapyroxad | 5            | 0.01                  | 73-88                 | 82.1±5.6      | 6.8     | 71-79                 | 73.6±3.2      | 4.4     |
|                    |              | 5            | 0.1                   | 71-92                 | 81.5±8.8      | 10.8    | 71-83                 | 76.8±4.5      | 5.9     |
| Grape, fruit       | Fluxapyroxad | 5            | 0.01                  | 77-94                 | 84.4±7.0      | 8.3     | 73-82                 | 78.5±4.1      | 5.2     |
|                    |              | 5            | 0.1                   | 78-90                 | 84.4±4.4      | 5.2     | 82-87                 | 84.1±2.5      | 3.0     |
| Soya bean, seed    | Fluxapyroxad | 5            | 0.01                  | 78-90                 | 86.1±4.9      | 5.7     | 76-79                 | 77.2±1.3      | 1.6     |
|                    |              | 5            | 0.1                   | 78-92                 | 86.3±5.7      | 6.6     | 77-83                 | 79.0±2.4      | 3.1     |
| Apple, fruit       | Fluxapyroxad | 5            | 0.01                  | 77-92                 | 83.2±5.9      | 7.0     | 73-86                 | 78.5±5.5      | 7.0     |
|                    |              | 5            | 0.1                   | 81-92                 | 86.6±5.3      | 6.1     | 75-87                 | 81.9±4.4      | 5.4     |
| Dried pea, seed    | Fluxapyroxad | 5            | 0.01                  | 74-89                 | 81.6±5.8      | 7.2     | 79-88                 | 83.5±4.3      | 5.1     |
|                    |              | 5            | 0.1                   | 74-89                 | 80.4±6.7      | 8.3     | 85-92                 | 87.9±2.7      | 3.1     |
| Lemon, fruit       | Fluxapyroxad | 5            | 0.01                  | 71-96                 | 86.9±9.7      | 11.1    | 80-84                 | 81.3±1.8      | 2.2     |
|                    |              | 5            | 0.1                   | 82-97                 | 90.0±7.0      | 7.8     | 78-85                 | 81.9±2.8      | 3.4     |
| Avocado, fruit     | Fluxapyroxad | 5            | 0.01                  | 70-83                 | 75.7±5.9      | 7.8     | 71-77                 | 74.2±2.5      | 3.4     |
|                    |              | 5            | 0.1                   | 83-89                 | 86.1±2.0      | 2.3     | 75-79                 | 76.5±1.7      | 2.2     |
| Potato, tuber      | Fluxapyroxad | 5            | 0.01                  | 71-89                 | 82.5±6.8      | 8.2     | 78-84                 | 80.4±2.2      | 2.7     |
|                    |              | 5            | 0.1                   | 86-93                 | 88.9±3.1      | 3.5     | 78-83                 | 81.3±2.1      | 2.6     |

For extraction of the analyte, a mixture consisting of methanol/water/2N HCl (70/25/5, v/v/v) is used. The final volume is prepared in methanol/water (50/50, v/v). In order to investigate the stability of the analyte in these mixtures, the aliquots of extract solutions and final volumes of tomato and dried peas samples of the above method recovery series were stored under refrigerator conditions in the dark and re-analysed after 7 days. The results showed that extracts of fluxapyroxad were stable when kept in the extraction mixture and in the final volume for 7 days.

To investigate the stability of calibration and spiking solutions, solutions of the analyte were prepared: for spiking, 100 ng/mL of the analyte was dissolved in methanol. As calibration standard, a methanol/water mixture (50/50, v/v) containing 0.25 ng/mL of the analyte was tested. Two replicates per solution were stored refrigerated in the dark, and re-analysed after 14, 30 and 62 days. The results showed that the spiking solutions in methanol and the calibration standards in methanol/water were stable over two months.

#### Method L0137/01

A validated method (L0137/01) has been reported for the determination of fluxapyroxad and its metabolites M700F002, M700F008 and M700F048 in plant matrices and processed commodities

using HPLC-MS/MS and UPLC-MS/MS (Lehmann and Mackenroth 2009, 2009/1074617). The analytes are extracted from the plant matrices (except oils) using methanol/water (50/50, v/v) using a Polytron. A portion of the extract is centrifuged. Filtration of the supernatant using cotton wool is necessary for straw matrices followed by repeat extraction.

An aliquot of the supernatant is then diluted with saturated sodium chloride solution, acidified with hydrochloric acid and subsequently partitioned with water saturated ethyl acetate. An aliquot of the organic phase is evaporated to dryness and dissolved in methanol water (50/50, v/v). The use of an ultrasonic bath is recommended.

For the analysis of fluxapyroxad, M700F002, M700F008 and M700F048 in oil, a variant of the method is applied. The sample is completely dissolved in isohexane, followed by a liquid/liquid partition against acetonitrile. An aliquot of the acetonitrile phase is evaporated to dryness and dissolved in methanol/water (50/50, v/v). Use of an ultrasonic bath is recommended.

The final determination is performed by HPLC-MS/MS or UPLC-MS/MS. For analytes fluxapyroxad, M700F008 and M700F048, a C18 column is used with gradient elution using 0.1% formic acid in water to 0.1% formic acid in acetonitrile as the mobile phase. MS/MS detection in the positive ionization mode is used to monitor ion transitions 382→342 and 382→362 (quantitation) for fluxapyroxad, 368→328 and 368→348 (quantitation) for M700F008, and 530→328 and 530→368 (quantitation) for M700F048. For the analyte M700F002, a Polar-RP or Hydro-RP column is used with gradient elution using 0.1% formic acid in water to 0.1% formic acid in methanol as the mobile phase. MS/MS detection in the negative ionization mode was used to monitor ion transitions 161→141 for M700F002.

Since the LC-MS/MS determination is highly selective, and quantitation was possible for the analytes fluxapyroxad, M700F008 and M700F048 at two different transitions, a confirmatory technique was not required for these three compounds. In the case of M700F002, for which the second transition was not sensitive enough, additional chromatographic conditions were described for confirmatory purposes. The results from several plant matrices under these confirmatory conditions were included.

Samples of wheat (whole plant, grain and straw), soya bean, field pea (dried seed), potato, onion, cauliflower, avocado, lemon, apple, tomato, grape, coffee (green bean), apple juice, beer, raisin, potato crisps and soya bean refined oil were spiked with fluxapyroxad, M700F002, M700F008 and M700F048 at levels of 0.01 and 0.1 mg/kg. Samples were extracted and analysed with Method L0137/01 (HPLC-MS/MS and UPLC-MS/MS).

In the matrices tested the mean recoveries were within 70–120% in all but one case; the recoveries obtained from wheat whole plant at spiking level of 0.1 mg/kg (HPLC, 2<sup>nd</sup> transition) averaged at 121.6%. The mean recovery data for the quantitation transition are summarized in Tables 47 to 50. The relative standard deviations (RSD, %) for all commodities and all spiking levels were below 20%. The method has satisfactory accuracy and precision in the range of spiking levels studied. The LOQ was defined by the lowest spiking level successfully tested, which was 0.01 mg/kg each for all four analytes in all matrices. Method linearity was validated over the range of 0.05 to 2.5 ng/mL for all four analytes (fluxapyroxad, M700F002, M700F008 and M700F048). Correlation coefficients (r) were > 0.99, demonstrating the linearity of the detector response to analyte amount.

Table 47 Method recoveries for L0137/01: fluxapyroxad in plant (HPLC and UPLC)

| Matrix             | Analyte      | No. of tests | Spiking level [mg/kg] | Transition 382 → 362* |               |         | Transition 382 → 362* |               |         |
|--------------------|--------------|--------------|-----------------------|-----------------------|---------------|---------|-----------------------|---------------|---------|
|                    |              |              |                       | Range [%]             | Mean ± SD [%] | RSD [%] | Range [%]             | Mean ± SD [%] | RSD [%] |
|                    |              |              |                       | HPLC-MS/MS            |               |         | UPLC-MS/MS            |               |         |
| Wheat, whole plant | Fluxapyroxad | 5            | 0.01                  | 89-96                 | 93.1±2.6      | 2.8     | 102-108               | 103.6±2.6     | 5.7     |
|                    |              | 5            | 0.1                   | 113-122               | 116.9±4.0     | 3.4     | 89-100                | 93.5±4.3      | 4.4     |
| Wheat, grain       | Fluxapyroxad | 5            | 0.01                  | 83-87                 | 84.2±1.9      | 2.2     | 88-96                 | 92.3±2.8      | 5.4     |
|                    |              | 5            | 0.1                   | 96-105                | 101.6±3.7     | 3.6     | 96-103                | 99.8±2.9      | 3.4     |
| Wheat, straw       | Fluxapyroxad | 5            | 0.01                  | 88-91                 | 89.3±0.9      | 1.0     | 91-102                | 94.4±4.4      | 3.9     |
|                    |              | 5            | 0.1                   | 83-103                | 96.4±7.9      | 8.2     | 98-110                | 105.8±4.7     | 9.6     |

| Matrix                 | Analyte      | No. of tests | Spiking level [mg/kg] | Transition 382 → 362* |               |         | Transition 382 → 362* |               |         |
|------------------------|--------------|--------------|-----------------------|-----------------------|---------------|---------|-----------------------|---------------|---------|
|                        |              |              |                       | Range [%]             | Mean ± SD [%] | RSD [%] | Range [%]             | Mean ± SD [%] | RSD [%] |
|                        |              |              |                       | HPLC-MS/MS            |               |         | UPLC-MS/MS            |               |         |
| Soya bean, seed        | Fluxapyroxad | 5            | 0.01                  | 85-95                 | 90.3±3.7      | 4.1     | 91-104                | 95.9±4.7      | 5.6     |
|                        |              | 5            | 0.1                   | 97-114                | 103.1±7.0     | 6.7     | 99-102                | 100.7±1.4     | 4.4     |
| Field pea, dried seed  | Fluxapyroxad | 5            | 0.01                  | 83-98                 | 91.3±6.5      | 7.1     | 79-89                 | 85.5±4.6      | 9.8     |
|                        |              | 5            | 0.1                   | 103-107               | 105.1±1.3     | 1.3     | 101-109               | 103.9±3.4     | 6.2     |
| Potato, tuber          | Fluxapyroxad | 5            | 0.01                  | 96-110                | 103.7±6.0     | 5.8     | 106-110               | 108.0±2.0     | 9.5     |
|                        |              | 5            | 0.1                   | 84-103                | 93.7±8.3      | 8.8     | 95-102                | 99.2±3.1      | 3.3     |
| Onion, bulb            | Fluxapyroxad | 5            | 0.01                  | 84-89                 | 86.0±2.0      | 2.3     | 90-104                | 100.1±5.5     | 3.9     |
|                        |              | 5            | 0.1                   | 92-101                | 98.1±3.6      | 3.7     | 98-108                | 102.2±4.5     | 5.3     |
| Cauliflower, head      | Fluxapyroxad | 5            | 0.01                  | 92-101                | 96.3±4.0      | 4.2     | 83-99                 | 92.1±6.9      | 4.3     |
|                        |              | 5            | 0.1                   | 111-118               | 113.5±3.2     | 2.8     | 90-102                | 94.3±5.5      | 4.0     |
| Avocado, fruit         | Fluxapyroxad | 5            | 0.01                  | 87-100                | 94.4±6.3      | 6.7     | 82-101                | 92.9±7.0      | 11.3    |
|                        |              | 5            | 0.1                   | 111-129               | 116.1±7.3     | 6.3     | 84-90                 | 86.9±2.4      | 9.5     |
| Lemon, fruit           | Fluxapyroxad | 5            | 0.01                  | 85-97                 | 91.9±5.2      | 5.6     | 93-100                | 97.2±2.9      | 7.1     |
|                        |              | 5            | 0.1                   | 88-94                 | 91.3±2.5      | 2.7     | 87-96                 | 90.9±3.9      | 1.7     |
| Apple, fruit           | Fluxapyroxad | 5            | 0.01                  | 86-97                 | 93.8±4.5      | 4.8     | 94-100                | 96.0±2.4      | 2.6     |
|                        |              | 5            | 0.1                   | 94-100                | 97.3±2.1      | 2.1     | 92-98                 | 95.7±2.3      | 1.3     |
| Tomato, fruit          | Fluxapyroxad | 5            | 0.01                  | 90-99                 | 94.9±3.4      | 3.6     | 96-105                | 101.7±3.2     | 2.0     |
|                        |              | 5            | 0.1                   | 95-99                 | 97.2±1.8      | 1.9     | 92-108                | 98.9±6.0      | 2.9     |
| Grape, fruit           | Fluxapyroxad | 5            | 0.01                  | 88-103                | 95.9±7.2      | 7.5     | 95-103                | 99.2±3.7      | 8.3     |
|                        |              | 5            | 0.1                   | 86-105                | 92.3±7.7      | 8.3     | 89-98                 | 95.3±3.9      | 15.1    |
| Coffee, green bean     | Fluxapyroxad | 5            | 0.01                  | 73-84                 | 77.5±4.1      | 5.2     | 80-84                 | 82.2±1.7      | 4.1     |
|                        |              | 5            | 0.1                   | 85-96                 | 92.8±4.6      | 5.0     | 86-99                 | 94.0±4.8      | 3.5     |
| Apple, juice           | Fluxapyroxad | 5            | 0.01                  | 95-100                | 98.1±2.1      | 2.2     | 87-107                | 99.4±7.7      | 0.7     |
|                        |              | 5            | 0.1                   | 98-101                | 99.8±1.1      | 1.1     | 99-107                | 103.9±2.7     | 3.8     |
| Beer                   | Fluxapyroxad | 5            | 0.01                  | 100-103               | 101.8±1.1     | 1.1     | 94-103                | 98.8±3.2      | 3.1     |
|                        |              | 5            | 0.1                   | 105-112               | 108.9±3.0     | 2.8     | 100-113               | 107.8±4.8     | 4.6     |
| Raisin                 | Fluxapyroxad | 5            | 0.01                  | 96-102                | 99.1±2.5      | 2.6     | 101-108               | 105.2±2.5     | 3.1     |
|                        |              | 5            | 0.1                   | 100-119               | 111.0±7.2     | 6.5     | 86-100                | 93.2±6.0      | 5.5     |
| Potato, crisps         | Fluxapyroxad | 5            | 0.01                  | 75-85                 | 79.3±3.6      | 4.5     | 88-95                 | 91.5±3.1      | 1.9     |
|                        |              | 5            | 0.1                   | 81-91                 | 85.2±4.4      | 5.2     | 86-90                 | 88.1±1.6      | 8.9     |
| Soya bean, refined oil | Fluxapyroxad | 5            | 0.01                  | 82-88                 | 84.9±2.1      | 2.5     | 75-81                 | 77.6±2.7      | 4.4     |
|                        |              | 5            | 0.1                   | 92-97                 | 94.0±2.1      | 2.2     | 92-98                 | 96.4±2.4      | 2.8     |

\* used for quantitation

Table 48 Method recoveries for L0137/01: M700F002 in plant (HPLC and UPLC)

| Matrix                   | Analyte  | No. of tests | Spiking level<br>[mg/kg] | Transition 161 → 141* |                  |            | Transition 161 → 141* |                  |            |
|--------------------------|----------|--------------|--------------------------|-----------------------|------------------|------------|-----------------------|------------------|------------|
|                          |          |              |                          | Range<br>[%]          | Mean ±<br>SD [%] | RSD<br>[%] | Range<br>[%]          | Mean ±<br>SD [%] | RSD<br>[%] |
|                          |          |              |                          | HPLC-MS/MS            |                  |            | UPLC-MS/MS            |                  |            |
| Wheat,<br>whole plant    | M700F002 | 5            | 0.01                     | 84-93                 | 89.5±3.4         | 3.8        | 79-85                 | 81.4±2.2         | 2.7        |
|                          |          | 5            | 0.1                      | 88-95                 | 92.4±2.8         | 3.0        | 83-94                 | 89.1±5.1         | 5.8        |
| Wheat,<br>grain          | M700F002 | 5            | 0.01                     | 92-103                | 97.8±4.3         | 4.3        | 88-105                | 94.9±6.4         | 6.7        |
|                          |          | 5            | 0.1                      | 102-108               | 105.0±2.4        | 2.3        | 90-99                 | 96.3±3.5         | 3.6        |
| Wheat,<br>straw          | M700F002 | 5            | 0.01                     | 77-92                 | 82.8±7.8         | 9.4        | 86-91                 | 88.2±2.0         | 2.3        |
|                          |          | 5            | 0.1                      | 85-107                | 97.6±9.6         | 9.9        | 74-96                 | 90.6±9.1         | 10.0       |
| Soya bean,<br>seed       | M700F002 | 5            | 0.01                     | 93-104                | 99.4±4.3         | 4.4        | 92-102                | 96.0±4.2         | 4.4        |
|                          |          | 5            | 0.1                      | 92-97                 | 95.0±1.9         | 2.0        | 97-101                | 98.5±1.8         | 1.8        |
| Field pea,<br>dried seed | M700F002 | 5            | 0.01                     | 93-98                 | 94.3±2.3         | 2.5        | 80-89                 | 85.0±3.4         | 4.0        |
|                          |          | 5            | 0.1                      | 98-102                | 99.3±1.7         | 1.7        | 83-109                | 98.7±9.7         | 9.8        |
| Potato,<br>tuber         | M700F002 | 5            | 0.01                     | 77-82                 | 79.6±1.7         | 2.1        | 71-80                 | 76.2±3.1         | 4.1        |
|                          |          | 5            | 0.1                      | 75-84                 | 80.6±3.5         | 4.4        | 77-87                 | 81.9±5.0         | 6.1        |
| Onion,<br>bulb           | M700F002 | 5            | 0.01                     | 85-88                 | 86.6±1.7         | 1.9        | 75-88                 | 82.8±5.3         | 6.4        |
|                          |          | 5            | 0.1                      | 72-89                 | 82.5±7.1         | 8.6        | 73-89                 | 82.9±6.3         | 7.6        |
| Cauliflower,<br>head     | M700F002 | 5            | 0.01                     | 81-85                 | 83.2±1.5         | 1.9        | 77-93                 | 82.3±6.4         | 7.8        |
|                          |          | 5            | 0.1                      | 83-86                 | 84.4±1.3         | 1.5        | 76-90                 | 85.6±6.0         | 7.0        |
| Avocado,<br>fruit        | M700F002 | 5            | 0.01                     | 81-102                | 93.9±7.9         | 8.4        | 77-92                 | 83.2±6.9         | 8.3        |
|                          |          | 5            | 0.1                      | 90-96                 | 93.7±2.2         | 2.3        | 79-98                 | 86.3±7.0         | 8.1        |

| Matrix                    | Analyte  | No. of tests | Spiking level<br>[mg/kg] | Transition 161 → 141* |                  |            | Transition 161 → 141* |                  |            |
|---------------------------|----------|--------------|--------------------------|-----------------------|------------------|------------|-----------------------|------------------|------------|
|                           |          |              |                          | Range<br>[%]          | Mean ±<br>SD [%] | RSD<br>[%] | Range<br>[%]          | Mean ±<br>SD [%] | RSD<br>[%] |
|                           |          |              |                          | HPLC-MS/MS            |                  |            | UPLC-MS/MS            |                  |            |
| Lemon,<br>fruit           | M700F002 | 5            | 0.01                     | 87-92                 | 88.9±2.0         | 2.3        | 75-91                 | 84.9±6.3         | 7.5        |
|                           |          | 5            | 0.1                      | 83-87                 | 85.2±1.3         | 1.6        | 87-97                 | 91.3±4.8         | 5.2        |
| Apple,<br>fruit           | M700F002 | 5            | 0.01                     | 81-88                 | 83.9±2.6         | 3.1        | 80-94                 | 84.1±5.5         | 6.5        |
|                           |          | 5            | 0.1                      | 82-89                 | 86.1±2.6         | 3.0        | 80-91                 | 84.9±4.2         | 5.0        |
| Tomato,<br>fruit          | M700F002 | 5            | 0.01                     | 80-86                 | 82.5±2.2         | 2.7        | 77-87                 | 81.8±4.5         | 5.4        |
|                           |          | 5            | 0.1                      | 86-90                 | 88.6±1.7         | 1.9        | 77-92                 | 84.7±6.7         | 7.9        |
| Grape,<br>fruit           | M700F002 | 5            | 0.01                     | 71-75                 | 73.8±1.6         | 2.2        | 71-94                 | 77.6±5.3         | 6.8        |
|                           |          | 5            | 0.1                      | 73-86                 | 78.2±5.2         | 6.7        | 74-87                 | 79.7±4.9         | 6.1        |
| Coffee,<br>green bean     | M700F002 | 5            | 0.01                     | 99-104                | 101.5±1.9        | 1.8        | 82-95                 | 87.6±5.5         | 6.3        |
|                           |          | 5            | 0.1                      | 96-100                | 98.2±1.6         | 1.7        | 97-105                | 100.7±4.0        | 4.0        |
| Apple,<br>juice           | M700F002 | 5            | 0.01                     | 72-78                 | 74.9±2.2         | 2.9        | 72-78                 | 74.9±2.7         | 3.6        |
|                           |          | 5            | 0.1                      | 84-99                 | 92.9±5.8         | 6.2        | 69-97                 | 82.2±12.2        | 14.8       |
| Beer                      | M700F002 | 5            | 0.01                     | 88-94                 | 90.4±3.0         | 3.3        | 92-100                | 96.4±3.9         | 4.0        |
|                           |          | 5            | 0.1                      | 97-106                | 102.8±4.0        | 3.9        | 95-102                | 99.8±2.9         | 2.9        |
| Raisin                    | M700F002 | 5            | 0.01                     | 80-83                 | 81.9±1.4         | 1.7        | 71-78                 | 75.6±3.1         | 4.2        |
|                           |          | 5            | 0.1                      | 73-95                 | 87.6±8.8         | 10.1       | 85-103                | 92.2±6.7         | 7.2        |
| Potato,<br>crisps         | M700F002 | 5            | 0.01                     | 91-97                 | 94.5±2.1         | 2.2        | 75-88                 | 82.5±5.3         | 6.4        |
|                           |          | 5            | 0.1                      | 88-90                 | 88.9±0.8         | 0.9        | 78-99                 | 90.2±8.1         | 9.0        |
| Soya bean,<br>refined oil | M700F002 | 5            | 0.01                     | 91-98                 | 95.8±2.8         | 2.9        | 82-95                 | 91.8±5.6         | 6.1        |
|                           |          | 5            | 0.1                      | 98-102                | 100.2±1.7        | 1.7        | 98-102                | 99.6±1.5         | 1.5        |

\* used for quantitation

Table 49 Method recoveries for L0137/01: M700F008 in plant (HPLC and UPLC)

| Matrix                | Analyte  | No. of tests | Spiking level [mg/kg] | Transition 368 → 348* |               |         | Transition 368 → 348* |               |         |
|-----------------------|----------|--------------|-----------------------|-----------------------|---------------|---------|-----------------------|---------------|---------|
|                       |          |              |                       | Range [%]             | Mean ± SD [%] | RSD [%] | Range [%]             | Mean ± SD [%] | RSD [%] |
|                       |          |              |                       | HPLC-MS/MS            |               |         | UPLC-MS/MS            |               |         |
| Wheat, whole plant    | M700F008 | 5            | 0.01                  | 81-86                 | 83.4±2.0      | 2.4     | 79-88                 | 84.6±3.6      | 4.2     |
|                       |          | 5            | 0.1                   | 92-99                 | 94.2±2.8      | 3.0     | 76-85                 | 81.0±3.3      | 4.0     |
| Wheat, grain          | M700F008 | 5            | 0.01                  | 72-82                 | 77.4±4.3      | 5.6     | 96-102                | 98.9±2.7      | 2.8     |
|                       |          | 5            | 0.1                   | 93-99                 | 96.2±2.9      | 3.0     | 92-107                | 99.9±5.9      | 5.9     |
| Wheat, straw          | M700F008 | 5            | 0.01                  | 79-85                 | 81.0±2.4      | 2.9     | 69-76                 | 73.2±3.1      | 4.2     |
|                       |          | 5            | 0.1                   | 81-99                 | 93.1±7.2      | 7.7     | 84-96                 | 91.6±4.8      | 5.2     |
| Soya bean, seed       | M700F008 | 5            | 0.01                  | 88-102                | 93.5±5.5      | 5.9     | 81-98                 | 89.5±6.5      | 7.2     |
|                       |          | 5            | 0.1                   | 93-103                | 96.5±3.7      | 3.9     | 98-106                | 103.0±3.1     | 3.0     |
| Field pea, dried seed | M700F008 | 5            | 0.01                  | 90-99                 | 94.3±3.7      | 3.9     | 94-103                | 98.8±3.5      | 3.5     |
|                       |          | 5            | 0.1                   | 89-100                | 93.5±4.1      | 4.4     | 95-100                | 96.7±2.2      | 2.3     |
| Potato, tuber         | M700F008 | 5            | 0.01                  | 72-85                 | 77.9±5.2      | 6.7     | 83-87                 | 84.5±1.6      | 1.9     |
|                       |          | 5            | 0.1                   | 79-90                 | 84.6±4.3      | 5.1     | 81-92                 | 84.8±4.5      | 5.3     |
| Onion, bulb           | M700F008 | 5            | 0.01                  | 81-85                 | 83.5±1.7      | 2.0     | 90-95                 | 92.1±1.8      | 1.9     |
|                       |          | 5            | 0.1                   | 82-94                 | 89.4±4.7      | 5.3     | 74-95                 | 86.3±8.2      | 9.6     |
| Cauliflower, head     | M700F008 | 5            | 0.01                  | 76-84                 | 80.8±3.1      | 3.9     | 82-90                 | 84.2±3.5      | 4.2     |
|                       |          | 5            | 0.1                   | 86-90                 | 88.0±1.5      | 1.7     | 76-84                 | 81.0±2.9      | 3.5     |
| Avocado, fruit        | M700F008 | 5            | 0.01                  | 86-98                 | 94.2±5.2      | 5.5     | 83-103                | 91.0±9.7      | 10.6    |
|                       |          | 5            | 0.1                   | 84-95                 | 88.7±4.2      | 4.8     | 80-96                 | 86.7±6.9      | 7.9     |
| Lemon, fruit          | M700F008 | 5            | 0.01                  | 75-81                 | 78.8±3.0      | 3.8     | 75-90                 | 81.2±5.5      | 6.7     |
|                       |          | 5            | 0.1                   | 83-91                 | 86.7±4.0      | 4.6     | 81-94                 | 84.7±5.5      | 6.5     |
| Apple, fruit          | M700F008 | 5            | 0.01                  | 78-87                 | 83.4±3.6      | 4.3     | 87-95                 | 90.4±3.5      | 3.9     |
|                       |          | 5            | 0.1                   | 84-90                 | 86.2±2.3      | 2.7     | 78-95                 | 87.6±6.5      | 7.4     |
| Tomato, fruit         | M700F008 | 5            | 0.01                  | 80-87                 | 84.3±2.8      | 3.4     | 73-87                 | 80.1±4.9      | 6.1     |
|                       |          | 5            | 0.1                   | 79-91                 | 84.6±5.4      | 6.4     | 77-90                 | 84.0±5.9      | 7.1     |
| Grape, fruit          | M700F008 | 5            | 0.01                  | 76-100                | 87.4±10.8     | 12.3    | 81-91                 | 85.5±3.9      | 4.6     |
|                       |          | 5            | 0.1                   | 78-99                 | 84.6±8.2      | 9.7     | 83-94                 | 87.6±4.3      | 4.9     |
| Coffee, green bean    | M700F008 | 5            | 0.01                  | 80-96                 | 85.9±6.5      | 7.6     | 85-91                 | 87.5±2.6      | 3.0     |
|                       |          | 5            | 0.1                   | 84-94                 | 88.9±4.8      | 5.3     | 85-95                 | 91.7±4.1      | 4.5     |
| Apple, juice          | M700F008 | 5            | 0.01                  | 76-80                 | 78.5±2.2      | 2.8     | 79-86                 | 81.1±3.0      | 3.7     |
|                       |          | 5            | 0.1                   | 79-89                 | 84.5±4.6      | 5.4     | 75-92                 | 83.2±7.3      | 8.7     |

| Matrix                 | Analyte  | No. of tests | Spiking level<br>[mg/kg] | Transition 368 → 348* |                  |            | Transition 368 → 348* |                  |            |
|------------------------|----------|--------------|--------------------------|-----------------------|------------------|------------|-----------------------|------------------|------------|
|                        |          |              |                          | Range<br>[%]          | Mean ±<br>SD [%] | RSD<br>[%] | Range<br>[%]          | Mean ±<br>SD [%] | RSD<br>[%] |
|                        |          |              |                          | HPLC-MS/MS            |                  |            | UPLC-MS/MS            |                  |            |
| Beer                   | M700F008 | 5            | 0.01                     | 78-94                 | 86.5±5.9         | 6.9        | 99-107                | 102.1±3.4        | 3.3        |
|                        |          | 5            | 0.1                      | 95-104                | 99.0±3.6         | 3.7        | 93-110                | 101.4±6.8        | 6.7        |
| Raisin                 | M700F008 | 5            | 0.01                     | 75-82                 | 79.7±2.8         | 3.6        | 77-86                 | 81.1±4.0         | 5.0        |
|                        |          | 5            | 0.1                      | 74-90                 | 82.0±6.9         | 8.4        | 73-77                 | 74.7±2.0         | 2.6        |
| Potato, crisps         | M700F008 | 5            | 0.01                     | 80-90                 | 85.2±4.1         | 4.8        | 88-95                 | 91.3±2.2         | 2.4        |
|                        |          | 5            | 0.1                      | 85-92                 | 88.7±2.7         | 3.1        | 88-93                 | 91.2±1.9         | 2.1        |
| Soya bean, refined oil | M700F008 | 5            | 0.01                     | 84-97                 | 89.1±4.9         | 5.5        | 92-111                | 103.0±7.0        | 6.8        |
|                        |          | 5            | 0.1                      | 88-97                 | 94.4±4.0         | 4.2        | 94-103                | 98.7±3.5         | 3.6        |

\* used for quantitation

Table 50 Method recoveries for L0137/01: M700F048 in plant (HPLC and UPLC)

| Matrix                 | Analyte  | No. of tests | Spiking level [mg/kg] | Transition 530 → 368* |               |         | Transition 530 → 328 |               |         |
|------------------------|----------|--------------|-----------------------|-----------------------|---------------|---------|----------------------|---------------|---------|
|                        |          |              |                       | Range [%]             | Mean ± SD [%] | RSD [%] | Range [%]            | Mean ± SD [%] | RSD [%] |
|                        |          |              |                       | HPLC-MS/MS            |               |         | UPLC-MS/MS           |               |         |
| Wheat, whole plant     | M700F048 | 5            | 0.01                  | 91-96                 | 93.1±2.1      | 2.2     | 84-92                | 86.7±3.6      | 4.1     |
|                        |          | 5            | 0.1                   | 102-107               | 103.5±2.2     | 2.1     | 88-99                | 91.4±4.1      | 4.5     |
| Wheat, grain           | M700F048 | 5            | 0.01                  | 91-98                 | 95.3±2.8      | 3.0     | 99-108               | 103.7±3.7     | 3.6     |
|                        |          | 5            | 0.1                   | 98-105                | 101.2±3.2     | 3.2     | 100-109              | 105.3±3.7     | 3.5     |
| Wheat, straw           | M700F048 | 5            | 0.01                  | 97-101                | 98.4±1.3      | 1.3     | 85-100               | 92.6±7.0      | 7.6     |
|                        |          | 5            | 0.1                   | 98-112                | 104.9±4.9     | 4.7     | 87-102               | 97.7±6.4      | 6.5     |
| Soya bean, seed        | M700F048 | 5            | 0.01                  | 93-108                | 100.6±5.5     | 5.5     | 95-102               | 98.4±3.3      | 3.4     |
|                        |          | 5            | 0.1                   | 114-119               | 118.0±2.1     | 1.8     | 93-100               | 95.8±3.2      | 3.4     |
| Field pea, dried seed  | M700F048 | 5            | 0.01                  | 87-97                 | 92.4±3.8      | 4.1     | 97-105               | 101.4±3.1     | 3.1     |
|                        |          | 5            | 0.1                   | 98-109                | 101.7±4.2     | 4.2     | 100-110              | 103.0±4.3     | 4.2     |
| Potato, tuber          | M700F048 | 5            | 0.01                  | 71-79                 | 74.6±3.2      | 4.3     | 89-94                | 91.6±2.0      | 2.1     |
|                        |          | 5            | 0.1                   | 85-89                 | 87.0±2.0      | 2.3     | 91-95                | 93.6±1.7      | 1.8     |
| Onion, bulb            | M700F048 | 5            | 0.01                  | 92-100                | 96.0±3.0      | 3.2     | 94-103               | 99.0±3.6      | 3.7     |
|                        |          | 5            | 0.1                   | 91-109                | 97.9±7.5      | 7.7     | 89-101               | 96.1±4.8      | 5.0     |
| Cauliflower, head      | M700F048 | 5            | 0.01                  | 88-91                 | 89.7±1.2      | 1.4     | 91-97                | 94.2±2.4      | 2.6     |
|                        |          | 5            | 0.1                   | 96-104                | 99.3±3.0      | 3.1     | 92-99                | 94.6±2.7      | 2.8     |
| Avocado, fruit         | M700F048 | 5            | 0.01                  | 107-111               | 108.8±1.5     | 1.4     | 89-102               | 95.6±4.7      | 4.9     |
|                        |          | 5            | 0.1                   | 103-115               | 107.9±6.1     | 5.7     | 86-98                | 90.6±4.9      | 5.4     |
| Lemon, fruit           | M700F048 | 5            | 0.01                  | 73-83                 | 78.4±4.0      | 5.1     | 81-99                | 92.4±7.3      | 7.9     |
|                        |          | 5            | 0.1                   | 85-93                 | 90.1±3.3      | 3.6     | 87-95                | 92.5±3.3      | 3.6     |
| Apple, fruit           | M700F048 | 5            | 0.01                  | 93-101                | 95.5±3.2      | 3.4     | 94-104               | 98.1±5.0      | 5.1     |
|                        |          | 5            | 0.1                   | 95-102                | 97.0±2.6      | 2.7     | 94-102               | 96.8±3.1      | 3.2     |
| Tomato, fruit          | M700F048 | 5            | 0.01                  | 89-92                 | 91.2±1.4      | 1.6     | 89-99                | 93.0±4.2      | 4.5     |
|                        |          | 5            | 0.1                   | 89-95                 | 91.4±2.5      | 2.7     | 92-98                | 94.9±2.2      | 2.3     |
| Grape, fruit           | M700F048 | 5            | 0.01                  | 85-99                 | 89.7±5.5      | 6.1     | 90-100               | 96.7±3.6      | 3.7     |
|                        |          | 5            | 0.1                   | 91-107                | 98.0±5.9      | 6.0     | 96-101               | 97.4±2.4      | 2.4     |
| Coffee, green bean     | M700F048 | 5            | 0.01                  | 81-93                 | 85.0±4.8      | 5.6     | 96-103               | 99.4±2.9      | 2.9     |
|                        |          | 5            | 0.1                   | 88-101                | 96.8±5.4      | 5.6     | 99-102               | 100.1±1.4     | 1.4     |
| Apple, juice           | M700F048 | 5            | 0.01                  | 93-102                | 97.3±3.5      | 3.6     | 92-99                | 94.7±3.2      | 3.4     |
|                        |          | 5            | 0.1                   | 98-102                | 100.5±1.7     | 1.7     | 91-102               | 97.5±3.8      | 3.9     |
| Beer                   | M700F048 | 5            | 0.01                  | 95-104                | 99.3±4.2      | 4.2     | 100-108              | 103.6±3.7     | 3.6     |
|                        |          | 5            | 0.1                   | 102-110               | 105.6±4.0     | 3.8     | 107-115              | 110.8±3.0     | 2.7     |
| Raisin                 | M700F048 | 5            | 0.01                  | 89-97                 | 92.6±3.5      | 3.8     | 90-101               | 93.6±4.1      | 4.4     |
|                        |          | 5            | 0.1                   | 97-100                | 98.1±1.2      | 1.2     | 83-100               | 89.1±6.6      | 7.4     |
| Potato, crisps         | M700F048 | 5            | 0.01                  | 84-97                 | 92.2±5.7      | 6.2     | 89-102               | 94.7±5.4      | 5.7     |
|                        |          | 5            | 0.1                   | 89-96                 | 93.6±2.8      | 3.0     | 86-93                | 90.9±2.9      | 3.2     |
| Soya bean, refined oil | M700F048 | 5            | 0.01                  | 94-102                | 97.2±3.3      | 3.4     | 94-103               | 98.4±3.6      | 3.6     |
|                        |          | 5            | 0.1                   | 95-98                 | 96.5±1.2      | 1.2     | 96-100               | 97.4±1.7      | 1.8     |

\* used for quantitation

For extraction of the analytes, a mixture consisting of methanol/water (50/50, v/v) is used. To investigate the stability of the analytes in this mixture, the extract solutions of six matrices (wheat

grain, dried pea, onion, lemon, tomato and soya bean oil) were stored under refrigerated conditions in the dark and re-analysed after 3 to 14 days by means of UPLC-MS/MS. For preparation of the final volume, a mixture of methanol/water (50/50, v/v) was used. To investigate the stability of the analytes in this mixture, the final volumes of the same six matrices were stored under refrigerated conditions in the dark and re-analysed after 3 to 14 days by means of UPLC-MS/MS. It was shown that the analytes were stable in the extraction solvent and in the solution used for final volume.

Calibration solutions are prepared in methanol/water (50/50, v/v). For spiking, the analytes are dissolved in methanol. To investigate the stability in these solutions, samples containing the analytes were prepared, kept in a refrigerator in the dark, then re-analysed after 14, 30 and 60 days. The spiking solutions and calibration standards were shown to be stable over a period of 60 days.

Independent laboratory validation reports for Method L0137/01 for the determination of residues of fluxapyroxad (Class and Joop 2009, 2009/1074618), M700F002 (Class and Joop 2009, 2009/1074614) and M700F008 (Class and Joop 2009, 2009/1091115) in plants (wheat grain and straw, tomato, whole lemon, soya bean and onion) have been submitted. The method was shown to be selective (two parent-daughter ion transitions for fluxapyroxad and M700F008 and one parent-daughter ion transition for M700F002 monitored on injections performed on two HPLC columns with different stationary phases) and yielded accurate and repeatable results.

Table 51 Recovery results of method L0137/01: fluxapyroxad in plant matrices

| Matrix      | Analyte      | No. of tests | Spiking level [mg/kg] | 382 m/z → 362 m/z |          |         |
|-------------|--------------|--------------|-----------------------|-------------------|----------|---------|
|             |              |              |                       | mean [%]          | SD [+/-] | RSD [%] |
| Tomato      | Fluxapyroxad | 5            | 0.01                  | 102               | 2        | 2       |
|             |              | 5            | 0.1                   | 79                | 8        | 10      |
| Onion       | Fluxapyroxad | 5            | 0.01                  | 94                | 3        | 3       |
|             |              | 5            | 0.1                   | 99                | 5        | 5       |
| Whole Lemon | Fluxapyroxad | 5            | 0.01                  | 102               | 8        | 8       |
|             |              | 5            | 0.1                   | 82                | 13       | 16      |
| Wheat Grain | Fluxapyroxad | 5            | 0.01                  | 90                | 14       | 15      |
|             |              | 5            | 0.1                   | 76                | 2        | 3       |
| Soya bean   | Fluxapyroxad | 5            | 0.01                  | 86                | 3        | 3       |
|             |              | 5            | 0.1                   | 95                | 7        | 7       |
| Wheat Straw | Fluxapyroxad | 5            | 0.01                  | 76                | 5        | 6       |
|             |              | 5            | 0.1                   | 71                | 4        | 5       |

Table 52 Recovery results of method L0137/01: M700F002 in plant matrices

| Matrix       | Analyte  | No. of tests | Spiking level [mg/kg] | Polar RP Column |         | Hydro RP Column |         |
|--------------|----------|--------------|-----------------------|-----------------|---------|-----------------|---------|
|              |          |              |                       | mean [%]        | RSD [%] | mean [%]        | RSD [%] |
| Tomato       | M700F002 | 5            | 0.01                  | 77              | 7       | 81              | 7       |
|              |          | 5            | 0.1                   | 78              | 10      | 80              | 9       |
| Onion        | M700F002 | 5            | 0.01                  | 82              | 4       | 94              | 4       |
|              |          | 5            | 0.1                   | 83              | 3       | 93              | 2       |
| Whole Lemon  | M700F002 | 5            | 0.01                  | 90              | 2       | 99              | 5       |
|              |          | 5            | 0.1                   | 78              | 5       | 90              | 7       |
| Wheat, grain | M700F002 | 5            | 0.01                  | 92              | 2       | 87              | 3       |
|              |          | 5            | 0.1                   | 91              | 6       | 89              | 4       |
| Soy Bean     | M700F002 | 5            | 0.01                  | 96              | 3       | 100             | 2       |
|              |          | 5            | 0.1                   | 89              | 4       | 92              | 4       |
| Wheat, straw | M700F002 | 5            | 0.01                  | 75              | 6       | 80              | 5       |
|              |          | 5            | 0.1                   | 73              | 4       | 78              | 1       |

Table 53 Recovery results of method L0137/01: M700F008 in plant matrices

| Matrix       | Analyte  | No. of tests | Spiking level [mg/kg] | Transition 368 → 348 |         |
|--------------|----------|--------------|-----------------------|----------------------|---------|
|              |          |              |                       | mean [%]             | RSD [%] |
| Tomato       | M700F008 | 5            | 0.01                  | 89                   | 7       |
|              |          | 5            | 0.1                   | 92                   | 1       |
| Onion        | M700F008 | 5            | 0.01                  | 75                   | 3       |
|              |          | 5            | 0.1                   | 87                   | 1       |
| Lemon        | M700F008 | 5            | 0.01                  | 96                   | 3       |
|              |          | 5            | 0.1                   | 95                   | 5       |
| Wheat, grain | M700F008 | 5            | 0.01                  | 86                   | 5       |
|              |          | 5            | 0.1                   | 86                   | 2       |
| Soy Bean     | M700F008 | 5            | 0.01                  | 74                   | 2       |
|              |          | 5            | 0.1                   | 83                   | 5       |
| Wheat, straw | M700F008 | 5            | 0.01                  | 71                   | 4       |
|              |          | 5            | 0.1                   | 82                   | 4       |

The extraction efficiencies of Methods L0137/01 and L0076/03 were tested during the soya bean, tomato and wheat metabolism studies. The extractability of radioactive residues from soya bean, tomato and wheat matrices was tested using the extraction solvent combinations used for extraction in Methods L0137/01 and L0076/03. It was found that the extraction procedures applied in the residue analytical methods released similar amounts of radioactive residues and yielded comparable metabolite patterns in comparison with the extraction methods used in the metabolism studies.

Table 54 Extractability of residues of <sup>14</sup>C-fluxapyroxad (pyrazole label) in plant matrices according to Methods L0137/01 and L0076/03

| Matrix                     | Extractability (%TRR)                        |                                                                 |                                                              |
|----------------------------|----------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------|
|                            | Method L0137/01<br>(methanol/water 1/1, v/v) | Method L0076/03<br>(methanol/water/ 2N HCl<br>(70/25/5, v/v/v)) | Using solvents for<br>metabolism investigations in<br>plants |
| Soya bean forage (21 DAT)  | 96.7                                         | 98.5                                                            | 96.9                                                         |
| Soya bean hay (22-34 DALA) | 93.6                                         | -                                                               | 95.2                                                         |
| Soya bean seed (34 DALA)   | 95.3                                         | 93.8                                                            | 92.3                                                         |
| Tomato fruits (3 DAT)      | 96.6                                         | 95.0                                                            | 98.3                                                         |
| Wheat straw                | 93.0                                         | 94.5                                                            | 94.8                                                         |
| Wheat grain                | 90.3                                         | 91.0                                                            | 84.6                                                         |

### Animal commodities

#### Method L0140/01

Method L0140/01 was developed for the determination of fluxapyroxad and the metabolites M700F002, M700F008 and M700F048 in animal matrices. During independent laboratory validation (ILV) trials at the Charles River Laboratories, the method failed to meet acceptance criteria for analyte M700F002 in eggs. Modifications were made to the method for this specific analyte/matrix combination, resulting in Method CRAM 1515 version 1 (Macdougall 2009, 2009/1074797). Although the study was designated originally as an ILV, the method (including the modifications for M700F002 in eggs), was used as the data generation method in the animal feeding studies and another enforcement method (Method L0140/02) was later developed.

Method L0140/01 involves the extraction of fluxapyroxad and the metabolites from animal matrices using acetonitrile. An aliquot of the extract is reduced to dryness then reconstituted with water, acidified with hydrochloric acid and subsequently partitioned with water-saturated ethyl acetate. A portion of the ethyl acetate is reduced to dryness and reconstituted with methanol/water

(50/50, v/v). The final extracts are analysed using HPLC-MS/MS. For analytes fluxapyroxad, M700F008 and M700F048, a C18 column is used with gradient elution using 0.1% formic acid in water to 0.1% formic acid in acetonitrile as the mobile phase. MS/MS detection in the positive ionization mode is used to monitor ion transitions 382→342 and 382→362 for fluxapyroxad, 368→328 and 368→348 for M700F008, and 530→328 and 530→368 for M700F048. For the analyte M700F002, a Polar-RP or Hydro-RP column is used with gradient elution using 0.1% formic acid in water to 0.1% formic acid in methanol as the mobile phase. MS/MS detection in the negative ionization mode is used to monitor ion transitions 161→141 for M700F002.

The method was modified for the determination of M700F002 in eggs. The major difference is the use of acetonitrile/water (80/20, v/v) for analyte extraction. An aliquot of the extract is reduced to dryness, reconstituted with methanol/water (50/50, v/v) and directly analysed without further clean-up steps. The final extracts are analysed using HPLC-MS/MS with the same parameters and conditions as in the initial method.

Since the LC-MS/MS determination is highly selective, and quantitation was possible for the analytes fluxapyroxad, M700F008 and M700F048 at two different transitions, a confirmatory technique was not required for these three compounds. In the case of M700F002, for which the second transition was not sensitive enough, additional chromatographic conditions were described for confirmatory purposes.

Samples of bovine muscle and liver were spiked individually at levels of 0.1 and 0.01 mg/kg with fluxapyroxad, M700F002, M700F008 and M700F048. Samples of milk and eggs were spiked individually at levels of 0.01 and 0.001 mg/kg with fluxapyroxad, M700F002, M700F008 and M700F048. Samples were extracted and analysed with Method L0140/01 (HPLC-MS/MS), except for egg samples spiked with M700F002, which were extracted and analysed by Method CRAM 1515 version 1.

In all matrices tested, the mean recovery values were between 70% and 120%, and the relative standard deviations (RSD, %) for all commodities and all spiking levels were <20%. The mean recovery data are summarized in Tables 55 to 58. The reported mean recovery values and percent relative standard deviations demonstrate that the method has satisfactory accuracy and precision. The LOQ was reported as 0.001 mg/kg per analyte for milk and eggs and 0.01 mg/kg per analyte for liver and muscle. Method linearity was validated in the range of 0.05 to 100 ng/mL. Correlation coefficients were > 0.99, demonstrating the linearity of the detector response to analyte amount. No significant interfering peaks > 30% of the LOQ were detected in control extracts of any matrix demonstrating assay specificity. Method L0140/01 was successfully and independently validated in this study, except for M700F002 determination in egg samples. Method CRAM 1515 version 1 was developed and validated for M700F002 in eggs.

Table 55 Recovery results of method L0140/01: fluxapyroxad in animal matrices

| Matrix | Analyte      | No. of tests | Spiking level<br>[mg/kg] | Transition 382 → 362 |            |
|--------|--------------|--------------|--------------------------|----------------------|------------|
|        |              |              |                          | mean<br>[%]          | RSD<br>[%] |
| Milk   | Fluxapyroxad | 5            | 0.001                    | 106                  | 4.8        |
|        |              |              | 0.01                     | 104                  | 1.7        |
| Liver  | Fluxapyroxad | 5            | 0.01                     | 74                   | 7.1        |
|        |              |              | 0.1                      | 83                   | 4.1        |
| Muscle | Fluxapyroxad | 5            | 0.01                     | 95                   | 3.7        |
|        |              |              | 0.1                      | 102                  | 1.1        |
| Egg    | Fluxapyroxad | 5            | 0.001                    | 107                  | 6.0        |
|        |              |              | 0.01                     | 107                  | 2.6        |

Table 56 Recovery results of method L0140/01: M700F002 in animal matrices

| Matrix | Analyte  | No. of tests | Spiking level<br>[mg/kg] | Transition 161 → 141 |            |
|--------|----------|--------------|--------------------------|----------------------|------------|
|        |          |              |                          | mean<br>[%]          | RSD<br>[%] |
| Milk   | M700F002 | 5            | 0.001                    | 87                   | 1.9        |
|        |          | 5            | 0.01                     | 96                   | 1.9        |
| Liver  | M700F002 | 5            | 0.01                     | 75                   | 3.2        |
|        |          | 5            | 0.1                      | 78                   | 3.9        |
| Muscle | M700F002 | 5            | 0.01                     | 75                   | 2.8        |
|        |          | 5            | 0.1                      | 74                   | 3.3        |
| Egg*   | M700F002 | 5            | 0.001                    | 84                   | 4.2        |
|        |          | 5            | 0.01                     | 99                   | 6.8        |

\* Egg samples were extracted with Charles River Analytical Method 1515 version 1.

Table 57 Recovery results of method L0140/01: M700F008 in animal matrices

| Matrix | Analyte  | No. of tests | Spiking level<br>[mg/kg] | Transition 368 → 348 |            |
|--------|----------|--------------|--------------------------|----------------------|------------|
|        |          |              |                          | mean<br>[%]          | RSD<br>[%] |
| Milk   | M700F008 | 5            | 0.001                    | 102                  | 7.6        |
|        |          | 5            | 0.01                     | 106                  | 3.2        |
| Liver  | M700F008 | 5            | 0.01                     | 88                   | 5.7        |
|        |          | 5            | 0.1                      | 95                   | 4.2        |
| Muscle | M700F008 | 5            | 0.01                     | 88                   | 2.6        |
|        |          | 5            | 0.1                      | 92                   | 3.6        |
| Egg    | M700F008 | 5            | 0.001                    | 96                   | 4.9        |
|        |          | 5            | 0.01                     | 105                  | 0.8        |

Table 58 Recovery results of method L0140/01: M700F048 in animal matrices\*

| Matrix | Analyte  | No. of tests | Spiking level<br>[mg/kg] | Transition 530 → 368 |            |
|--------|----------|--------------|--------------------------|----------------------|------------|
|        |          |              |                          | mean<br>[%]          | RSD<br>[%] |
| Milk   | M700F048 | 5            | 0.001                    | 107                  | 5.8        |
|        |          | 5            | 0.01                     | 104                  | 3.6        |
| Liver  | M700F048 | 5            | 0.01                     | 95                   | 6.1        |
|        |          | 5            | 0.1                      | 99                   | 3.6        |
| Muscle | M700F048 | 5            | 0.01                     | 87                   | 5.1        |
|        |          | 5            | 0.1                      | 92                   | 5.4        |
| Egg    | M700F048 | 5            | 0.001                    | 96                   | 13.1       |
|        |          | 5            | 0.01                     | 96                   | 1.6        |

\* supplementary information (residue levels of metabolite M700F048 not analysed in animal matrices)

The extraction procedure applied in the residue analytical method released similar amounts of radioactive residues and yielded comparable metabolite patterns in comparison to data obtained with the extraction solvent acetonitrile and water used for analysis and metabolite identification during the metabolism studies.

Method L0140/01 underwent successful validation by an independent laboratory and was deemed suitable for the determination of fluxapyroxad, M700F002, M700F008 and M700F048 in animal matrices, except for analyte M700F002 in eggs. The extraction procedure was modified for this specific analyte/matrix combination, and resulted in the development and validation of Charles River Analytical Method 1515 version 1 for the determination of M700F002 in eggs. The methods were shown to be selective, with accurate and repeatable results. The LOQs were reported as 0.01 mg/kg per analyte for bovine meat and liver, and 0.001 mg/kg per analyte for milk and egg.

*Method L0140/02*

Method L0140/02 was developed for the determination of fluxapyroxad and the metabolites M700F002, M700F008 and M700F048 in animal matrices (Hopf and Mackenroth 2009, 2009/1074613).

Fluxapyroxad and the metabolites M700F002, M700F008 and M700F048 are extracted from animal matrices using acetonitrile/water (80/20, v/v). An aliquot of the extract is evaporated to dryness and subsequently dissolved in methanol/water, diluted with saturated sodium chloride solution, acidified with hydrochloric acid and subsequently partitioned with water-saturated ethyl acetate. An aliquot of the organic phase is evaporated to dryness and dissolved in methanol/water (40/60, v/v). The final determination is performed by HPLC-MS/MS using a T3 column and gradient elution using 0.1% formic acid in water to 0.1% formic acid in methanol as the mobile phase. MS/MS detection in the positive ionization mode is used to monitor ion transitions 382→342 and 382→362 for fluxapyroxad, 368→328 and 368→348 for M700F008, and 530→328 and 530→368 for M700F048. MS/MS detection in the negative ionization mode is used to monitor ion transitions 161→141 and 161→97 for M700F002.

The HPLC-MS/MS final determination for fluxapyroxad and the metabolites is a highly selective detection technique. The quantitation of the compounds was possible at two different mass transitions, and the data for both were presented. Therefore, no confirmatory technique was required for fluxapyroxad, M700F008 and M700F048. In the case of M700F002 where the second transition was sometimes not sensitive enough, confirmation was provided by monitoring one parent-daughter ion transition at 161 m/z→141 m/z with two different HPLC-columns/stationary phases.

Samples of bovine muscle, kidney, fat and liver were spiked individually with fluxapyroxad, M700F002, M700F008 and M700F048 at levels of 0.1 and 0.01 mg/kg. Samples of milk, skim milk, cream and eggs were spiked individually with fluxapyroxad, M700F002, M700F008 and M700F048 at levels of 0.01 and 0.001 mg/kg. Samples were extracted and analysed with Method L0140/02 (HPLC-MS/MS).

In all matrices tested, the mean recovery values were between 70% and 110% and the relative standard deviations (% RSD) for all commodities and all spiking levels for five tests at each spiking level were < 20%. The reported range of percent recoveries and the percent relative standard deviations demonstrate that the method has satisfactory accuracy and precision in the range of spiking levels that were studied. Mean recovery data for the quantitation transitions are given in Tables 59 to 62.

The LOQ was defined by the lowest spiking level successfully tested which was 0.01 mg/kg per analyte for bovine muscle, kidney, fat and liver, and 0.001 mg/kg per analyte for milk, skim milk, cream and eggs. Method linearity was validated over the range of 0.04 to 2.5 ng/mL. Correlation coefficients were > 0.99, demonstrating the linearity of the detector response to analyte amount.

Table 59 Recovery results of method L0140/02: fluxapyroxad in animal matrices

| Matrix        | Analyte      | No. of tests | Spiking level [mg/kg] | Transition 382 → 362* |               |         |
|---------------|--------------|--------------|-----------------------|-----------------------|---------------|---------|
|               |              |              |                       | Range [%]             | Mean ± SD [%] | RSD [%] |
| Cow muscle    | Fluxapyroxad | 5            | 0.01                  | 98-107                | 103.9±3.4     | 3.3     |
|               |              | 5            | 0.1                   | 101-111               | 107.5±4.0     | 3.7     |
| Cow kidney    | Fluxapyroxad | 5            | 0.01                  | 95-105                | 98.0±4.2      | 4.3     |
|               |              | 5            | 0.1                   | 99-106                | 102.7±3.2     | 3.1     |
| Cow fat       | Fluxapyroxad | 5            | 0.01                  | 102-117               | 107.5±5.6     | 5.2     |
|               |              | 5            | 0.1                   | 102-112               | 108.6±4.3     | 4.0     |
| Cow liver     | Fluxapyroxad | 5            | 0.01                  | 94-105                | 99.0±4.6      | 4.6     |
|               |              | 5            | 0.1                   | 96-106                | 101.6±3.6     | 3.5     |
| Cow milk      | Fluxapyroxad | 5            | 0.001                 | 89-99                 | 92.9±4.3      | 4.7     |
|               |              | 5            | 0.01                  | 87-101                | 94.2±5.6      | 6.0     |
| Cow skim milk | Fluxapyroxad | 5            | 0.001                 | 90-98                 | 94.2±3.5      | 3.8     |
|               |              | 5            | 0.01                  | 97-114                | 104.3±6.2     | 6.0     |

| Matrix    | Analyte      | No. of tests | Spiking level [mg/kg] | Transition 382 → 362* |               |         |
|-----------|--------------|--------------|-----------------------|-----------------------|---------------|---------|
|           |              |              |                       | Range [%]             | Mean ± SD [%] | RSD [%] |
| Cow cream | Fluxapyroxad | 5            | 0.001                 | 81-87                 | 83.6±2.9      | 3.4     |
|           |              | 5            | 0.01                  | 89-94                 | 91.9±2.5      | 2.7     |
| Hen egg   | Fluxapyroxad | 5            | 0.001                 | 88-99                 | 93.7±3.9      | 4.2     |
|           |              | 5            | 0.01                  | 87-95                 | 90.9±3.7      | 4.1     |

\* used for quantitation

Table 60 Recovery results of method L0140/02: M700F002 in animal matrices

| Matrix                | Analyte  | No. of tests | Spiking level [mg/kg] | Transition 161 → 141* |               |         |
|-----------------------|----------|--------------|-----------------------|-----------------------|---------------|---------|
|                       |          |              |                       | Range [%]             | Mean ± SD [%] | RSD [%] |
| Cow muscle            | M700F002 | 5            | 0.01                  | 73-76                 | 74.4±1.4      | 1.9     |
|                       |          | 5            | 0.1                   | 79-82                 | 80.8±1.0      | 1.2     |
| Cow kidney            | M700F002 | 5            | 0.01                  | 71-75                 | 72.7±1.5      | 2.0     |
|                       |          | 5            | 0.1                   | 70-74                 | 72.1±1.7      | 2.3     |
| Cow fat               | M700F002 | 5            | 0.01                  | 90-95                 | 91.7±2.1      | 2.3     |
|                       |          | 5            | 0.1                   | 94-100                | 97.1±2.4      | 2.5     |
| Cow liver             | M700F002 | 5            | 0.01                  | 93-95                 | 93.8±0.8      | 0.8     |
|                       |          | 5            | 0.1                   | 91-97                 | 93.6±2.3      | 2.4     |
| Cow milk              | M700F002 | 5            | 0.001                 | 96-102                | 98.5±2.0      | 2.1     |
|                       |          | 5            | 0.01                  | 94-100                | 98.0±2.5      | 2.6     |
| Cow skim milk         | M700F002 | 5            | 0.001                 | 77-86                 | 83.4±3.7      | 4.4     |
|                       |          | 5            | 0.01                  | 88-94                 | 90.1±3.1      | 3.5     |
| Cow cream             | M700F002 | 5            | 0.001                 | 99-102                | 99.9±1.3      | 1.3     |
|                       |          | 5            | 0.01                  | 97-103                | 99.7±2.2      | 2.2     |
| Hen egg               | M700F002 | 5            | 0.001                 | 83-89                 | 86.0±2.4      | 2.8     |
|                       |          | 5            | 0.01                  | 85-92                 | 88.3±2.7      | 3.1     |
| Confirmatory method I |          |              |                       |                       |               |         |
| Cow muscle            | M700F002 | 5            | 0.01                  | 71-78                 | 75.5±3.1      | 4.1     |
|                       |          | 5            | 0.1                   | 78-82                 | 79.3±1.4      | 1.8     |
| Cow kidney            | M700F002 | 5            | 0.01                  | 70-79                 | 74.6±3.3      | 4.4     |
|                       |          | 5            | 0.1                   | 71-78                 | 74.3±2.7      | 3.6     |
| Cow fat               | M700F002 | 5            | 0.01                  | 89-97                 | 92.3±3.3      | 3.5     |
|                       |          | 5            | 0.1                   | 95-100                | 98.1±2.0      | 2.0     |
| Cow liver             | M700F002 | 5            | 0.01                  | 89-94                 | 91.5±2.3      | 2.5     |
|                       |          | 5            | 0.1                   | 90-98                 | 94.6±3.5      | 3.7     |
| Cow milk              | M700F002 | 5            | 0.001                 | 94-100                | 97.1±2.4      | 2.5     |
|                       |          | 5            | 0.01                  | 90-100                | 96.4±4.6      | 4.7     |
| Cow skim milk         | M700F002 | 5            | 0.001                 | 90-98                 | 92.4±3.4      | 3.7     |
|                       |          | 5            | 0.01                  | 89-95                 | 90.5±2.6      | 2.9     |
| Cow cream             | M700F002 | 5            | 0.001                 | 95-101                | 98.0±2.2      | 2.3     |
|                       |          | 5            | 0.01                  | 97-101                | 98.8±1.7      | 1.7     |
| Hen egg               | M700F002 | 5            | 0.001                 | 81-85                 | 82.8±1.6      | 1.9     |
|                       |          | 5            | 0.01                  | 83-91                 | 86.0±2.9      | 3.4     |

\* used for quantitation

Table 61 Recovery results of method L0140/02: M700F008 in animal matrices

| Matrix     | Analyte  | No. of tests | Spiking level [mg/kg] | Transition 368 → 348* |               |         |
|------------|----------|--------------|-----------------------|-----------------------|---------------|---------|
|            |          |              |                       | Range [%]             | Mean ± SD [%] | RSD [%] |
| Cow muscle | M700F008 | 5            | 0.01                  | 81-92                 | 87.5±4.5      | 5.2     |
|            |          | 5            | 0.1                   | 84-92                 | 87.1±2.9      | 3.3     |
| Cow kidney | M700F008 | 5            | 0.01                  | 72-84                 | 79.4±4.6      | 5.7     |
|            |          | 5            | 0.1                   | 80-84                 | 81.8±1.7      | 2.1     |
| Cow fat    | M700F008 | 5            | 0.01                  | 95-108                | 97.7±5.5      | 5.7     |
|            |          | 5            | 0.1                   | 96-109                | 104.5±5.2     | 4.9     |
| Cow liver  | M700F008 | 5            | 0.01                  | 90-99                 | 93.4±3.5      | 3.8     |
|            |          | 5            | 0.1                   | 91-98                 | 95.7±2.8      | 2.9     |

| Matrix        | Analyte  | No. of tests | Spiking level [mg/kg] | Transition 368 → 348* |               |         |
|---------------|----------|--------------|-----------------------|-----------------------|---------------|---------|
|               |          |              |                       | Range [%]             | Mean ± SD [%] | RSD [%] |
| Cow milk      | M700F008 | 5            | 0.001                 | 104-110               | 105.8±2.3     | 2.2     |
|               |          | 5            | 0.01                  | 84-95                 | 90.7±4.6      | 5.0     |
| Cow skim milk | M700F008 | 5            | 0.001                 | 80-98                 | 90.8±6.8      | 7.5     |
|               |          | 5            | 0.01                  | 86-97                 | 92.4±4.5      | 4.9     |
| Cow cream     | M700F008 | 5            | 0.001                 | 92-100                | 95.0±3.2      | 3.3     |
|               |          | 5            | 0.01                  | 84-98                 | 91.8±5.3      | 5.8     |
| Hen egg       | M700F008 | 5            | 0.001                 | 82-91                 | 87.4±3.9      | 4.5     |
|               |          | 5            | 0.01                  | 73-92                 | 82.0±7.0      | 8.5     |

\* used for quantitation

Table 62 Recovery results of method L0140/02: M700F048 in animal matrices\*

| Matrix        | Analyte  | No. of tests | Spiking level [mg/kg] | Transition 530 → 368** |               |         |
|---------------|----------|--------------|-----------------------|------------------------|---------------|---------|
|               |          |              |                       | Range [%]              | Mean ± SD [%] | RSD [%] |
| Cow muscle    | M700F048 | 5            | 0.01                  | 98-108                 | 103.6±3.9     | 3.8     |
|               |          | 5            | 0.1                   | 102-107                | 104.1±2.0     | 1.9     |
| Cow kidney    | M700F048 | 5            | 0.01                  | 95-105                 | 100.5±3.6     | 3.6     |
|               |          | 5            | 0.1                   | 94-104                 | 98.8±3.8      | 3.8     |
| Cow fat       | M700F048 | 5            | 0.01                  | 102-107                | 104.4±1.8     | 1.7     |
|               |          | 5            | 0.1                   | 99-111                 | 103.4±4.4     | 4.2     |
| Cow liver     | M700F048 | 5            | 0.01                  | 94-103                 | 97.0±3.6      | 3.8     |
|               |          | 5            | 0.1                   | 95-105                 | 99.6±4.6      | 4.7     |
| Cow milk      | M700F048 | 5            | 0.001                 | 99-106                 | 102.0±2.9     | 2.9     |
|               |          | 5            | 0.01                  | 96-105                 | 100.8±3.8     | 3.8     |
| Cow skim milk | M700F048 | 5            | 0.001                 | 102-115                | 106.5±5.0     | 4.7     |
|               |          | 5            | 0.01                  | 105-111                | 107.1±2.5     | 2.4     |
| Cow cream     | M700F048 | 5            | 0.001                 | 93-108                 | 100.1±5.2     | 5.2     |
|               |          | 5            | 0.01                  | 97-103                 | 100.1±2.6     | 2.6     |
| Hen egg       | M700F048 | 5            | 0.001                 | 88-99                  | 92.0±4.4      | 4.7     |
|               |          | 5            | 0.01                  | 83-95                  | 88.0±5.0      | 5.6     |

\* supplementary information (residue levels of metabolite M700F048 not analysed in animal matrices)

\*\* used for quantitation

For extraction of the analytes, a mixture of acetonitrile/water (80/20, v/v) was used. The final volume was prepared in methanol/water (40/60, v/v). In order to investigate the stability of the analytes in these mixtures, the aliquots of extract solutions and final volumes of cow liver and hen egg samples of the validation series were stored under refrigerator conditions in the dark and re-analysed after 7 days. Extract solutions which were stored for 7 days prior to work-up showed that the analytes were stable under refrigerated conditions. Stored extract showed slightly lower recoveries for M700F002 but all recoveries were above the 70% recovery level. The solutions prepared for final determination by HPLC-MS/MS were stored in the refrigerator for 7 days, and re-analysis after storage lead to comparable recoveries. The data in the study report showed that extracts of fluxapyroxad, M700F002, M700F008 and M700F048 were stable in the extract solvent and in the solution used as final volume.

To investigate the stability of calibration and spiking solutions, mixed solutions of the analytes were prepared: for spiking, 100 ng/mL of each analyte was dissolved in methanol. As calibration standard, a methanol/water mixture (40/60, v/v) containing 0.25 ng/mL of each analyte was tested. Two replicates per solution were stored refrigerated in the dark, and re-analysed after 7, 14 and 21 days. The results show that spiking solutions in methanol and calibration standards in MeOH/H<sub>2</sub>O are stable over the time investigated (three weeks).

Independent laboratory validation reports for Method L0104/02 for the determination of residues of fluxapyroxad (Class and Jooß 2009, 2009/1074618), M700F002 (Class and Jooß 2009, 2009/1074614) and M700F008 (Class and Jooß 2009, 2009/1091115) in animal matrices (milk, egg, bovine meat and liver) have been submitted. The method was shown to be selective (two parent-

daughter ion transitions for fluxapyroxad and M700F008 and one parent-daughter ion transition for M700F002 monitored on injections performed on two HPLC columns with different stationary phases) and yielded accurate and repeatable results.

Table 63 Recovery results of method L0104/02: fluxapyroxad in animal matrices

| Matrix | Analyte      | No. of tests | Spiking level [mg/kg] | 382 m/z → 362 m/z |          |         |
|--------|--------------|--------------|-----------------------|-------------------|----------|---------|
|        |              |              |                       | mean [%]          | SD [+/-] | RSD [%] |
| Liver  | Fluxapyroxad | 5            | 0.01                  | 80                | 3        | 4       |
|        |              | 5            | 0.1                   | 98                | 4        | 4       |
| Meat   | Fluxapyroxad | 5            | 0.01                  | 80                | 15       | 19      |
|        |              | 5            | 0.1                   | 100               | 2        | 2       |
| Egg    | Fluxapyroxad | 5            | 0.001                 | 96                | 4        | 4       |
|        |              | 5            | 0.01                  | 102               | 2        | 2       |
| Milk   | Fluxapyroxad | 5            | 0.001                 | 89                | 6        | 6       |
|        |              | 5            | 0.01                  | 95                | 2        | 2       |

Table 64 Recovery results of method L0140/02: M700F002 in animal matrices

| Matrix | Analyte  | No. of tests | Spiking level [mg/kg] | Polar RP-Column |         | Hydro RP-Column |         |
|--------|----------|--------------|-----------------------|-----------------|---------|-----------------|---------|
|        |          |              |                       | mean [%]        | RSD [%] | mean [%]        | RSD [%] |
| Liver  | M700F002 | 5            | 0.01                  | 98              | 2       | 98              | 2       |
|        |          | 5            | 0.1                   | 88              | 4       | 89              | 5       |
| Meat   | M700F002 | 5            | 0.01                  | 103             | 2       | 101             | 4       |
|        |          | 5            | 0.1                   | 88              | 9       | 88              | 9       |
| Milk   | M700F002 | 5            | 0.001                 | 97              | 3       | 97              | 2       |
|        |          | 5            | 0.01                  | 106             | 10      | 104             | 12      |
| Egg    | M700F002 | 5            | 0.001                 | 80              | 6       | 78              | 8       |
|        |          | 5            | 0.01                  | 82              | 2       | 81              | 2       |

Table 65 Recovery results of method L0140/02: M700F008 in animal matrices

| Matrix | Analyte  | No. of tests | Spiking level [mg/kg] | Transition 368 → 348* |         |
|--------|----------|--------------|-----------------------|-----------------------|---------|
|        |          |              |                       | mean [%]              | RSD [%] |
| Liver  | M700F008 | 5            | 0.01                  | 87                    | 2       |
|        |          | 5            | 0.1                   | 72                    | 4       |
| Meat   | M700F008 | 5            | 0.01                  | 105                   | 12      |
|        |          | 5            | 0.1                   | 77                    | 6       |
| Egg    | M700F008 | 5            | 0.001                 | 91                    | 6       |
|        |          | 5            | 0.01                  | 95                    | 3       |
| Milk   | M700F008 | 5            | 0.001                 | 75                    | 5       |
|        |          | 5            | 0.01                  | 79                    | 10      |

The extraction efficiency of Method L0140/02 was tested during the lactating goat and laying hen metabolism studies. The extractability of radioactive residues from matrices of the goat and hen studies was tested using the acetonitrile/water (80/20, v/v) solvent combination used for extraction in Method L0140/02. It was found that the extraction procedure applied in the residue analytical method, released similar amounts of radioactive residues and yielded comparable metabolite patterns in comparison with data obtained with the extraction solvents methanol or acetonitrile used for analysis and metabolite identification in the goat and hen metabolism studies.

Table 66 Extractability of residues of <sup>14</sup>C-fluxapyroxad (pyrazole label) in goat or hen matrices according to Method L0140/02

| Matrix            | Extractability (%TRR)                             |                                                                |
|-------------------|---------------------------------------------------|----------------------------------------------------------------|
|                   | Method L0140/02<br>(acetonitrile/water, 8:2; v/v) | Using solvents for metabolism<br>investigations in goat or hen |
| <i>Goat study</i> |                                                   |                                                                |
| Milk              | 88.3                                              | 90.4 (acetonitrile, 1x)                                        |
| Liver             | 29.5                                              | 30.3 (methanol, 3x)                                            |
| Kidney            | 90.2                                              | 92.1 (methanol, 3x)                                            |
| Fat               | 117.6                                             | 105.1 (acetonitrile, 1x)                                       |
| <i>Hen study</i>  |                                                   |                                                                |
| Egg               | 94.1                                              | 91.7                                                           |
| Liver             | 52.9                                              | 67.9                                                           |
| Fat               | 100.4                                             | 102.5                                                          |

***Stability of pesticide residues in stored analytical samples******Plant Matrices***

A freezer storage stability study was carried out on plant samples fortified with fluxapyroxad at 0.1 mg/kg and stored at -20 °C (Radzom and Mackenroth 2010, 2010/1009624 and 2010/1194150). Samples were analysed using either Method L0076/3 or Method L0137/1. Concurrent recoveries were run concurrently with the analytical samples. The results are summarized below in Table 67 and indicate that fluxapyroxad is stable for up to 24 months in apple, tomato, triticale whole plant, soya bean seed, avocado, dried pea seed, cereal grain, potato tuber, grape, lemon and wheat straw. The results of the study are tabulated showing the stability in stored samples as well as results of concurrent recoveries.

Table 67 Storage stability of fluxapyroxad in plant matrices

|                     | Mean Recovery (%) |     |              |     |                       |     |                |     |               |     |                |     |
|---------------------|-------------------|-----|--------------|-----|-----------------------|-----|----------------|-----|---------------|-----|----------------|-----|
| Day                 | A                 | B   | A            | B   | A                     | B   | A              | B   | A             | B   | A              | B   |
| Method No. L0076/3  |                   |     |              |     |                       |     |                |     |               |     |                |     |
|                     | Apple fruit       |     | Tomato fruit |     | Triticale whole plant |     | Soya bean seed |     | Avocado fruit |     | Dried pea seed |     |
| 0                   | 89                | 91  | 87           | 83  | 84                    | 87  | 78             | 86  | 94            | 84  | 93             | 88  |
| 28-31               | 78                | 79  | 78           | 78  | 84                    | 81  | 79             | 82  | 83            | 81  | 83             | 81  |
| 244                 | 93                | 94  | 90           | 93  | 88                    | 94  | 85             | 91  | 87            | 92  | 93             | 95  |
| 365                 | 90                | 97  | 92           | 95  | 96                    | 97  | 89             | 94  | 100           | 106 | 99             | 93  |
| 539                 | 84                | 92  | 84           | 87  | 78                    | 85  | 81             | 82  | 82            | 94  | 83             | 87  |
|                     | Cereal grain      |     | Potato tuber |     | Grape fruit           |     | Lemon fruit    |     | Wheat straw   |     | -              |     |
| 0                   | 90                | 89  | 85           | 85  | 84                    | 88  | 83             | 87  | 86            | 84  |                |     |
| 28-31               | 80                | 80  | 71           | 75  | 78                    | 75  | 77             | 80  | 82            | 81  |                |     |
| 244                 | 86                | 91  | 88           | 95  | 86                    | 91  | 93             | 95  | 85            | 88  |                |     |
| 365                 | 104               | 104 | 97           | 96  | 92                    | 103 | 99             | 94  | 99            | 104 |                |     |
| 539                 | 86                | 89  | 79           | 90  | 86                    | 88  | 87             | 91  | 82            | 82  |                |     |
| Method No. L0137/01 |                   |     |              |     |                       |     |                |     |               |     |                |     |
|                     | Apple fruit       |     | Tomato fruit |     | Triticale whole plant |     | Soya bean seed |     | Avocado fruit |     | Dried pea seed |     |
| 0                   | 97                | 95  | 96           | 94  | 106                   | 101 | 93             | 94  | 96            | 97  | 100            | 99  |
| 28-31               | 104               | 98  | 105          | 109 | 100                   | 104 | 98             | 93  | 104           | 101 | 93             | 102 |
| 85-88               | 93                | 100 | 96           | 98  | 87                    | 100 | 82             | 74  | 95            | 95  | 90             | 91  |
| 548-554             | 83                | 104 | 96           | 103 | 97                    | 104 | 87             | 80  | 89            | 96  | 97             | 100 |
| 734-737             | 77                | 95  | 79           | 90  | 75                    | 100 | 77             | 91  | 77            | 95  | 85             | 92  |
|                     | Cereal grain      |     | Potato tuber |     | Grape fruit           |     | Lemon fruit    |     | Wheat straw   |     | -              |     |
| 0                   | 99                | 99  | 97           | 95  | 98                    | 99  | 102            | 102 | 94            | 98  |                |     |
| 28-31               | 103               | 99  | 108          | 102 | 106                   | 104 | 102            | 105 | 97            | 89  |                |     |
| 85-88               | 90                | 90  | 103          | 97  | 96                    | 98  | 97             | 104 | 89            | 84  |                |     |
| 548-554             | 100               | 110 | 94           | 100 | 96                    | 101 | 92             | 102 | 92            | 94  |                |     |
| 734-737             | 85                | 94  | 82           | 95  | 92                    | 97  | 87             | 98  | 78            | 83  |                |     |

A: in stored samples, % of nominal; B: concurrent, in freshly spiked sample

The freezer storage stability of M700F002 was investigated in plant matrices fortified at 0.1 mg/kg and stored at -20 °C (Radzom and Mackenroth 2010, 2010/1009625). Samples were analysed using Method L0137/1. Recoveries were run concurrently with the analytical samples. The results are summarized below in Table 68 and indicate that M700F002 is stable for up to 27 months in frozen samples of apple, tomato, triticale whole plant, soya bean seed, avocado, dried pea seed, cereal grain, potato tuber, grape, lemon and wheat straw. The results of the study are tabulated showing the stability in stored samples as well as results of concurrent recoveries.

Table 68 Storage stability of M700F002 in plant matrices

| Day     | Mean Recovery of M700F002 (%) |    |              |    |                       |    |                |     |               |    |                |     |
|---------|-------------------------------|----|--------------|----|-----------------------|----|----------------|-----|---------------|----|----------------|-----|
|         | A                             | B  | A            | B  | A                     | B  | A              | B   | A             | B  | A              | B   |
|         | Apple fruit                   |    | Tomato fruit |    | Triticale whole plant |    | Soya bean seed |     | Avocado fruit |    | Dried pea seed |     |
| 0       | 84                            | 81 | 85           | 78 | 87                    | 86 | 91             | 85  | 84            | 81 | 92             | 87  |
| 29      | 80                            | 89 | 81           | 88 | 83                    | 91 | 87             | 95  | 83            | 91 | 93             | 97  |
| 87      | 77                            | 79 | 67           | 80 | 77                    | 87 | 84             | 98  | 79            | 81 | 82             | 91  |
| 113     | 82                            | 87 | 76           | 85 | 74                    | 87 | 89             | 109 | 67            | 76 | 97             | 101 |
| 175-181 | 81                            | 76 | 83           | 87 | 74                    | 84 | 90             | 93  | 82            | 96 | 91             | 95  |
| 538     | 86                            | 84 | 86           | 89 | 77                    | 81 | 91             | 102 | 61            | 82 | 89             | 95  |
| 726-737 | 69                            | 79 | 67           | 68 | 68                    | 83 | 82             | 93  | 76            | 88 | 87             | 93  |
| 824     | 91                            | 91 | 82           | 87 | 87                    | 91 | 95             | 97  | 88            | 82 | 98             | 95  |
|         | Cereal grain                  |    | Potato tuber |    | Grape fruit           |    | Lemon fruit    |     | Wheat straw   |    |                |     |
| 0       | 89                            | 85 | 82           | 84 | 78                    | 74 | 89             | 88  | 100           | 98 |                |     |
| 29      | 90                            | 87 | 85           | 81 | 69                    | 74 | 96             | 92  | 95            | 91 |                |     |
| 87      | 87                            | 91 | 77           | 72 | 66                    | 88 | 81             | 81  | 83            | 89 |                |     |
| 113     | 89                            | 96 | 72           | 83 | 69                    | 72 | 93             | 94  | 85            | 82 |                |     |
| 175-181 | 90                            | 92 | 79           | 87 | 67                    | 79 | 88             | 97  | 86            | 74 |                |     |
| 538     | 86                            | 93 | 59           | 70 | 72                    | 75 | 93             | 94  | 89            | 92 |                |     |
| 726-737 | 91                            | 93 | 58           | 52 | 70                    | 69 | 80             | 78  | 79            | 88 |                |     |
| 824     | 99                            | 88 | 82           | 85 | 91                    | 87 | 91             | 94  | 80            | 89 |                |     |

A: mean in stored samples, % of nominal; B: mean concurrent, in freshly spiked sample

The freezer storage stability of M700F008 was investigated in plant matrices fortified at 0.1 mg/kg and stored at -20 °C (Lehmann and Mackenroth 2011, 2011/1124183). Samples were analysed using Method L0137/1. Recoveries were run concurrently with the analytical samples. The results are summarized below in Table 69 and indicate that M700F008 is stable for up to 2 years in frozen samples of dried pea seed and wheat straw. For the other four matrices (wheat whole plant, wheat grain, lemon fruit and soya bean seed) a decrease was observed up to the 88–91 day time point. The recoveries observed for storage intervals between 129 and 725 days did not show any subsequent significant decrease.

Table 69 Storage stability of M700F008 in plant matrices

| Day     | Mean Recovery (%)  |    |             |     |             |    |             |     |                |     |                |    |
|---------|--------------------|----|-------------|-----|-------------|----|-------------|-----|----------------|-----|----------------|----|
|         | A                  | B  | A           | B   | A           | B  | A           | B   | A              | B   | A              | B  |
|         | Wheat whole plant* |    | Wheat grain |     | Wheat straw |    | Lemon fruit |     | Dried pea seed |     | Soya bean seed |    |
| 0       | 97                 | 89 | 98          | 96  | 78          | 80 | 96          | 95  | 86             | 82  | 90             | 94 |
| 28-32   | 87                 | 91 | 95          | 90  | 72          | 70 | 91          | 104 | 98             | 97  | 78             | 91 |
| 88-91   | 66                 | 81 | 88          | 95  | 64          | 68 | 77          | 96  | 89             | 90  | 59             | 89 |
| 129-133 | 71                 | 82 | -           | -   | -           | -  | 74          | 95  | -              | -   | 82             | 85 |
| 177-182 | 62                 | 87 | 70          | 100 | 84          | 92 | 74          | 97  | 91             | 100 | 53             | 93 |
| 358-364 | 54                 | 81 | 82          | 98  | 62          | 87 | 67          | 96  | 92             | 100 | 65             | 96 |
| 539-546 | 68                 | 87 | 69          | 109 | 83          | 94 | 72          | 96  | 91             | 98  | 60             | 90 |
| 723-725 | 68                 | 93 | 69          | 107 | 82          | 94 | 65          | 93  | 90             | 97  | 49             | 90 |

A: mean in stored samples, % of nominal; B: mean concurrent, in freshly spiked sample; \*without roots

The freezer storage stability of M700F048 was investigated in plant matrices fortified at 0.1 mg/kg and stored at -20 °C (Richter 2011, 2011/1125600). Samples were analysed using Method L0137/1. Recoveries were run concurrently with the analytical samples. The results are summarized below in Table 70 and indicate that M700F048 is stable for up to 2 years in all matrices tested.

Table 70 Storage stability of M700F048 in plant matrices

| Day     | Mean Recovery (%)      |     |                |     |                   |     |                |     |               |    |                |     |
|---------|------------------------|-----|----------------|-----|-------------------|-----|----------------|-----|---------------|----|----------------|-----|
|         | A                      | B   | A              | B   | A                 | B   | A              | B   | A             | B  | A              | B   |
|         | Apple fruit            |     | Tomato fruit   |     | Wheat whole plant |     | Soya bean seed |     | Avocado fruit |    | Dried pea seed |     |
| 0       | 92                     | 96  | 91             | 91  | 95                | 97  | 95             | 97  | 84            | 86 | 92             | 91  |
| 28-29   | 96                     | 98  | 89             | 93  | 89                | 93  | 95             | 94  | 92            | 94 | 91             | 90  |
| 84-90   | 92                     | 98  | 91             | 87  | 87                | 91  | 88             | 90  | 94            | 92 | 87             | 96  |
| 143-145 | 97                     | 102 | 92             | 97  | 95                | 95  | 88             | 94  | 95            | 97 | 102            | 98  |
| 207-209 | 97                     | 97  | 97             | 94  | 95                | 97  | 93             | 98  | 100           | 97 | 97             | 97  |
| 235-243 | 104                    | 93  | 95             | 88  | 98                | 92  | 98             | 93  | 95            | 87 | 98             | 86  |
| 363-367 | 102                    | 101 | 92             | 98  | 93                | 95  | 103            | 103 | 95            | 99 | 92             | 98  |
| 538-542 | 101                    | 99  | 91             | 94  | 88                | 99  | 97             | 103 | 88            | 95 | 97             | 99  |
| 724-733 | 103                    | 105 | 99             | 107 | 98                | 95  | 105            | 106 | 99            | 99 | 106            | 102 |
|         | Cereal grain           |     | Potato tuber   |     | Grape fruit       |     | Lemon fruit    |     | Wheat straw   |    | Apple juice    |     |
| 0       | 99                     | 97  | 95             | 96  | 92                | 88  | 90             | 87  | 95            | 94 | 89             | 94  |
| 28-29   | 98                     | 98  | 91             | 91  | 98                | 94  | 96             | 94  | 79            | 79 | 94             | 86  |
| 84-90   | 100                    | 95  | 90             | 93  | 97                | 90  | 94             | 96  | 85            | 84 | 94             | 94  |
| 143-145 | 92                     | 98  | 88             | 100 | 100               | 97  | 100            | 101 | 96            | 91 | 105            | 99  |
| 207-209 | 108                    | 104 | 99             | 99  | 99                | 91  | 99             | 102 | 94            | 91 | 98             | 85  |
| 235-243 | 99                     | 95  | 93             | 91  | 102               | 92  | 103            | 96  | 77            | 78 | 96             | 90  |
| 363-367 | 96                     | 96  | 93             | 96  | 101               | 100 | 98             | 97  | 92            | 93 | 94             | 93  |
| 538-542 | 94                     | 107 | 98             | 99  | 83                | 99  | 104            | 103 | 84            | 89 | 82             | 94  |
| 724-733 | 104                    | 103 | 97             | 100 | 101               | 104 | 101            | 102 | 93            | 94 | 93             | 96  |
|         | Soya bean, refined oil |     | Potato, crisps |     | Grape, raisins    |     | Barley, beer   |     |               |    |                |     |
| 0       | 103                    | 103 | 104            | 99  | 102               | 105 | 89             | 90  |               |    |                |     |
| 28-29   | 101                    | 97  | 98             | 100 | 93                | 97  | 91             | 96  |               |    |                |     |
| 84-90   | 94                     | 96  | 100            | 97  | 90                | 92  | 90             | 90  |               |    |                |     |
| 143-145 | 106                    | 102 | 101            | 97  | 95                | 90  | 104            | 101 |               |    |                |     |
| 207-209 | 105                    | 95  | 100            | 90  | 100               | 95  | 98             | 96  |               |    |                |     |
| 235-243 | 101                    | 91  | 106            | 93  | 100               | 84  | 102            | 83  |               |    |                |     |
| 363-367 | 101                    | 98  | 99             | 99  | 88                | 89  | 98             | 98  |               |    |                |     |
| 538-542 | 90                     | 100 | 91             | 101 | 97                | 93  | 86             | 94  |               |    |                |     |
| 724-733 | 102                    | 100 | 110            | 99  | 109               | 104 | 100            | 99  |               |    |                |     |

A: mean in stored samples, % of nominal; B: mean concurrent, in freshly spiked sample

Samples from the fluxapyroxad wheat and soya bean metabolism studies were re-analysed after a storage interval of up to 1105 days to investigate the stability of incurred residues of M700F008 (Schreiner and Deppermann 2011, 2011/1141383). In the original studies aniline-U-<sup>14</sup>C- and pyrazole-4-<sup>14</sup>C-fluxapyroxad were foliar applied to wheat (2 × 125 g ai/ha) and soya bean (3 × 60 g ai/ha). For investigation of storage stability the samples selected were wheat forage (pyrazole label), wheat straw (aniline label), wheat grain (pyrazole label) and soya bean seed (aniline label). In the original studies the initial quantitation of the residue including M700F008 was done after a short period of frozen storage (15 days for wheat straw and grain, 20 days for soya bean seed and 55 days for wheat forage). After an extended freezer storage period (1106–1155 days) aliquots of these samples were analysed using an equivalent HPLC method and the results compared to the initial data as summarized below in Table 71.

Table 71 Quantitation of M700F008 after short and long term storage of frozen samples from plant metabolism studies in fluxapyroxad treated wheat and soya bean

| Matrix      | Storage (days) | Methanol extract |      | Aqueous extract |      | Total Extracted |      |
|-------------|----------------|------------------|------|-----------------|------|-----------------|------|
|             |                | mg/kg            | %TRR | mg/kg           | %TRR | mg/kg           | %TRR |
| Wheat straw | 15             | 0.511            | 2.7  | 0.035           | 0.2  | 0.546           | 2.8  |
|             | 1106           | 0.510            | 2.6  | 0.019           | 0.1  | 0.529           | 2.7  |

| Matrix         | Storage (days) | Methanol extract |      | Aqueous extract |      | Total Extracted |      |
|----------------|----------------|------------------|------|-----------------|------|-----------------|------|
|                |                | mg/kg            | %TRR | mg/kg           | %TRR | mg/kg           | %TRR |
| Wheat forage   | 55             | 0.060            | 5.7  | 0.001           | 0.1  | 0.061           | 5.8  |
|                | 1155           | 0.046            | 4.2  | ND              | ND   | 0.046           | 4.2  |
| Wheat grain    | 15             | 0.004            | 6.2  | 0.0001          | 0.3  | 0.004           | 6.5  |
|                | 1108           | 0.004            | 8.0  | ND              | ND   | 0.004           | 8.0  |
| Soya bean seed | 20             | 0.005            | 4.0  | ND              | ND   | 0.005           | 4.0  |
|                | 1149           | 0.004            | 3.6  | ND              | ND   | 0.004           | 3.6  |

ND = not detected

Note: the fraction containing M700F008 often contained minor amounts of other components, however M700F008 was considered the predominant component of the fraction

Recoveries of M700F008 from wheat straw, forage and grain and soya bean seed after an extended storage period of 1105-1155 days were shown to be similar to those obtained in the original study. Data was also presented for parent fluxapyroxad (Table 72).

Table 72 Quantitation of fluxapyroxad after short and long term storage of frozen samples from plant metabolism studies in fluxapyroxad treated wheat and soya bean

| Matrix         | Storage (days) | Methanol extract |      | Aqueous extract |      | Total Extracted |      |
|----------------|----------------|------------------|------|-----------------|------|-----------------|------|
|                |                | mg/kg            | %TRR | mg/kg           | %TRR | mg/kg           | %TRR |
| Wheat straw    | 15             | 15.711           | 81.4 | 0.447           | 2.3  | 16.158          | 83.8 |
|                | 1106           | 15.274           | 78.0 | 0.496           | 2.5  | 15.770          | 80.5 |
| Wheat forage   | 55             | 0.918            | 86.8 | 0.005           | 0.5  | 0.923           | 87.3 |
|                | 1155           | 0.935            | 84.8 | 0.018           | 1.7  | 0.953           | 86.5 |
| Wheat grain    | 15             | 0.033            | 58.6 | 0.001           | 1.6  | 0.034           | 60.2 |
|                | 1108           | 0.032            | 58.5 | 0.005           | 8.5  | 0.037           | 67.0 |
| Soya bean seed | 20             | 0.023            | 20.4 | 0.001           | 0.8  | 0.024           | 21.2 |
|                | 1149           | 0.015            | 14.5 | ND              | ND   | 0.015           | 14.5 |

ND = not detected

The extractability of wheat and soya bean samples before and after storage was also compared (Table 73).

Table 73 Extractability of wheat and soya bean samples before and after storage

| Matrix         | Storage (days) | Methanol extract |      | Aqueous extract |      | Total Extracted |      | PES   |      | TRR (calculated) mg/kg |
|----------------|----------------|------------------|------|-----------------|------|-----------------|------|-------|------|------------------------|
|                |                | mg/kg            | %TRR | mg/kg           | %TRR | mg/kg           | %TRR | mg/kg | %TRR |                        |
| Wheat forage   | 55             | 1.003            | 94.9 | 0.012           | 1.1  | 1.015           | 96.0 | 0.043 | 4.0  | 1.057                  |
|                | 1155           | 1.025            | 93.0 | 0.021           | 2.0  | 1.047           | 95.0 | 0.056 | 5.0  | 1.102                  |
| Wheat straw    | 15             | 17.550           | 91.0 | 0.692           | 3.6  | 18.243          | 94.6 | 1.049 | 5.4  | 19.291                 |
|                | 1106           | 17.567           | 89.8 | 0.682           | 3.5  | 18.248          | 93.2 | 1.324 | 6.8  | 19.572                 |
| Wheat grain    | 15             | 0.041            | 71.6 | 0.007           | 13.0 | 0.048           | 84.6 | 0.009 | 15.4 | 0.057                  |
|                | 1108           | 0.035            | 63.8 | 0.009           | 16.1 | 0.044           | 79.9 | 0.011 | 20.1 | 0.055                  |
| Soya bean seed | 20             | 0.071            | 61.3 | 0.019           | 16.4 | 0.089           | 77.7 | 0.026 | 22.3 | 0.115                  |
|                | 1149           | 0.065            | 62.2 | 0.014           | 13.7 | 0.079           | 75.9 | 0.025 | 24.1 | 0.104                  |

### Animal matrices

The stability of fluxapyroxad and the metabolites M700F002, M700F008 and M700F048 in extracts of animal matrices was tested with the validation of Method L0140/02. Stability in animal matrices was demonstrated over 7 days under refrigerator conditions.

In the hen metabolism study for fluxapyroxad a comparison of the extractabilities and metabolite patterns (HPLC chromatograms) obtained at the beginning and the end of the investigation period showed no relevant changes in the nature of radioactive residues during sample storage over approximately 16 months.

In the goat metabolism study for fluxapyroxad the stability of the residues in acetonitrile and methanol extracts was demonstrated for the whole period of metabolite investigation. Extracts were obtained after storage of the matrices for about 550 days (milk, kidney and muscle from the aniline label) or 300–700 days (fat from the aniline label). The extracts showed concentrations and metabolite patterns comparable to data generated during earlier workups. It was concluded that the nature of residues was not changed over the duration of storage.

For the study of the metabolism of metabolite M700F002 in goat, the radiochemical stability of the test item over the 8 day dosing period was confirmed. After 8 days of storage, the radiochemical purity was 95.3%. Extractions were performed several times during the course of the study. No differences in the extraction characteristics at 70 days up to 145 days after sampling were observed. The stability of radioactivity in extracts stored in a refrigerator was also proven for up to 83 days of storage by comparison of the HPLC chromatograms.

## USE PATTERN

Information on registered uses made available to this meeting is shown in Table 74.

Table 74 Registered uses of fluxapyroxad on pome fruits, stone fruits, fruiting vegetables other than cucurbits, legume vegetables, pulses, root and tuber vegetables, cereal grains, oilseed and forage and fodder crops

| Crop                                                                                                    | Country | Formulation | Application |                                                      |                                       | PHI days |
|---------------------------------------------------------------------------------------------------------|---------|-------------|-------------|------------------------------------------------------|---------------------------------------|----------|
|                                                                                                         |         |             | Method      | Rate, g ai/ha or (g ai / 100kg seed) or [g ai/ 100L] | Max. no. or g ai/ ha/year             |          |
| Citrus Fruits                                                                                           |         |             |             |                                                      |                                       |          |
| Citrus fruit                                                                                            | Brazil  | SC          | Foliar      | [2.5 g / 100 L (2000 L/ha) $\equiv$ 50 g ai/ ha]     | 3 (intervals of 7-14 days or 30 days) | 30       |
| Pome Fruits                                                                                             |         |             |             |                                                      |                                       |          |
| Pome fruit: Apple, Crabapple, Loquat, Mayhaw Oriental pear, Pear Quince                                 | USA     | SC/EC       | Foliar      | 97-101                                               | 4 (maximum of 2 consecutive)          | 0        |
| Apple                                                                                                   | Brazil  | SC          | Foliar      | [6.7 g / 100 L (1000 L/ha) $\equiv$ 67 g ai/ ha]     | 4 (intervals of 7-14 days)            | 30       |
| Stone Fruits                                                                                            |         |             |             |                                                      |                                       |          |
| Stone fruit: Apricot, Cherry (sweet and tart), Nectarines, Peach, Plums (all varieties), Plumcot, Prune | USA     | SC/EC       | Foliar      | 121-123                                              | 3 (maximum of 2 consecutive)          | 0        |
| Assorted tropical and sub-tropical fruits-inedible peel                                                 |         |             |             |                                                      |                                       |          |
| Mango                                                                                                   | Brazil  | SC          | Foliar      | [6.7 g / 100L (1000 L/ha) $\equiv$ 67 g ai/ ha]      | 4 (intervals of 7-14 days)            | 30       |
| Bulb Vegetables                                                                                         |         |             |             |                                                      |                                       |          |
| Onion                                                                                                   | Brazil  | SC          | Foliar      | 58                                                   | 4 (intervals of 7-14 days)            | 14       |
| Fruiting Vegetables, Cucurbits                                                                          |         |             |             |                                                      |                                       |          |
| Cucumber                                                                                                | Brazil  | SC          | Foliar      | [5.8 g / 100L (1000 L/ha) $\equiv$ 58 g ai/ ha]      | 4 (intervals of 7-14 days)            | 14       |
| Melon                                                                                                   | Brazil  | SC          | Foliar      | 58                                                   | 4 (intervals of 7-14 days)            | 14       |

| Crop                                                                                             | Country | Formulation | Application    |                                                      |                              | PHI days                                                    |
|--------------------------------------------------------------------------------------------------|---------|-------------|----------------|------------------------------------------------------|------------------------------|-------------------------------------------------------------|
|                                                                                                  |         |             | Method         | Rate, g ai/ha or (g ai / 100kg seed) or [g ai/ 100L] | Max. no. or g ai/ ha/year    |                                                             |
| Fruiting Vegetables, other than Cucurbits                                                        |         |             |                |                                                      |                              |                                                             |
| Fruiting vegetables: Egg plant, Ground Cherry, Pepino, Pepper (all varieties), Tomatillo, Tomato | USA     | SC/EC       | Foliar         | 97-101                                               | 3 (maximum of 2 consecutive) | 7                                                           |
| Red Bell Pepper                                                                                  | Brazil  | SC          | Foliar         | 58                                                   | 4 (intervals of 7-14 days)   | 14                                                          |
| Tomato                                                                                           | Brazil  | SC          | Foliar         | [5.8 g / 100L (1000 L/ha) ≡ 58 g ai/ ha]             | 4 (intervals of 7-14 days)   | 14                                                          |
| Legume Vegetables                                                                                |         |             |                |                                                      |                              |                                                             |
| Edible podded legume vegetables                                                                  | USA     | SC/EC       | Foliar         | 97-100                                               | 2                            | 7 (Bean forage, bean hay, pea vines and pea hay – 7 days)   |
| Edible podded legume vegetables                                                                  | USA     | SC          | Foliar         | 97                                                   | 2                            | 7 (Bean forage, bean hay, pea vines and pea hay – 14 days)  |
| Edible podded legume vegetables                                                                  | USA     | SC          | Seed treatment | (10 g ai/100kg seed)                                 | 1                            | -                                                           |
| Succulent shelled peas and beans                                                                 | USA     | SC/EC       | Foliar         | 97-100                                               | 2                            | 7 (Bean forage, bean hay, pea vines and pea hay – 7 days)   |
| Succulent shelled peas and beans                                                                 | USA     | SC          | Foliar         | 97                                                   | 2                            | 7 (Bean forage, bean hay, pea vines and pea hay – 14 days)  |
| Bean                                                                                             | Brazil  | SC          | Foliar         | 50                                                   | 4 (intervals of 7-14 days)   | 14                                                          |
| Pulses                                                                                           |         |             |                |                                                      |                              |                                                             |
| Dried shelled peas and beans (except soya beans)                                                 | USA     | SC          | Foliar         | 97-100<br>195-200 (dry beans only)                   | 2                            | 21 (Bean forage, bean hay, pea vines and pea hay – 7 days)  |
| Dried shelled peas and beans (except soya beans)                                                 | USA     | SC          | Foliar         | 97<br>195 (dry beans only)                           | 2                            | 21 (Bean forage, bean hay, pea vines and pea hay – 14 days) |
| Dried shelled peas and beans (except soya beans)                                                 | USA     | SC          | Seed Treatment | (10 g ai/100kg seed)                                 | 1                            | -                                                           |
| Soya bean                                                                                        | USA     | SC/EC       | Foliar         | 97-100                                               | 2                            | 21 (Soya bean forage – 7 days, Soya bean hay 14-days)       |
| Soya bean                                                                                        | USA     | SC          | Foliar         | 97-101                                               | 2                            | 21 (Soya bean forage – 14 days, Soya bean hay 21-days)      |
| Soya bean                                                                                        | USA     | SC          | Seed Treatment | (10 g ai/100kg seed)                                 | 1                            | -                                                           |
| Soya bean                                                                                        | Brazil  | SC/EC       | Foliar         | 58 (EC max. 50)                                      | 4 (intervals of 10-20 days)  | 14                                                          |

| Crop                                                                          | Country   | Formulation | Application    |                                                      |                              | PHI days                                                                                                    |
|-------------------------------------------------------------------------------|-----------|-------------|----------------|------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------|
|                                                                               |           |             | Method         | Rate, g ai/ha or (g ai / 100kg seed) or [g ai/ 100L] | Max. no. or g ai/ ha/year    |                                                                                                             |
| Root and tuber vegetables                                                     |           |             |                |                                                      |                              |                                                                                                             |
| Tuberous and corm vegetables subgroup:                                        | USA       | SC/EC       | Foliar         | 97-101                                               | 3 (maximum of 2 consecutive) | 7                                                                                                           |
| Sugar beet (leaves roots and tops)                                            | USA       | SC/EC       | Foliar         | 97-100                                               | 3 (maximum of 2 consecutive) | 7 (Leaves, roots and tops)                                                                                  |
| Carrot                                                                        | Brazil    | SC          | Foliar         | 58                                                   | 4 (intervals of 7-14 days)   | 14                                                                                                          |
| Potato                                                                        | Brazil    | SC          | Foliar         | 58                                                   | 4 (intervals of 7-14 days)   | 14                                                                                                          |
| Cereal Grains                                                                 |           |             |                |                                                      |                              |                                                                                                             |
| Barley (except malting barley)                                                | Australia | EC          | Foliar         | 62.5                                                 | 2                            | Harvest-Not required when used as directed (Do not graze or use for stock food – 14 days)                   |
| Barley                                                                        | USA       | SC/EC       | Foliar         | 97-100                                               | 2                            | 21 (Barley hay or green-chopped barley 7-day)                                                               |
| Barley                                                                        | USA       | SC          | Foliar         | 97                                                   | 2                            | Apply no later than 50% head emergence (Feekes10.3, Zadok’s 55) (Barley hay or green-chopped barley 14-day) |
| Barley                                                                        | USA       | SC          | Seed Treatment | (50 g ai/100kg seed)                                 | 1                            | -                                                                                                           |
| Barley                                                                        | Brazil    | EC          | Foliar         | 60                                                   | 2 (intervals of 15-20 days)  | 30                                                                                                          |
| Corn: Field corn, Pop corn, Sweet corn, Seed production corn, Corn for silage | USA       | SC/EC       | Foliar         | 97-100                                               | 2                            | 21 (7 sweet corn only) (Forage-7 days)                                                                      |
| Corn (Field, Pop corn, Corn for seed production corn)                         | USA       | SC          | Seed Treatment | (50 g ai/100kg seed)                                 | 1                            | -                                                                                                           |
| Corn (Sweet)                                                                  | USA       | SC          | Seed Treatment | (50 g ai/100kg seed)                                 | 1                            | -                                                                                                           |
| Corn                                                                          | Brazil    | SC/EC       | Foliar         | 58-60                                                | 2 (intervals of 15-20 days)  | 45                                                                                                          |
| Oat                                                                           | USA       | SC/EC       | Foliar         | 97-100                                               | 2                            | 21 (Oat hay or green-chopped oats 7-days)                                                                   |
| Oat                                                                           | USA       | SC          | Foliar         | 97                                                   | 2                            | Apply no later than 50% head emergence (Feekes10.3, Zadok’s 55) (Oat hay or green-chopped oats 7-day)       |
| Oat                                                                           | USA       | SC          | Seed Treatment | (10 g ai/100kg seed)                                 | 1                            | -                                                                                                           |

| Crop                                                                                 | Country        | Formulation | Application    |                                                      |                                         | PHI days                                                                                                         |
|--------------------------------------------------------------------------------------|----------------|-------------|----------------|------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------|
|                                                                                      |                |             | Method         | Rate, g ai/ha or (g ai / 100kg seed) or [g ai/ 100L] | Max. no. or g ai/ ha/year               |                                                                                                                  |
| Oat                                                                                  | Brazil         | SC/EC       | Foliar         | 58-60                                                | 2 (intervals of 15-20 days)             | 30                                                                                                               |
| Rye                                                                                  | USA            | SC/EC       | Foliar         | 97-100                                               | 2                                       | 21 (Rye hay or green-chopped rye – 7 days)                                                                       |
| Rye                                                                                  | USA            | SC          | Foliar         | 97                                                   | 2                                       | Apply no later than beginning of flowering (Feekes10.5, Zadok's 59) (Rye hay or green-chopped rye – 7 days)      |
| Rye                                                                                  | USA            | SC          | Seed Treatment | (10 g ai/100kg seed)                                 | 1                                       | -                                                                                                                |
| Sorghum                                                                              | USA            | SC          | Seed Treatment | (20 g ai/100kg seed)                                 | 1                                       | -                                                                                                                |
| Sorghum                                                                              | Brazil         | SC          | Foliar         | 58                                                   | 2 (intervals of 14-21 days)             | 45                                                                                                               |
| Wheat, Barley, Rye, Triticale                                                        | France         | EC          | Foliar         | 125                                                  | 1                                       | 35                                                                                                               |
| Wheat, Triticale                                                                     | Germany        | EC          | Foliar         | 125                                                  | 2                                       | 21                                                                                                               |
| Winter and spring barley, Oats                                                       | United Kingdom | EC          | Foliar         | 125                                                  | 2                                       | Up to and including emergence of ear just complete (GS 59)                                                       |
| Winter and spring wheat, Durum wheat, Triticale, Rye, Winter and spring barley, Oats | United Kingdom | EC          | Foliar         | 125                                                  | 2                                       | Up to and including flowering (anthesis) just complete (GS 69)                                                   |
| Wheat and triticale                                                                  | USA            | SC/EC       | Foliar         | 97-100                                               | 2                                       | 21 (Wheat hay or green-chopped wheat – 7 days)                                                                   |
| Wheat and triticale                                                                  | USA            | SC          | Foliar         | 97                                                   | 2                                       | Apply no later than beginning of flowering (Feekes10.5, Zadok's 59) (Wheat hay or green-chopped wheat – 14 days) |
| Wheat and Triticale                                                                  | USA            | SC          | Seed Treatment | 50 g ai/100kg seed                                   | 1                                       | -                                                                                                                |
| Wheat                                                                                | Brazil         | SC/EC       | Foliar         | 58-60                                                | 4 (SC), 3(EC) (intervals of 15-20 days) | 30                                                                                                               |
| Grasses for sugar or syrup production                                                |                |             |                |                                                      |                                         |                                                                                                                  |
| Sugar cane                                                                           | Brazil         | SC          | Foliar         | 67                                                   | 5 (intervals of 21-30 days)             | 30                                                                                                               |
| Oilseeds                                                                             |                |             |                |                                                      |                                         |                                                                                                                  |
| Oilseed crops: (+ calendula and cotton seed for EC)                                  | USA            | SC/EC       | Foliar         | 97-101                                               | 2                                       | 21                                                                                                               |
| Canola                                                                               | Brazil         | EC          | Foliar         | 60                                                   | 2 (intervals of 15-20 days)             | 30                                                                                                               |

| Crop                          | Country | Formulation | Application    |                                                      |                                 | PHI days                                       |
|-------------------------------|---------|-------------|----------------|------------------------------------------------------|---------------------------------|------------------------------------------------|
|                               |         |             | Method         | Rate, g ai/ha or (g ai / 100kg seed) or [g ai/ 100L] | Max. no. or g ai/ ha/year       |                                                |
| Cotton                        | USA     | SC          | Seed Treatment | (20 g ai/100kg seed)                                 | 1                               | -                                              |
| Cotton                        | Brazil  | SC/EC       | Foliar         | 58<br>(EC max. 50)                                   | 4<br>(intervals of 12-15 days)  | 14                                             |
| Peanut                        | USA     | SC/EC       | Foliar         | 97                                                   | 3<br>(maximum of 2 consecutive) | 7<br>(DO NOT graze or harvest for forage use)  |
| Peanut                        | USA     | EC          | Foliar         | 97                                                   | 3<br>(maximum of 2 consecutive) | 14<br>(DO NOT graze or harvest for forage use) |
| Peanut                        | USA     | SC          | Seed Treatment | (10 g ai/100kg seed)                                 | 1                               | -                                              |
| Peanut                        | Brazil  | SC/EC       | Foliar         | 58<br>(EC max. 50)                                   | 4<br>(intervals of 14-20 days)  | 14                                             |
| Sunflower                     | USA     | SC          | Seed Treatment | (20 g ai/100kg seed)                                 | 1                               | -                                              |
| Sunflower                     | Brazil  | SC/EC       | Foliar         | 58-60                                                | 2<br>(intervals of 15-20 days)  | 30                                             |
| Seed for beverages and sweets |         |             |                |                                                      |                                 |                                                |
| Coffee                        | Brazil  | EC          | Foliar         | 75                                                   | 3                               | 45                                             |

**Edible podded legume vegetables:**

Jack bean, Pigeon pea, Soya bean (immature seed), Sword bean

*Phaseolus* spp Runner bean, Snap bean, Wax bean

*Pisum* spp Dwarf pea, Edible podded pea, Snowpea, Sugar snap pea

*Vigna* spp Asparagus bean, Chinese longbean, Moth bean, Yardlong bean

**Succulent shelled peas and beans:**

Pigeon pea

*Phaseolus* spp Lima bean (green)

*Pisum* spp English pea, Garden pea, Green pea, Broad bean

*Vigna* spp Blackeyed pea, Cowpea, Southern pea

**Dried shelled peas and beans (except soya beans):**

Broad bean, Chickpea (garbanzo bean), Guar, Lablab bean, Lentils, Pigeon pea

*Lupinus* spp Grain lupin, Sweet lupin, White lupin

*Phaseolus* spp Field bean, Kidney bean, Lima bean, navy bean, Pink bean, Pinto bean, Tepary bean

*Pisum* spp Field pea

*Vigna* spp Adzuki bean, Black eyed pea, Catjang, Cowpea, Crowder pea, Moth bean, Mung bean, Rice bean, Southern pea, Urd bean

**Oilseed crops:**

Flax seed, rapeseed (cultivars, varieties and/or hybrids, including canola and crambe), Sunflower, Borage, Castor oil plant, Chinese tallowtree, Crambe, Cuphea, Echium, Euphorbia, Evening Primrose, Gold of pleasure (carnelina), Hare's ear mustard, Jojoba, Lesquerella, Lunaria, Meadowfoam, Milkweed, Mustard seed, Niger seed, Oil radish, Poppy seed, Rose hip, Safflower, Sesame, Stoke's aster, Sweet rocket, Tallowwood, Tea oil plant, Vernonia

**Tuberous and corm vegetables subgroup:**

Potato

Arracacha, Arrowroot, Cassava (bitter and sweet), Chayote, Chinese artichoke, Chufa, Dasheen (taro), Edible canna, Ginger,

Jerusalem artichoke, Leren, Sweet potato, Tanier, True yam, Tumeric, Yam bean

## RESIDUES RESULTING FROM SUPERVISED TRIALS

The Meeting received information on supervised trials for the uses of fluxapyroxad on pome fruits (apples and pears), stone fruits (cherries, peaches and plums), fruiting vegetables other than cucurbits (tomatoes, bell and non-bell peppers and sweet corn), legume vegetables (peas and soya beans), pulses (peas, beans and soya beans), root and tuber vegetables (potatoes and sugar beets), cereals (barley, corn, oats, rice, sorghum, triticale and wheat) and oilseeds (canola, sunflower, cotton and peanuts).

Trials were well documented with laboratory and field reports. The former included method validation including recoveries with spiking at residue levels similar to those occurring in samples from the supervised trials. Dates of analyses or duration of sample storage were also provided. Trials were carried out in appropriately sized plots and sample sizes were within acceptable weights. Applications were generally made using hand-held boom or knapsack boom sprayers although occasionally tractor mounted boom sprayers were used. Samples were collected and stored frozen immediately or soon after sampling. Although trials included control plots, no control data are recorded in the Tables because, unless noted, no residues in control samples exceeded the LOQ. Residues are unadjusted for recoveries.

When residues were not detected they are generally shown as < LOD (less than the limit of detection) or below the LOQ (e.g., < 0.01 mg/kg). Residues, application rates and spray concentrations have generally been rounded to two significant figures. Residues from the trials conducted according to maximum GAP have been used for the estimation of maximum residue levels and dietary intake assessment. If a higher residue level was observed at a longer PHI than the GAP, the higher value has been used in MRL setting and dietary intake assessment.

For replicate samples (from the same plot), the mean value was used for maximum residue level estimation and dietary intake assessment with the individual results given in brackets.. For two or more analyses of the same sample, the mean value was reported. For multiple trials on a crop from the same location, results from the trial yielding the highest residue was utilised for maximum residue level estimation and dietary intake assessment. When residues were listed as < LOD, the LOQ value was utilised for maximum residue level estimation and dietary intake assessment.

For dietary intake assessment the residues are expressed as the sum of fluxapyroxad + M700F008 + M700F048 expressed as fluxapyroxad (total residues). In most cases the metabolites were tabulated as mg/kg of the specific analyte, so the M700F008 and M700F048 amounts were converted to fluxapyroxad to give the total residues by multiplying by 1.038 and 0.72 respectively. The treatment of values at < LOQ is illustrated below. When one component is above the LOQ and the others are below the LOQ, the combined residue is assumed to be equal to the main component.

| Fluxapyroxad | M700F008 | M700F048 | Total Residues (mg/kg)<br>(Sum of fluxapyroxad + M700F008 + M700F048) |
|--------------|----------|----------|-----------------------------------------------------------------------|
| 0.10         | < 0.01   | < 0.01   | 0.10                                                                  |
| < 0.01       | < 0.01   | < 0.01   | < 0.01                                                                |
| < 0.01       | 0.03     | < 0.01   | 0.03                                                                  |

Residues according to maximum GAP, of both fluxapyroxad (used for MRL estimation) and total residues (used for dietary intake assessment) have been underlined.

| Group                              | Commodity | Country/ Countries | Table |
|------------------------------------|-----------|--------------------|-------|
| FP Pome Fruits                     | Apple     | USA, Canada        | 75    |
|                                    | Pear      | USA, Canada        | 76    |
| FS Stone Fruits                    | Cherries  | USA, Canada        | 77    |
|                                    | Peach     | USA, Canada        | 78    |
|                                    | Plum      | USA, Canada        | 79    |
|                                    | Tomatoes  | USA, Canada        | 80    |
| VO Fruiting Vegetables, other than |           |                    |       |

| Group                        | Commodity                  | Country/ Countries                                          | Table |
|------------------------------|----------------------------|-------------------------------------------------------------|-------|
| Cucurbits                    | Pepper (bell and non-bell) | USA, Canada                                                 | 81    |
|                              | Sweet Corn                 | USA, Canada                                                 | 82    |
| VP Legume Vegetables         | Peas                       | USA, Canada                                                 | 83    |
|                              | Soya beans                 | USA, Canada                                                 | 84    |
| VD Pulses                    | Peas (dried seed)          | USA, Canada                                                 | 85    |
|                              | Beans (dried seed)         | USA, Canada                                                 | 86    |
|                              | Soya beans (dried seed)    | USA, Canada                                                 | 87    |
|                              | Soya beans (dried seed)    | Brazil                                                      | 88    |
| VR Root and Tuber Vegetables | Potato                     | USA, Canada                                                 | 89    |
|                              | Sugar beet (roots)         | USA, Canada                                                 | 90    |
| GC Cereal Grains             | Barley                     | USA, Canada                                                 | 91    |
|                              |                            | Brazil                                                      | 92    |
|                              |                            | Europe                                                      | 93    |
|                              |                            | Australia                                                   | 94    |
|                              |                            | USA, Canada                                                 | 95    |
|                              |                            | Brazil                                                      | 96    |
|                              |                            | Brazil                                                      | 97    |
|                              |                            | USA                                                         | 98    |
|                              |                            | USA                                                         | 99    |
|                              | Wheat                      | USA, Canada                                                 | 100   |
|                              |                            | Brazil                                                      | 101   |
|                              |                            | Europe (with triticales)                                    | 102   |
|                              |                            | Australia                                                   | 103   |
|                              |                            | USA, Canada                                                 | 104   |
|                              |                            | USA, Canada                                                 | 105   |
|                              |                            | USA                                                         | 106   |
|                              |                            | USA                                                         | 107   |
|                              |                            | USA, Canada                                                 | 109   |
| SO Oilseeds                  | Canola                     | USA, Canada                                                 | 105   |
|                              |                            | USA                                                         | 106   |
|                              |                            | USA                                                         | 107   |
|                              |                            | USA, Canada                                                 | 109   |
|                              |                            | USA, Canada                                                 | 110   |
|                              |                            | USA, Canada                                                 | 111   |
|                              |                            | Europe                                                      | 112   |
|                              |                            | without root, straw                                         |       |
|                              |                            | Australia                                                   | 113   |
|                              |                            | USA, Canada                                                 | 114   |
|                              |                            | USA                                                         | 115   |
|                              |                            | USA                                                         | 116   |
|                              |                            | USA, Canada                                                 | 117   |
|                              |                            | Europe                                                      | 118   |
|                              |                            | plant without root, ears, rest of plant without root, straw |       |
|                              |                            | Australia                                                   | 119   |
|                              |                            | USA                                                         | 120   |
|                              |                            | USA                                                         | 121   |
|                              |                            | USA, Canada                                                 | 108   |

The results of these supervised trials are shown in the following tables:

#### *Pome fruits*

Supervised trials were carried out on apples (14 trials – Table 75) and pears (10 trials – Table 76) in the USA and Canada during the 2008 growing season (Jordan 2009, 2009/7003135). Four foliar applications of a 62.5 g/L EC formulation of fluxapyroxad were made at 91–111 g ai/ha. Applications were made to plots using either concentrate (456–893 L/ha) or dilute (1113–2214 L/ha) spray volumes with ground equipment (airblast sprayer). An adjuvant was added to the spray mixture for all applications. Pome fruit RAC samples (fruit, one sample per plot) were harvested at 0, 1, 7 and 12-14

days after the last application (also 10 DALA at three sites). Residues were quantitated using LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Table 75 Residues from the foliar application of fluxapyroxad to apples in the USA and Canada (Jordan 2009, 2009/7003135)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                  | Application |                  |                                        |                              | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |             |
|-----------------------------------------------------------------------------------------|-------------|------------------|----------------------------------------|------------------------------|--------|-------------|------------------|----------|----------|----------|-------------|
|                                                                                         | No          | Interval<br>Days | g<br>ai/ha                             | Water<br>(L/ha)              |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total<br>*  |
| GAP, USA                                                                                | 4           |                  | 97-<br>101                             |                              |        | 0           |                  |          |          |          |             |
| 2009/7003135<br>RCN R080153<br>USA<br>(Wayne, New<br>York)<br>2008<br>(Twenty Ounce)    | 4           | 8<br>7<br>7      | 100<br>100<br>99<br><u>100</u><br>399  | 753<br>749<br>747<br>749     | Fruit  | 0           | 0.16             | < LOD    | < LOD    | < LOD    | 0.16        |
|                                                                                         |             |                  |                                        |                              |        | 1           | 0.16             | < LOD    | < LOD    | < LOD    | 0.16        |
|                                                                                         |             |                  |                                        |                              |        | 7           | 0.11             | < LOD    | < LOD    | < 0.01   | 0.11        |
|                                                                                         |             |                  |                                        |                              |        | 14          | 0.08             | < LOD    | < LOD    | < LOD    | 0.08        |
|                                                                                         | 4           | 8<br>7<br>7      | 100<br>101<br>100<br><u>100</u><br>401 | 1125<br>1127<br>1122<br>1119 | Fruit  | 0           | 0.15             | < LOD    | < LOD    | < 0.01   | 0.15        |
|                                                                                         |             |                  |                                        |                              |        | 1           | 0.14             | < LOD    | < LOD    | < 0.01   | 0.14        |
|                                                                                         |             |                  |                                        |                              |        | 7           | 0.12             | < LOD    | < LOD    | < LOD    | 0.12        |
|                                                                                         |             |                  |                                        |                              |        | 14          | 0.10             | < LOD    | < LOD    | < LOD    | 0.10        |
|                                                                                         | 4           | 7<br>7<br>7      | 101<br>100<br>100<br><u>99</u><br>400  | 758<br>748<br>751<br>744     | Fruit  | 0           | <u>0.28</u>      | < LOD    | 0.08     | < LOD    | <u>0.36</u> |
|                                                                                         |             |                  |                                        |                              |        | 1           | 0.13             | < LOD    | < LOD    | < LOD    | 0.13        |
|                                                                                         |             |                  |                                        |                              |        | 7           | 0.14             | < LOD    | < LOD    | < 0.01   | 0.14        |
|                                                                                         |             |                  |                                        |                              |        | 14          | 0.09             | < LOD    | < LOD    | < 0.01   | 0.09        |
|                                                                                         | 4           | 7<br>7<br>7      | 101<br>100<br>100<br><u>100</u><br>401 | 1129<br>1123<br>1118<br>1125 | Fruit  | 0           | 0.18             | < LOD    | < LOD    | < 0.01   | 0.18        |
|                                                                                         |             |                  |                                        |                              |        | 1           | 0.15             | < LOD    | < LOD    | < LOD    | 0.15        |
|                                                                                         |             |                  |                                        |                              |        | 7           | 0.12             | < LOD    | < LOD    | < LOD    | 0.12        |
|                                                                                         |             |                  |                                        |                              |        | 14          | 0.10             | < LOD    | < LOD    | < 0.01   | 0.10        |
| 2009/7003135<br>RCN R080155<br>USA<br>(Wayne, New<br>York)<br>2008<br>(Ida Red Apple)   | 4           | 7<br>7<br>7      | 99<br>100<br>99<br><u>99</u><br>397    | 601<br>612<br>606<br>604     | Fruit  | 0           | 0.08             | < LOD    | < LOD    | < LOD    | 0.08        |
|                                                                                         |             |                  |                                        |                              |        | 1           | 0.06             | < LOD    | < LOD    | < LOD    | 0.06        |
|                                                                                         |             |                  |                                        |                              |        | 7           | 0.06             | < LOD    | < LOD    | < LOD    | 0.06        |
|                                                                                         |             |                  |                                        |                              |        | 10          | 0.05             | < LOD    | < LOD    | < LOD    | 0.05        |
|                                                                                         |             |                  |                                        |                              |        | 14          | 0.05             | < LOD    | < LOD    | < LOD    | 0.05        |
|                                                                                         | 4           | 7<br>7<br>7      | 101<br>101<br>100<br><u>101</u><br>403 | 2124<br>2124<br>2095<br>2119 | Fruit  | 0           | 0.08             | < LOD    | < LOD    | < LOD    | 0.08        |
|                                                                                         |             |                  |                                        |                              |        | 1           | 0.07             | < LOD    | < LOD    | < LOD    | 0.07        |
|                                                                                         |             |                  |                                        |                              |        | 7           | 0.06             | < LOD    | < LOD    | < LOD    | 0.06        |
|                                                                                         |             |                  |                                        |                              |        | 10          | 0.06             | < LOD    | < LOD    | < LOD    | 0.06        |
|                                                                                         |             |                  |                                        |                              |        | 14          | 0.05             | < LOD    | < LOD    | < LOD    | 0.05        |
| 2009/7003135<br>RCN R080157<br>USA<br>(Lenawee,<br>Michigan)<br>2008<br>(Red Delicious) | 4           | 7<br>7<br>7      | 98<br>101<br>102<br><u>100</u><br>401  | 791<br>826<br>814<br>796     | Fruit  | 0           | 0.18             | < LOD    | < LOD    | < LOD    | 0.18        |
|                                                                                         |             |                  |                                        |                              |        | 1           | <u>0.24</u>      | < LOD    | < LOD    | < LOD    | <u>0.24</u> |
|                                                                                         |             |                  |                                        |                              |        | 7           | 0.23             | < LOD    | < LOD    | < LOD    | 0.23        |
|                                                                                         |             |                  |                                        |                              |        | 14          | 0.15             | < LOD    | < LOD    | < LOD    | 0.15        |
|                                                                                         | 4           | 7<br>7<br>7      | 100<br>101<br>103<br><u>101</u><br>405 | 1702<br>1771<br>1762<br>1727 | Fruit  | 0           | 0.15             | < LOD    | < LOD    | < 0.01   | 0.15        |
|                                                                                         |             |                  |                                        |                              |        | 1           | 0.12             | < LOD    | < LOD    | ND       | 0.12        |
|                                                                                         |             |                  |                                        |                              |        | 7           | 0.12             | < LOD    | < LOD    | < 0.01   | 0.12        |
|                                                                                         |             |                  |                                        |                              |        | 14          | 0.10             | < LOD    | < LOD    | < LOD    | 0.10        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                       | Application |                  |                   |                 | Matrix | PHI<br>days | Residues (mg/kg)     |                            |                              |                            |             |
|----------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|-------------|----------------------|----------------------------|------------------------------|----------------------------|-------------|
|                                                                                              | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |             | Fluxapyroxad         | M700F002                   | M700F008                     | M700F048                   | Total<br>*  |
| 2009/7003135<br>RCN R080158<br>USA<br>(Marion,<br>Illinois)<br>2008<br>(Rome)                | 4           | 7                | 98                | 466             | Fruit  | 0           | <u>0.21</u>          | < LOD                      | < LOD                        | < LOD                      | <u>0.21</u> |
|                                                                                              |             | 7                | 102               | 533             |        | 1           | 0.20                 | < LOD                      | < LOD                        | < LOD                      | 0.20        |
|                                                                                              |             | 7                | 102               | 492             |        | 7           | 0.15                 | < LOD                      | < LOD                        | < LOD                      | 0.15        |
|                                                                                              |             |                  | <u>100</u><br>402 | 607             |        | 14          | 0.07                 | < LOD                      | < LOD                        | < LOD                      | 0.07        |
|                                                                                              | 4           | 7                | 100               | 1737            | Fruit  | 0           | 0.19                 | < LOD                      | 0.01                         | 0.01                       | 0.21        |
|                                                                                              |             | 7                | 107               | 1941            |        | 1           | 0.21                 | < LOD                      | < LOD                        | < LOD                      | 0.21        |
|                                                                                              |             | 7                | 101               | 1810            |        | 7           | 0.13                 | < LOD                      | < LOD                        | < LOD                      | 0.13        |
|                                                                                              |             |                  | <u>98</u><br>406  | 2214            |        | 14          | 0.06                 | < LOD                      | < LOD                        | < LOD                      | 0.06        |
|                                                                                              | 4           | 7                | 99                | 587             | Fruit  | 0           | <u>0.15</u>          | < LOD                      | < 0.01                       | < LOD                      | <u>0.15</u> |
|                                                                                              |             | 7                | 103               | 611             |        | 1           | 0.08                 | < LOD                      | < LOD                        | < LOD                      | 0.08        |
|                                                                                              |             | 6                | 98                | 582             |        | 7           | 0.06                 | < LOD                      | < LOD                        | < LOD                      | 0.06        |
|                                                                                              |             |                  | <u>98</u><br>398  | 582             |        | 14          | 0.08                 | < LOD                      | < LOD                        | < LOD                      | 0.08        |
| 2009/7003135<br>RCN R080159<br>Canada<br>(Simcoe,<br>Ontario)<br>2008<br>(MacIntosh)         | 4           | 7                | 98                | 1172            | Fruit  | 0           | 0.08                 | < LOD                      | < LOD                        | < LOD                      | 0.08        |
|                                                                                              |             | 7                | 102               | 1225            |        | 1           | 0.09                 | < LOD                      | < LOD                        | < LOD                      | 0.09        |
|                                                                                              |             | 6                | 98                | 1179            |        | 7           | 0.07                 | < LOD                      | < LOD                        | < LOD                      | 0.07        |
|                                                                                              |             |                  | <u>98</u><br>396  | 1177            |        | 14          | 0.07                 | < LOD                      | < LOD                        | < LOD                      | 0.07        |
|                                                                                              | 4           | 7                | 99                | 593             | Fruit  | 0           | 0.12                 | < LOD                      | < LOD                        | < LOD                      | 0.12        |
|                                                                                              |             | 7                | 97                | 583             |        | 1           | 0.14                 | < LOD                      | < LOD                        | < LOD                      | 0.14        |
|                                                                                              |             | 7                | 101               | 608             |        | 7           | 0.10                 | < LOD                      | < LOD                        | < LOD                      | 0.10        |
|                                                                                              |             |                  | <u>99</u><br>396  | 595             |        | 12          | 0.09                 | < LOD                      | < LOD                        | < LOD                      | 0.09        |
|                                                                                              | 4           | 7                | 100               | 1195            | Fruit  | 0           | <u>0.14</u>          | < LOD                      | < LOD                        | < LOD                      | <u>0.14</u> |
|                                                                                              |             | 7                | 97                | 1161            |        | 1           | 0.14                 | < LOD                      | < 0.01                       | < LOD                      | 0.14        |
|                                                                                              |             | 7                | 99                | 1193            |        | 7           | 0.11                 | < LOD                      | < 0.01                       | < LOD                      | 0.11        |
|                                                                                              |             |                  | <u>102</u><br>398 | 1219            |        | 12          | 0.08                 | < LOD                      | < LOD                        | < LOD                      | 0.08        |
| 2009/7003135<br>RCN R080161<br>USA<br>(Ottawa,<br>Michigan)<br>2008<br>(Golden<br>Delicious) | 4           | 7                | 100               | 735             | Fruit  | 0           | 0.27                 | < LOD                      | < LOD                        | < LOD                      | 0.27        |
|                                                                                              |             | 8                | 99                | 700             |        | 1           | <u>0.36</u>          | < LOD                      | < LOD                        | < LOD                      | <u>0.36</u> |
|                                                                                              |             | 6                | 100               | 727             |        | 7           | 0.10                 | < LOD                      | < LOD                        | < LOD                      | 0.10        |
|                                                                                              |             |                  | <u>99</u><br>398  | 723             |        | 14          | 0.15                 | < LOD                      | < 0.01                       | < LOD                      | 0.15        |
|                                                                                              | 4           | 7                | 100               | 1802            | Fruit  | 0           | 0.21                 | < LOD                      | < LOD                        | < LOD                      | 0.21        |
|                                                                                              |             | 8                | 100               | 1733            |        | 1           | 0.13                 | < LOD                      | < LOD                        | < LOD                      | 0.13        |
|                                                                                              |             | 6                | 100               | 1775            |        | 7           | 0.10                 | < LOD                      | < LOD                        | < LOD                      | 0.10        |
|                                                                                              |             |                  | <u>101</u><br>401 | 1793            |        | 14          | 0.15                 | < LOD                      | < LOD                        | < LOD                      | 0.15        |
| 2009/7003135<br>RCN R080162<br>USA<br>(Cache, Utah)<br>2008 (Red<br>Delicious)               | 4           | 7                | 101               | 471             | Fruit  | 0           | <u>0.31</u>          | < LOD                      | < LOD                        | < LOD                      | <u>0.31</u> |
|                                                                                              |             | 7                | 98                | 460             |        | 1           | (0.23, 0.25)<br>0.24 | (< LOD,<br>< LOD)<br>< LOD | (< LOD,<br>< 0.01)<br>< 0.01 | (< LOD,<br>< LOD)<br>< LOD | 0.24        |
|                                                                                              |             | 7                | 97                | 456             |        | 7           | 0.08                 | < LOD                      | < 0.01                       | < LOD                      | 0.08        |
|                                                                                              |             |                  | <u>103</u><br>399 | 483             |        | 14          | 0.03                 | < LOD                      | < LOD                        | < LOD                      | 0.03        |
|                                                                                              | 4           | 7                | 97                | 1812            | Fruit  | 0           | 0.22                 | < LOD                      | < LOD                        | < LOD                      | 0.22        |
|                                                                                              |             | 7                | 99                | 1853            |        | 1           | 0.15                 | < LOD                      | < LOD                        | < LOD                      | 0.15        |
|                                                                                              |             | 7                | 103               | 1924            |        | 7           | 0.05                 | < LOD                      | < LOD                        | < LOD                      | 0.05        |
|                                                                                              |             |                  | <u>102</u><br>401 | 1907            |        | 14          | 0.04                 | < LOD                      | < LOD                        | < LOD                      | 0.04        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                  | Application |                  |                                       |                              | Matrix | PHI<br>days | Residues (mg/kg)            |                              |                            |                            |             |
|-----------------------------------------------------------------------------------------|-------------|------------------|---------------------------------------|------------------------------|--------|-------------|-----------------------------|------------------------------|----------------------------|----------------------------|-------------|
|                                                                                         | No          | Interval<br>Days | g<br>ai/ha                            | Water<br>(L/ha)              |        |             | Fluxapyroxad                | M700F002                     | M700F008                   | M700F048                   | Total<br>*  |
| 2009/7003135<br>RCN R080163<br>USA<br>(Fresno,<br>California)<br>2008<br>(Fuji)         | 4           | 7<br>7<br>6      | 100<br>102<br>101<br><u>99</u><br>402 | 787<br>832<br>819<br>818     | Fruit  | 0           | (0.18, 0.17)<br>0.18        | (< LOD,<br>< 0.01)<br>< 0.01 | (< LOD,<br>< LOD)<br>< LOD | (< LOD,<br>< LOD)<br>< LOD | 0.18        |
|                                                                                         |             |                  |                                       |                              |        | 1           | (0.08, 0.09)<br>0.09        | (< LOD,<br>< LOD)<br>< LOD   | (< LOD,<br>< LOD)<br>< LOD | (< LOD,<br>< LOD)<br>< LOD | 0.09        |
|                                                                                         |             |                  |                                       |                              |        | 7           | (0.20, 0.23)<br>0.22        | (< LOD,<br>< LOD)<br>< LOD   | (< LOD,<br>< LOD)<br>< LOD | (< LOD,<br>< LOD)<br>< LOD | 0.22        |
|                                                                                         |             |                  |                                       |                              |        | 14          | (0.22, 0.13)<br>0.18        | (< LOD,<br>< LOD)<br>< LOD   | (< LOD,<br>< LOD)<br>< LOD | (< LOD,<br>< LOD)<br>< LOD | 0.18        |
|                                                                                         | 4           | 7<br>7<br>6      | 100<br>99<br>101<br><u>98</u><br>398  | 1705<br>1644<br>1678<br>1641 | Fruit  | 0           | (0.11, 0.11)<br>0.11        | (< LOD,<br>< LOD)<br>< LOD   | (< LOD,<br>< LOD)<br>< LOD | (< LOD,<br>< LOD)<br>< LOD | 0.11        |
|                                                                                         |             |                  |                                       |                              |        | 1           | (0.08, 0.09)<br>0.09        | (< LOD,<br>< LOD)<br>< LOD   | (< LOD,<br>< LOD)<br>< LOD | (< LOD,<br>< LOD)<br>< LOD | 0.09        |
|                                                                                         |             |                  |                                       |                              |        | 7           | (0.26, 0.25)<br><u>0.26</u> | (< 0.01,<br>< LOD)<br>< 0.01 | (< LOD,<br>< LOD)<br>< LOD | (< LOD,<br>< LOD)<br>< LOD | <u>0.26</u> |
|                                                                                         |             |                  |                                       |                              |        | 14          | (0.20, 0.17)<br>0.19        | (< LOD,<br>< 0.01)<br>< 0.01 | (< LOD,<br>< LOD)<br>< LOD | (< LOD,<br>< LOD)<br>< LOD | 0.19        |
| 2009/7003135<br>RCN R080164<br>USA<br>(Power, Idaho)<br>2008<br>(McIntosh)              | 4           | 7<br>7<br>7      | 98<br>102<br>101<br><u>103</u><br>404 | 457<br>477<br>473<br>483     | Fruit  | 0           | 0.19                        | < LOD                        | < LOD                      | < 0.01                     | 0.19        |
|                                                                                         |             |                  |                                       |                              |        | 1           | 0.21                        | < LOD                        | < LOD                      | < LOD                      | 0.21        |
|                                                                                         |             |                  |                                       |                              |        | 7           | 0.16                        | < LOD                        | < LOD                      | < LOD                      | 0.16        |
|                                                                                         |             |                  |                                       |                              |        | 14          | 0.09                        | < LOD                        | < LOD                      | < LOD                      | 0.09        |
|                                                                                         | 4           | 7<br>7<br>7      | 103<br>102<br>97<br><u>98</u><br>400  | 1918<br>1920<br>1814<br>1833 | Fruit  | 0           | 0.24                        | < LOD                        | < LOD                      | < LOD                      | 0.24        |
|                                                                                         |             |                  |                                       |                              |        | 1           | <u>0.25</u>                 | < LOD                        | < LOD                      | < 0.01                     | <u>0.25</u> |
|                                                                                         |             |                  |                                       |                              |        | 7           | 0.18                        | < LOD                        | < LOD                      | < LOD                      | 0.18        |
|                                                                                         |             |                  |                                       |                              |        | 14          | 0.14                        | < LOD                        | < LOD                      | < 0.01                     | 0.14        |
| 2009/7003135<br>RCN R080165<br>USA<br>(Grant,<br>Washington)<br>2008<br>(Red Delicious) | 4           | 7<br>7<br>7      | 99<br>100<br>91<br><u>100</u><br>390  | 835<br>843<br>767<br>845     | Fruit  | 0           | 0.3                         | < LOD                        | < LOD                      | < LOD                      | 0.3         |
|                                                                                         |             |                  |                                       |                              |        | 1           | (0.26, 0.32)<br>0.29        | < LOD                        | < LOD                      | < LOD                      | 0.29        |
|                                                                                         |             |                  |                                       |                              |        | 7           | 0.27                        | < LOD                        | < LOD                      | < LOD                      | 0.27        |
|                                                                                         |             |                  |                                       |                              |        | 14          | 0.19                        | < LOD                        | < LOD                      | < LOD                      | 0.19        |
|                                                                                         | 4           | 7<br>7<br>7      | 99<br>99<br>99<br><u>99</u><br>396    | 1864<br>1881<br>1877<br>1873 | Fruit  | 0           | 0.23                        | < LOD                        | < LOD                      | < LOD                      | 0.23        |
|                                                                                         |             |                  |                                       |                              |        | 1           | 0.26                        | < LOD                        | < LOD                      | < LOD                      | 0.26        |
|                                                                                         |             |                  |                                       |                              |        | 7           | 0.23                        | < LOD                        | < LOD                      | < LOD                      | 0.23        |
|                                                                                         |             |                  |                                       |                              |        | 14          | 0.19                        | < LOD                        | < LOD                      | < LOD                      | 0.19        |
| 2009/7003135<br>RCN R080166<br>USA<br>(Grant,<br>Washington)<br>2008<br>(Red Delicious) | 4           | 7<br>7<br>7      | 99<br>102<br>100<br><u>100</u><br>401 | 837<br>854<br>837<br>837     | Fruit  | 0           | 0.32                        | < LOD                        | < LOD                      | < LOD                      | 0.32        |
|                                                                                         |             |                  |                                       |                              |        | 1           | <u>0.35</u>                 | < LOD                        | < LOD                      | < LOD                      | <u>0.35</u> |
|                                                                                         |             |                  |                                       |                              |        | 7           | 0.29                        | < LOD                        | < LOD                      | < LOD                      | 0.29        |
|                                                                                         |             |                  |                                       |                              |        | 14          | 0.18                        | < LOD                        | < LOD                      | < LOD                      | 0.18        |
|                                                                                         | 4           | 7<br>7<br>7      | 99<br>99<br>99<br><u>99</u><br>396    | 1867<br>1867<br>1872<br>1872 | Fruit  | 0           | 0.21                        | < LOD                        | < LOD                      | < LOD                      | 0.21        |
|                                                                                         |             |                  |                                       |                              |        | 1           | 0.22                        | < LOD                        | < LOD                      | < LOD                      | 0.22        |
|                                                                                         |             |                  |                                       |                              |        | 7           | 0.16                        | < LOD                        | < LOD                      | < LOD                      | 0.16        |
|                                                                                         |             |                  |                                       |                              |        | 14          | 0.19                        | < LOD                        | < LOD                      | < LOD                      | 0.19        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                             | Application |                  |                                 |                              | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |             |
|------------------------------------------------------------------------------------|-------------|------------------|---------------------------------|------------------------------|--------|-------------|------------------|----------|----------|----------|-------------|
|                                                                                    | No          | Interval<br>Days | g<br>ai/ha                      | Water<br>(L/ha)              |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total<br>*  |
| 2009/7003135<br>RCN R080167<br>USA<br>(Washington,<br>Idaho)<br>2008<br>(Law Rome) | 4           | 6<br>7<br>7      | 102<br>104<br>101<br>101<br>408 | 567<br>581<br>564<br>561     | Fruit  | 0           | <u>0.37</u>      | < LOD    | < LOD    | < LOD    | <u>0.37</u> |
|                                                                                    |             |                  |                                 |                              |        | 1           | 0.31             | < LOD    | < LOD    | < LOD    | 0.31        |
|                                                                                    |             |                  |                                 |                              |        | 7           | 0.25             | < LOD    | < LOD    | < LOD    | 0.25        |
|                                                                                    |             |                  |                                 |                              |        | 10          | 0.27             | < LOD    | < LOD    | < LOD    | 0.27        |
|                                                                                    |             |                  |                                 |                              |        | 14          | 0.24             | < LOD    | < LOD    | < LOD    | 0.24        |
|                                                                                    | 4           | 6<br>7<br>7      | 100<br>101<br>100<br>99<br>400  | 1141<br>1152<br>1133<br>1127 | Fruit  | 0           | 0.27             | < LOD    | < LOD    | < LOD    | 0.27        |
|                                                                                    |             |                  |                                 |                              |        | 1           | 0.24             | < LOD    | < LOD    | < LOD    | 0.24        |
|                                                                                    |             |                  |                                 |                              |        | 7           | 0.19             | < LOD    | < LOD    | < LOD    | 0.19        |
|                                                                                    |             |                  |                                 |                              |        | 10          | 0.30             | < LOD    | < LOD    | < LOD    | 0.30        |
|                                                                                    |             |                  |                                 |                              |        | 14          | 0.19             | < LOD    | < LOD    | < LOD    | 0.19        |

\*All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 76 Residues from the foliar application of fluxapyroxad to pears in the USA and Canada (Jordan 2009, 2009/7003135)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                           | Application |                  |                                 |                              | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |             |
|----------------------------------------------------------------------------------|-------------|------------------|---------------------------------|------------------------------|--------|-------------|------------------|----------|----------|----------|-------------|
|                                                                                  | No          | Interval<br>Days | g<br>ai/ha                      | Water<br>(L/ha)              |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total<br>*  |
| GAP, USA                                                                         | 4           |                  | 97-<br>101                      |                              |        | 0           |                  |          |          |          |             |
| 2009/7003135<br>RCN R080168<br>USA<br>(Wayne, New<br>York)<br>2008<br>(Bartlett) | 4           | 9<br>6<br>8      | 99<br>100<br>99<br>100<br>398   | 557<br>561<br>560<br>561     | Fruit  | 0           | 0.21             | < LOD    | < 0.01   | < LOD    | 0.21        |
|                                                                                  |             |                  |                                 |                              |        | 1           | 0.17             | < LOD    | < 0.01   | < LOD    | 0.17        |
|                                                                                  |             |                  |                                 |                              |        | 7           | 0.15             | < LOD    | 0.01     | < LOD    | 0.16        |
|                                                                                  |             |                  |                                 |                              |        | 14          | 0.10             | < LOD    | < 0.01   | < LOD    | 0.10        |
|                                                                                  | 4           | 8<br>6<br>8      | 99<br>100<br>100<br>100<br>399  | 1113<br>1121<br>1125<br>1124 | Fruit  | 0           | 0.18             | < LOD    | < 0.01   | < LOD    | 0.18        |
|                                                                                  |             |                  |                                 |                              |        | 1           | 0.16             | < LOD    | < 0.01   | < LOD    | 0.16        |
|                                                                                  |             |                  |                                 |                              |        | 7           | 0.11             | < LOD    | < 0.01   | < LOD    | 0.11        |
|                                                                                  |             |                  |                                 |                              |        | 14          | 0.09             | < LOD    | < 0.01   | < LOD    | 0.09        |
| 2009/7003135<br>RCN R080169<br>USA<br>(Wayne, New<br>York)<br>2008<br>(Bosc)     | 4           | 7<br>7<br>7      | 102<br>102<br>101<br>101<br>406 | 621<br>619<br>616<br>616     | Fruit  | 0           | 0.26             | < LOD    | < 0.01   | < LOD    | 0.26        |
|                                                                                  |             |                  |                                 |                              |        | 1           | 0.24             | < LOD    | < 0.01   | < 0.01   | 0.24        |
|                                                                                  |             |                  |                                 |                              |        | 7           | 0.27             | < LOD    | < 0.01   | < LOD    | 0.27        |
|                                                                                  |             |                  |                                 |                              |        | 14          | 0.19             | < LOD    | < 0.01   | < LOD    | 0.19        |
|                                                                                  | 4           | 7<br>7<br>7      | 101<br>101<br>101<br>103<br>406 | 2130<br>2115<br>2113<br>2164 | Fruit  | 0           | <u>0.34</u>      | < LOD    | < 0.01   | < LOD    | <u>0.34</u> |
|                                                                                  |             |                  |                                 |                              |        | 1           | 0.34             | < LOD    | < 0.01   | < LOD    | 0.34        |
|                                                                                  |             |                  |                                 |                              |        | 7           | 0.31             | < LOD    | < 0.01   | < LOD    | 0.31        |
|                                                                                  |             |                  |                                 |                              |        | 14          | 0.19             | < LOD    | < 0.01   | < LOD    | 0.19        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                | Application |                  |                   |                 | Matrix | PHI<br>days | Residues (mg/kg) |                   |                     |                   |             |
|---------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|-------------|------------------|-------------------|---------------------|-------------------|-------------|
|                                                                                       | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002          | M700F008            | M700F048          | Total<br>*  |
| 2009/7003135<br>RCN R080170<br>USA<br>(Allegan,<br>Michigan)<br>2008<br>(Bartlett)    | 4           | 7                | 103               | 686             | Fruit  | 0           | 0.18             | < LOD             | < 0.01              | < LOD             | 0.18        |
|                                                                                       |             | 7                | 101               | 694             |        | 1           | 0.17             | < LOD             | < 0.01              | < LOD             | 0.17        |
|                                                                                       |             | 7                | 101               | 693             |        | 7           | 0.19             | < LOD             | < 0.01              | < LOD             | 0.19        |
|                                                                                       |             |                  | <u>101</u><br>406 | 694             |        | 14          | 0.11             | < LOD             | 0.01                | < LOD             | 0.12        |
|                                                                                       | 4           | 7                | 102               | 1478            | Fruit  | 0           | 0.21             | < LOD             | < 0.01              | < LOD             | 0.21        |
|                                                                                       |             | 7                | 100               | 1498            |        | 1           | <u>0.29</u>      | < LOD             | 0.01                | < LOD             | <u>0.30</u> |
|                                                                                       |             | 7                | 101               | 1499            |        | 7           | 0.14             | < LOD             | < 0.01              | < LOD             | 0.14        |
|                                                                                       |             |                  | <u>100</u><br>403 | 1494            |        | 14          | 0.06             | < LOD             | < 0.01              | < LOD             | 0.06        |
|                                                                                       | 4           | 7                | 96                | 576             | Fruit  | 0           | 0.13             | < LOD             | < 0.01              | < LOD             | 0.13        |
|                                                                                       |             | 7                | 99                | 595             |        | 1           | 0.16             | < LOD             | < 0.01              | < LOD             | 0.16        |
|                                                                                       |             | 6                | 97                | 579             |        | 7           | 0.05             | < LOD             | < 0.01              | < LOD             | 0.05        |
|                                                                                       |             |                  | <u>96</u><br>388  | 578             |        | 14          | 0.04             | < LOD             | < 0.01              | < LOD             | 0.04        |
| 2009/7003135<br>RCN R080171<br>USA<br>(Simcoe,<br>Ontario)<br>2008<br>(Bartlett)      | 4           | 7                | 99                | 1175            | Fruit  | 0           | 0.17             | < LOD             | < 0.01              | < LOD             | 0.17        |
|                                                                                       |             | 7                | 101               | 1192            |        | 1           | <u>0.18</u>      | < LOD             | < 0.01              | < LOD             | <u>0.18</u> |
|                                                                                       |             | 6                | 98                | 1161            |        | 7           | 0.12             | < LOD             | < 0.01              | < LOD             | 0.12        |
|                                                                                       |             |                  | <u>99</u><br>397  | 1176            |        | 14          | 0.05             | < LOD             | < 0.01              | < LOD             | 0.05        |
|                                                                                       | 4           | 7                | 99                | 720             | Fruit  | 0           | <u>0.38</u>      | < LOD             | < 0.01              | < LOD             | <u>0.38</u> |
|                                                                                       |             | 7                | 101               | 722             |        | 1           | 0.29             | < LOD             | 0.01                | < LOD             | 0.30        |
|                                                                                       |             | 7                | 100               | 722             |        | 7           | 0.21             | < LOD             | < 0.01              | < LOD             | 0.21        |
|                                                                                       |             |                  | <u>101</u><br>401 | 732             |        | 14          | 0.18             | < LOD             | 0.01                | < LOD             | 0.19        |
|                                                                                       | 4           | 7                | 100               | 1759            | Fruit  | 0           | 0.29             | < LOD             | < 0.01              | < LOD             | 0.29        |
|                                                                                       |             | 7                | 100               | 1741            |        | 1           | 0.20             | < LOD             | < 0.01              | < LOD             | 0.20        |
|                                                                                       |             | 7                | 100               | 1752            |        | 7           | 0.19             | < LOD             | < 0.01              | < LOD             | 0.19        |
|                                                                                       |             |                  | <u>99</u><br>399  | 1764            |        | 14          | 0.17             | < LOD             | 0.01                | < LOD             | 0.18        |
| 2009/7003135<br>RCN R080173<br>Canada<br>(Tulare,<br>California)<br>2008<br>(Olympic) | 4           | 7                | 100               | 861             | Fruit  | 0           | (0.13, 0.11)     | (< LOD,<br>< LOD) | (< 0.01,<br>< LOD)  | (< LOD,<br>< LOD) | 0.12        |
|                                                                                       |             | 7                | 100               | 862             |        |             | 0.12             | < LOD             | < 0.01              | < LOD             |             |
|                                                                                       |             | 7                | 99                | 854             |        | 1           | (0.08, 0.08)     | (< LOD,<br>< LOD) | (< LOD,<br>< LOD)   | (< LOD,<br>< LOD) | 0.08        |
|                                                                                       |             |                  | <u>100</u><br>399 | 893             |        |             | 0.08             | < LOD             | < 0.01              | < LOD             |             |
|                                                                                       | 4           | 7                | 100               | 861             | Fruit  | 7           | (0.05, 0.07)     | (< LOD,<br>< LOD) | (< LOD,<br>< LOD)   | (< LOD,<br>< LOD) | 0.06        |
|                                                                                       |             |                  |                   |                 |        |             | 0.06             | < LOD             | < 0.01              | < LOD             |             |
|                                                                                       |             | 7                | 100               | 862             |        | 14          | (0.05, 0.04)     | (< LOD,<br>< LOD) | (< LOD,<br>< 0.01)  | (< LOD,<br>< LOD) | 0.05        |
|                                                                                       |             |                  |                   |                 |        |             | 0.05             | < LOD             | < 0.01              | < LOD             |             |
|                                                                                       | 4           | 7                | 99                | 1885            | Fruit  | 0           | (0.19, 0.21)     | (< LOD,<br>< LOD) | (< 0.01,<br>< 0.01) | (< LOD,<br>< LOD) | <u>0.20</u> |
|                                                                                       |             | 7                | 100               | 1921            |        |             | <u>0.20</u>      | < LOD             | < 0.01              | < LOD             |             |
|                                                                                       |             | 7                | 98                | 1850            |        | 1           | (0.15, 0.14)     | (< LOD,<br>< LOD) | (< LOD,<br>< LOD)   | (< LOD,<br>< LOD) | 0.15        |
|                                                                                       |             |                  | <u>101</u><br>398 | 1862            |        |             | 0.15             | < LOD             | < 0.01              | < LOD             |             |
|                                                                                       | 4           | 7                | 99                | 1885            | Fruit  | 7           | (0.15, 0.12)     | (< LOD,<br>< LOD) | (< LOD,<br>< LOD)   | (< LOD,<br>< LOD) | 0.14        |
|                                                                                       |             |                  |                   |                 |        |             | 0.12             | < LOD             | < 0.01              | < LOD             |             |
|                                                                                       | 4           | 7                | 99                | 1885            | Fruit  | 14          | (0.11, 0.09)     | (< LOD,<br>< LOD) | (< LOD,<br>< LOD)   | (< LOD,<br>< LOD) | 0.10        |
|                                                                                       |             |                  |                   |                 |        |             | 0.10             | < LOD             | < 0.01              | < LOD             |             |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                              | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |             |
|-----------------------------------------------------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|------------------|----------|----------|----------|-------------|
|                                                                                                     | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total<br>*  |
| 2009/7003135<br>RCN R080174<br>Canada<br>(Madera,<br>California)<br>2008<br>(Asian pear -<br>Hogui) | 4           | 7                | 101        | 703             | Fruit  | 0           | <u>0.23</u>      | < LOD    | < 0.01   | < LOD    | <u>0.23</u> |
|                                                                                                     |             | 7                | 101        | 702             |        | 1           | 0.14             | < LOD    | < LOD    | < LOD    | 0.14        |
|                                                                                                     |             | 7                | 101        | 702             |        | 7           | 0.11             | < LOD    | < 0.01   | < LOD    | 0.11        |
|                                                                                                     |             |                  | <u>101</u> | 708             |        | 10          | 0.12             | < LOD    | < 0.01   | < LOD    | 0.12        |
|                                                                                                     |             |                  | 404        |                 |        | 14          | 0.10             | < LOD    | < 0.01   | < LOD    | 0.10        |
|                                                                                                     | 4           | 7                | 100        | 1877            | Fruit  | 0           | 0.22             | < LOD    | < LOD    | < LOD    | 0.22        |
|                                                                                                     |             | 7                | 100        | 1880            |        | 1           | 0.19             | < LOD    | < LOD    | < LOD    | 0.19        |
|                                                                                                     |             | 7                | 99         | 1856            |        | 7           | 0.04             | < LOD    | < LOD    | < LOD    | 0.04        |
|                                                                                                     |             |                  | <u>100</u> | 1873            |        | 10          | 0.14             | < LOD    | < 0.01   | < LOD    | 0.14        |
|                                                                                                     |             |                  | 399        |                 |        | 14          | 0.06             | < LOD    | < 0.01   | < LOD    | 0.06        |
| 2009/7003135<br>RCN R080175<br>USA<br>(Grant,<br>Washington)<br>2008<br>(Concord)                   | 4           | 7                | 99         | 834             | Fruit  | 0           | <u>0.47</u>      | < LOD    | < LOD    | < LOD    | <u>0.47</u> |
|                                                                                                     |             | 7                | 99         | 838             |        | 1           | 0.36             | < LOD    | < LOD    | < LOD    | 0.36        |
|                                                                                                     |             | 7                | 100        | 842             |        | 7           | 0.41             | < LOD    | < 0.01   | < LOD    | 0.41        |
|                                                                                                     |             |                  | <u>100</u> | 840             |        | 14          | 0.31             | < LOD    | < 0.01   | < LOD    | 0.31        |
|                                                                                                     | 4           | 7                | 99         | 1868            | Fruit  | 0           | 0.4              | < LOD    | < LOD    | < LOD    | 0.4         |
|                                                                                                     |             | 7                | 99         | 1876            |        | 1           | 0.42             | < LOD    | < LOD    | 0.04     | 0.45        |
|                                                                                                     |             | 7                | 99         | 1868            |        | 7           | 0.42             | < LOD    | < 0.01   | < LOD    | 0.42        |
|                                                                                                     |             |                  | <u>99</u>  | 1869            |        | 14          | 0.26             | < LOD    | < LOD    | < LOD    | 0.26        |
|                                                                                                     | 4           | 7                | 100        | 842             | Fruit  | 0           | 0.22             | < LOD    | 0.01     | < LOD    | 0.23        |
|                                                                                                     |             | 7                | 100        | 840             |        | 1           | 0.17             | < LOD    | < 0.01   | < LOD    | 0.17        |
|                                                                                                     |             | 7                | 100        | 838             |        | 7           | 0.17             | < LOD    | 0.02     | < LOD    | 0.19        |
|                                                                                                     |             |                  | <u>101</u> | 849             |        | 14          | < LOD            | < LOD    | < 0.01   | < LOD    | < 0.01      |
| 2009/7003135<br>RCN R080176<br>USA<br>(Grant,<br>Washington)<br>2008<br>(Bartlett)                  | 4           | 7                | 99         | 1867            | Fruit  | 0           | 0.23             | < LOD    | < 0.01   | < LOD    | 0.23        |
|                                                                                                     |             | 7                | 100        | 1883            |        | 1           | 0.2              | < LOD    | 0.01     | < LOD    | 0.21        |
|                                                                                                     |             | 7                | 100        | 1882            |        | 7           | 0.13             | < LOD    | 0.01     | < LOD    | 0.14        |
|                                                                                                     |             |                  | <u>99</u>  | 1870            |        | 14          | 0.09             | < LOD    | 0.02     | < LOD    | 0.11        |
|                                                                                                     | 4           | 7                | 109        | 626             | Fruit  | 0           | 0.1              | < LOD    | 0.01     | < LOD    | 0.11        |
|                                                                                                     |             | 7                | 100        | 517             |        | 1           | 0.09             | < LOD    | < 0.01   | < LOD    | 0.09        |
|                                                                                                     |             | 7                | 98         | 516             |        | 7           | 0.04             | < LOD    | < 0.01   | < LOD    | 0.04        |
|                                                                                                     |             |                  | <u>103</u> | 578             |        | 14          | 0.03             | < LOD    | < 0.01   | < LOD    | 0.03        |
|                                                                                                     | 4           | 7                | 111        | 1421            | Fruit  | 0           | <u>0.45</u>      | < LOD    | 0.01     | < LOD    | <u>0.46</u> |
|                                                                                                     |             | 7                | 101        | 1539            |        | 1           | 0.09             | < LOD    | 0.01     | < LOD    | 0.10        |
|                                                                                                     |             | 7                | 102        | 1553            |        | 7           | 0.05             | < LOD    | 0.01     | < LOD    | 0.06        |
|                                                                                                     |             |                  | <u>101</u> | 1571            |        | 14          | 0.02             | < LOD    | 0.01     | < LOD    | 0.03        |
| 2009/7003135<br>RCN R080177<br>USA<br>(Hood River,<br>Oregon)<br>2008<br>(Red Clapp)                | 4           | 7                | 109        | 626             | Fruit  | 0           | 0.1              | < LOD    | 0.01     | < LOD    | 0.11        |
|                                                                                                     |             | 7                | 100        | 517             |        | 1           | 0.09             | < LOD    | < 0.01   | < LOD    | 0.09        |
|                                                                                                     |             | 7                | 98         | 516             |        | 7           | 0.04             | < LOD    | < 0.01   | < LOD    | 0.04        |
|                                                                                                     |             |                  | <u>103</u> | 578             |        | 14          | 0.03             | < LOD    | < 0.01   | < LOD    | 0.03        |
|                                                                                                     | 4           | 7                | 111        | 1421            | Fruit  | 0           | <u>0.45</u>      | < LOD    | 0.01     | < LOD    | <u>0.46</u> |
|                                                                                                     |             | 7                | 101        | 1539            |        | 1           | 0.09             | < LOD    | 0.01     | < LOD    | 0.10        |
|                                                                                                     |             | 7                | 102        | 1553            |        | 7           | 0.05             | < LOD    | 0.01     | < LOD    | 0.06        |
|                                                                                                     |             |                  | <u>101</u> | 1571            |        | 14          | 0.02             | < LOD    | 0.01     | < LOD    | 0.03        |
|                                                                                                     | 4           | 7                | 109        | 626             | Fruit  | 0           | 0.1              | < LOD    | 0.01     | < LOD    | 0.11        |
|                                                                                                     |             | 7                | 100        | 517             |        | 1           | 0.09             | < LOD    | < 0.01   | < LOD    | 0.09        |
|                                                                                                     |             | 7                | 98         | 516             |        | 7           | 0.04             | < LOD    | < 0.01   | < LOD    | 0.04        |
|                                                                                                     |             |                  | <u>103</u> | 578             |        | 14          | 0.03             | < LOD    | < 0.01   | < LOD    | 0.03        |

\*All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

### Stone fruits

Supervised trials were carried out on cherries (eight trials – Table 77), peaches (12 trials – Table 78) and plums (10 trials – Table 79) in the USA and Canada during the 2008 growing season (Jordan 2010, 2009/7003328) and in cherries during the 2011 growing season (Schreier 2012, 2011/7004953). Three foliar applications of a 62.5 g/L EC formulation of fluxapyroxad were made at 118–141 g ai/ha. Applications were made to plots using either concentrate (463–930 L/ha) or dilute (1116–2005 L/ha)

spray volumes with ground equipment (airblast sprayer). An adjuvant was added to the spray mixture for all applications except the first application to Trial R110214. Stonefruit RAC samples (fruit, one sample per plot) were harvested at 0, 1, 6–7 and 13–14 days after the last application (also 10 DALA at four sites) or two from each trial at 0, 1 and 7-days (cherries, 2011/7004953). Residues were quantitated using LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Table 77 Residues from the foliar application of fluxapyroxad to cherries in the USA and Canada (Jordan 2010, 2009/7003328 and Schreier 2012, 2011/7004953)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                          | Application |                  |                                 |                      | Matrix | PHI<br>days | Residues (mg/kg)            |          |                               |                       |             |
|-------------------------------------------------------------------------------------------------|-------------|------------------|---------------------------------|----------------------|--------|-------------|-----------------------------|----------|-------------------------------|-----------------------|-------------|
|                                                                                                 | No          | Interval<br>Days | g<br>ai/ha                      | Water<br>(L/ha)      |        |             | Fluxapyroxad                | M700F002 | M700F008                      | M700F048              | Total*      |
| GAP, USA                                                                                        | 3           |                  | 121-<br>123                     |                      |        | 0           |                             |          |                               |                       |             |
| 2009/7003328<br>RCN R080182<br>USA<br>(Allegan,<br>Michigan)<br>2008<br>(Tart -<br>Montmorency) | 3           | 6<br>6           | 121<br>128<br><u>129</u><br>378 | 679<br>716<br>712    | Fruit  | 0           | 1.05                        | < LOD    | 0.21                          | 0.05                  | 1.31        |
|                                                                                                 |             |                  |                                 |                      |        | 1           | <u>1.10</u>                 | < LOD    | 0.24                          | 0.04                  | <u>1.38</u> |
|                                                                                                 |             |                  |                                 |                      |        | 7           | 0.32                        | < LOD    | 0.25                          | 0.07                  | 0.63        |
|                                                                                                 |             |                  |                                 |                      |        | 14          | 0.09                        | < LOD    | 0.18                          | 0.07                  | 0.33        |
|                                                                                                 | 3           | 6<br>6           | 119<br>128<br><u>129</u><br>376 | 1455<br>1540<br>1532 | Fruit  | 0           | 0.86                        | < LOD    | 0.25                          | 0.05                  | 1.16        |
|                                                                                                 |             |                  |                                 |                      |        | 1           | 0.78                        | < LOD    | 0.25                          | 0.06                  | 1.08        |
|                                                                                                 |             |                  |                                 |                      |        | 7           | 0.32                        | < LOD    | 0.23                          | 0.09                  | 0.62        |
|                                                                                                 |             |                  |                                 |                      |        | 14          | 0.12                        | < LOD    | 0.16                          | 0.10                  | 0.36        |
|                                                                                                 | 3           | 8<br>6           | 127<br>125<br><u>126</u><br>378 | 610<br>599<br>608    | Fruit  | 0           | 0.43                        | < LOD    | 0.17                          | < 0.01                | 0.61        |
|                                                                                                 |             |                  |                                 |                      |        | 1           | (0.58, 0.52)<br><u>0.55</u> | < LOD    | 0.16                          | < 0.01                | <u>0.72</u> |
|                                                                                                 |             |                  |                                 |                      |        | 7           | (0.31, 0.48)<br>0.40        | < LOD    | 0.19                          | 0.01                  | 0.61        |
|                                                                                                 |             |                  |                                 |                      |        | 14          | 0.14                        | < LOD    | 0.26                          | < 0.01                | 0.41        |
|                                                                                                 | 3           | 8<br>6           | 124<br>126<br><u>124</u><br>374 | 1194<br>1207<br>1190 | Fruit  | 0           | (0.05, 0.05)<br>0.05        | < LOD    | (0.21, 0.15,<br>0.14)<br>0.17 | (0.04, 0.03,<br>0.03) | 0.25        |
|                                                                                                 |             |                  |                                 |                      |        | 1           | 0.20                        | < LOD    | 0.30                          | 0.05                  | 0.55        |
|                                                                                                 |             |                  |                                 |                      |        | 7           | 0.02                        | < LOD    | 0.11                          | 0.06                  | 0.17        |
|                                                                                                 |             |                  |                                 |                      |        | 14          | 0.06                        | < LOD    | 0.14                          | 0.10                  | 0.28        |
| 2009/7003328<br>RCN R080184<br>USA<br>(Ottawa,<br>Michigan)<br>2008<br>(Sweet -Sams)            | 3           | 6<br>7           | 125<br>125<br><u>125</u><br>375 | 723<br>719<br>708    | Fruit  | 0           | 0.53                        | < LOD    | 0.17                          | < 0.01                | 0.71        |
|                                                                                                 |             |                  |                                 |                      |        | 1           | 0.51                        | < LOD    | 0.17                          | < 0.01                | 0.69        |
|                                                                                                 |             |                  |                                 |                      |        | 7           | 0.18                        | < LOD    | 0.23                          | < 0.01                | 0.42        |
|                                                                                                 |             |                  |                                 |                      |        | 14          | <u>0.59</u>                 | < LOD    | 0.18                          | < 0.01                | <u>0.78</u> |
|                                                                                                 | 3           | 7<br>7           | 123<br>125<br><u>124</u><br>372 | 1751<br>1742<br>1697 | Fruit  | 0           | 0.34                        | < LOD    | 0.19                          | < 0.01                | 0.54        |
|                                                                                                 |             |                  |                                 |                      |        | 1           | 0.36                        | < LOD    | 0.17                          | < 0.01                | 0.54        |
|                                                                                                 |             |                  |                                 |                      |        | 7           | 0.12                        | < LOD    | 0.19                          | < 0.01                | 0.32        |
|                                                                                                 |             |                  |                                 |                      |        | 14          | 0.02                        | < LOD    | 0.16                          | < 0.01                | 0.19        |
|                                                                                                 | 3           | 7<br>7           | 123<br>123<br><u>124</u><br>370 | 769<br>789<br>796    | Fruit  | 0           | <u>0.82</u>                 | < 0.01   | 0.30                          | < 0.01                | <u>1.13</u> |
|                                                                                                 |             |                  |                                 |                      |        | 1           | 0.37                        | < LOD    | 0.24                          | < 0.01                | 0.62        |
|                                                                                                 |             |                  |                                 |                      |        | 7           | 0.12                        | < LOD    | 0.30                          | < 0.01                | 0.43        |
|                                                                                                 |             |                  |                                 |                      |        | 14          | 0.07                        | < LOD    | 0.28                          | < 0.01                | 0.36        |
|                                                                                                 | 3           | 7<br>7           | 124<br>125<br><u>124</u><br>373 | 1957<br>1887<br>1961 | Fruit  | 0           | 0.39                        | < LOD    | 0.22                          | < 0.01                | 0.62        |
|                                                                                                 |             |                  |                                 |                      |        | 1           | 0.41                        | < 0.01   | 0.23                          | < 0.01                | 0.65        |
|                                                                                                 |             |                  |                                 |                      |        | 7           | 0.16                        | < 0.01   | 0.29                          | < 0.01                | 0.46        |
|                                                                                                 |             |                  |                                 |                      |        | 14          | 0.14                        | < 0.01   | 0.29                          | < 0.01                | 0.44        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                          | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg)            |                            |                             |                         |             |
|-------------------------------------------------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|-----------------------------|----------------------------|-----------------------------|-------------------------|-------------|
|                                                                                                 | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad                | M700F002                   | M700F008                    | M700F048                | Total*      |
| 2009/7003328<br>RCN R080186<br>USA<br>(Grant,<br>Washington)<br>2008<br>(Tart -<br>Montmorency) | 3           | 7                | 125        | 702             | Fruit  | 0           | 0.49                        | < LOD                      | 0.16                        | 0.08                    | 0.72        |
|                                                                                                 |             |                  | 125        | 703             |        | 1           | 0.38                        | < 0.01                     | 0.17                        | 0.07                    | 0.61        |
|                                                                                                 |             |                  | <u>125</u> | 701             |        | 7           | 0.19                        | < LOD                      | 0.23                        | 0.08                    | 0.49        |
|                                                                                                 |             |                  | 375        |                 |        | 13          | 0.10                        | < LOD                      | 0.16                        | 0.11                    | 0.35        |
|                                                                                                 | 3           | 7                | 123        | 1869            | Fruit  | 0           | <u>0.56</u>                 | < LOD                      | 0.13                        | 0.05                    | <u>0.73</u> |
|                                                                                                 |             |                  | 123        | 1871            |        | 1           | 0.49                        | < LOD                      | 0.15                        | 0.05                    | 0.69        |
|                                                                                                 |             |                  | <u>123</u> | 1872            |        | 7           | 0.33                        | < LOD                      | 0.19                        | 0.08                    | 0.59        |
|                                                                                                 |             |                  | 369        |                 |        | 13          | 0.30                        | < LOD                      | 0.15                        | 0.10                    | 0.53        |
| 2009/7003328<br>RCN R080187<br>USA<br>(Wasco, Oregon)<br>2008<br>(Sweet -Lapin)                 | 3           | 8<br>6           | 126        | 492             | Fruit  | 0           | 0.19                        | < LOD                      | 0.16                        | < 0.01                  | 0.36        |
|                                                                                                 |             |                  | 127        | 640             |        | 1           | 0.19                        | < LOD                      | 0.18                        | < LOD                   | 0.38        |
|                                                                                                 |             |                  | <u>125</u> | 501             |        | 7           | 0.08                        | < LOD                      | 0.21                        | < 0.01                  | 0.30        |
|                                                                                                 |             |                  | 378        |                 |        | 10          | 0.06                        | < LOD                      | 0.26                        | < 0.01                  | 0.33        |
|                                                                                                 | 3           | 8<br>6           | 128        | 1554            | Fruit  | 0           | <u>0.31</u>                 | < LOD                      | 0.18                        | < 0.01                  | <u>0.50</u> |
|                                                                                                 |             |                  | 121        | 1595            |        | 1           | 0.20                        | < LOD                      | 0.19                        | < 0.01                  | 0.40        |
|                                                                                                 |             |                  | <u>126</u> | 1623            |        | 7           | 0.18                        | < LOD                      | 0.22                        | < 0.01                  | 0.41        |
|                                                                                                 |             |                  | 375        |                 |        | 10          | 0.11                        | < LOD                      | 0.22                        | < 0.01                  | 0.34        |
| 2011/7004953<br>R110214<br>USA<br>(Fennville,<br>Michigan)<br>2011<br>(Tart-<br>Montmorency)    | 3           | 7<br>7           | 124        | 711             | Fruit  | 0           | (0.26, 0.25)<br><u>0.26</u> | (< LOQ,<br>< LOQ)<br>< LOQ | (0.10, 0.074)<br>0.087      | (0.028, 0.023)<br>0.026 | <u>0.37</u> |
|                                                                                                 |             |                  | 124        | 686             |        | 1           | (0.29, 0.20)<br>0.25        | (< LOQ,<br>< LOQ)<br>< LOQ | (0.098,<br>0.085)<br>0.092) | (0.030, 0.026)<br>0.028 | 0.37        |
|                                                                                                 |             |                  | <u>124</u> | 711             |        | 7           | (0.15, 0.18)<br>0.17        | (< LOQ,<br>< LOQ)<br>< LOQ | (0.13, 0.17)<br>0.15        | (0.048, 0.052)<br>0.050 | 0.37        |
|                                                                                                 | 3           | 7<br>6           | 126        | 699             | Fruit  | 0           | (1.93, 1.80)<br><u>1.87</u> | (< LOQ,<br>< LOQ)<br>< LOQ | (0.42, 0.43)<br>0.43        | (0.022, 0.021)<br>0.022 | <u>2.32</u> |
|                                                                                                 |             |                  | 123        | 683             |        | 1           | (1.03, 1.44)<br>1.24        | (< LOQ,<br>< LOQ)<br>< LOQ | (0.34, 0.38)<br>0.36        | (0.024, 0.027)<br>0.026 | 1.63        |
|                                                                                                 |             |                  | <u>124</u> | 692             |        | 7           | (0.82, 0.75)<br>0.79        | (< LOQ,<br>< LOQ)<br>< LOQ | (0.52, 0.64)<br>0.58        | (0.045, 0.046)<br>0.046 | 1.42        |

\*All analytes are reported in terms of themselves, except for the 2011 trials where residues are expressed as parent equivalents. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 78 Residues from the foliar application of fluxapyroxad to peaches in the USA and Canada (Jordan 2010, 2009/7003328)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                     | Application |                  |                          |                      | Matrix | PHI<br>days | Residues (mg/kg)           |          |          |          |        |
|--------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|----------------------|--------|-------------|----------------------------|----------|----------|----------|--------|
|                                                                                            | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)      |        |             | Fluxapyroxad               | M700F002 | M700F008 | M700F048 | Total* |
| GAP, USA                                                                                   | 3           |                  | 121-<br>123              |                      |        | 0           |                            |          |          |          |        |
| 2009/7003328<br>RCN R080188<br>USA<br>(Wayne, New<br>York)<br>2008<br>(Glohaven)           | 3           | 8<br>6           | 125<br>125<br>124<br>374 | 747<br>747<br>746    | Fruit  | 0           | 0.37                       | < LOD    | 0.01     | < LOD    | 0.38   |
|                                                                                            |             |                  |                          |                      |        | 1           | 0.29                       | < 0.01   | 0.02     | < LOD    | 0.31   |
|                                                                                            |             |                  |                          |                      |        | 7           | 0.07                       | < LOD    | 0.01     | < 0.01   | 0.08   |
|                                                                                            |             |                  |                          |                      |        | 14          | 0.05                       | < LOD    | 0.01     | < LOD    | 0.06   |
|                                                                                            | 3           | 8<br>6           | 124<br>125<br>126<br>375 | 1116<br>1119<br>1129 | Fruit  | 0           | 0.43                       | < LOD    | 0.01     | < LOD    | 0.44   |
|                                                                                            |             |                  |                          |                      |        | 1           | 0.43                       | < LOD    | 0.02     | < LOD    | 0.45   |
|                                                                                            |             |                  |                          |                      |        | 7           | 0.10                       | < LOD    | 0.02     | < LOD    | 0.12   |
|                                                                                            |             |                  |                          |                      |        | 14          | 0.08                       | < LOD    | 0.03     | < LOD    | 0.11   |
|                                                                                            | 3           | 7<br>7           | 124<br>124<br>124<br>372 | 511<br>504<br>488    | Fruit  | 0           | 0.55                       | < LOD    | 0.02     | 0.01     | 0.58   |
|                                                                                            |             |                  |                          |                      |        | 1           | 0.43                       | < LOD    | 0.03     | 0.01     | 0.47   |
|                                                                                            |             |                  |                          |                      |        | 7           | 0.31                       | < LOD    | 0.04     | 0.03     | 0.37   |
|                                                                                            |             |                  |                          |                      |        | 14          | 0.29                       | < LOD    | 0.03     | 0.04     | 0.35   |
|                                                                                            | 3           | 7<br>7           | 126<br>125<br>126<br>377 | 1228<br>1189<br>1197 | Fruit  | 0           | 0.42                       | < LOD    | 0.02     | < 0.01   | 0.44   |
|                                                                                            |             |                  |                          |                      |        | 1           | 0.37                       | < LOD    | 0.02     | < 0.01   | 0.39   |
|                                                                                            |             |                  |                          |                      |        | 7           | 0.29                       | < 0.01   | 0.10     | 0.02     | 0.40   |
|                                                                                            |             |                  |                          |                      |        | 14          | 0.30                       | < LOD    | 0.05     | 0.04     | 0.38   |
| 2009/7003328<br>RCN R080190<br>USA<br>(Brooks, Georgia)<br>2008<br>(Mid white 9A54-<br>13) | 3           | 7<br>7           | 126<br>126<br>124<br>376 | 522<br>523<br>521    | Fruit  | 0           | 0.55                       | < LOD    | 0.06     | < LOD    | 0.61   |
|                                                                                            |             |                  |                          |                      |        | 1           | 0.29                       | < LOD    | 0.04     | < LOD    | 0.33   |
|                                                                                            |             |                  |                          |                      |        | 7           | 0.22                       | < LOD    | 0.08     | < 0.01   | 0.30   |
|                                                                                            |             |                  |                          |                      |        | 14          | (0.12, 0.10)<br>0.11       | < LOD    | 0.09     | < 0.01   | 0.20   |
|                                                                                            | 3           | 7<br>7           | 125<br>124<br>124<br>373 | 1251<br>1257<br>1265 | Fruit  | 0           | (0.19, 0.17)<br>0.18       | < LOD    | 0.04     | < LOD    | 0.22   |
|                                                                                            |             |                  |                          |                      |        | 1           | (0.50, 0.44)<br>0.47       | < LOD    | 0.06     | < LOD    | 0.53   |
|                                                                                            |             |                  |                          |                      |        | 7           | 0.57                       | < LOD    | 0.05     | < LOD    | 0.62   |
|                                                                                            |             |                  |                          |                      |        | 14          | 0.12                       | < LOD    | 0.05     | < 0.01   | 0.17   |
| 2009/7003328<br>RCN R080192<br>USA<br>(Lenawee,<br>Michigan)<br>2008 (Redhaven)            | 3           | 7<br>7           | 125<br>123<br>126<br>374 | 930<br>919<br>912    | Fruit  | 0           | 0.39                       | < LOD    | 0.02     | < 0.01   | 0.41   |
|                                                                                            |             |                  |                          |                      |        | 1           | 0.45                       | < LOD    | 0.03     | < 0.01   | 0.48   |
|                                                                                            |             |                  |                          |                      |        | 7           | (0.14, 0.14, 0.16)<br>0.15 | < LOD    | 0.03     | < 0.01   | 0.18   |
|                                                                                            |             |                  |                          |                      |        | 14          | 0.16, 0.16<br>(0.16)       | < LOD    | 0.03     | < 0.01   | 0.19   |
|                                                                                            | 3           | 7<br>7           | 124<br>123<br>128<br>375 | 2005<br>1993<br>1975 | Fruit  | 0           | 0.33                       | < LOD    | 0.02     | < 0.01   | 0.35   |
|                                                                                            |             |                  |                          |                      |        | 1           | 0.26                       | < LOD    | 0.02     | < LOD    | 0.28   |
|                                                                                            |             |                  |                          |                      |        | 7           | 0.15                       | < LOD    | 0.03     | < 0.01   | 0.18   |
|                                                                                            |             |                  |                          |                      |        | 14          | 0.12                       | < LOD    | 0.03     | < 0.01   | 0.15   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                             | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |             |
|------------------------------------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|------------------|----------|----------|----------|-------------|
|                                                                                    | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total*      |
| 2009/7003328<br>RCN R080193<br>Canada<br>(Niagara, Ontario)<br>2008<br>(Red Star)  | 3           | 7                | 129        | 627             | Fruit  | 0           | 0.10             | < LOD    | < 0.01   | < 0.01   | 0.10        |
|                                                                                    |             |                  | 129        | 621             |        | 1           | 0.19             | < 0.01   | < 0.01   | < LOD    | 0.19        |
|                                                                                    |             |                  | <u>120</u> | 578             |        | 6           | 0.08             | < LOD    | 0.01     | < LOD    | 0.09        |
|                                                                                    |             |                  | 378        |                 |        | 13          | 0.07             | < 0.01   | 0.02     | < 0.01   | 0.09        |
|                                                                                    | 3           | 7                | 124        | 1206            | Fruit  | 0           | 0.26             | < 0.01   | 0.03     | < 0.01   | 0.29        |
|                                                                                    |             |                  | 125        | 1213            |        | 1           | <u>0.28</u>      | < LOD    | 0.02     | < 0.01   | <u>0.30</u> |
|                                                                                    |             |                  | <u>119</u> | 1165            |        | 6           | 0.26             | < 0.01   | 0.03     | < 0.01   | 0.29        |
|                                                                                    |             |                  | 368        |                 |        | 13          | 0.19             | < LOD    | 0.04     | < 0.01   | 0.23        |
| 2009/7003328<br>RCN R080194<br>USA<br>(Ottawa,<br>Michigan)<br>2008<br>(Bellaire)  | 3           | 7                | 124        | 738             | Fruit  | 0           | 0.29             | < LOD    | 0.01     | < LOD    | 0.30        |
|                                                                                    |             |                  | 125        | 726             |        | 1           | 0.28             | < LOD    | 0.01     | < 0.01   | 0.29        |
|                                                                                    |             |                  | <u>124</u> | 711             |        | 7           | 0.21             | < LOD    | 0.02     | < 0.01   | 0.23        |
|                                                                                    |             |                  | 373        |                 |        | 14          | 0.19             | < LOD    | 0.02     | < 0.01   | 0.21        |
|                                                                                    | 3           | 7                | 124        | 1787            | Fruit  | 0           | <u>0.34</u>      | < LOD    | < 0.01   | < 0.01   | <u>0.34</u> |
|                                                                                    |             |                  | 125        | 1765            |        | 1           | 0.28             | < LOD    | 0.01     | < 0.01   | 0.29        |
|                                                                                    |             |                  | <u>124</u> | 1740            |        | 7           | 0.15             | < LOD    | 0.01     | < 0.01   | 0.16        |
|                                                                                    |             |                  | 373        |                 |        | 14          | 0.17             | < LOD    | 0.02     | < 0.01   | 0.19        |
| 2009/7003328<br>RCN R080195<br>USA<br>(Marion, Illinois)<br>2008 (Cresthaven)      | 3           | 7                | 126        | 505             | Fruit  | 0           | 0.17             | < 0.01   | < 0.01   | < LOD    | 0.17        |
|                                                                                    |             |                  | 129        | 548             |        | 1           | 0.24             | < LOD    | < 0.01   | < LOD    | 0.24        |
|                                                                                    |             |                  | <u>133</u> | 555             |        | 7           | 0.08             | < 0.01   | < 0.01   | < LOD    | 0.08        |
|                                                                                    |             |                  | 388        |                 |        | 14          | 0.08             | < LOD    | < 0.01   | < LOD    | 0.08        |
|                                                                                    | 3           | 7                | 126        | 1857            | Fruit  | 0           | <u>0.32</u>      | < 0.01   | 0.01     | < LOD    | <u>0.33</u> |
|                                                                                    |             |                  | 125        | 1961            |        | 1           | 0.21             | < 0.01   | 0.01     | < LOD    | 0.22        |
|                                                                                    |             |                  | <u>128</u> | 1971            |        | 7           | 0.15             | < LOD    | 0.01     | < LOD    | 0.16        |
|                                                                                    |             |                  | 379        |                 |        | 14          | 0.08             | < 0.01   | 0.02     | < LOD    | 0.10        |
| 2009/7003328<br>RCN R080196<br>USA<br>(Pontotoc,<br>Oklahoma)<br>2008 (Contender)  | 3           | 6                | 119        | 826             | Fruit  | 0           | 0.44             | < LOD    | 0.04     | < LOD    | 0.48        |
|                                                                                    |             |                  | 126        | 815             |        | 1           | 0.50             | < LOD    | 0.04     | < LOD    | 0.54        |
|                                                                                    |             |                  | <u>124</u> | 870             |        | 7           | 0.33             | < LOD    | 0.05     | < LOD    | 0.38        |
|                                                                                    |             |                  | 369        |                 |        | 14          | 0.25             | < LOD    | 0.06     | < 0.01   | 0.31        |
|                                                                                    | 3           | 6                | 118        | 1393            | Fruit  | 0           | <u>0.58</u>      | < LOD    | 0.08     | < LOD    | <u>0.66</u> |
|                                                                                    |             |                  | 124        | 1368            |        | 1           | 0.42             | < LOD    | 0.04     | < LOD    | 0.46        |
|                                                                                    |             |                  | <u>123</u> | 1414            |        | 7           | 0.33             | < LOD    | 0.04     | < LOD    | 0.37        |
|                                                                                    |             |                  | 365        |                 |        | 14          | 0.26             | < LOD    | 0.06     | < 0.01   | 0.32        |
| 2009/7003328<br>RCN R080197<br>USA<br>(Kings, California)<br>2008<br>(Klamt Cling) | 3           | 6                | 140        | 894             | Fruit  | 0           | 0.59             | < LOD    | 0.02     | < LOD    | 0.61        |
|                                                                                    |             |                  | 141        | 900             |        | 1           | 0.22             | < LOD    | 0.02     | < LOD    | 0.24        |
|                                                                                    |             |                  | <u>140</u> | 884             |        | 7           | 0.13             | < LOD    | 0.02     | < LOD    | 0.15        |
|                                                                                    |             |                  | 421        |                 |        | 10          | 0.26             | < LOD    | 0.02     | < LOD    | 0.28        |
|                                                                                    |             |                  |            |                 |        | 14          | 0.08             | < LOD    | 0.02     | < LOD    | 0.10        |
|                                                                                    | 3           | 6                | 141        | 1837            | Fruit  | 0           | <u>0.63</u>      | < LOD    | 0.03     | < LOD    | <u>0.66</u> |
|                                                                                    |             |                  | 141        | 1837            |        | 1           | 0.39             | < LOD    | 0.03     | < LOD    | 0.42        |
|                                                                                    |             |                  | <u>140</u> | 1836            |        | 7           | 0.23             | < LOD    | 0.03     | < LOD    | 0.26        |
|                                                                                    |             |                  | 422        |                 |        | 10          | 0.13             | < LOD    | 0.03     | < LOD    | 0.16        |
|                                                                                    |             |                  |            |                 |        | 14          | 0.14             | < LOD    | 0.04     | < LOD    | 0.18        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg)           |          |          |          |             |
|---------------------------------------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|----------------------------|----------|----------|----------|-------------|
|                                                                                       | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad               | M700F002 | M700F008 | M700F048 | Total*      |
| 2009/7003328<br>RCN R080198<br>USA<br>(Stanislaus,<br>California)<br>2008 (Summerset) | 3           | 7                | 124        | 617             | Fruit  | 0           | 0.30                       | < LOD    | 0.01     | < LOD    | 0.31        |
|                                                                                       |             |                  | 123        | 612             |        | 1           | 0.24                       | < LOD    | 0.01     | < LOD    | 0.25        |
|                                                                                       |             |                  | <u>125</u> | 620             |        | 7           | (0.20, 0.20)<br>0.20       | < LOD    | 0.02     | < LOD    | 0.22        |
|                                                                                       |             |                  | 372        |                 |        | 14          | 0.14                       | < 0.01   | 0.02     | < 0.01   | 0.16        |
|                                                                                       | 3           | 7                | 125        | 1574            | Fruit  | 0           | 0.24                       | < LOD    | 0.01     | < LOD    | 0.25        |
|                                                                                       |             |                  | 124        | 1487            |        | 1           | <u>0.33</u>                | < LOD    | 0.02     | < LOD    | <u>0.35</u> |
|                                                                                       |             |                  | <u>125</u> | 1498            |        | 7           | 0.18                       | < LOD    | 0.01     | < 0.01   | 0.19        |
|                                                                                       |             |                  | 374        |                 |        | 14          | 0.14                       | < LOD    | 0.02     | < LOD    | 0.16        |
| 2009/7003328<br>RCN R080199<br>USA<br>(Madera,<br>California)<br>2008<br>(Angelus)    | 3           | 7                | 125        | 704             | Fruit  | 0           | <u>0.30</u>                | < LOD    | 0.01     | < 0.01   | <u>0.31</u> |
|                                                                                       |             |                  | 125        | 706             |        | 1           | 0.18                       | < LOD    | 0.01     | < 0.01   | 0.19        |
|                                                                                       |             |                  | <u>125</u> | 703             |        | 7           | 0.13                       | < LOD    | 0.02     | < 0.01   | 0.15        |
|                                                                                       |             |                  | 375        |                 |        | 10          | (0.08, 0.08, 0.09)<br>0.08 | < LOD    | 0.01     | 0.01     | 0.10        |
|                                                                                       |             |                  |            |                 |        | 14          | 0.09                       | < LOD    | 0.03     | < 0.01   | 0.12        |
|                                                                                       | 3           | 7                | 126        | 1884            | Fruit  | 0           | 0.26                       | < LOD    | 0.01     | < 0.01   | 0.27        |
|                                                                                       |             |                  | 126        | 1880            |        | 1           | 0.24                       | < LOD    | 0.01     | < 0.01   | 0.25        |
|                                                                                       |             |                  | <u>125</u> | 1871            |        | 7           | 0.24                       | < LOD    | 0.05     | < 0.01   | 0.29        |
|                                                                                       |             |                  | 377        |                 |        | 10          | 0.13                       | < LOD    | 0.02     | < 0.01   | 0.15        |
|                                                                                       |             |                  |            |                 |        | 14          | 0.12                       | < LOD    | 0.02     | < 0.01   | 0.14        |
| 2009/7003328<br>RCN R080200<br>USA<br>(Grant,<br>Washington)<br>2008<br>(Snow King)   | 3           | 7                | 125        | 842             | Fruit  | 0           | 0.46                       | < LOD    | 0.03     | < 0.01   | 0.49        |
|                                                                                       |             |                  | 125        | 843             |        | 1           | 0.55                       | < LOD    | 0.05     | < 0.01   | 0.60        |
|                                                                                       |             |                  | <u>125</u> | 840             |        | 7           | 0.29                       | < LOD    | 0.03     | < 0.01   | 0.32        |
|                                                                                       |             |                  | 375        |                 |        | 14          | 0.19                       | < LOD    | 0.05     | < 0.01   | 0.24        |
|                                                                                       | 3           | 7                | 124        | 1870            | Fruit  | 0           | 0.57                       | < LOD    | 0.03     | < 0.01   | 0.60        |
|                                                                                       |             |                  | 125        | 1890            |        | 1           | <u>0.59</u>                | < LOD    | 0.04     | < 0.01   | <u>0.63</u> |
|                                                                                       |             |                  | <u>124</u> | 1880            |        | 7           | 0.34                       | < LOD    | 0.05     | < 0.01   | 0.39        |
|                                                                                       |             |                  | 373        |                 |        | 14          | 0.25                       | < LOD    | 0.06     | 0.01     | 0.32        |

\*All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 79 Residues from the foliar application of fluxapyroxad to plums in the USA and Canada (Jordan 2010, 2009/7003328)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                 | Application |                  |                                 |                      | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |             |
|----------------------------------------------------------------------------------------|-------------|------------------|---------------------------------|----------------------|--------|-------------|------------------|----------|----------|----------|-------------|
|                                                                                        | No          | Interval<br>Days | g<br>ai/ha                      | Water<br>(L/ha)      |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total*      |
| GAP, USA                                                                               | 3           |                  | 121-<br>123                     |                      |        | 0           |                  |          |          |          |             |
| 2009/7003328<br>RCN R080201<br>USA<br>(Wayne, New<br>York)<br>2008<br>(Stanley)        | 3           | 7<br>6           | 124<br>124<br><u>125</u><br>373 | 558<br>558<br>561    | Fruit  | 0           | <u>0.95</u>      | < LOD    | < LOD    | < LOD    | <u>0.95</u> |
|                                                                                        |             |                  |                                 |                      |        | 1           | 0.32             | < LOD    | < LOD    | < LOD    | 0.32        |
|                                                                                        |             |                  |                                 |                      |        | 7           | 0.46             | < LOD    | < LOD    | < LOD    | 0.46        |
|                                                                                        |             |                  |                                 |                      |        | 14          | 0.43             | < LOD    | < LOD    | < LOD    | 0.43        |
|                                                                                        | 3           | 7<br>6           | 129<br>126<br><u>126</u><br>381 | 1119<br>1125<br>1124 | Fruit  | 0           | 0.79             | < LOD    | < LOD    | < LOD    | 0.79        |
|                                                                                        |             |                  |                                 |                      |        | 1           | 0.29             | < LOD    | < LOD    | < LOD    | 0.29        |
|                                                                                        |             |                  |                                 |                      |        | 7           | 0.40             | < LOD    | < LOD    | < LOD    | 0.40        |
|                                                                                        |             |                  |                                 |                      |        | 14          | 0.09             | < LOD    | < LOD    | < LOD    | 0.09        |
|                                                                                        | 3           | 6<br>6           | 121<br>128<br><u>131</u><br>380 | 681<br>720<br>720    | Fruit  | 0           | <u>0.49</u>      | < LOD    | < LOD    | < LOD    | <u>0.49</u> |
|                                                                                        |             |                  |                                 |                      |        | 1           | 0.46             | < LOD    | < LOD    | < LOD    | 0.46        |
|                                                                                        |             |                  |                                 |                      |        | 7           | 0.30             | < LOD    | < 0.01   | < LOD    | 0.30        |
|                                                                                        |             |                  |                                 |                      |        | 14          | 0.17             | < LOD    | < LOD    | < LOD    | 0.17        |
| 2009/7003328<br>RCN R080202<br>USA<br>(Allegan,<br>Michigan)<br>2008<br>(Early Golden) | 3           | 6<br>6           | 120<br>129<br><u>129</u><br>378 | 1469<br>1543<br>1541 | Fruit  | 0           | 0.42             | < LOD    | < LOD    | < LOD    | 0.42        |
|                                                                                        |             |                  |                                 |                      |        | 1           | 0.34             | < LOD    | < LOD    | < LOD    | 0.34        |
|                                                                                        |             |                  |                                 |                      |        | 7           | 0.26             | < LOD    | < LOD    | < LOD    | 0.26        |
|                                                                                        |             |                  |                                 |                      |        | 14          | 0.20             | < LOD    | < LOD    | < LOD    | 0.20        |
|                                                                                        | 3           | 7<br>7           | 123<br>121<br><u>120</u><br>364 | 592<br>579<br>577    | Fruit  | 0           | 0.20             | < LOD    | < LOD    | < LOD    | 0.20        |
|                                                                                        |             |                  |                                 |                      |        | 1           | 0.17             | < LOD    | < LOD    | < LOD    | 0.17        |
|                                                                                        |             |                  |                                 |                      |        | 7           | 0.11             | < LOD    | < LOD    | < LOD    | 0.11        |
|                                                                                        |             |                  |                                 |                      |        | 14          | 0.09             | < LOD    | < LOD    | < LOD    | 0.09        |
|                                                                                        | 3           | 7<br>7           | 122<br>121<br><u>122</u><br>365 | 1182<br>1177<br>1179 | Fruit  | 0           | <u>0.24</u>      | < LOD    | < LOD    | < LOD    | <u>0.24</u> |
|                                                                                        |             |                  |                                 |                      |        | 1           | 0.24             | < LOD    | < LOD    | < LOD    | 0.24        |
|                                                                                        |             |                  |                                 |                      |        | 7           | 0.14             | < LOD    | < LOD    | < LOD    | 0.14        |
|                                                                                        |             |                  |                                 |                      |        | 14          | 0.10             | < LOD    | 0.01     | < LOD    | 0.11        |
| 2009/7003328<br>RCN R080204<br>USA<br>(Ottawa,<br>Michigan)<br>2008<br>(Stanley)       | 3           | 7<br>7           | 123<br>123<br><u>124</u><br>370 | 717<br>718<br>707    | Fruit  | 0           | <u>0.64</u>      | < LOD    | < LOD    | < LOD    | <u>0.64</u> |
|                                                                                        |             |                  |                                 |                      |        | 1           | 0.62             | < LOD    | < LOD    | < LOD    | 0.62        |
|                                                                                        |             |                  |                                 |                      |        | 7           | 0.59             | < LOD    | < LOD    | < LOD    | 0.59        |
|                                                                                        |             |                  |                                 |                      |        | 14          | 0.49             | < LOD    | < LOD    | < LOD    | 0.49        |
|                                                                                        | 3           | 7<br>7           | 124<br>124<br><u>125</u><br>373 | 1741<br>1749<br>1724 | Fruit  | 0           | 0.44             | < LOD    | < LOD    | < LOD    | 0.44        |
|                                                                                        |             |                  |                                 |                      |        | 1           | 0.42             | < LOD    | < LOD    | < LOD    | 0.42        |
|                                                                                        |             |                  |                                 |                      |        | 7           | 0.49             | < LOD    | 0.02     | < LOD    | 0.51        |
|                                                                                        |             |                  |                                 |                      |        | 14          | 0.37             | < LOD    | < 0.01   | < LOD    | 0.37        |
| 2009/7003328<br>RCN R080205<br>USA<br>(Tulare,<br>California)<br>2008<br>(Prunes)      | 3           | 7<br>7           | 138<br>140<br><u>140</u><br>418 | 748<br>755<br>756    | Fruit  | 0           | 0.37             | < LOD    | < LOD    | < LOD    | 0.37        |
|                                                                                        |             |                  |                                 |                      |        | 1           | <u>0.38</u>      | < LOD    | < LOD    | < LOD    | <u>0.38</u> |
|                                                                                        |             |                  |                                 |                      |        | 7           | 0.29             | < LOD    | < 0.01   | < LOD    | 0.29        |
|                                                                                        |             |                  |                                 |                      |        | 10          | 0.26             | < LOD    | < LOD    | < LOD    | 0.26        |
|                                                                                        | 3           | 7<br>7           | 140<br>140<br><u>140</u><br>420 | 1540<br>1534<br>1535 | Fruit  | 0           | 0.32             | < LOD    | < LOD    | < LOD    | 0.32        |
|                                                                                        |             |                  |                                 |                      |        | 1           | 0.38             | < LOD    | < LOD    | < LOD    | 0.38        |
|                                                                                        |             |                  |                                 |                      |        | 7           | 0.32             | < LOD    | < LOD    | < LOD    | 0.32        |
|                                                                                        |             |                  |                                 |                      |        | 10          | 0.24             | < LOD    | < LOD    | < LOD    | 0.24        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                     | Application                                                                            |                  |                                 |                                 | Matrix            | PHI<br>days | Residues (mg/kg)     |             |          |                            |             |             |
|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------|---------------------------------|---------------------------------|-------------------|-------------|----------------------|-------------|----------|----------------------------|-------------|-------------|
|                                                                                            | No                                                                                     | Interval<br>Days | g<br>ai/ha                      | Water<br>(L/ha)                 |                   |             | Fluxapyroxad         | M700F002    | M700F008 | M700F048                   | Total*      |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   |             |                      |             |          |                            |             |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 14          | 0.28                 | < LOD       | < LOD    | < LOD                      | 0.28        |             |
| 2009/7003328<br>RCN R080206<br>USA<br>(Stanislaus,<br>California)<br>2008<br>(French Plum) | 3                                                                                      | 7<br>7           | 124<br>123<br><u>124</u><br>371 | 534<br>533<br>534               | Fruit             | 0           | 0.48                 | < LOD       | < 0.01   | < LOD                      | 0.48        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 1           | 0.47                 | < LOD       | < 0.01   | < LOD                      | 0.47        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 7           | 0.53                 | < LOD       | < LOD    | < LOD                      | 0.53        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 14          | 0.51                 | < LOD       | < LOD    | < LOD                      | 0.51        |             |
|                                                                                            | 3                                                                                      | 7<br>7           | 124<br>124<br><u>124</u><br>372 | 1488<br>1524<br>1525            | Fruit             | 0           | 0.49                 | < LOD       | < LOD    | < LOD                      | 0.49        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 1           | <u>0.56</u>          | < LOD       | < 0.01   | < LOD                      | <u>0.56</u> |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 7           | 0.47                 | < LOD       | < LOD    | < LOD                      | 0.47        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 14          | 0.54                 | < LOD       | < LOD    | < LOD                      | 0.54        |             |
|                                                                                            | 2009/7003328<br>RCN R080207<br>USA<br>(Fresno,<br>California)<br>2008 (Flavor<br>Rich) | 3                | 7<br>7                          | 124<br>124<br><u>125</u><br>373 | 701<br>701<br>705 | Fruit       | 0                    | 0.20        | < LOD    | < 0.01                     | < LOD       | 0.20        |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   |             | 1                    | 0.18        | < LOD    | < LOD                      | < LOD       | 0.18        |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   |             | 7                    | <u>0.23</u> | < LOD    | < LOD                      | < LOD       | <u>0.23</u> |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   |             | 14                   | 0.09        | < LOD    | < LOD                      | < LOD       | 0.09        |
| 3                                                                                          |                                                                                        | 7<br>7           | 125<br>126<br><u>126</u><br>377 | 1870<br>1883<br>1885            | Fruit             | 0           | 0.18                 | < LOD       | < LOD    | < LOD                      | 0.18        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 1           | 0.17                 | < LOD       | < LOD    | < LOD                      | 0.17        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 7           | 0.17                 | < LOD       | < LOD    | < LOD                      | 0.17        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 14          | 0.08                 | < LOD       | < LOD    | < LOD                      | 0.08        |             |
| 2009/7003328<br>RCN R080208<br>USA<br>(Madera,<br>California)<br>2008<br>(Fortune)         | 3                                                                                      | 7<br>7           | 126<br>128<br><u>125</u><br>379 | 476<br>473<br>463               | Fruit             | 0           | 0.24                 | < LOD       | < 0.01   | < LOD                      | 0.24        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 1           | <u>0.27</u>          | < LOD       | < LOD    | < LOD                      | <u>0.27</u> |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 7           | 0.16                 | < LOD       | < LOD    | < LOD                      | 0.16        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 14          | (0.12, 0.12)<br>0.12 | < LOD       | < 0.01   | (< 0.01, < 0.01)<br>< 0.01 | 0.12        |             |
|                                                                                            | 3                                                                                      | 7<br>7           | 122<br>125<br><u>123</u><br>370 | 1851<br>1898<br>1866            | Fruit             | 0           | 0.14                 | < LOD       | < LOD    | < LOD                      | 0.14        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 1           | 0.13                 | < LOD       | < LOD    | < LOD                      | 0.13        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 7           | 0.13                 | < LOD       | < LOD    | < LOD                      | 0.13        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 14          | 0.12                 | < LOD       | < LOD    | < LOD                      | 0.12        |             |
| 2009/7003328<br>RCN R080209<br>USA<br>(Grant,<br>Washington)<br>2008<br>(Pluot)            | 3                                                                                      | 7<br>7           | 125<br>124<br><u>123</u><br>372 | 843<br>836<br>831               | Fruit             | 0           | 0.30                 | < LOD       | < 0.01   | < LOD                      | 0.30        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 1           | <u>0.37</u>          | < LOD       | 0.02     | < LOD                      | <u>0.39</u> |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 7           | 0.15                 | < LOD       | < 0.01   | < LOD                      | 0.15        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 14          | 0.20                 | < LOD       | < 0.01   | < 0.01                     | 0.20        |             |
|                                                                                            | 3                                                                                      | 7<br>7           | 124<br>123<br><u>125</u><br>372 | 1872<br>1858<br>1885            | Fruit             | 0           | 0.27                 | < LOD       | < 0.01   | < LOD                      | 0.27        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 1           | 0.15                 | < LOD       | < 0.01   | < LOD                      | 0.15        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 7           | 0.17                 | < LOD       | < 0.01   | < LOD                      | 0.17        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 14          | 0.13                 | < LOD       | < 0.01   | < LOD                      | 0.13        |             |
| 2009/7003328<br>RCN R080210<br>USA<br>(Polk, Oregon)<br>2008<br>(Moyer)                    | 3                                                                                      | 7<br>7           | 124<br>126<br><u>127</u><br>377 | 752<br>770<br>776               | Fruit             | 0           | 0.30                 | < LOD       | < 0.01   | < LOD                      | 0.30        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 1           | 0.39                 | < LOD       | < LOD    | < LOD                      | 0.39        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 7           | 0.37                 | < LOD       | < LOD    | < LOD                      | 0.37        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 14          | 0.27                 | < LOD       | < 0.01   | < LOD                      | 0.27        |             |
|                                                                                            | 3                                                                                      | 7<br>7           | 124<br>128<br><u>129</u><br>381 | 1508<br>1555<br>1527            | Fruit             | 0           | 0.31                 | < LOD       | < LOD    | < LOD                      | 0.31        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 1           | <u>0.55</u>          | < LOD       | < LOD    | < LOD                      | <u>0.55</u> |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 7           | 0.48                 | < LOD       | < 0.01   | < LOD                      | 0.48        |             |
|                                                                                            |                                                                                        |                  |                                 |                                 |                   | 14          | 0.29                 | < LOD       | < 0.01   | < LOD                      | 0.29        |             |

\*All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

*Fruiting vegetables, other than Cucurbits*

Supervised trials were carried out on tomatoes (20 trials – Table 80) and bell and non-bell peppers (eight and two trials respectively – Table 81) in the USA and Canada during the 2008 and 2009 growing seasons (White 2010, 2009/7006207). Two or three foliar applications of a 62.5 g/L EC formulation of fluxapyroxad were made at 95–105 g ai/ha. Retreatment intervals were 6–8 days. Applications were made to plots using spray volumes of 185–317 L/ha with ground equipment (tractor-mounted boom or backpack sprayer). An adjuvant was added to the spray mixture for all applications. Fruiting vegetable RAC samples (fruit, two samples per plot) were harvested at 7, 14 and 21 days after the last application. Residues were quantitated using LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Table 80 Residues from the foliar application of fluxapyroxad to tomatoes in the USA and Canada (White 2010, 2009/7006207)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                            | Application |                  |                                 |                   | Matrix | PHI<br>days | Residues (mg/kg) |                                 |          |          |          |            |             |
|-----------------------------------------------------------------------------------|-------------|------------------|---------------------------------|-------------------|--------|-------------|------------------|---------------------------------|----------|----------|----------|------------|-------------|
|                                                                                   | No          | Interval<br>Days | g<br>ai/ha                      | Water<br>(L/ha)   |        |             | Fluxapyroxad     |                                 | M700F002 | M700F008 | M700F048 | Total*     |             |
|                                                                                   |             |                  |                                 |                   |        |             | Mean             | Individual                      |          |          |          | Individual | Mean        |
| GAP, USA                                                                          | 3           |                  | 97-<br>101                      |                   |        | 7           |                  |                                 |          |          |          |            |             |
| 2009/7006207<br>RCN R080635<br>USA<br>(Wayne, New<br>York)<br>2009<br>(Polbig F1) | 2           | 6                | 100<br><u>100</u><br>200        | 282<br>281        | Fruit  | 7           | 0.04             | 0.03                            | < LOD    | < LOD    | < LOD    | 0.03       | 0.04        |
|                                                                                   |             |                  |                                 |                   |        |             |                  | 0.04                            | < LOD    | < LOD    | < LOD    | 0.04       |             |
|                                                                                   |             |                  |                                 |                   |        | 14          | 0.03             | 0.02                            | < LOD    | < LOD    | < LOD    | 0.02       | 0.03        |
|                                                                                   |             |                  |                                 |                   |        |             |                  | 0.03                            | < LOD    | < 0.01   | < 0.01   | 0.03       |             |
|                                                                                   |             |                  |                                 |                   |        | 21          | 0.02             | 0.02                            | < LOD    | < LOD    | < 0.01   | 0.02       | 0.02        |
|                                                                                   |             |                  |                                 |                   |        |             |                  | 0.02                            | < LOD    | < 0.01   | < 0.01   | 0.02       |             |
|                                                                                   | 3           | 8<br>6           | 102<br>101<br><u>101</u><br>304 | 285<br>283<br>283 | Fruit  | 7           | <u>0.05</u>      | 0.03                            | < LOD    | < LOD    | < LOD    | 0.03       | <u>0.05</u> |
|                                                                                   |             |                  |                                 |                   |        |             |                  | 0.06                            | < LOD    | < LOD    | < LOD    | 0.06       |             |
|                                                                                   |             |                  |                                 |                   |        | 14          | 0.03             | 0.03                            | < LOD    | < 0.01   | < LOD    | 0.03       | 0.03        |
|                                                                                   |             |                  |                                 |                   |        |             |                  | 0.03                            | < LOD    | < LOD    | < LOD    | 0.03       |             |
|                                                                                   |             |                  |                                 |                   |        | 21          | 0.02             | 0.01                            | < LOD    | < LOD    | < LOD    | 0.01       | 0.02        |
|                                                                                   |             |                  |                                 |                   |        |             |                  | 0.02                            | < LOD    | < LOD    | < 0.01   | 0.02       |             |
| 2009/7006207<br>RCN R080636<br>USA<br>(Tift, Georgia)<br>2009<br>(Bella Rosa)     | 2           | 6                | 101<br><u>100</u><br>201        | 237<br>231        | Fruit  | 7           | <u>0.11</u>      | 0.12                            | < LOD    | < LOD    | < LOD    | 0.12       | <u>0.11</u> |
|                                                                                   |             |                  |                                 |                   |        |             |                  | 0.10                            | < LOD    | < LOD    | < LOD    | 0.10       |             |
|                                                                                   |             |                  |                                 |                   |        | 14          | < 0.01           | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01      |
|                                                                                   |             |                  |                                 |                   |        |             |                  | < 0.01                          | < 0.01   | < 0.01   | < 0.01   | < 0.01     |             |
|                                                                                   |             |                  |                                 |                   |        | 21          | 0.02             | (< 0.01,<br>0.02, 0.02)<br>0.02 | < LOD    | < LOD    | < LOD    | 0.02       | 0.02        |
|                                                                                   |             |                  |                                 |                   |        |             |                  | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     |             |
|                                                                                   | 3           | 7<br>6           | 101<br>101<br><u>100</u><br>302 | 230<br>236<br>231 | Fruit  | 7           | < 0.01           | < 0.01                          | < 0.01   | < 0.01   | < 0.01   | < 0.01     | < 0.01      |
|                                                                                   |             |                  |                                 |                   |        |             |                  | < 0.01                          | < LOD    | < LOD    | < LOD    | < 0.01     |             |
|                                                                                   |             |                  |                                 |                   |        | 14          | < 0.01           | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01      |
|                                                                                   |             |                  |                                 |                   |        |             |                  | < 0.01                          | 0.01     | < 0.01   | < 0.01   | < 0.01     |             |
|                                                                                   |             |                  |                                 |                   |        | 21          | 0.02             | (0.02,<br>0.02) 0.02            | < 0.01   | < 0.01   | < 0.01   | 0.02       | 0.02        |
|                                                                                   |             |                  |                                 |                   |        |             |                  | (< 0.01,<br>< 0.01)<br>< 0.01   | < LOD    | < LOD    | < LOD    | < 0.01     |             |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                | Application |                  |                          |                   | Matrix | PHI<br>days | Residues (mg/kg) |                                 |          |          |          |            |        |
|---------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|--------|-------------|------------------|---------------------------------|----------|----------|----------|------------|--------|
|                                                                                       | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |        |             | Fluxapyroxad     |                                 | M700F002 | M700F008 | M700F048 | Total*     |        |
|                                                                                       |             |                  |                          |                   |        |             | Mean             | Individual                      |          |          |          | Individual | Mean   |
| 2009/7006207<br>RCN R080637<br>USA<br>(Seminole,<br>Florida)<br>2008<br>(Better Boy)  | 2           | 7                | 102<br>101<br>203        | 285<br>284        | Fruit  | 7           | < 0.01           | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             |                  | < 0.01                          | < 0.01   | < 0.01   | < 0.01   | < 0.01     |        |
|                                                                                       |             |                  |                          |                   |        | 14          | 0.03             | (0.03,<br>0.03) 0.03            | < LOD    | < LOD    | < LOD    | 0.03       | 0.03   |
|                                                                                       |             |                  |                          |                   |        |             |                  | (< 0.01,<br>0.03, 0.04)<br>0.03 | < LOD    | < LOD    | < LOD    | 0.03       |        |
|                                                                                       |             |                  |                          |                   |        | 21          | 0.02             | (< 0.01,<br>0.02, 0.02)<br>0.01 | < 0.01   | < 0.01   | < 0.01   | 0.02       | 0.02   |
|                                                                                       |             |                  |                          |                   |        |             |                  | (0.01,<br>0.02) 0.02            | < LOD    | < LOD    | < LOD    | 0.02       |        |
|                                                                                       | 3           | 7<br>7           | 102<br>100<br>99<br>301  | 287<br>282<br>278 | Fruit  | 7           | < 0.01           | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             |                  | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     |        |
|                                                                                       |             |                  |                          |                   |        | 14          | < 0.01           | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             |                  | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     |        |
|                                                                                       |             |                  |                          |                   |        | 21          | < 0.01           | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             |                  | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2009/7006207<br>RCN R080638<br>USA<br>(Dane,<br>Wisconsin)<br>2009<br>(Celebrity)     | 2           | 7                | 99<br>100<br>199         | 199<br>262        | Fruit  | 7           | 0.02             | 0.02                            | < LOD    | < LOD    | < LOD    | 0.02       | 0.02   |
|                                                                                       |             |                  |                          |                   |        |             |                  | 0.02                            | < LOD    | < LOD    | < LOD    | 0.02       |        |
|                                                                                       |             |                  |                          |                   |        | 14          | 0.01             | 0.01                            | < LOD    | < LOD    | < LOD    | 0.01       | 0.01   |
|                                                                                       |             |                  |                          |                   |        |             |                  | 0.01                            | < LOD    | < LOD    | < LOD    | 0.01       |        |
|                                                                                       |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01                          | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             |                  | < 0.01                          | < LOD    | < LOD    | < LOD    | < 0.01     |        |
|                                                                                       | 3           | 7<br>7           | 100<br>103<br>101<br>304 | 280<br>207<br>263 | Fruit  | 7           | 0.05             | 0.04                            | < LOD    | < LOD    | < LOD    | 0.04       | 0.05   |
|                                                                                       |             |                  |                          |                   |        |             |                  | 0.05                            | < LOD    | < LOD    | < LOD    | 0.05       |        |
|                                                                                       |             |                  |                          |                   |        | 14          | 0.02             | 0.02                            | < LOD    | < LOD    | < LOD    | 0.02       | 0.02   |
|                                                                                       |             |                  |                          |                   |        |             |                  | 0.02                            | < LOD    | < LOD    | < LOD    | 0.02       |        |
|                                                                                       |             |                  |                          |                   |        | 21          | 0.01             | < 0.01                          | < LOD    | < LOD    | < LOD    | < 0.01     | 0.01   |
|                                                                                       |             |                  |                          |                   |        |             |                  | 0.01                            | < LOD    | < LOD    | < LOD    | 0.01       |        |
| 2009/7006207<br>RCN R080639<br>USA<br>Dane,<br>Wisconsin)<br>2009<br>(Mountain Fresh) | 2           | 7                | 101<br>100<br>201        | 203<br>261        | Fruit  | 7           | 0.02             | < 0.01                          | < LOD    | < LOD    | < LOD    | < 0.01     | 0.02   |
|                                                                                       |             |                  |                          |                   |        |             |                  | 0.02                            | < LOD    | < LOD    | < LOD    | 0.02       |        |
|                                                                                       |             |                  |                          |                   |        | 14          | 0.01             | 0.01                            | < 0.01   | < LOD    | < LOD    | 0.01       | 0.01   |
|                                                                                       |             |                  |                          |                   |        |             |                  | < 0.01                          | < LOD    | < LOD    | < LOD    | < 0.01     |        |
|                                                                                       |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01                          | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             |                  | < 0.01                          | < LOD    | < LOD    | < LOD    | < 0.01     |        |
|                                                                                       | 3           | 6<br>7           | 102<br>103<br>103<br>308 | 276<br>206<br>269 | Fruit  | 7           | 0.06             | 0.07                            | < 0.01   | < 0.01   | < LOD    | 0.07       | 0.06   |
|                                                                                       |             |                  |                          |                   |        |             |                  | 0.04                            | < LOD    | < LOD    | < LOD    | 0.04       |        |
|                                                                                       |             |                  |                          |                   |        | 14          | 0.03             | 0.03                            | < LOD    | < LOD    | < LOD    | 0.03       | 0.03   |
|                                                                                       |             |                  |                          |                   |        |             |                  | 0.02                            | < LOD    | < LOD    | < LOD    | 0.02       |        |
|                                                                                       |             |                  |                          |                   |        | 21          | 0.02             | 0.01                            | < LOD    | < LOD    | < LOD    | 0.01       | 0.02   |
|                                                                                       |             |                  |                          |                   |        |             |                  | 0.02                            | < 0.01   | < 0.01   | < LOD    | 0.02       |        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                      | Application |                  |                          |                   | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |        |
|-------------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|--------|-------------|------------------|------------|----------|----------|----------|------------|--------|
|                                                                                                             | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |        |
|                                                                                                             |             |                  |                          |                   |        |             | Mean             | Individual |          |          |          | Individual | Mean   |
| 2009/7006207<br>RCN R080640<br>USA<br>(Pepin,<br>Wisconsin)<br>2009<br>(Big Boy)                            | 2           | 6                | 103<br>100<br>203        | 192<br>187        | Fruit  | 7           | 0.02             | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       | 0.02   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       |        |
|                                                                                                             |             |                  |                          |                   |        | 14          | 0.02             | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       | 0.02   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       |        |
|                                                                                                             |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                             |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |        |
|                                                                                                             | 3           | 8<br>6           | 101<br>102<br>101<br>304 | 188<br>191<br>189 | Fruit  | 7           | 0.04             | 0.04       | < LOD    | < LOD    | < LOD    | 0.04       | 0.04   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.03       | < LOD    | < LOD    | < LOD    | 0.03       |        |
|                                                                                                             |             |                  |                          |                   |        | 14          | 0.02             | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       | 0.02   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       |        |
|                                                                                                             |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                             |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2009/7006207<br>RCN R080641<br>Canada<br>(RM of Portage<br>la Prairie,<br>Manitoba)<br>2009<br>(Basket Vee) | 2           | 7                | 100<br>98<br>198         | 251<br>246        | Fruit  | 7           | 0.06             | 0.05       | < LOD    | < LOD    | < LOD    | 0.05       | 0.06   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.06       | < LOD    | < LOD    | < LOD    | 0.06       |        |
|                                                                                                             |             |                  |                          |                   |        | 14          | 0.03             | 0.03       | < LOD    | < LOD    | < LOD    | 0.03       | 0.03   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.03       | < LOD    | < LOD    | < LOD    | 0.03       |        |
|                                                                                                             |             |                  |                          |                   |        | 21          | 0.03             | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       | 0.03   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.03       | < LOD    | < 0.01   | < LOD    | 0.03       |        |
|                                                                                                             | 3           | 6<br>7           | 98<br>100<br>98<br>296   | 245<br>250<br>245 | Fruit  | 7           | 0.08             | 0.08       | < LOD    | < 0.01   | < LOD    | 0.08       | 0.08   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.07       | < LOD    | < 0.01   | < LOD    | 0.07       |        |
|                                                                                                             |             |                  |                          |                   |        | 14          | 0.04             | 0.04       | < LOD    | < 0.01   | < LOD    | 0.04       | 0.04   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.04       | < LOD    | < 0.01   | < LOD    | 0.04       |        |
|                                                                                                             |             |                  |                          |                   |        | 21          | 0.04             | 0.04       | < LOD    | < 0.01   | < LOD    | 0.04       | 0.04   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.04       | < LOD    | < 0.01   | < LOD    | 0.04       |        |
| 2009/7006207<br>RCN R080642<br>Canada<br>(RM of Portage<br>la Prairie,<br>Manitoba)<br>2009<br>(Basket Vee) | 2           | 7                | 100<br>100<br>200        | 250<br>251        | Fruit  | 7           | 0.09             | 0.09       | < LOD    | < LOD    | < LOD    | 0.09       | 0.09   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.08       | < LOD    | < 0.01   | < LOD    | 0.08       |        |
|                                                                                                             |             |                  |                          |                   |        | 14          | 0.06             | 0.06       | < LOD    | < 0.01   | < LOD    | 0.06       | 0.06   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.05       | < LOD    | < LOD    | < LOD    | 0.05       |        |
|                                                                                                             |             |                  |                          |                   |        | 21          | 0.04             | 0.03       | < LOD    | < LOD    | < LOD    | 0.03       | 0.04   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.04       | < LOD    | < 0.01   | < LOD    | 0.04       |        |
|                                                                                                             | 3           | 6<br>7           | 99<br>101<br>100<br>300  | 249<br>252<br>250 | Fruit  | 7           | 0.07             | 0.06       | < LOD    | < 0.01   | < LOD    | 0.06       | 0.07   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.07       | < LOD    | < 0.01   | < LOD    | 0.07       |        |
|                                                                                                             |             |                  |                          |                   |        | 14          | 0.04             | 0.04       | < LOD    | < LOD    | < LOD    | 0.04       | 0.04   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.04       | < LOD    | < 0.01   | < LOD    | 0.04       |        |
|                                                                                                             |             |                  |                          |                   |        | 21          | 0.06             | 0.05       | < LOD    | < 0.01   | < 0.01   | 0.05       | 0.06   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.06       | < LOD    | < 0.01   | < 0.01   | 0.06       |        |
| 2009/7006207<br>RCN R080643<br>USA<br>(Stafford,<br>Kansas)<br>2009<br>(Heartland)                          | 2           | 7                | 100<br>100<br>200        | 188<br>187        | Fruit  | 7           | 0.02             | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       | 0.02   |
|                                                                                                             |             |                  |                          |                   |        |             |                  | 0.03       | < LOD    | < LOD    | < LOD    | 0.03       |        |
|                                                                                                             |             |                  |                          |                   |        | 14          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                             |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |        |
|                                                                                                             |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01     | < 0.01   | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                             |             |                  |                          |                   |        |             |                  | < LOD      | < 0.01   | < LOD    | < LOD    | < 0.01     |        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                 | Application |                  |                          |                   | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |        |      |
|----------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|--------|-------------|------------------|------------|----------|----------|----------|------------|--------|------|
|                                                                                        | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |        |      |
|                                                                                        |             |                  |                          |                   |        |             | Mean             | Individual |          |          |          | Individual | Mean   |      |
|                                                                                        | 3           | 7<br>7           | 100<br>102<br>105<br>307 | 186<br>192<br>196 | Fruit  | 7           | 0.07             | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       | 0.07   |      |
|                                                                                        |             |                  |                          |                   |        |             | 0.11             | < LOD      | < LOD    | < LOD    | 0.11     |            |        |      |
|                                                                                        |             |                  |                          |                   |        | 14          | 0.02             | 0.03       | < 0.01   | < LOD    | < LOD    | < LOD      | 0.03   | 0.02 |
|                                                                                        |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |        |      |
|                                                                                        |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | ND         | < 0.01   | < LOD    | < LOD    | ND         |        |      |
| 2009/7006207<br>RCN R080644<br>Canada<br>(Verchères,<br>Quebec)<br>2009<br>(Monica)    | 2           | 7                | 96<br>99<br>195          | 288<br>297        | Fruit  | 7           | 0.02             | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       | 0.02   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       |        |      |
|                                                                                        |             |                  |                          |                   |        | 14          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |        |      |
|                                                                                        |             |                  |                          |                   |        | 21          | 0.01             | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       | 0.01   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |        |      |
|                                                                                        | 3           | 6<br>7           | 105<br>99<br>102<br>306  | 317<br>297<br>307 | Fruit  | 7           | 0.02             | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       | 0.02   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       |        |      |
|                                                                                        |             |                  |                          |                   |        | 14          | 0.01             | 0.01       | < 0.01   | < LOD    | < LOD    | 0.01       | 0.01   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.01       | 0.01     | < 0.01   | < LOD    | 0.01       |        |      |
|                                                                                        |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01     | < 0.01   | < LOD    | < LOD    | < 0.01     | < 0.01 |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | < 0.01     | < 0.01   | < LOD    | < LOD    | < 0.01     |        |      |
| 2009/7006207<br>RCN R080645<br>Canada<br>(Verchères,<br>Quebec)<br>2009<br>(Brillante) | 2           | 6                | 99<br>101<br>200         | 297<br>303        | Fruit  | 7           | 0.02             | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       | 0.02   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       |        |      |
|                                                                                        |             |                  |                          |                   |        | 14          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |        |      |
|                                                                                        |             |                  |                          |                   |        | 21          | 0.01             | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       | 0.01   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |        |      |
|                                                                                        | 3           | 7<br>6           | 99<br>100<br>95<br>294   | 297<br>301<br>287 | Fruit  | 7           | 0.04             | 0.04       | < LOD    | < LOD    | < LOD    | 0.04       | 0.04   |      |
|                                                                                        |             |                  |                          |                   |        |             | 0.03             | < LOD      | < LOD    | < LOD    | 0.03     |            |        |      |
|                                                                                        |             |                  |                          |                   |        | 14          | 0.02             | 0.02       | < 0.01   | < LOD    | < LOD    | 0.02       | 0.02   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       |        |      |
|                                                                                        |             |                  |                          |                   |        | 21          | 0.02             | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       | 0.02   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       |        |      |
| 2009/7006207<br>RCN R080646<br>USA<br>(Cass, North<br>Dakota)<br>2009<br>(Early Girl)  | 2           | 7                | 100<br>99<br>199         | 235<br>231        | Fruit  | 7           | 0.07             | 0.09       | < 0.01   | < LOD    | < LOD    | 0.09       | 0.07   |      |
|                                                                                        |             |                  |                          |                   |        |             | 0.04             | < LOD      | < LOD    | < LOD    | 0.04     |            |        |      |
|                                                                                        |             |                  |                          |                   |        | 14          | 0.04             | 0.04       | < LOD    | < 0.01   | < LOD    | 0.04       | 0.04   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.03       | < LOD    | < 0.01   | < LOD    | 0.03       |        |      |
|                                                                                        |             |                  |                          |                   |        | 21          | 0.02             | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       | 0.02   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.03       | < LOD    | < 0.01   | < LOD    | 0.03       |        |      |
|                                                                                        | 3           | 7<br>7           | 103<br>100<br>102<br>305 | 241<br>235<br>239 | Fruit  | 7           | 0.05             | 0.05       | < LOD    | < LOD    | < LOD    | 0.05       | 0.05   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.04       | < LOD    | < LOD    | < LOD    | 0.04       |        |      |
|                                                                                        |             |                  |                          |                   |        | 14          | 0.03             | 0.03       | < LOD    | < 0.01   | < LOD    | 0.03       | 0.03   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.02       | < 0.01   | < 0.01   | < LOD    | 0.02       |        |      |
|                                                                                        |             |                  |                          |                   |        | 21          | 0.02             | 0.01       | 0.02     | < 0.01   | < LOD    | 0.01       | 0.02   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.02       | < LOD    | < 0.01   | < LOD    | 0.02       |        |      |
| 2009/7006207<br>RCN R080647<br>USA<br>(Tulare,<br>California)                          | 2           | 6                | 100<br>101<br>201        | 283<br>289        | Fruit  | 7           | 0.05             | 0.04       | < LOD    | < LOD    | < LOD    | 0.04       | 0.05   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.05       | < LOD    | < LOD    | < LOD    | 0.05       |        |      |
|                                                                                        |             |                  |                          |                   |        | 14          | 0.05             | 0.04       | < LOD    | < LOD    | < LOD    | 0.04       | 0.05   |      |
|                                                                                        |             |                  |                          |                   |        |             |                  | 0.05       | < LOD    | < LOD    | < LOD    | 0.05       |        |      |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)<br>2008<br>(Shady Lady)      | Application |                  |                          |                   | Matrix | PHI<br>days | Residues (mg/kg) |                               |          |          |          |            |        |
|-------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|--------|-------------|------------------|-------------------------------|----------|----------|----------|------------|--------|
|                                                                                     | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |        |             | Fluxapyroxad     |                               | M700F002 | M700F008 | M700F048 | Total*     |        |
|                                                                                     |             |                  |                          |                   |        |             | Mean             | Individual                    |          |          |          | Individual | Mean   |
|                                                                                     |             |                  |                          |                   |        |             |                  |                               |          |          |          |            |        |
| 3                                                                                   | 8           | 100              | 293                      | Fruit             | 7      | 0.04        | 0.04             | < LOD                         | < LOD    | < LOD    | 0.04     | 0.04       |        |
|                                                                                     | 6           | 99               | 282                      |                   |        |             | 0.06             | < LOD                         | < LOD    | < LOD    | 0.06     |            | 0.06   |
|                                                                                     |             | 99               | 286                      |                   |        |             | 0.06             | < LOD                         | < LOD    | < LOD    | 0.06     |            |        |
|                                                                                     |             | 298              |                          |                   |        | 14          | 0.05             | 0.05                          | < LOD    | < LOD    | < LOD    | 0.05       | 0.05   |
|                                                                                     |             |                  |                          |                   |        |             | 0.05             | < LOD                         | < LOD    | < LOD    | 0.05     |            |        |
|                                                                                     |             |                  |                          |                   |        | 21          | 0.08             | 0.08                          | < LOD    | < LOD    | < LOD    | 0.08       | 0.08   |
|                                                                                     |             |                  |                          |                   |        |             | 0.07             | < LOD                         | < LOD    | < LOD    | 0.07     |            |        |
| 2009/7006207<br>RCN R080648<br>USA<br>(Tulare,<br>California)<br>2008<br>(Sun 6117) | 2           | 8                | 100<br>101<br>201        | 283<br>286        | Fruit  | 7           | 0.03             | 0.03                          | < LOD    | < LOD    | < LOD    | 0.03       | 0.03   |
|                                                                                     |             |                  |                          |                   |        |             |                  | 0.03                          | < LOD    | < LOD    | < LOD    | 0.03       |        |
|                                                                                     |             |                  |                          |                   |        | 14          | 0.04             | 0.03                          | < LOD    | < LOD    | < LOD    | 0.03       | 0.04   |
|                                                                                     |             |                  |                          |                   |        |             |                  | 0.05                          | < LOD    | < LOD    | < LOD    | 0.05       |        |
|                                                                                     |             |                  |                          |                   |        | 21          | 0.04             | 0.03                          | < LOD    | < LOD    | < LOD    | 0.03       | 0.04   |
|                                                                                     |             |                  |                          |                   |        |             |                  | 0.04                          | < LOD    | < LOD    | < LOD    | 0.04       |        |
|                                                                                     | 3           | 6<br>8           | 100<br>100<br>101<br>301 | 288<br>283<br>286 | Fruit  | 7           | 0.03             | 0.03                          | < LOD    | < LOD    | < LOD    | 0.03       | 0.03   |
|                                                                                     |             |                  |                          |                   |        |             |                  | 0.03                          | < LOD    | < LOD    | < LOD    | 0.03       |        |
|                                                                                     |             |                  |                          |                   |        | 14          | 0.03             | 0.03                          | < LOD    | < LOD    | < LOD    | 0.03       | 0.03   |
|                                                                                     |             |                  |                          |                   |        |             |                  | 0.03                          | < LOD    | < LOD    | < LOD    | 0.03       |        |
|                                                                                     |             |                  |                          |                   |        | 21          | 0.04             | 0.03                          | < LOD    | < LOD    | < LOD    | 0.03       | 0.04   |
|                                                                                     |             |                  |                          |                   |        |             |                  | 0.04                          | < LOD    | < LOD    | < LOD    | 0.04       |        |
| 2009/7006207<br>RCN R080649<br>USA<br>(Tehama,<br>California)<br>2009<br>(APT 410)  | 2           | 7                | 98<br>98<br>196          | 185<br>185        | Fruit  | 7           | 0.03             | 0.01                          | < LOD    | < LOD    | < LOD    | 0.01       | 0.03   |
|                                                                                     |             |                  |                          |                   |        |             |                  | 0.04                          | < LOD    | < LOD    | < LOD    | 0.04       |        |
|                                                                                     |             |                  |                          |                   |        | 14          | < 0.01           | < 0.01                        | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |        |             |                  | < 0.01                        | < 0.01   | < LOD    | < LOD    | < 0.01     |        |
|                                                                                     |             |                  |                          |                   |        | 21          | < 0.01           | < LOD                         | < 0.01   | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |        |             |                  | < LOD                         | < 0.01   | < LOD    | < LOD    | < 0.01     |        |
|                                                                                     | 3           | 7<br>7           | 99<br>98<br>98<br>295    | 187<br>185<br>185 | Fruit  | 7           | 0.07             | 0.12                          | < LOD    | < LOD    | < LOD    | 0.12       | 0.07   |
|                                                                                     |             |                  |                          |                   |        |             |                  | 0.02                          | < LOD    | < LOD    | < LOD    | 0.02       |        |
|                                                                                     |             |                  |                          |                   |        | 14          | 0.02             | 0.02                          | < 0.01   | < LOD    | < LOD    | 0.02       | 0.02   |
|                                                                                     |             |                  |                          |                   |        |             |                  | 0.02                          | < LOD    | < LOD    | < LOD    | 0.02       |        |
|                                                                                     |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01                        | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |        |             |                  | < LOD                         | < 0.01   | < LOD    | < LOD    | < 0.01     |        |
| 2009/7006207<br>RCN R080650<br>USA<br>(Glenn,<br>California)<br>2009<br>(Sun 6366)  | 2           | 7                | 98<br>98<br>196          | 185<br>185        | Fruit  | 7           | 0.18             | (0.21,<br>0.13, 0.14)<br>0.16 | < LOD    | < LOD    | < LOD    | 0.16       | 0.18   |
|                                                                                     |             |                  |                          |                   |        |             |                  | (0.19,<br>0.19) 0.19          | < LOD    | < 0.01   | < LOD    | 0.19       |        |
|                                                                                     |             |                  |                          |                   |        | 14          | 0.14             | (0.14,<br>0.13) 0.14          | < LOD    | < 0.01   | < LOD    | 0.14       | 0.14   |
|                                                                                     |             |                  |                          |                   |        |             |                  | (0.16,<br>0.12, 0.11)<br>0.13 | < LOD    | < LOD    | < 0.01   | 0.13       |        |
|                                                                                     |             |                  |                          |                   |        | 21          | 0.17             | 0.19                          | < LOD    | < LOD    | < 0.01   | 0.19       | 0.17   |
|                                                                                     |             |                  |                          |                   |        |             |                  | 0.15                          | < LOD    | < LOD    | < 0.01   | 0.15       |        |
|                                                                                     | 3           | 7<br>7           | 98<br>98<br>98<br>294    | 185<br>185<br>185 | Fruit  | 7           | 0.44             | 0.41                          | < LOD    | < 0.01   | < LOD    | 0.41       | 0.44   |
|                                                                                     |             |                  |                          |                   |        |             |                  | 0.46                          | < LOD    | < 0.01   | < LOD    | 0.46       |        |
|                                                                                     |             |                  |                          |                   |        | 14          | 0.31             | 0.33                          | < LOD    | < LOD    | < 0.01   | 0.33       | 0.31   |
|                                                                                     |             |                  |                          |                   |        |             |                  | 0.29                          | < LOD    | < 0.01   | < 0.01   | 0.29       |        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                              | Application |                  |                          |                   | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |      |
|-----------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|--------|-------------|------------------|------------|----------|----------|----------|------------|------|
|                                                                                                     | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |      |
|                                                                                                     |             |                  |                          |                   |        |             | Mean             | Individual |          |          |          | Individual | Mean |
|                                                                                                     |             |                  |                          |                   |        |             |                  |            |          |          |          |            |      |
|                                                                                                     |             |                  |                          |                   | 21     | 0.19        | 0.22             | < LOD      | < LOD    | < 0.01   | 0.22     | 0.19       |      |
| 2009/7006207<br>RCN R080651<br>USA<br>(Fresno,<br>California)<br>2009<br>(AB8058)                   | 2           | 7                | 101<br>100<br>201        | 188<br>187        | Fruit  | 7           | 0.09             | 0.06       | < LOD    | < LOD    | < LOD    | 0.06       | 0.09 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.11       | < LOD    | < LOD    | < LOD    | 0.11       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.09       | < LOD    | < LOD    | < LOD    | 0.09       |      |
|                                                                                                     |             |                  |                          |                   |        | 14          | 0.09             | 0.09       | < LOD    | < LOD    | < LOD    | 0.09       | 0.09 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.09       | < LOD    | < LOD    | < LOD    | 0.09       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.06       | < LOD    | < LOD    | < LOD    | 0.06       |      |
|                                                                                                     | 3           | 7<br>7           | 100<br>100<br>100<br>300 | 187<br>188<br>187 | Fruit  | 7           | 0.10             | 0.11       | < LOD    | < LOD    | < LOD    | 0.11       | 0.10 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.08       | < LOD    | < LOD    | < LOD    | 0.08       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.08       | < LOD    | < LOD    | < LOD    | 0.08       |      |
|                                                                                                     |             |                  |                          |                   |        | 14          | 0.08             | 0.07       | < LOD    | < LOD    | < LOD    | 0.07       | 0.08 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.08       | < LOD    | < LOD    | < LOD    | 0.08       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.10       | < LOD    | < LOD    | < LOD    | 0.10       |      |
| 2009/7006207<br>RCN R080652<br>USA<br>(Fresno,<br>California)<br>2009<br>(2206)                     | 2           | -                | 100<br>101<br>201        | 187<br>188        | Fruit  | 7           | 0.12             | 0.13       | < LOD    | < LOD    | < LOD    | 0.13       | 0.12 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.10       | < LOD    | < LOD    | < LOD    | 0.10       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.05       | < LOD    | < LOD    | < LOD    | 0.05       |      |
|                                                                                                     |             |                  |                          |                   |        | 14          | 0.06             | 0.07       | < LOD    | < LOD    | < LOD    | 0.07       | 0.06 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.09       | < LOD    | < LOD    | < LOD    | 0.09       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.06       | < LOD    | < LOD    | < LOD    | 0.06       |      |
|                                                                                                     | 3           | -                | 99<br>101<br>101<br>301  | 185<br>189<br>188 | Fruit  | 7           | 0.13             | 0.15       | < LOD    | < LOD    | < LOD    | 0.15       | 0.13 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.10       | < LOD    | < LOD    | < LOD    | 0.10       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.09       | < LOD    | < LOD    | < LOD    | 0.09       |      |
|                                                                                                     |             |                  |                          |                   |        | 14          | 0.09             | 0.08       | < LOD    | < LOD    | < LOD    | 0.08       | 0.09 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.08       | < LOD    | < LOD    | < LOD    | 0.08       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.08       | < LOD    | < LOD    | < LOD    | 0.08       |      |
| 2009/7006207<br>RCN R080653<br>USA<br>(Tulare,<br>California)<br>2009<br>(Cherry Tomato<br>- Naomi) | 2           | -                | 100<br>100<br>200        | 281<br>282        | Fruit  | 7           | 0.13             | 0.13       | < LOD    | < LOD    | < LOD    | 0.13       | 0.13 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.12       | < LOD    | < LOD    | < LOD    | 0.12       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.11       | < LOD    | < LOD    | < LOD    | 0.11       |      |
|                                                                                                     |             |                  |                          |                   |        | 14          | 0.11             | 0.11       | < LOD    | < LOD    | < LOD    | 0.11       | 0.11 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.20       | < LOD    | < LOD    | < LOD    | 0.20       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.10       | < LOD    | < LOD    | < LOD    | 0.10       |      |
|                                                                                                     | 3           | -                | 100<br>100<br>100<br>300 | 285<br>281<br>282 | Fruit  | 7           | 0.24             | 0.25       | < LOD    | < LOD    | < LOD    | 0.25       | 0.24 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.22       | < LOD    | < LOD    | < LOD    | 0.22       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.28       | < LOD    | < LOD    | < LOD    | 0.28       |      |
|                                                                                                     |             |                  |                          |                   |        | 14          | 0.27             | 0.25       | < LOD    | < LOD    | < LOD    | 0.25       | 0.27 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.16       | < LOD    | < LOD    | < LOD    | 0.16       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.16       | < LOD    | < LOD    | < LOD    | 0.16       |      |
| 2009/7006207<br>RCN R080654<br>USA<br>(Fresno,<br>California)<br>2009<br>(Cherry Tomato<br>- Naomi) | 2           | -                | 100<br>99<br>199         | 188<br>186        | Fruit  | 7           | 0.07             | 0.10       | < LOD    | < LOD    | < LOD    | 0.10       | 0.07 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.04       | < LOD    | < LOD    | < LOD    | 0.04       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.03       | < LOD    | < LOD    | < LOD    | 0.03       |      |
|                                                                                                     |             |                  |                          |                   |        | 14          | 0.03             | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       | 0.03 |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.03       | < LOD    | < LOD    | < LOD    | 0.03       |      |
|                                                                                                     |             |                  |                          |                   |        |             |                  | 0.02       | < 0.01   | < LOD    | < LOD    | 0.02       |      |
| 21                                                                                                  | 0.02        | 0.02             | < 0.01                   | < LOD             | < LOD  | 0.02        | 0.02             |            |          |          |          |            |      |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety) | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |      |
|--------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|------------------|------------|----------|----------|----------|------------|------|
|                                                        | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |      |
|                                                        |             |                  |            |                 |        |             | Mean             | Individual |          |          |          | Individual | Mean |
|                                                        |             |                  |            |                 |        |             |                  |            |          |          |          |            |      |
|                                                        | 3           | -                | 100        | 187             | Fruit  | 7           |                  | 0.09       | < LOD    | < LOD    | < LOD    | 0.09       | 0.07 |
|                                                        |             |                  | 100        | 187             |        |             | 0.07             | 0.05       | < LOD    | < LOD    | < LOD    | 0.05       |      |
|                                                        |             |                  | 100        | 187             |        | 14          | 0.06             | 0.06       | < LOD    | < LOD    | < LOD    | 0.06       | 0.06 |
|                                                        |             |                  | 300        | 0.05            |        |             |                  | < LOD      | < LOD    | < LOD    | 0.05     |            |      |
|                                                        |             |                  | 21         | 0.05            |        | 0.04        | < LOD            | < LOD      | < LOD    | 0.04     | 0.05     |            |      |
|                                                        |             |                  |            |                 |        | 0.06        | < LOD            | < LOD      | < LOD    | 0.06     |          |            |      |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 81 Residues from the foliar application of fluxapyroxad to peppers (bell and non-bell) in the USA and Canada (White 2010, 2009/7006207)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                   | Application |                  |                                |                   | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |             |        |        |
|----------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------------|-------------------|--------|-------------|------------------|------------|----------|----------|----------|------------|-------------|--------|--------|
|                                                                                                          | No          | Interval<br>Days | g<br>ai/ha                     | Water<br>(L/ha)   |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total *    |             |        |        |
|                                                                                                          |             |                  |                                |                   |        |             | Mean             | Individual |          |          |          | Individual | Mean        |        |        |
| GAP, USA                                                                                                 | 3           |                  | 97-<br>101                     |                   |        | 7           |                  |            |          |          |          |            |             |        |        |
| 2009/7006207<br>RCN<br>R080655<br>USA<br>(Tift, Georgia)<br>2009<br>(Bell Pepper -<br>Aristotle)         | 2           | 6                | 99<br>99<br>198                | 197<br>194        | Fruit  | 7           | <u>0.01</u>      | 0.01       | < LOD    | 0.02     | < LOD    | 0.03       | <u>0.03</u> |        |        |
|                                                                                                          |             |                  |                                |                   |        |             |                  | 0.01       | < LOD    | 0.02     | < LOD    | 0.03       |             |        |        |
|                                                                                                          |             |                  |                                |                   |        | 14          | < 0.01           | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     | < LOD       | < 0.01 |        |
|                                                                                                          |             |                  |                                |                   |        |             |                  | < 0.01     | < LOD    | 0.01     | < LOD    | 0.01       |             |        |        |
|                                                                                                          |             |                  |                                |                   |        | 21          | < 0.01           | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     | < LOD       | < 0.01 | < 0.01 |
|                                                                                                          |             |                  |                                |                   |        |             |                  | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     |             |        |        |
|                                                                                                          | 3           | 7<br>6           | 100<br>99<br><u>100</u><br>299 | 201<br>199<br>196 | Fruit  | 7           | 0.01             | 0.01       | < LOD    | 0.02     | < LOD    | 0.03       | 0.03        |        |        |
|                                                                                                          |             |                  |                                |                   |        |             |                  | 0.01       | < LOD    | 0.01     | < LOD    | 0.02       |             |        |        |
|                                                                                                          |             |                  |                                |                   |        | 14          | < 0.01           | < 0.01     | < LOD    | 0.01     | < LOD    | 0.01       | < LOD       | 0.01   | 0.01   |
|                                                                                                          |             |                  |                                |                   |        |             |                  | < 0.01     | < LOD    | 0.01     | < LOD    | 0.01       |             |        |        |
|                                                                                                          |             |                  |                                |                   |        | 21          | < 0.01           | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     | < LOD       | < 0.01 | < 0.01 |
|                                                                                                          |             |                  |                                |                   |        |             |                  | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     |             |        |        |
| 2009/7006207<br>RCN<br>R080656<br>USA<br>(Seminole,<br>Florida)<br>2008<br>(Bell Pepper –<br>Sweet Bell) | 2           | 7                | 103<br><u>100</u><br>203       | 289<br>281        | Fruit  | 7           | 0.08             | 0.07       | < LOD    | 0.04     | < LOD    | 0.11       | 0.12        |        |        |
|                                                                                                          |             |                  |                                |                   |        |             |                  | 0.08       | < LOD    | 0.04     | < LOD    | 0.12       |             |        |        |
|                                                                                                          |             |                  |                                |                   |        | 14          | 0.02             | 0.02       | < LOD    | 0.03     | < LOD    | 0.05       | 0.06        |        |        |
|                                                                                                          |             |                  |                                |                   |        |             |                  | 0.02       | < LOD    | 0.04     | < LOD    | 0.06       |             |        |        |
|                                                                                                          |             |                  |                                |                   |        | 21          | < 0.01           | < 0.01     | < 0.01   | 0.02     | < LOD    | 0.02       | 0.02        |        |        |
|                                                                                                          |             |                  |                                |                   |        |             |                  | < 0.01     | < 0.01   | 0.01     | < LOD    | 0.01       |             |        |        |
|                                                                                                          | 3           | 7<br>7           | 98<br>100<br><u>99</u><br>297  | 276<br>282<br>279 | Fruit  | 7           | <u>0.09</u>      | 0.09       | < 0.01   | 0.05     | < 0.01   | 0.14       | <u>0.15</u> |        |        |
|                                                                                                          |             |                  |                                |                   |        |             |                  | 0.09       | < LOD    | 0.06     | < 0.01   | 0.15       |             |        |        |
|                                                                                                          |             |                  |                                |                   |        | 14          | 0.02             | 0.02       | < LOD    | 0.03     | < LOD    | 0.05       | 0.06        |        |        |
|                                                                                                          |             |                  |                                |                   |        |             |                  | 0.02       | < LOD    | 0.04     | < LOD    | 0.06       |             |        |        |
|                                                                                                          |             |                  |                                |                   |        | 21          | < 0.01           | < 0.01     | < 0.01   | 0.01     | < LOD    | 0.01       | 0.01        |        |        |
|                                                                                                          |             |                  |                                |                   |        |             |                  | < 0.01     | 0.02     | 0.01     | < LOD    | 0.01       |             |        |        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                                                       | Application |                  |                                 |                   | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|---------------------------------|-------------------|--------|-------------|------------------|------------|----------|----------|----------|------------|------------------|
|                                                                                                                                              | No          | Interval<br>Days | g<br>ai/ha                      | Water<br>(L/ha)   |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total *    |                  |
|                                                                                                                                              |             |                  |                                 |                   |        |             | Mean             | Individual |          |          |          | Individual | Mean             |
| 2009/7006207<br>RCN<br>R080657<br>USA<br>(Dane,<br>Wisconsin)<br>2009<br>(Bell Pepper –<br>King Arthur)                                      | 2           | 7                | 100<br><u>101</u><br>201        | 201<br>263        | Fruit  | 7           | 0.01             | 0.01       | < LOD    | < 0.01   | < LOD    | 0.01       | 0.01             |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 14          | 0.01             | 0.01       | < LOD    | 0.01     | < LOD    | 0.02       | 0.02             |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 21          | < 0.01           | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     | < 0.01           |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     |                  |
|                                                                                                                                              | 3           | 7<br>7           | 102<br>98<br><u>101</u><br>301  | 278<br>196<br>262 | Fruit  | 7           | <u>0.02</u>      | 0.03       | < LOD    | 0.01     | < LOD    | 0.04       | <u>0.03</u>      |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | 0.01       | < LOD    | 0.01     | < LOD    | 0.02       |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 14          | < 0.01           | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     | < 0.01           |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 21          | < 0.01           | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     | < 0.01           |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     |                  |
| 2009/7006207<br>RCN<br>R080658<br>Canada<br>(RM of<br>Portage la<br>Prairie,<br>Manitoba)<br>2009<br>(Bell Pepper –<br>Green Bell<br>Pepper) | 2           | 7                | 100<br><u>99</u><br>199         | 250<br>247        | Fruit  | 7           | <u>0.04</u>      | 0.04       | < LOD    | 0.03     | < LOD    | 0.07       | <u>0.06</u>      |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | 0.03       | < LOD    | 0.02     | < LOD    | 0.05       |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 14          | < 0.01           | < 0.01     | < LOD    | 0.01     | < LOD    | 0.01       | 0.01             |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < 0.01     | < LOD    | 0.01     | < LOD    | 0.01       |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 21          | < 0.01           | < 0.01     | < LOD    | 0.02     | < LOD    | 0.02       | 0.02             |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < 0.01     | < LOD    | 0.02     | < 0.01   | 0.02       |                  |
|                                                                                                                                              | 3           | 6<br>7           | 100<br>101<br><u>98</u><br>299  | 250<br>253<br>246 | Fruit  | 7           | 0.03             | 0.02       | < LOD    | 0.02     | < LOD    | 0.04       | 0.05             |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | 0.03       | < LOD    | 0.02     | < LOD    | 0.05       |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 14          | 0.01             | < 0.01     | < LOD    | 0.02     | < LOD    | 0.02       | 0.03             |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | 0.01       | < LOD    | 0.02     | < 0.01   | 0.03       |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 21          | 0.01             | 0.01       | < LOD    | 0.02     | < LOD    | 0.03       | 0.03             |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < 0.01     | < LOD    | 0.02     | < LOD    | 0.02       |                  |
| 2009/7006207<br>RCN<br>R080659<br>USA<br>(Stafford,<br>Kansas)<br>2009<br>(Bell Pepper –<br>Better Belle)                                    | 2           | 7                | 106<br><u>103</u><br>209        | 199<br>193        | Fruit  | 7           | < 0.01           | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     | < 0.01           |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 14          | <u>0.01</u>      | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     | <u>0.01</u>      |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | 0.01       | < LOD    | < 0.01   | < LOD    | 0.01       |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01           |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < LOD      | < 0.01   | < LOD    | < LOD    | < 0.01     |                  |
|                                                                                                                                              | 3           | 7<br>7           | 103<br>105<br><u>100</u><br>308 | 193<br>197<br>188 | Fruit  | 7           | < 0.01           | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     | < 0.01           |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 14          | < 0.01           | < LOD      | < 0.01   | < 0.01   | < LOD    | < 0.01     | < 0.01           |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < LOD      | < 0.01   | < 0.01   | < LOD    | < 0.01     |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 21          | < 0.01           | < LOD      | < 0.01   | < LOD    | < LOD    | < 0.01     | < 0.01           |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < LOD      | < 0.01   | < LOD    | < LOD    | < 0.01     |                  |
| 2009/7006207<br>RCN<br>R080660<br>Canada<br>(Verchères,<br>Quebec)<br>2009<br>(Bell Pepper –<br>Aristotle)                                   | 2           | 6                | 99<br><u>103</u><br>202         | 297<br>309        | Fruit  | 7           | <u>&lt; 0.01</u> | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     | <u>&lt; 0.01</u> |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 14          | < 0.01           | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     | < 0.01           |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 21          | < 0.01           | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     | < 0.01           |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |                  |
|                                                                                                                                              | 3           | 7<br>6           | 99<br>99<br><u>101</u><br>299   | 296<br>298<br>303 | Fruit  | 7           | < 0.01           | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     | < 0.01           |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < 0.01     | < 0.01   | < 0.01   | < LOD    | < 0.01     |                  |
|                                                                                                                                              |             |                  |                                 |                   |        | 14          | < 0.01           | < 0.01     | < 0.01   | < 0.01   | < LOD    | < 0.01     | < 0.01           |
|                                                                                                                                              |             |                  |                                 |                   |        |             |                  | < LOD      | < LOD    | < 0.01   | < LOD    | < 0.01     |                  |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                              | Application |                  |                          |                   | Matrix | PHI<br>days | Residues (mg/kg) |            |          |                      |          |            |        |
|---------------------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|--------|-------------|------------------|------------|----------|----------------------|----------|------------|--------|
|                                                                                                                     | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |        |             | Fluxapyroxad     |            | M700F002 | M700F008             | M700F048 | Total *    |        |
|                                                                                                                     |             |                  |                          |                   |        |             | Mean             | Individual |          |                      |          | Individual | Mean   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  |            |          |                      |          |            |        |
|                                                                                                                     |             |                  |                          |                   | 21     | < 0.01      | < LOD            | < 0.01     | < 0.01   | < LOD                | < 0.01   | < 0.01     | < 0.01 |
| 2009/7006207<br>RCN<br>R080661<br>USA<br>(Cass, North<br>Dakota)<br>2009<br>(Bell Pepper –<br>California<br>Wonder) | 2           | 7                | 103<br>99<br>202         | 240<br>231        | Fruit  | 7           | 0.08             | 0.07       | < LOD    | 0.06                 | < LOD    | 0.13       | 0.14   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.08       | < LOD    | 0.06                 | < LOD    | 0.14       |        |
|                                                                                                                     |             |                  |                          |                   |        | 14          | 0.03             | 0.02       | < LOD    | 0.03                 | < LOD    | 0.05       | 0.06   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.03       | < LOD    | 0.04                 | < LOD    | 0.07       |        |
|                                                                                                                     |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01     | < LOD    | 0.03                 | < LOD    | 0.03       | 0.03   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | 0.02                 | < LOD    | 0.02       |        |
|                                                                                                                     | 3           | 7<br>7           | 101<br>101<br>103<br>305 | 235<br>236<br>240 | Fruit  | 7           | 0.09             | 0.10       | < LOD    | 0.09                 | < 0.01   | 0.19       | 0.16   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.07       | < LOD    | 0.06                 | < 0.01   | 0.13       |        |
|                                                                                                                     |             |                  |                          |                   |        | 14          | 0.04             | 0.04       | < LOD    | 0.06                 | < 0.01   | 0.10       | 0.10   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.04       | < LOD    | 0.06                 | < 0.01   | 0.10       |        |
|                                                                                                                     |             |                  |                          |                   |        | 21          | 0.02             | < 0.01     | < LOD    | 0.02                 | < LOD    | 0.02       | 0.04   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.02       | < LOD    | 0.04                 | < LOD    | 0.06       |        |
| 2009/7006207<br>RCN<br>R080662<br>USA<br>(Tehama,<br>California)<br>2009<br>(Bell Pepper –<br>Green Bell)           | 2           | 7                | 99<br>98<br>197          | 187<br>185        | Fruit  | 7           | 0.10             | 0.12       | < LOD    | 0.07                 | < 0.01   | 0.19       | 0.16   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.07       | < LOD    | 0.05                 | < 0.01   | 0.12       |        |
|                                                                                                                     |             |                  |                          |                   |        | 14          | 0.04             | 0.03       | < LOD    | 0.03                 | < 0.01   | 0.06       | 0.07   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.04       | < LOD    | 0.03                 | < 0.01   | 0.07       |        |
|                                                                                                                     |             |                  |                          |                   |        | 21          | 0.01             | 0.01       | < LOD    | 0.01                 | < LOD    | 0.02       | 0.02   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | < 0.01               | < 0.01   | < 0.01     |        |
|                                                                                                                     | 3           | 7<br>7           | 98<br>99<br>98<br>295    | 185<br>186<br>185 | Fruit  | 7           | 0.24             | 0.29       | < LOD    | 0.15                 | < 0.01   | 0.44       | 0.37   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.18       | < LOD    | (0.11,<br>0.13) 0.12 | < 0.01   | 0.30       |        |
|                                                                                                                     |             |                  |                          |                   |        | 14          | 0.12             | 0.09       | < LOD    | 0.08                 | < 0.01   | 0.17       | 0.20   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.14       | < LOD    | (0.08,<br>0.09) 0.09 | < 0.01   | 0.23       |        |
|                                                                                                                     |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01     | < LOD    | 0.01                 | < 0.01   | 0.01       | 0.01   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | < 0.01               | < LOD    | < 0.01     |        |
| 2009/7006207<br>RCN<br>R080663<br>USA<br>(Fresno,<br>California)<br>2009<br>(Non-bell<br>Pepper – Hot<br>chili)     | 2           | 7                | 100<br>100<br>200        | 188<br>188        | Fruit  | 7           | 0.01             | < 0.01     | < LOD    | < 0.01               | < LOD    | < 0.01     | 0.01   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.01       | < LOD    | < 0.01               | < LOD    | 0.01       |        |
|                                                                                                                     |             |                  |                          |                   |        | 14          | < 0.01           | < 0.01     | < 0.01   | < 0.01               | < LOD    | < 0.01     | < 0.01 |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | < 0.01     | < 0.01   | < 0.01               | < LOD    | < 0.01     |        |
|                                                                                                                     |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01     | 0.01     | < 0.01               | < LOD    | < 0.01     | < 0.01 |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | < 0.01               | < LOD    | < 0.01     |        |
|                                                                                                                     | 3           | 7<br>7           | 99<br>100<br>100<br>299  | 186<br>188<br>188 | Fruit  | 7           | 0.02             | 0.02       | < LOD    | 0.02                 | < LOD    | 0.04       | 0.03   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.01       | < 0.01   | 0.01                 | < LOD    | 0.02       |        |
|                                                                                                                     |             |                  |                          |                   |        | 14          | 0.01             | < 0.01     | < 0.01   | < 0.01               | < 0.01   | < 0.01     | 0.02   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.01       | 0.01     | 0.01                 | < 0.01   | 0.02       |        |
|                                                                                                                     |             |                  |                          |                   |        | 21          | 0.01             | 0.01       | < LOD    | < 0.01               | < 0.01   | 0.01       | 0.01   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | < 0.01     | < LOD    | 0.01                 | < 0.01   | 0.01       |        |
| 2009/7006207<br>RCN<br>R080664<br>USA<br>(Uvalde,<br>Texas)<br>2008<br>(Non-bell                                    | 2           | 7                | 99<br>100<br>199         | 278<br>279        | Fruit  | 7           | 0.19             | 0.19       | < LOD    | < 0.01               | < LOD    | 0.19       | 0.19   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.19       | < LOD    | < 0.01               | < LOD    | 0.19       |        |
|                                                                                                                     |             |                  |                          |                   |        | 14          | 0.16             | 0.17       | < LOD    | < 0.01               | < LOD    | 0.17       | 0.16   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.14       | < LOD    | < 0.01               | < LOD    | 0.14       |        |
|                                                                                                                     |             |                  |                          |                   |        | 21          | 0.07             | 0.09       | < LOD    | 0.01                 | < LOD    | 0.10       | 0.09   |
|                                                                                                                     |             |                  |                          |                   |        |             |                  | 0.05       | < LOD    | 0.02                 | < 0.01   | 0.07       |        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)<br><br>Pepper –<br>Jalapeno M) | Application |                  |                          |                   | Matrix | PHI<br>days | Residues (mg/kg) |                     |                |          |                 |              |             |
|---------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|--------|-------------|------------------|---------------------|----------------|----------|-----------------|--------------|-------------|
|                                                                                       | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |        |             | Fluxapyroxad     |                     | M700F002       | M700F008 | M700F048        | Total *      |             |
|                                                                                       |             |                  |                          |                   |        |             | Mean             | Individual          |                |          |                 | Individual   | Mean        |
|                                                                                       |             |                  |                          |                   |        |             |                  |                     |                |          |                 |              |             |
|                                                                                       | 3           | 7<br>7           | 101<br>100<br>100<br>301 | 284<br>280<br>281 | Fruit  | 7           | 0.30             | 0.28<br><u>0.30</u> | < LOD<br>0.31  | 0.02     | < LOD           | 0.30<br>0.33 | <u>0.32</u> |
|                                                                                       |             |                  |                          |                   |        | 14          | 0.24             | 0.25<br>0.23        | < LOD<br>< LOD | 0.02     | < LOD           | 0.27<br>0.25 | 0.26        |
|                                                                                       |             |                  |                          |                   |        | 21          | 0.06             | 0.05<br>0.07        | < LOD<br>< LOD | 0.02     | < 0.01<br>< LOD | 0.07<br>0.09 | 0.08        |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out on field corn and sweet corn (Table 82) in the USA and Canada during the 2008 growing seasons (White 2010, 2010/7003693). At each site one untreated control plot and two treated plots were established. Two foliar applications of a 62.5 g/L EC formulation were made at 98–102 g ai/ha (196–202 g ai/ha/season). Retreatment intervals were 7 days. Applications were made to plots using spray volumes of 150–286 L/ha with ground equipment. An adjuvant was added to the spray mixture for all applications. Field corn/sweet corn fresh kernels plus cob with husks removed samples were harvested targeting  $7 \pm 1$  DALA. Residues were quantitated by LC/MS/MS method L0137/01. Concurrent recoveries were acceptable.

Table 82 Residues from the foliar application of fluxapyroxad to field and sweet corn in the USA and Canada (White 2010, 2010/7003693)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                                              | Application |                      |                   |                     | Matrix | PHI<br>days   | Residues (mg/kg)                         |                |                |                  |                |                  |                                          |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|-------------------|---------------------|--------|---------------|------------------------------------------|----------------|----------------|------------------|----------------|------------------|------------------------------------------|
|                                                                                                                                     | No          | Interva<br>l<br>Days | g<br>ai/h<br>a    | Water<br>(L/ha<br>) |        |               | Fluxapyroxad                             |                | M700F002       | M700F008         | M700F048       | Total*           |                                          |
|                                                                                                                                     |             |                      |                   |                     |        |               | Mean                                     | Individual     |                |                  |                | Individual       | Mean                                     |
| GAP, USA                                                                                                                            | 2           |                      | 97-100            |                     |        | 7<br>(K+CWHR) |                                          |                |                |                  |                |                  |                                          |
| 2010/7003693<br>RCN<br>R080385<br>USA<br>(Pepin,<br>Wisconsin)<br>2008<br>(Field corn –<br>P-38 g16)                                | 2           | 7                    | 101<br>101<br>202 | 189<br>189          | K+CWHR | 7             | <br><br><br><u>&lt; 0.01</u><br><u>1</u> | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD   | < LOD<br>< LOD | < 0.01<br>< 0.01 | <br><br><br><u>&lt; 0.01</u><br><u>1</u> |
| 2010/7003693<br>RCN<br>R080386<br>Canada<br>(RM of<br>Portage la<br>Prairie,<br>Manitoba)<br>2008<br>(Field corn –<br>Dekalb 26-79) | 2           | 7                    | 99<br>101<br>200  | 188<br>187          | K+CWHR | 7             | <br><br><br><u>0.08</u>                  | 0.07<br>0.09   | < LOD<br>< LOD | < 0.01<br>< 0.01 | < LOD<br>< LOD | 0.07<br>0.09     | <br><br><br><u>0.08</u>                  |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                           | Application |                  |                   |                     | Matrix     | PHI<br>days | Residues (mg/kg) |                |                |                |                |                  |                  |
|------------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|---------------------|------------|-------------|------------------|----------------|----------------|----------------|----------------|------------------|------------------|
|                                                                                                                  | No          | Interval<br>Days | g<br>ai/h<br>a    | Water<br>(L/ha<br>) |            |             | Fluxapyroxad     |                | M700F00<br>2   | M700F00<br>8   | M700F04<br>8   | Total*           |                  |
|                                                                                                                  |             |                  |                   |                     |            |             | Mean             | Individual     |                |                |                | Individual       | Mean             |
| 2010/7003693<br>RCN<br>R080388<br>USA<br>(York,<br>Nebraska)<br>2008<br>(Field corn –<br>34F96)                  | 2           | 7                | 101<br>100<br>201 | 188<br>188          | K+CWH<br>R | 7           |                  | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 |
|                                                                                                                  |             |                  |                   |                     |            |             | < 0.01           |                |                |                |                |                  | < 0.01           |
| 2010/7003693<br>RCN<br>R080394<br>USA<br>(Stoddard,<br>Missouri)<br>2008<br>(Field corn –<br>31P42)              | 2           | 7                | 99<br>99<br>198   | 185<br>185          | K+CWH<br>R | 7           |                  | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 |
|                                                                                                                  |             |                  |                   |                     |            |             | < 0.01           |                |                |                |                |                  | < 0.01           |
| 2010/7003693<br>RCN<br>R080398<br>USA<br>(Clarke,<br>Georgia)<br>2008<br>(Sweet corn-<br>Silver Queen)           | 2           | 7                | 98<br>98<br>196   | 286<br>233          | K+CWH<br>R | 7           |                  | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 |
|                                                                                                                  |             |                  |                   |                     |            |             | < 0.01           |                |                |                |                |                  | < 0.01           |
| 2010/7003693<br>RCN<br>R080399<br>Canada<br>(MD of<br>Taber,<br>Alberta)<br>2008<br>(Sweet corn-<br>Super Sweet) | 2           | 7                | 101<br>99<br>200  | 152<br>150          | K+CWH<br>R | 5           |                  | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 |
|                                                                                                                  |             |                  |                   |                     |            |             | < 0.01           |                |                |                |                |                  | < 0.01           |
| 2010/7003693<br>RCN<br>R080400<br>USA<br>(Fresno,<br>California)<br>2008<br>(Sweet corn-<br>Bodacious)           | 2           | 7                | 99<br>98<br>197   | 277<br>276          | K+CWH<br>R | 7           |                  | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 |
|                                                                                                                  |             |                  |                   |                     |            |             | < 0.01           |                |                |                |                |                  | < 0.01           |
| 2010/7003693<br>RCN<br>R080401<br>USA<br>(Payette,<br>Idaho)<br>2008<br>(Sweet corn -<br>Bodacious)              | 2           | 7                | 102<br>100<br>202 | 190<br>187          | K+CWH<br>R | 7           |                  | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD | < LOD<br>< LOD | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 |
|                                                                                                                  |             |                  |                   |                     |            |             | < 0.01           |                |                |                |                |                  | < 0.01           |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                        | Application |                  |                |                     | Matrix     | PHI<br>days | Residues (mg/kg)     |            |              |              |              |            |                      |
|---------------------------------------------------------------------------------------------------------------|-------------|------------------|----------------|---------------------|------------|-------------|----------------------|------------|--------------|--------------|--------------|------------|----------------------|
|                                                                                                               | No          | Interval<br>Days | g<br>ai/h<br>a | Water<br>(L/ha<br>) |            |             | Fluxapyroxad         |            | M700F00<br>2 | M700F00<br>8 | M700F04<br>8 | Total*     |                      |
|                                                                                                               |             |                  |                |                     |            |             | Mean                 | Individual |              |              |              | Individual | Mean                 |
| 2010/700369<br>3<br>RCN<br>R080144<br>USA<br>(Hood River,<br>Oregon)<br>2008<br>(Sweet corn -<br>Serendipity) | 2           | 7                | 99             | 187                 | K+CWH<br>R | 7           |                      | < LOD      | < LOD        | < LOD        | < LOD        | < 0.01     |                      |
|                                                                                                               |             |                  | 99             | 186                 |            |             | < LOD                | < LOD      | < LOD        | < LOD        | < 0.01       |            |                      |
|                                                                                                               |             |                  | 198            |                     |            |             |                      |            |              |              |              |            |                      |
|                                                                                                               |             |                  |                |                     |            |             | <u>&lt; 0.0</u><br>1 |            |              |              |              |            | <u>&lt; 0.0</u><br>1 |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

### Legume vegetables

Supervised trials were carried out on garden peas (nine trials – Tables 83), dry (field) peas (nine trials – Table 85), soya beans (15 trials – Tables 84 and 87) and various dry beans (11 trials – Table 86) in the USA and Canada during the 2008 growing season (Johnston 2010, 2010/7003486). At each site one untreated control plot and two treated plots were established. Two foliar applications of a 62.5 g/L EC formulation of fluxapyroxad were made at 93–105 g ai/ha. Retreatment intervals were 6–8 days (187–207 g ai/ha/season). For dry beans the second treated plot at each location received actual rates of 196–210 g ai/ha with a 6–9 day retreatment interval (398–413 g ai/ha/season). Applications were made to plots using spray volumes of 116–329 L/ha with ground equipment (*e.g.*, tractor-mounted sprayer or backpack sprayer). An adjuvant was added to the spray mixture for all applications. Pea and soya bean immature RAC samples (succulent seed with and without pod) were harvested targeting  $7 \pm 1$  DALA and targeting growth stage BBCH 73–77) and were harvested at 6–8 DALA except at one trial (RCN R080346) where the RAC samples were collected at 4 DALA because the crop developed more quickly and at another (RCN R080377) at 28 DALA because weather conditions delayed crop development.

Samples were harvested by hand and a portion was hand- or mechanically-shelled to generate the immature shelled RAC samples (succulent seed without pod) with the remainder becoming the immature edible succulent podded RAC samples (succulent seed with pod). Soya bean foliage (forage) and hay samples or pea vines and hay were harvested at the same time the succulent pods were collected; the pods were removed as part of the collection of the succulent pods. The hay samples were air-dried under ambient conditions but protected from rain to a moisture content typical of dry hay. Mature pea, soya bean and dry bean samples (mature dried seed) were harvested at normal maturity, targeting  $21 \pm 1$  DALA (actual 20–22 DALA). The dry shelled seed was collected from fully mature plants (targeting growth stage BBCH 99). In addition at four sites (succulent pea, two trials at Illinois and Washington and soya bean, two trials at Manitoba) additional treated samples were collected at two to three additional sampling intervals to examine residue decline targeting 0, 4 and 14 DALA. Residues were quantitated using LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Residues in pea vines and hay are shown in Table 108 and residues in soya bean forage and hay are shown in Table 109.

Table 83 Residues from the foliar application of fluxapyroxad to garden peas in the USA and Canada (Johnston 2010, 2010/7003486)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                        | Application |                  |                          |                 | Matrix                              | PHI<br>days | Residues (mg/kg) |                         |                              |                               |                            |            |             |
|-----------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|-------------------------------------|-------------|------------------|-------------------------|------------------------------|-------------------------------|----------------------------|------------|-------------|
|                                                                                               | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |                                     |             | Fluxapyroxad     |                         | M700F002                     | M700F008                      | M700F048                   | Total*     |             |
|                                                                                               |             |                  |                          |                 |                                     |             | Mean             | Individual              |                              |                               |                            | Individual | Mean        |
| GAP, USA                                                                                      | 2           |                  | 97-<br>100               |                 |                                     | 7           |                  |                         |                              |                               |                            |            |             |
| 2010/7003486<br>RCN R080343<br>USA<br>(North Rose, New<br>York)<br>2008<br>(Durango)          | 2           | 7                | 100<br>100<br>200        | 186<br>186      | Succulent<br>seed with<br>pod       | 7           | <u>0.39</u>      | 0.49                    | < LOD                        | 0.01                          | < LOD                      | 0.50       | <u>0.40</u> |
|                                                                                               |             |                  |                          |                 |                                     |             | 0.29             | < LOD                   | 0.01                         | < LOD                         | 0.30                       |            |             |
|                                                                                               |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 7           | <u>0.04</u>      | 0.04                    | < LOD                        | < LOD                         | < LOD                      | 0.04       | <u>0.04</u> |
|                                                                                               |             |                  |                          |                 |                                     |             | 0.04             | < LOD                   | < LOD                        | < LOD                         | 0.04                       |            |             |
| 2010/7003486RC<br>N R080344<br>USA<br>(Germansville,<br>Pennsylvania)<br>2008<br>(Wando)      | 2           | 6                | 102<br><u>101</u><br>203 | 288<br>286      | Succulent<br>seed with<br>pod       | 6           | <u>0.74</u>      | (0.84,<br>0.66)<br>0.75 | (< LOD,<br>< 0.01)<br>< 0.01 | (< 0.01,<br>< 0.01)<br>< 0.01 | (< LOD,<br>< LOD)<br>< LOD | 0.75       | <u>0.74</u> |
|                                                                                               |             |                  |                          |                 |                                     |             | 0.72             | < LOD                   | < 0.01                       | < LOD                         | 0.72                       |            |             |
|                                                                                               |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 6           | <u>0.03</u>      | 0.03                    | < 0.01                       | < LOD                         | < LOD                      | 0.03       | <u>0.03</u> |
|                                                                                               |             |                  |                          |                 |                                     |             | 0.03             | < 0.01                  | < LOD                        | < LOD                         | 0.03                       |            |             |
| 2010/7003486<br>RCN R080345<br>Canada<br>(Portage la<br>Prairie, Manitoba)<br>2008<br>(Tudor) | 2           | 6                | 102<br><u>99</u><br>201  | 193<br>187      | Succulent<br>seed with<br>pod       | 7           | <u>0.66</u>      | 0.63                    | < LOD                        | 0.02                          | < LOD                      | 0.65       | <u>0.68</u> |
|                                                                                               |             |                  |                          |                 |                                     |             | 0.69             | < LOD                   | 0.02                         | < LOD                         | 0.71                       |            |             |
|                                                                                               |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 7           | <u>0.04</u>      | 0.04                    | < LOD                        | < LOD                         | < LOD                      | 0.04       | <u>0.04</u> |
|                                                                                               |             |                  |                          |                 |                                     |             | 0.03             | < LOD                   | < LOD                        | < LOD                         | 0.03                       |            |             |
| 2010/7003486<br>RCN R080346<br>USA<br>(Geneva,<br>Minnesota)<br>2008<br>(Midas)               | 2           | 7                | 102<br><u>105</u><br>207 | 188<br>193      | Succulent<br>seed with<br>pod       | 4           | 0.95             | 0.97                    | < 0.01                       | < 0.01                        | < 0.01                     | 0.97       | 0.95        |
|                                                                                               |             |                  |                          |                 |                                     |             | 0.92             | < 0.01                  | < 0.01                       | < 0.01                        | 0.92                       |            |             |
|                                                                                               |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 4           | 0.05             | 0.04                    | < LOD                        | < LOD                         | < LOD                      | 0.04       | 0.05        |
|                                                                                               |             |                  |                          |                 |                                     |             | 0.05             | < LOD                   | < LOD                        | < LOD                         | 0.05                       |            |             |
| 2010/7003486<br>RCN R080347<br>USA<br>(Eldridge, Illinois)<br>2008<br>(Admiral)               | 2           | 7                | 100<br><u>102</u><br>202 | 189<br>191      | Succulent<br>seed with<br>pod       | 0           | 0.90             | 1.04                    | < LOD                        | < 0.01                        | < LOD                      | 1.04       | 0.90        |
|                                                                                               |             |                  |                          |                 |                                     |             |                  | 0.75                    | < LOD                        | < 0.01                        | < LOD                      | 0.75       |             |
|                                                                                               |             |                  |                          |                 |                                     | 4           | 0.70             | 0.71                    | < LOD                        | < 0.01                        | < LOD                      | 0.71       | 0.70        |
|                                                                                               |             |                  |                          |                 |                                     |             |                  | 0.68                    | < LOD                        | < 0.01                        | < LOD                      | 0.68       |             |
|                                                                                               |             |                  |                          |                 |                                     | 7           | <u>0.73</u>      | 0.78                    | < LOD                        | < 0.01                        | < 0.01                     | 0.78       | <u>0.73</u> |
|                                                                                               |             |                  |                          |                 |                                     |             |                  | 0.67                    | < LOD                        | < 0.01                        | < 0.01                     | 0.67       |             |
|                                                                                               |             |                  |                          |                 |                                     | 13          | 0.12             | 0.13                    | < LOD                        | < LOD                         | < LOD                      | 0.13       | 0.12        |
|                                                                                               |             |                  |                          |                 |                                     |             |                  | 0.11                    | < LOD                        | < LOD                         | < LOD                      | 0.11       |             |
|                                                                                               |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 0           | 0.06             | 0.03                    | < LOD                        | < LOD                         | < LOD                      | 0.03       | 0.06        |
|                                                                                               |             |                  |                          |                 |                                     |             |                  | 0.08                    | < LOD                        | < LOD                         | < LOD                      | 0.08       |             |
|                                                                                               |             |                  |                          |                 |                                     | 4           | 0.06             | 0.06                    | < LOD                        | < LOD                         | < LOD                      | 0.06       | 0.06        |
|                                                                                               |             |                  |                          |                 |                                     |             |                  | 0.05                    | < LOD                        | < LOD                         | < LOD                      | 0.05       |             |
|                                                                                               |             |                  |                          |                 |                                     | 7           | <u>0.03</u>      | 0.03                    | < LOD                        | < LOD                         | < LOD                      | 0.03       | <u>0.03</u> |
|                                                                                               |             |                  |                          |                 |                                     |             |                  | 0.03                    | < LOD                        | < LOD                         | < LOD                      | 0.03       |             |
|                                                                                               |             |                  |                          |                 |                                     | 13          | 0.03             | 0.03                    | < LOD                        | < LOD                         | < LOD                      | 0.03       | 0.03        |
|                                                                                               |             |                  |                          |                 |                                     |             |                  | 0.02                    | < LOD                        | < LOD                         | < LOD                      | 0.02       |             |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                               | Application |                  |                          |                 | Matrix                              | PHI<br>days                         | Residues (mg/kg) |                  |                |                  |                  |                  |                  |                |              |
|--------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|-------------------------------------|-------------------------------------|------------------|------------------|----------------|------------------|------------------|------------------|------------------|----------------|--------------|
|                                                                                      | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |                                     |                                     | Fluxapyroxad     |                  | M700F002       | M700F008         | M700F048         | Total*           |                  |                |              |
|                                                                                      |             |                  |                          |                 |                                     |                                     | Mean             | Individual       |                |                  |                  | Individual       | Mean             |                |              |
| 2010/7003486<br>RCN R080349<br>USA<br>(Fresno,<br>California)<br>2008<br>(Strike)    | 2           | 7                | 102<br><u>101</u><br>203 | 285<br>280      | Succulent<br>seed with<br>pod       | 7                                   | <u>0.65</u>      | 0.66<br>0.63     | < LOD<br>< LOD | < LOD<br>< LOD   | < LOD<br>< LOD   | 0.66<br>0.63     | <u>0.65</u>      |                |              |
|                                                                                      |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 7                                   | <u>&lt; 0.01</u> | < 0.01<br>< 0.01 | < LOD<br>< LOD | < LOD<br>< LOD   | < LOD<br>< LOD   | < 0.01<br>< 0.01 | <u>&lt; 0.01</u> |                |              |
|                                                                                      |             |                  |                          |                 |                                     |                                     |                  |                  |                |                  |                  |                  |                  |                |              |
|                                                                                      |             |                  |                          |                 |                                     |                                     |                  |                  |                |                  |                  |                  |                  |                |              |
| 2010/7003486<br>RCN R080350<br>USA<br>(Jerome, Idaho)<br>2008<br>(Pendleton)         | 2           | 6                | 100<br><u>100</u><br>200 | 218<br>208      | Succulent<br>seed with<br>pod       | 7                                   | <u>0.22</u>      | 0.26<br>0.17     | < LOD<br>< LOD | 0.02<br>0.02     | < 0.01<br>< 0.01 | 0.28<br>0.19     | <u>0.24</u>      |                |              |
|                                                                                      |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 7                                   | <u>0.03</u>      | 0.03<br>0.03     | < LOD<br>< LOD | < LOD<br>< LOD   | < LOD<br>< LOD   | 0.03<br>0.03     | <u>0.03</u>      |                |              |
|                                                                                      |             |                  |                          |                 |                                     |                                     |                  |                  |                |                  |                  |                  |                  |                |              |
|                                                                                      |             |                  |                          |                 |                                     |                                     |                  |                  |                |                  |                  |                  |                  |                |              |
| 2010/7003486<br>RCN R080348<br>USA<br>(Ephrata,<br>Washington)<br>2008<br>(Deshutes) | 2           | 7                | 101<br><u>100</u><br>201 | 283<br>280      | Succulent<br>seed with<br>pod       | 7                                   | <u>0.23</u>      | 0.21<br>0.25     | < LOD<br>< LOD | 0.01<br>0.01     | < 0.01<br>< 0.01 | 0.22<br>0.26     | <u>0.24</u>      |                |              |
|                                                                                      |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 7                                   | <u>0.03</u>      | 0.03<br>0.03     | < LOD<br>< LOD | < LOD<br>< LOD   | < LOD<br>< LOD   | 0.03<br>0.03     | <u>0.03</u>      |                |              |
|                                                                                      |             |                  |                          |                 |                                     |                                     |                  |                  |                |                  |                  |                  |                  |                |              |
|                                                                                      |             |                  |                          |                 |                                     |                                     |                  |                  |                |                  |                  |                  |                  |                |              |
| 2010/7003486<br>RCN R080351<br>USA<br>(Ephrata,<br>Washington)<br>2008<br>(Kalamo)   | 2           | 7                | 100<br><u>100</u><br>200 | 281<br>280      | Succulent<br>seed with<br>pod       | 0                                   | 0.98             | 0.91<br>1.04     | < LOD<br>< LOD | < 0.01<br>< 0.01 | < LOD<br>< LOD   | 0.91<br>1.04     | 0.98             |                |              |
|                                                                                      |             |                  |                          |                 |                                     |                                     |                  | 4                | 0.26           | 0.27<br>0.25     | < LOD<br>< LOD   | 0.01<br>< 0.01   | < LOD<br>< LOD   | 0.28<br>0.25   | 0.27         |
|                                                                                      |             |                  |                          |                 |                                     | 7                                   | 0.17             |                  |                | 0.17<br>0.16     | < LOD<br>< LOD   | < 0.01<br>< 0.01 | < LOD<br>< 0.01  | 0.17<br>0.16   | 0.17         |
|                                                                                      |             |                  |                          |                 |                                     |                                     |                  | 14               | 0.09           | 0.09<br>0.08     | < LOD<br>< LOD   | < 0.01<br>< 0.01 | < LOD<br>< 0.01  | 0.09<br>0.08   | 0.09         |
|                                                                                      |             |                  |                          |                 |                                     | Succulent<br>seed<br>without<br>pod | 0                |                  |                | 0.02             | 0.02<br>0.02     | < LOD<br>< LOD   | < LOD<br>< LOD   | < LOD<br>< LOD | 0.02<br>0.02 |
|                                                                                      |             |                  |                          |                 |                                     |                                     |                  | 4                | 0.02           |                  | 0.02<br>0.02     | < LOD<br>< LOD   | < LOD<br>< LOD   | < LOD<br>< LOD | 0.02<br>0.02 |
|                                                                                      |             |                  |                          |                 |                                     |                                     | 7                |                  |                | 0.02             | 0.02<br>0.02     | < LOD<br>< LOD   | < LOD<br>< LOD   | < LOD<br>< LOD | 0.02<br>0.02 |
|                                                                                      |             |                  |                          |                 |                                     |                                     |                  | 14               | 0.02           |                  | 0.02<br>0.02     | < LOD<br>< LOD   | < LOD<br>< LOD   | < LOD<br>< LOD | 0.02<br>0.02 |
|                                                                                      |             |                  |                          |                 |                                     |                                     |                  |                  |                |                  |                  |                  |                  |                |              |
|                                                                                      |             |                  |                          |                 |                                     |                                     |                  |                  |                |                  |                  |                  |                  |                |              |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.003125 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 84 Residues from the foliar application of fluxapyroxad to soya beans in the USA and Canada (Johnston 2010, 2010/7003486)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                            | Application |                  |                   |                 | Matrix                              | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |      |        |        |        |
|---------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|-------------------------------------|-------------|------------------|------------|----------|----------|----------|------------|------|--------|--------|--------|
|                                                                                                   | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                                     |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |      |        |        |        |
|                                                                                                   |             |                  |                   |                 |                                     |             | Mean             | Individual |          |          |          | Individual | Mean |        |        |        |
| GAP, USA                                                                                          | 2           |                  | 97-<br>100        |                 |                                     | 7           |                  |            |          |          |          |            |      |        |        |        |
| 2010/7003486<br>RCN<br>R080367<br>USA<br>(Chula,<br>Georgia)<br>2008<br>(4R492)                   | 2           | 6                | 100<br>101<br>201 | 207<br>209      | Succulent<br>seed with<br>pod       | 7           |                  | 0.30       | < LOD    | 0.02     | < 0.01   | 0.32       | 0.31 |        |        |        |
|                                                                                                   |             |                  |                   |                 |                                     |             | 0.29             |            |          |          |          |            |      |        |        |        |
|                                                                                                   |             |                  |                   |                 |                                     |             | 0.28             | < LOD      | 0.01     | < LOD    | 0.29     |            |      |        |        |        |
|                                                                                                   |             |                  |                   |                 | Succulent<br>seed<br>without<br>pod | 7           | 0.01             | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       |      | 0.01   | 0.01   |        |
| 2010/7003486<br>RCN<br>R080368<br>USA<br>(Sunsweet,<br>Georgia)<br>2008<br>(4R492)                | 2           | 6                | 99<br>99<br>198   | 204<br>205      | Succulent<br>seed with<br>pod       | 7           | 0.20             | 0.15       | < 0.01   | 0.01     | < 0.01   | 0.16       | 0.21 |        |        |        |
|                                                                                                   |             |                  |                   |                 |                                     |             | 0.24             | < 0.01     | 0.01     | < 0.01   | 0.25     |            |      |        |        |        |
|                                                                                                   |             |                  |                   |                 | Succulent<br>seed<br>without<br>pod | 7           | < 0.01           | < 0.01     | < 0.01   | < LOD    | < LOD    | < 0.01     |      | < 0.01 | < 0.01 |        |
|                                                                                                   |             |                  |                   |                 |                                     |             | < 0.01           | < 0.01     | < 0.01   | < LOD    | < LOD    | < 0.01     |      | < 0.01 |        |        |
| 2010/7003486<br>RCN<br>R080369<br>USA<br>(Fisk,<br>Missouri)<br>2008<br>(Gateway<br>4R492)        | 2           | 8                | 99<br>100<br>199  | 185<br>188      | Succulent<br>seed with<br>pod       | 6           | 0.69             | 0.85       | < 0.01   | 0.04     | 0.01     | 0.90       | 0.74 |        |        |        |
|                                                                                                   |             |                  |                   |                 |                                     |             | 0.52             | < 0.01     | 0.04     | 0.01     | 0.57     |            |      |        |        |        |
|                                                                                                   |             |                  |                   |                 | Succulent<br>seed<br>without<br>pod | 6           | 0.04             | 0.04       | < 0.01   | < 0.01   | < 0.01   | 0.04       |      | 0.04   | 0.03   | 0.04   |
|                                                                                                   |             |                  |                   |                 |                                     |             | 0.03             | < 0.01     | < 0.01   | < 0.01   | 0.03     |            |      |        |        |        |
| 2010/7003486<br>RCN<br>R080370<br>USA<br>(Proctor,<br>Arkansas)<br>2008<br>(4R492RR)              | 2           | 7                | 100<br>100<br>200 | 138<br>138      | Succulent<br>seed with<br>pod       | 7           | 0.69             | 0.69       | < 0.01   | 0.02     | < 0.01   | 0.71       | 0.71 |        |        |        |
|                                                                                                   |             |                  |                   |                 |                                     |             | 0.68             | < 0.01     | 0.02     | < 0.01   | 0.70     |            |      |        |        |        |
|                                                                                                   |             |                  |                   |                 | Succulent<br>seed<br>without<br>pod | 7           | 0.37             | 0.35       | < 0.01   | < LOD    | < LOD    | 0.35       |      | 0.38   | 0.38   | 0.37   |
|                                                                                                   |             |                  |                   |                 |                                     |             | 0.38             | < 0.01     | < 0.01   | < LOD    | 0.38     |            |      |        |        |        |
| 2010/7003486<br>RCN<br>R080371<br>USA<br>(Carlyle,<br>Illinois)<br>2008<br>(4R492)                | 2           | 7                | 101<br>100<br>201 | 236<br>236      | Succulent<br>seed with<br>pod       | 7           | 0.29             | 0.24       | < 0.01   | 0.04     | 0.01     | 0.29       | 0.34 |        |        |        |
|                                                                                                   |             |                  |                   |                 |                                     |             | 0.33             | < 0.01     | 0.05     | 0.01     | 0.39     |            |      |        |        |        |
|                                                                                                   |             |                  |                   |                 | Succulent<br>seed<br>without<br>pod | 7           | < 0.01           | < 0.01     | < 0.01   | < 0.01   | < 0.01   | < 0.01     |      | < 0.01 | < 0.01 | < 0.01 |
|                                                                                                   |             |                  |                   |                 |                                     |             | < 0.01           | < 0.01     | < 0.01   | < 0.01   | < 0.01   | < 0.01     |      |        |        |        |
| 2010/7003486<br>RCN<br>R080372<br>USA<br>(Durand,<br>Wisconsin)<br>2008<br>(Renk Seed<br>RS165RR) | 2           | 7                | 101<br>100<br>201 | 201<br>200      | Succulent<br>seed with<br>pod       | 8           | 0.11             | 0.09       | < 0.01   | 0.01     | < 0.01   | 0.10       | 0.13 |        |        |        |
|                                                                                                   |             |                  |                   |                 |                                     |             | 0.13             | < 0.01     | 0.02     | < 0.01   | 0.15     |            |      |        |        |        |
|                                                                                                   |             |                  |                   |                 | Succulent<br>seed<br>without<br>pod | 8           | 0.11             | 0.09       | < 0.01   | 0.01     | < 0.01   | 0.10       |      | 0.10   | 0.14   | 0.12   |
|                                                                                                   |             |                  |                   |                 |                                     |             | 0.12             | < 0.01     | 0.02     | < 0.01   | 0.14     |            |      |        |        |        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                           | Application |                  |                          |                 | Matrix                              | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |        |
|------------------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|-------------------------------------|-------------|------------------|------------|----------|----------|----------|------------|--------|
|                                                                                                                  | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |                                     |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |        |
|                                                                                                                  |             |                  |                          |                 |                                     |             | Mean             | Individual |          |          |          | Individual | Mean   |
| 2010/7003486<br>RCN<br>R080373<br>USA<br>(GranPFork,<br>Illinois)<br>2008<br>(4R492)                             | 2           | 6                | 100<br><u>98</u><br>198  | 232<br>228      | Succulent<br>seed with<br>pod       | 8           | <u>0.18</u>      | 0.11       | < 0.01   | 0.01     | < 0.01   | 0.12       | 0.20   |
|                                                                                                                  |             |                  |                          |                 |                                     |             | 0.25             | < LOD      | 0.02     | < 0.01   | 0.27     |            |        |
|                                                                                                                  |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 8           | <u>&lt; 0.01</u> | < 0.01     | < 0.01   | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                                  |             |                  |                          |                 |                                     |             |                  | < 0.01     | < 0.01   | < LOD    | < 0.01   | < 0.01     |        |
| 2010/7003486<br>RCN<br>R080374<br>USA<br>(Gardner,<br>North<br>Dakota)<br>2008<br>(0702RR)                       | 2           | 7                | 96<br><u>102</u><br>198  | 180<br>191      | Succulent<br>seed with<br>pod       | 7           | <u>0.27</u>      | 0.27       | < LOD    | 0.01     | < 0.01   | 0.28       | 0.28   |
|                                                                                                                  |             |                  |                          |                 |                                     |             | 0.26             | < LOD      | 0.02     | < 0.01   | 0.28     |            |        |
|                                                                                                                  |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 7           | <u>0.04</u>      | 0.04       | < LOD    | < LOD    | < LOD    | 0.04       | 0.04   |
|                                                                                                                  |             |                  |                          |                 |                                     |             |                  | 0.03       | < LOD    | < LOD    | < LOD    | 0.03       |        |
| 2010/7003486<br>RCN<br>R080375<br>USA<br>(Geneva,<br>Minnesota)<br>2008<br>(0710RR)                              | 2           | 7                | 103<br><u>101</u><br>204 | 193<br>190      | Succulent<br>seed with<br>pod       | 7           | <u>0.10</u>      | 0.10       | < 0.01   | 0.02     | < 0.01   | 0.12       | 0.12   |
|                                                                                                                  |             |                  |                          |                 |                                     |             | 0.10             | < 0.01     | 0.02     | < 0.01   | 0.12     |            |        |
|                                                                                                                  |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 7           | <u>0.01</u>      | < 0.01     | < 0.01   | < LOD    | < 0.01   | < 0.01     | 0.01   |
|                                                                                                                  |             |                  |                          |                 |                                     |             |                  | 0.01       | < 0.01   | < LOD    | < LOD    | 0.01       |        |
| 2010/7003486<br>RCN<br>R080376<br>USA<br>(Ellendale,<br>Minnesota)<br>2008<br>(0710RR)                           | 2           | 7                | 103<br><u>101</u><br>204 | 193<br>189      | Succulent<br>seed with<br>pod       | 7           | <u>0.10</u>      | 0.12       | < 0.01   | 0.02     | < 0.01   | 0.14       | 0.11   |
|                                                                                                                  |             |                  |                          |                 |                                     |             | 0.07             | < LOD      | < 0.01   | < LOD    | 0.07     |            |        |
|                                                                                                                  |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 7           | <u>&lt; 0.01</u> | < 0.01     | < 0.01   | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                                  |             |                  |                          |                 |                                     |             |                  | < 0.01     | < 0.01   | < LOD    | < LOD    | < 0.01     |        |
| 2010/7003486<br>RCN<br>R080377<br>USA<br>(Frankfort<br>Township,<br>Wisconsin)<br>2008<br>(Renk Seed<br>RS165RR) | 2           | 7                | 102<br><u>100</u><br>202 | 204<br>201      | Succulent<br>seed with<br>pod       | 28          | 0.04             | 0.04       | 0.01     | < 0.01   | < 0.01   | 0.04       | 0.04   |
|                                                                                                                  |             |                  |                          |                 |                                     |             | 0.04             | 0.01       | < 0.01   | < 0.01   | 0.04     |            |        |
|                                                                                                                  |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 28          | 0.04             | 0.03       | < 0.01   | < 0.01   | < 0.01   | 0.03       | 0.04   |
|                                                                                                                  |             |                  |                          |                 |                                     |             |                  | 0.04       | < 0.01   | < 0.01   | < 0.01   | 0.04       |        |
| 2010/7003486<br>RCN<br>R080378<br>USA<br>(Bloomsfield,<br>Missouri)<br>2008<br>(Gateway<br>4R492)                | 2           | 6                | 99<br><u>100</u><br>199  | 185<br>186      | Succulent<br>seed with<br>pod       | 8           | <u>0.46</u>      | 0.53       | < 0.01   | 0.06     | 0.03     | 0.61       | 0.52   |
|                                                                                                                  |             |                  |                          |                 |                                     |             | 0.38             | < 0.01     | 0.03     | 0.02     | 0.42     |            |        |
|                                                                                                                  |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 8           | <u>0.02</u>      | 0.02       | < 0.01   | 0.01     | 0.02     | 0.04       | 0.04   |
|                                                                                                                  |             |                  |                          |                 |                                     |             |                  | 0.02       | < 0.01   | 0.01     | 0.02     | 0.04       |        |
| 2010/7003486<br>RCN<br>R080379<br>Canada<br>(Elm Creek,<br>Manitoba)<br>2008                                     | 2           | 6                | 98<br><u>99</u><br>197   | 197<br>198      | Succulent<br>seed with<br>pod       | 8           | 0.11             | 0.10       | < LOD    | 0.01     | < 0.01   | 0.11       | 0.12   |
|                                                                                                                  |             |                  |                          |                 |                                     |             | 0.11             | < LOD      | 0.01     | < 0.01   | 0.12     |            |        |
|                                                                                                                  |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 8           | < 0.01           | < 0.01     | < LOD    | < LOD    | < 0.01   | < 0.01     | < 0.01 |
|                                                                                                                  |             |                  |                          |                 |                                     |             |                  | < 0.01     | < LOD    | < LOD    | < 0.01   | < 0.01     |        |

## Fluxapyroxad

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)<br><br>(NSC Warren<br>RR)                         | Application |                  |                          |                 | Matrix                              | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |                  |
|----------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|-------------------------------------|-------------|------------------|------------|----------|----------|----------|------------|------------------|
|                                                                                                          | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |                                     |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |                  |
|                                                                                                          |             |                  |                          |                 |                                     |             | Mean             | Individual |          |          |          | Individual | Mean             |
|                                                                                                          |             |                  |                          |                 |                                     |             |                  |            |          |          |          |            |                  |
| 2010/7003486<br>RCN<br>R080380<br>Canada<br>(Elm Creek,<br>Manitoba)<br>2008<br>(NSC Warren<br>RR)       | 2           | 6                | 102<br><u>101</u><br>203 | 204<br>203      | Succulent<br>seed with<br>pod       | 0           | 0.71             | 0.77       | < LOD    | < 0.01   | < LOD    | 0.77       | 0.71             |
|                                                                                                          |             |                  |                          |                 |                                     |             | 0.65             | < LOD      | < 0.01   | < LOD    | 0.65     |            |                  |
|                                                                                                          |             |                  |                          |                 |                                     | 4           | 0.14             | 0.15       | < LOD    | < 0.01   | < LOD    | 0.15       | 0.14             |
|                                                                                                          |             |                  |                          |                 |                                     |             | 0.12             | < LOD      | < 0.01   | < LOD    | 0.12     |            |                  |
|                                                                                                          |             |                  |                          |                 |                                     | 7           | <u>0.11</u>      | 0.10       | < LOD    | < 0.01   | < LOD    | 0.10       | <u>0.12</u>      |
|                                                                                                          |             |                  |                          |                 |                                     |             | 0.12             | < LOD      | 0.01     | < 0.01   | 0.13     |            |                  |
|                                                                                                          |             |                  |                          |                 |                                     | 13          | 0.06             | 0.07       | < LOD    | < 0.01   | < 0.01   | 0.07       | 0.06             |
|                                                                                                          |             |                  |                          |                 |                                     |             | 0.05             | < LOD      | < 0.01   | < 0.01   | 0.05     |            |                  |
|                                                                                                          |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 0           | 0.04             | 0.05       | < LOD    | < LOD    | < LOD    | 0.05       | 0.04             |
|                                                                                                          |             |                  |                          |                 |                                     |             | 0.03             | < LOD      | < LOD    | < LOD    | 0.03     |            |                  |
|                                                                                                          |             |                  |                          |                 |                                     | 4           | 0.01             | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       | 0.01             |
|                                                                                                          |             |                  |                          |                 |                                     |             | 0.01             | < LOD      | < LOD    | < LOD    | 0.01     |            |                  |
|                                                                                                          |             |                  |                          |                 |                                     | 7           | <u>&lt; 0.01</u> | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | <u>&lt; 0.01</u> |
|                                                                                                          |             |                  |                          |                 |                                     |             | < 0.01           | < LOD      | < LOD    | < LOD    | < 0.01   |            |                  |
|                                                                                                          |             |                  |                          |                 |                                     | 13          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01           |
|                                                                                                          |             |                  |                          |                 |                                     |             | < LOD            | < LOD      | < LOD    | < LOD    | < 0.01   |            |                  |
| 2010/7003486<br>RCN<br>R080381<br>Canada<br>(Portage la<br>Prairie,<br>Manitoba)<br>2008<br>(RR Portage) | 2           | 8                | 93<br><u>99</u><br>192   | 175<br>187      | Succulent<br>seed with<br>pod       | 0           | 1.36             | 1.31       | < 0.01   | 0.05     | < 0.01   | 1.36       | 1.41             |
|                                                                                                          |             |                  |                          |                 |                                     |             | 1.40             | < 0.01     | 0.05     | < 0.01   | 1.45     |            |                  |
|                                                                                                          |             |                  |                          |                 |                                     | 5           | 1.13             | 1.15       | 0.02     | 0.12     | 0.03     | 1.29       | 1.27             |
|                                                                                                          |             |                  |                          |                 |                                     |             | 1.11             | 0.02       | 0.12     | 0.02     | 1.24     |            |                  |
|                                                                                                          |             |                  |                          |                 |                                     | 8           | <u>0.21</u>      | 0.20       | 0.02     | 0.03     | < 0.01   | 0.23       | <u>0.24</u>      |
|                                                                                                          |             |                  |                          |                 |                                     |             | 0.21             | 0.01       | 0.04     | < 0.01   | 0.25     |            |                  |
|                                                                                                          |             |                  |                          |                 |                                     | 15          | 0.17             | 0.15       | 0.03     | 0.06     | 0.02     | 0.22       | 0.24             |
|                                                                                                          |             |                  |                          |                 |                                     |             | 0.19             | 0.03       | 0.06     | 0.02     | 0.26     |            |                  |
|                                                                                                          |             |                  |                          |                 | Succulent<br>seed<br>without<br>pod | 5           | 0.04             | 0.03       | < 0.01   | < LOD    | < LOD    | 0.03       | 0.04             |
|                                                                                                          |             |                  |                          |                 |                                     |             | 0.04             | < 0.01     | < 0.01   | < 0.01   | 0.04     |            |                  |
|                                                                                                          |             |                  |                          |                 |                                     | 8           | <u>0.03</u>      | 0.03       | < 0.01   | < LOD    | < 0.01   | 0.03       | <u>0.03</u>      |
|                                                                                                          |             |                  |                          |                 |                                     |             | 0.03             | 0.01       | < 0.01   | < 0.01   | 0.03     |            |                  |
|                                                                                                          |             |                  |                          |                 |                                     | 15          | 0.02             | 0.02       | < 0.01   | < LOD    | < 0.01   | 0.02       | 0.02             |
|                                                                                                          |             |                  |                          |                 |                                     |             | < 0.01           | < 0.01     | < LOD    | < 0.01   | < 0.01   |            |                  |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.003125 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

*Pulses*

Table 85 Residues from the foliar application of fluxapyroxad to dry (field) peas in the USA and Canada (Johnston 2010, 2010/7003486)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                         | Application |                  |                          |                 | Matrix        | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |                  |
|------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|---------------|-------------|------------------|------------|----------|----------|----------|------------|------------------|
|                                                                                                | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |               |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |                  |
|                                                                                                |             |                  |                          |                 |               |             | Mean             | Individual |          |          |          | Individual | Mean             |
| GAP, USA                                                                                       | 2           |                  | 97-<br>100               |                 |               | 21          |                  |            |          |          |          |            |                  |
| 2010/7003486<br>RCN R080343<br>USA<br>(North Rose,<br>New York)<br>2008<br>(Durango)           | 2           | 7                | 100<br><u>101</u><br>201 | 187<br>188      | Dried<br>seed | 21          | <u>0.16</u>      | 0.12       | < LOD    | < 0.01   | < LOD    | 0.12       | <u>0.16</u>      |
|                                                                                                |             |                  |                          |                 |               |             |                  | 0.20       | < LOD    | < 0.01   | < LOD    | 0.20       |                  |
| 2010/7003486<br>RCN R080344<br>USA<br>(Germansville,<br>Pennsylvania)<br>2008<br>(Wando)       | 2           | 6                | 100<br><u>103</u><br>203 | 329<br>291      | Dried<br>seed | 21          | <u>0.02</u>      | 0.02       | < 0.01   | < LOD    | < LOD    | 0.02       | <u>0.02</u>      |
|                                                                                                |             |                  |                          |                 |               |             |                  | 0.02       | < 0.01   | < LOD    | < LOD    | 0.02       |                  |
| 2010/7003486?<br>RCN R080345<br>Canada<br>(Portage la<br>Prairie,<br>Manitoba)<br>2008 (Tudor) | 2           | 7                | 99<br><u>101</u><br>200  | 187<br>191      | Dried<br>seed | 21          | <u>0.11</u>      | 0.12       | < 0.01   | < 0.01   | < LOD    | 0.12       | <u>0.11</u>      |
|                                                                                                |             |                  |                          |                 |               |             |                  | 0.09       | < LOD    | < 0.01   | < LOD    | 0.09       |                  |
| 2010/7003486<br>RCN R080346<br>USA<br>(Geneva,<br>Minnesota)<br>2008<br>(Midas)                | 2           | 7                | 105<br><u>102</u><br>207 | 193<br>191      | Dried<br>seed | 21          | <u>&lt; 0.01</u> | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | <u>&lt; 0.01</u> |
|                                                                                                |             |                  |                          |                 |               |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |                  |
| 2010/7003486<br>RCN R080347<br>USA<br>(Eldridge,<br>Illinois)<br>2008<br>(Admiral)             | 2           | 6                | 100<br><u>95</u><br>195  | 188<br>180      | Dried<br>seed | 21          | <u>0.04</u>      | 0.03       | < LOD    | < LOD    | < LOD    | 0.03       | <u>0.04</u>      |
|                                                                                                |             |                  |                          |                 |               |             |                  | 0.04       | < LOD    | < LOD    | < LOD    | 0.04       |                  |
| 2010/7003486<br>RCN R080352<br>Canada<br>(Rosthern,<br>Saskatchewan)<br>2008<br>(CDC Bronco)   | 2           | 6                | 104<br><u>102</u><br>206 | 207<br>204      | Dried<br>seed | 22          | <u>&lt; 0.01</u> | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | <u>&lt; 0.01</u> |
|                                                                                                |             |                  |                          |                 |               |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |                  |
| 2010/7003486<br>RCN R080353<br>Canada<br>(Hepburn,<br>Saskatchewan)<br>2008 (CDC<br>Bronco)    | 2           | 7                | 102<br><u>101</u><br>203 | 203<br>202      | Dried<br>seed | 21          | <u>0.02</u>      | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       | <u>0.02</u>      |
|                                                                                                |             |                  |                          |                 |               |             |                  | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       |                  |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                 | Application |                  |            |                 | Matrix        | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |      |
|----------------------------------------------------------------------------------------|-------------|------------------|------------|-----------------|---------------|-------------|------------------|------------|----------|----------|----------|------------|------|
|                                                                                        | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |               |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |      |
|                                                                                        |             |                  |            |                 |               |             | Mean             | Individual |          |          |          | Individual | Mean |
| 2010/7003486<br>RCN R080354<br>Canada<br>(Innisfail,<br>Alberta)<br>2008<br>(SW Capri) | 2           | 7                | 95         | 267             | Dried<br>seed | 21          | 0.15             | 0.15       | < 0.01   | < 0.01   | < LOD    | 0.15       | 0.15 |
|                                                                                        |             |                  | 100        | 280             |               |             |                  | 0.14       | < 0.01   | < 0.01   | < LOD    | 0.14       |      |
|                                                                                        |             |                  | 195        |                 |               |             |                  | 0.15       |          |          |          |            |      |
| 2010/7003486<br>RCN R080355<br>Canada<br>(Penhold,<br>Alberta)<br>2008<br>(SW Capri)   | 2           | 7                | 99         | 276             | Dried<br>seed | 22          | 0.09             | 0.10       | < LOD    | < LOD    | < LOD    | 0.10       | 0.09 |
|                                                                                        |             |                  | 102        | 285             |               |             |                  | 0.08       | < LOD    | < LOD    | < LOD    | 0.08       |      |
|                                                                                        |             |                  | 201        |                 |               |             |                  |            |          |          |          |            |      |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.003125 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 86 Residues from the foliar application of fluxapyroxad to dry beans in the USA and Canada (Johnston 2010, 2010/7003486)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                      | Application |                  |                   |                 | Matrix        | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |      |             |
|---------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|---------------|-------------|------------------|------------|----------|----------|----------|------------|------|-------------|
|                                                                                             | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |               |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |      |             |
|                                                                                             |             |                  |                   |                 |               |             | Mean             | Individual |          |          |          | Individual | Mean |             |
| GAP, USA                                                                                    | 2           |                  | 195-<br>200       |                 |               | 21          |                  |            |          |          |          |            |      |             |
| 2010/7003486<br>RCN R080356<br>Canada<br>(Minto,<br>Manitoba)<br>2008<br>(Pinto Bean)       | 2           | 7                | 100               | 221             | Dried<br>seed | 22          |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |      |             |
|                                                                                             |             |                  | <u>100</u><br>200 | 219             |               |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |      |             |
|                                                                                             |             |                  | 201               | 221             |               | 22          |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | 0.02 | <u>0.02</u> |
|                                                                                             |             |                  | <u>200</u><br>401 | 219             |               |             | <u>0.02</u>      | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       |      |             |
| 2010/7003486<br>RCN R080357<br>USA<br>(Fitchburg,<br>Wisconsin)<br>2008<br>(Great Northern) | 2           | 7                | 100               | 265             | Dried<br>seed | 21          |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |      |             |
|                                                                                             |             |                  | <u>101</u><br>201 | 262             |               |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |      |             |
|                                                                                             |             |                  | 198               | 262             |               | 21          |                  | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       | 0.01 | <u>0.01</u> |
|                                                                                             |             |                  | <u>205</u><br>403 | 265             |               |             | <u>0.01</u>      | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |      |             |
| 2010/7003486<br>RCN R080358<br>Canada<br>(Paris, Ontario)<br>2008<br>(Etna<br>(Cranberry))  | 2           | 6                | 96                | 248             | Dried<br>seed | 21          |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |      |             |
|                                                                                             |             |                  | <u>99</u><br>195  | 246             |               |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |      |             |
|                                                                                             |             |                  | 196               | 244             |               | 21          |                  | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       | 0.03 | <u>0.03</u> |
|                                                                                             |             |                  | <u>208</u><br>404 | 263             |               |             | <u>0.03</u>      | 0.03       | < LOD    | < LOD    | < LOD    | 0.03       |      |             |
| 2010/7003486<br>RCN R080359<br>USA<br>(Carlyle, Illinois)<br>2008<br>(Field Bean,<br>Pinto) | 2           | 7                | 99                | 233             | Dried<br>seed | 21          |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |      |             |
|                                                                                             |             |                  | <u>101</u><br>200 | 235             |               |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |      |             |
|                                                                                             |             |                  | 199               | 236             |               | 21          |                  | 0.01       | < LOD    | < LOD    | < LOD    | 0.01       | 0.01 | <u>0.01</u> |
|                                                                                             |             |                  | <u>202</u><br>401 | 235             |               |             | <u>0.01</u>      | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |      |             |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                               | Application |                  |                   |                 | Matrix        | PHI<br>days | Residues (mg/kg) |                 |                    |                   |                    |            |             |
|----------------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|---------------|-------------|------------------|-----------------|--------------------|-------------------|--------------------|------------|-------------|
|                                                                                                                      | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |               |             | Fluxapyroxad     |                 | M700F002           | M700F008          | M700F048           | Total*     |             |
|                                                                                                                      |             |                  |                   |                 |               |             | Mean             | Individual      |                    |                   |                    | Individual | Mean        |
| 2010/7003486<br>RCN R080360<br>USA<br>(Eakley,<br>Oklahoma)<br>2008<br>(Early Scarlet)                               | 2           | 6                | 101               | 234             | Dried<br>seed | 21          |                  | 0.07            | < LOD              | 0.01              | < 0.01             | 0.08       |             |
|                                                                                                                      |             |                  | <u>100</u><br>201 | 230             |               |             |                  | 0.14            | < LOD              | 0.02              | < 0.01             | 0.16       |             |
|                                                                                                                      |             |                  | 202               | 231             |               | 21          |                  | 0.21            | < LOD              | 0.03              | 0.01               | 0.25       | <u>0.25</u> |
|                                                                                                                      |             |                  | <u>196</u><br>398 | 224             |               |             | <u>0.21</u>      | 0.20            | < LOD              | 0.03              | 0.01               | 0.24       |             |
| 2010/7003486<br>RCN R080361<br>USA<br>(Eldridge, North<br>Dakota)<br>2008<br>(Navigator<br>(Navy))                   | 2           | 9                | 100               | 187             | Dried<br>seed | 21          |                  | 0.03            | < LOD              | < LOD             | < LOD              | 0.03       |             |
|                                                                                                                      |             |                  | <u>99</u><br>199  | 186             |               |             |                  | 0.06            | < LOD              | < LOD             | < LOD              | 0.06       |             |
|                                                                                                                      |             |                  | 210               | 195             |               | 21          |                  | 0.04            | < LOD              | < LOD             | < LOD              | 0.04       | <u>0.05</u> |
|                                                                                                                      |             |                  | <u>203</u><br>413 | 188             |               |             | <u>0.05</u>      | 0.06            | < LOD              | < 0.01            | < LOD              | 0.06       |             |
| 2010/7003486<br>RCN R080362<br>USA<br>(Adrian, North<br>Dakota)<br>2008<br>(Maverick<br>(Pinto))                     | 2           | 9                | 102               | 190             | Dried<br>seed | 21          |                  | < LOD           | < LOD              | < LOD             | < LOD              | < 0.01     |             |
|                                                                                                                      |             |                  | <u>99</u><br>201  | 185             |               |             |                  | 0.03            | < LOD              | < LOD             | < LOD              | 0.03       |             |
|                                                                                                                      |             |                  | 208               | 193             |               | 21          |                  | 0.05            | < LOD              | < LOD             | < LOD              | 0.05       | <u>0.05</u> |
|                                                                                                                      |             |                  | <u>202</u><br>410 | 187             |               |             | <u>0.05</u>      | 0.04            | < LOD              | < LOD             | < LOD              | 0.04       |             |
| 2010/7003486<br>RCN R080363<br>USA<br>(Larned, Kansas)<br>2008<br>(Pinto Field<br>Bean)                              | 2           | 7                | 102               | 210             | Dried<br>seed | 21          |                  | 0.04            | < LOD              | < LOD             | < LOD              | 0.04       |             |
|                                                                                                                      |             |                  | <u>100</u><br>202 | 206             |               |             |                  | 0.05            | < LOD              | < LOD             | < LOD              | 0.05       |             |
|                                                                                                                      |             |                  | 202               | 208             |               | 21          |                  | (0.08,<br>0.05) | (< 0.01,<br>< LOD) | (< LOD,<br>< LOD) | (< 0.01,<br>< LOD) | 0.07       | <u>0.07</u> |
|                                                                                                                      |             |                  | <u>202</u><br>404 | 209             |               |             | <u>0.07</u>      | 0.07            | < 0.01             | < LOD             | < 0.01             | 0.07       |             |
| 2010/7003486<br>RCN R080364<br>USA<br>(Lewiston, Utah)<br>2008<br>(Cranberry)                                        | 2           | 7                | 99                | 185             | Dried<br>seed | 22          |                  | 0.01            | < LOD              | < 0.01            | < LOD              | 0.01       |             |
|                                                                                                                      |             |                  | <u>102</u><br>201 | 190             |               |             |                  | 0.01            | < LOD              | < 0.01            | < 0.01             | 0.01       |             |
|                                                                                                                      |             |                  | 201               | 188             |               | 22          |                  | 0.04            | < LOD              | 0.02              | 0.01               | 0.07       | <u>0.06</u> |
|                                                                                                                      |             |                  | <u>205</u><br>406 | 192             |               |             | <u>0.04</u>      | 0.03            | < LOD              | 0.01              | < 0.01             | 0.04       |             |
| 2010/7003486<br>RCN R080365<br>USA<br>(Kerman,<br>California)<br>2008<br>(Bush Blue Lake<br>274 (Bush Snap<br>Bean)) | 2           | 7                | 100               | 281             | Dried<br>seed | 21          |                  | 0.01            | < LOD              | < LOD             | < LOD              | 0.01       |             |
|                                                                                                                      |             |                  | <u>101</u><br>201 | 282             |               |             |                  | 0.01            | < LOD              | < LOD             | < LOD              | 0.01       |             |
|                                                                                                                      |             |                  | 201               | 282             |               | 21          |                  | 0.03            | < LOD              | < 0.01            | < LOD              | 0.03       | <u>0.03</u> |
|                                                                                                                      |             |                  | <u>200</u><br>401 | 280             |               |             | <u>0.03</u>      | 0.03            | < LOD              | < 0.01            | < LOD              | 0.03       |             |
| 2010/7003486<br>RCN R080366<br>USA<br>(Ephrata,<br>Washington)<br>2008<br>(Othello (pinto))                          | 2           | 7                | 101               | 283             | Dried<br>seed | 21          |                  | 0.02            | < LOD              | < LOD             | < LOD              | 0.02       |             |
|                                                                                                                      |             |                  | <u>101</u><br>202 | 281             |               |             |                  | 0.01            | < LOD              | < LOD             | < LOD              | 0.01       |             |
|                                                                                                                      |             |                  | 199               | 279             |               | 21          |                  | 0.04            | < LOD              | < LOD             | < LOD              | 0.04       | <u>0.04</u> |
|                                                                                                                      |             |                  | <u>201</u><br>400 | 282             |               |             | <u>0.04</u>      | 0.03            | < LOD              | < LOD             | < LOD              | 0.03       |             |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.003125 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 87 Residues from the foliar application of fluxapyroxad to soya beans in the USA and Canada (Johnston 2010, 2010/7003486)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                      | Application |                  |                          |                 | Matrix        | PHI<br>days | Residues (mg/kg) |                                 |          |          |          |            |        |
|---------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|---------------|-------------|------------------|---------------------------------|----------|----------|----------|------------|--------|
|                                                                                             | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |               |             | Fluxapyroxad     |                                 | M700F002 | M700F008 | M700F048 | Total*     |        |
|                                                                                             |             |                  |                          |                 |               |             | Mean             | Individual                      |          |          |          | Individual | Mean   |
| GAP, USA                                                                                    | 2           |                  | 97-<br>101               |                 |               | 21          |                  |                                 |          |          |          |            |        |
| 2010/7003486<br>RCN R080367<br>USA<br>(Chula, Georgia)<br>2008<br>(4R492)                   | 2           | 7                | 100<br><u>102</u><br>202 | 227<br>226      | Dried<br>seed | 20          |                  | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                             |             |                  |                          |                 |               |             | < 0.01           | < LOD                           | < LOD    | < LOD    | < 0.01   |            |        |
| 2010/7003486<br>RCN R080368<br>USA<br>(Sunsweet, Georgia)<br>2008<br>(4R492)                | 2           | 7                | 99<br>98<br>197          | 227<br>218      | Dried<br>seed | 20          |                  | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                             |             |                  |                          |                 |               |             | < 0.01           | < LOD                           | < LOD    | < LOD    | < 0.01   |            |        |
| 2010/7003486<br>RCN R080369<br>USA<br>(Fisk, Missouri)<br>2008<br>(Gateway 4R492)           | 2           | 7                | 100<br><u>100</u><br>200 | 187<br>188      | Dried<br>seed | 22          |                  | -                               | -        | -        | -        | -          | < 0.01 |
|                                                                                             |             |                  |                          |                 |               |             | < 0.01           | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2010/7003486<br>RCN R080370<br>USA<br>(Proctor, Arkansas)<br>2008<br>(4R492RR)              | 2           | 7                | 100<br><u>100</u><br>200 | 138<br>138      | Dried<br>seed | 21          |                  | 0.07                            | < 0.01   | < 0.01   | < 0.01   | 0.07       | 0.11   |
|                                                                                             |             |                  |                          |                 |               |             | 0.10             | 0.13                            | < 0.01   | < 0.01   | 0.01     | 0.14       |        |
| 2010/7003486<br>RCN R080371<br>USA<br>(Carlyle, Illinois)<br>2008<br>(4R492)                | 2           | 7                | 98<br><u>99</u><br>197   | 116<br>123      | Dried<br>seed | 21          |                  | 0.01                            | < LOD    | < LOD    | < LOD    | 0.01       | 0.01   |
|                                                                                             |             |                  |                          |                 |               |             | 0.01             | < 0.01                          | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2010/7003486<br>RCN R080372<br>USA<br>(Durand, Wisconsin)<br>2008<br>(Renk Seed<br>RS165RR) | 2           | 7                | 100<br><u>100</u><br>200 | 199<br>200      | Dried<br>seed | 22          |                  | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                             |             |                  |                          |                 |               |             | < 0.01           | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2010/7003486<br>RCN R080373<br>USA<br>(GranPFork, Illinois)<br>2008<br>(4R492)              | 2           | 8                | 94<br>93<br>187          | 217<br>209      | Dried<br>seed | 20          |                  | (0.03, 0.04,<br>0.04)<br>0.04   | < LOD    | < LOD    | < LOD    | 0.04       | 0.03   |
|                                                                                             |             |                  |                          |                 |               |             | 0.03             | (< 0.01,<br>0.02, 0.02)<br>0.02 | < LOD    | < LOD    | < LOD    | 0.02       |        |
| 2010/7003486<br>RCN R080374<br>USA<br>(Gardner, North<br>Dakota)<br>2008<br>(0702RR)        | 2           | 8                | 101<br><u>95</u><br>196  | 189<br>179      | Dried<br>seed | 21          |                  | < 0.01                          | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                             |             |                  |                          |                 |               |             | < 0.01           | < 0.01                          | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2010/7003486<br>RCN R080375<br>USA<br>(Geneva, Minnesota)<br>2008<br>(0710RR)               | 2           | 7                | 100<br><u>101</u><br>201 | 187<br>188      | Dried<br>seed | 20          | < 0.01           | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                             |             |                  |                          |                 |               |             |                  | < LOD                           | < LOD    | < LOD    | < LOD    | < 0.01     |        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                        | Application |                  |                   |                 | Matrix        | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |      |
|---------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|---------------|-------------|------------------|------------|----------|----------|----------|------------|------|
|                                                                                                               | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |               |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |      |
|                                                                                                               |             |                  |                   |                 |               |             | Mean             | Individual |          |          |          | Individual | Mean |
| 2010/7003486<br>RCN R080376<br>USA<br>(Ellendale,<br>Minnesota)<br>2008<br>(0710RR)                           | 2           | 7                | 101<br>102<br>203 | 188<br>190      | Dried<br>seed | 20          | < LOD            | < LOD      | < LOD    | < LOD    | < 0.01   | < 0.01     |      |
|                                                                                                               |             |                  |                   |                 |               |             | < LOD            | < LOD      | < LOD    | < LOD    | < 0.01   | < 0.01     |      |
|                                                                                                               |             |                  |                   |                 |               |             | < 0.01           |            |          |          |          | < 0.01     |      |
| 2010/7003486<br>RCN R080377<br>USA<br>(Frankfort<br>Township,<br>Wisconsin)<br>2008<br>(Renk Seed<br>RS165RR) | 2           | 7                | 99<br>100<br>199  | 199<br>200      | Dried<br>seed | 22          | < LOD            | < LOD      | < LOD    | < LOD    | < 0.01   | < 0.01     |      |
|                                                                                                               |             |                  |                   |                 |               |             | < 0.01           | < LOD      | < LOD    | < LOD    | < 0.01   | < 0.01     |      |
|                                                                                                               |             |                  |                   |                 |               |             | < 0.01           |            |          |          |          | < 0.01     |      |
| 2010/7003486<br>RCN R080378<br>USA<br>(Bloomsfield,<br>Missouri)<br>2008<br>(Gateway 4R492)                   | 2           | 7                | 100<br>99<br>199  | 188<br>186      | Dried<br>seed | 20          | < 0.01           | < LOD      | < LOD    | < LOD    | < 0.01   | < 0.01     |      |
|                                                                                                               |             |                  |                   |                 |               |             | < LOD            | < LOD      | < LOD    | < LOD    | < 0.01   | < 0.01     |      |
|                                                                                                               |             |                  |                   |                 |               |             | < 0.01           |            |          |          |          | < 0.01     |      |
| 2010/7003486<br>RCN R080379<br>Canada<br>(Elm Creek,<br>Manitoba)<br>2008<br>(NSC Warren RR)                  | 2           | 7                | 97<br>99<br>196   | 193<br>199      | Dried<br>seed | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < 0.01   | < 0.01     |      |
|                                                                                                               |             |                  |                   |                 |               |             | < LOD            | < LOD      | < LOD    | < LOD    | < 0.01   | < 0.01     |      |
|                                                                                                               |             |                  |                   |                 |               |             | < 0.01           |            |          |          |          | < 0.01     |      |
| 2010/7003486<br>RCN R080380<br>Canada<br>(Elm Creek,<br>Manitoba)<br>2008<br>(NSC Warren RR)                  | 2           | 7                | 96<br>99<br>195   | 193<br>198      | Dried<br>seed | 21          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |      |
|                                                                                                               |             |                  |                   |                 |               |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |      |
|                                                                                                               |             |                  |                   |                 |               |             | < 0.01           |            |          |          |          | < 0.01     |      |
| 2010/7003486<br>RCN R080381<br>Canada<br>(Portage la Prairie,<br>Manitoba)<br>2008<br>(RR Portage)            | 2           | 8                | 99<br>102<br>201  | 187<br>188      | Dried<br>seed | 21          | 0.04             | < LOD      | < LOD    | < LOD    | 0.04     | 0.04       |      |
|                                                                                                               |             |                  |                   |                 |               |             | 0.04             | < LOD      | < LOD    | < LOD    | 0.04     | 0.04       |      |
|                                                                                                               |             |                  |                   |                 |               |             | 0.04             |            |          |          |          | 0.04       |      |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.003125 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out on soya beans (five trials – Table 88) in Brazil during the 2009 growing season (Resende and Takahashi 2010, 2010/1057151). Four foliar applications of a 50 g fluxapyroxad/L EC co-formulation were made at 50 g fluxapyroxad/ha (total rate 200 g fluxapyroxad /ha/season). Applications were made to plots using spray volumes of 100 L/ha with a backpack sprayer. An adjuvant was added to the spray mixture for all applications. Mature soya bean samples (mature dried seed) were harvested at normal maturity, targeting 14 DALA. The dry shelled seed was collected from fully mature plants (growth stages BBCH 89–99). In addition at two of the sites additional treated samples were collected at four additional sampling intervals (0, 7, 21 and 30 DALA) to examine residue decline. Residues were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Table 88 Residues from the foliar application of fluxapyroxad to soya beans in Brazil (Resende and Takahashi 2010, 2010/1057151)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                            | Application |                  |                             |              | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|-----------------------------------------------------------------------------------|-------------|------------------|-----------------------------|--------------|--------|-------------|------------------|----------|----------|----------|--------|
|                                                                                   | No          | Interval<br>Days | g<br>ai/ha                  | Water (L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| GAP, Brazil                                                                       | 4           | 10-20            | 58                          |              |        | 14          |                  |          |          |          |        |
| 2010/1057151<br>G080409<br>Brazil<br>(Ponta Grossa, Paraná)<br>2009<br>(CD 205)   | 4           | 10               | 50                          | 100          | Grain  | 0           | < 0.01           | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                   |             |                  | 50                          |              |        | 7           | < 0.01           | < 0.01   | < LOD    | < LOD    | < 0.01 |
|                                                                                   |             |                  | 50                          |              |        | 14          | < 0.01           | 0.02     | < LOD    | < 0.01   | < 0.01 |
|                                                                                   |             |                  | 50                          |              |        | 21          | < 0.01           | 0.02     | < LOD    | < 0.01   | < 0.01 |
|                                                                                   |             |                  | 200                         |              |        | 30          | < 0.01           | 0.0      | < LOD    | < 0.01   | < 0.01 |
| 2010/1057151<br>G080411<br>Brazil<br>(Castro, Paraná)<br>2009<br>(NK 3363)        | 4           | 10               | 50<br>50<br>50<br>200       | 100          | Grain  | 14          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
| 2010/1057151<br>G080412<br>Brazil<br>(Anápolis, Goiás)<br>2009<br>(M-SOY 7908RR)  | 4           | 10               | 50<br>50<br>50<br>50<br>200 | 100          | Grain  | 14          | < LOD            | < 0.01   | < LOD    | < LOD    | < 0.01 |
| 2010/1057151<br>G080413<br>Brazil<br>(Uberlândia, Minas Gerais)<br>2009           | 4           | 10               | 50                          | 100          | Grain  | 0           | < 0.01           | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                   |             |                  | 50                          |              |        | 7           | < 0.01           | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                   |             |                  | 50                          |              |        | 14          | < 0.01           | < LOD    | < LOD    | < 0.01   | < 0.01 |
|                                                                                   |             |                  | 50                          |              |        | 21          | < 0.01           | < 0.01   | < LOD    | < 0.01   | < 0.01 |
|                                                                                   |             |                  | 200                         |              |        | 30          | < 0.01           | < 0.01   | < LOD    | < 0.01   | < 0.01 |
| 2010/1057151<br>G080445<br>Brazil<br>(Senador Canedo, Goiás)<br>2009<br>(Va Hosa) | 4           | 10               | 50<br>50<br>50<br>50<br>200 | 100          | Grain  | 14          | 0.03             | 0.02     | < LOD    | < LOD    | 0.03   |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

### Root and tuber vegetables

Supervised trials were carried out on potatoes (21 trials – Table 89) and sugar beet (12 trials – Table 90) in the USA and Canada during the 2008 growing season (Johnston and Saha 2010, 2009/7003643). Three foliar applications of a 62.5 g/L EC formulation of fluxapyroxad were made at 91–129 g ai/ha. Retreatment intervals were 6–10 days, except for a 29-day RTI between the second and third applications in one potato trial (RCN R080462). Applications were made to plots using spray volumes of 149–316 L/ha with ground equipment (mounted boom, backpack sprayer or handheld sprayer). An adjuvant was added to the spray mixture for all applications, except for the first application in one sugar beet trial (RCN R080480). Root and tuber vegetable RAC samples (potato tubers and sugar beet tops (leaves) and roots, two samples per plot) were harvested at 7–8, 13–15 and 20–22 days after the last application. In addition, at two potato sites and one sugar beet site additional samples were collected up to 28 days after the last application. Residues were quantitated using LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Residues in sugar beet tops are shown in Table 110.

Table 89 Residues from the foliar application of fluxapyroxad to potatoes in the USA and Canada (Johnston and Saha 2010, 2009/7003643)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                             | Application |                  |                          |                   | Matrix | PHI<br>days | Residues (mg/kg) |                              |          |          |          |            |        |  |
|----------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|--------|-------------|------------------|------------------------------|----------|----------|----------|------------|--------|--|
|                                                                                                    | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |        |             | Fluxapyroxad     |                              | M700F002 | M700F008 | M700F048 | Total*     |        |  |
|                                                                                                    |             |                  |                          |                   |        |             | Mean             | Individual                   |          |          |          | Individual | Mean   |  |
| GAP, USA                                                                                           | 3           |                  | 97-<br>101               |                   |        | 7           |                  |                              |          |          |          |            |        |  |
| 2009/7003643<br>RCN R080451<br>USA<br>(Wayne, New York)<br>2008<br>(Superior)                      | 3           | 6<br>7           | 100<br>101<br>101<br>302 | 280<br>282<br>283 | Tuber  | 7           | < 0.01           | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
|                                                                                                    |             |                  |                          |                   |        | 14          | < 0.01           | < LOD                        | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
|                                                                                                    |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < LOD                        | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
| 2009/7003643<br>RCN R080452<br>USA<br>(Wayne, New York)<br>2008<br>(Norland)                       | 3           | 6<br>7           | 100<br>101<br>101<br>302 | 280<br>281<br>281 | Tuber  | 7           | < 0.01           | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
|                                                                                                    |             |                  |                          |                   |        | 14          | 0.02             | 0.02                         | < LOD    | < LOD    | < LOD    | 0.02       | 0.02   |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | 0.02                         | < LOD    | < LOD    | < LOD    | 0.02       |        |  |
|                                                                                                    |             |                  |                          |                   |        | 21          | 0.02             | 0.02                         | < LOD    | < LOD    | < LOD    | 0.02       | 0.02   |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | 0.02                         | < LOD    | < LOD    | < LOD    | 0.02       |        |  |
| 2009/7003643<br>RCN R080453<br>USA<br>(Lehigh,<br>Pennsylvania)<br>2008<br>(Dark Red Norland)      | 3           | 6<br>8           | 104<br>102<br>103<br>309 | 316<br>310<br>314 | Tuber  | 7           | < 0.01           | < LOD                        | < 0.01   | < LOD    | < LOD    | < 0.01     | < 0.01 |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < LOD                        | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
|                                                                                                    |             |                  |                          |                   |        | 14          | < 0.01           | < LOD                        | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < LOD                        | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
|                                                                                                    |             |                  |                          |                   |        | 21          | < 0.01           | < LOD                        | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < LOD                        | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
| 2009/7003643<br>RCN R080454<br>Canada<br>(Queens, Prince<br>Edward Island)<br>2008<br>(Yukon Gold) | 3           | 7<br>6           | 102<br>96<br>95<br>293   | 255<br>241<br>238 | Tuber  | 7           | < 0.01           | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
| 2009/7003643<br>RCN R080455<br>Canada<br>(Queens, Prince<br>Edward Island)<br>2008<br>(Shepody)    | 3           | 7<br>6           | 100<br>97<br>98<br>295   | 250<br>242<br>245 | Tuber  | 7           | < 0.01           | < LOD                        | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
| 2009/7003643<br>RCN R080456<br>USA<br>(Tift, Georgia)<br>2008<br>(Red Pontiac)                     | 3           | 6<br>7           | 120<br>99<br>100<br>319  | 223<br>236<br>232 | Tuber  | 7           | 0.02             | (0.01, 0.02)<br>0.02         | < 0.01   | < LOD    | < LOD    | 0.02       | 0.02   |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | (< 0.01,<br>0.01) 0.01       | < 0.01   | < LOD    | < LOD    | 0.01       |        |  |
|                                                                                                    |             |                  |                          |                   |        | 14          | 0.02             | (0.01, 0.02)<br>0.02         | < 0.01   | < LOD    | < LOD    | 0.02       | 0.02   |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | (0.01, 0.01)<br>0.01         | < 0.01   | < LOD    | < LOD    | 0.01       |        |  |
|                                                                                                    |             |                  |                          |                   |        | 21          | 0.02             | (0.01, 0.02)<br>0.02         | < 0.01   | < LOD    | < LOD    | 0.02       | 0.02   |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | < 0.01                       | < 0.01   | < LOD    | < LOD    | < 0.01     |        |  |
| 2009/7003643<br>RCN R080457<br>USA<br>(Seminole, Florida)<br>2008<br>(Red Pontiac)                 | 3           | 7<br>7           | 101<br>100<br>100<br>301 | 284<br>281<br>280 | Tuber  | 7           | < 0.01           | < 0.01                       | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |  |
|                                                                                                    |             |                  |                          |                   |        |             |                  | (< LOD,<br>< 0.01)<br>< 0.01 | < LOD    | < LOD    | < LOD    | < 0.01     |        |  |
|                                                                                                    |             |                  |                          |                   |        | 14          | < 0.01           | < LOD,<br>< 0.01)<br>< 0.01  | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |  |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                | Application |                  |                          |                   | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |        |
|---------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|--------|-------------|------------------|------------|----------|----------|----------|------------|--------|
|                                                                                       | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |        |
|                                                                                       |             |                  |                          |                   |        |             | Mean             | Individual |          |          |          | Individual | Mean   |
|                                                                                       |             |                  |                          |                   |        |             |                  |            |          |          |          |            |        |
|                                                                                       |             |                  |                          |                   | 21     | < 0.01      | < LOD            | < LOD      | < LOD    | < LOD    | < 0.01   | < 0.01     |        |
| 2009/7003643<br>RCN R080458<br>USA<br>(Freeborn,<br>Minnesota)<br>2008<br>(Cascade)   | 3           | 6<br>7           | 101<br>102<br>101<br>304 | 189<br>192<br>190 | Tuber  | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7003643<br>RCN R080459<br>USA<br>(Cass, North Dakota)<br>2009<br>(Red Lady)      | 3           | 6<br>8           | 105<br>104<br>105<br>314 | 196<br>194<br>196 | Tuber  | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7003643<br>RCN R080460<br>USA<br>(Keokuk, Iowa)<br>2008<br>(Kennebec)            | 3           | 7<br>7           | 101<br>99<br>102<br>302  | 154<br>166<br>192 | Tuber  | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7003643<br>RCN R080461<br>USA<br>(Dane, Wisconsin)<br>2008<br>(Superior)         | 3           | 7<br>7           | 129<br>100<br>94<br>323  | 242<br>262<br>293 | Tuber  | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7003643<br>RCN R080462<br>USA<br>(Pepin, Wisconsin)<br>2008<br>(Russet Burbank)  | 3           | 7<br>29          | 99<br>100<br>99<br>298   | 278<br>281<br>280 | Tuber  | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7003643<br>RCN R080463<br>Canada<br>(Taber, Alberta)<br>2008<br>(Russet Burbank) | 3           | 7<br>7           | 102<br>99<br>102<br>303  | 154<br>149<br>153 | Tuber  | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7003643<br>RCN R080464<br>USA<br>(Cache, Utah)<br>2008<br>(Klondike Rose)        | 3           | 7<br>7           | 99<br>102<br>101<br>302  | 185<br>191<br>189 | Tuber  | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                       |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                        | Application |                  |                          |                   | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |        |
|-----------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|--------|-------------|------------------|------------|----------|----------|----------|------------|--------|
|                                                                                               | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |        |
|                                                                                               |             |                  |                          |                   |        |             | Mean             | Individual |          |          |          | Individual | Mean   |
| 2009/7003643<br>RCN R080465<br>USA<br>(Sacramento,<br>California)<br>2008<br>(1533)           | 3           | 7<br>7           | 99<br>99<br>99<br>297    | 187<br>187<br>187 | Tuber  | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7003643<br>RCN R080466<br>USA<br>(Payette, Idaho)<br>2008<br>(Norkotah)                  | 3           | 6<br>8           | 100<br>102<br>99<br>301  | 234<br>239<br>233 | Tuber  | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7003643<br>RCN R080467<br>USA<br>(Washington, Idaho)<br>2008<br>(Ranger Russet)          | 3           | 7<br>7           | 102<br>102<br>101<br>305 | 240<br>238<br>236 | Tuber  | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7003643<br>RCN R080468<br>USA<br>(Bingham, Idaho)<br>2008<br>(Ranger Russet)             | 3           | 6<br>7           | 103<br>103<br>103<br>309 | 192<br>192<br>192 | Tuber  | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 10          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 15          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 28          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7003643<br>RCN R080469<br>USA<br>(Power, Idaho)<br>2008<br>(Russet Burbank)              | 3           | 8<br>6           | 98<br>97<br>99<br>294    | 184<br>182<br>186 | Tuber  | 7           | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7003643<br>RCN R080470<br>USA<br>(Benton, Oregon)<br>2008<br>(Ranger Russet)             | 3           | 7<br>7           | 98<br>102<br>100<br>300  | 277<br>288<br>283 | Tuber  | 7           | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 14          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7003643<br>RCN R080471<br>Canada<br>(Strathcona, Alberta)<br>2008<br>(Russet Burbank E3) | 3           | 7<br>7           | 104<br>103<br>101<br>308 | 192<br>192<br>189 | Tuber  | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 14          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        | 21          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                               |             |                  |                          |                   |        |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 90 Residues in sugar beet roots from the foliar application of fluxapyroxad to sugar beet in the USA and Canada (Johnston and Saha 2010, 2009/7003643)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                         | Application |                  |                          |                   | Matrix | PHI<br>days | Residues (mg/kg) |                      |                              |          |          |            |             |
|------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|--------|-------------|------------------|----------------------|------------------------------|----------|----------|------------|-------------|
|                                                                                                | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |        |             | Fluxapyroxad     |                      | M700F002                     | M700F008 | M700F048 | Total*     |             |
|                                                                                                |             |                  |                          |                   |        |             | Mean             | Individual           |                              |          |          | Individual | Mean        |
| GAP, USA                                                                                       | 3           |                  | 97-<br>101               |                   |        | 7           |                  |                      |                              |          |          |            |             |
| 2009/7003643<br>RCN R080472<br>USA<br>(Freeborn,<br>Minnesota)<br>2008<br>(Beta 130R)          | 3           | 7<br>7           | 101<br>100<br>100<br>301 | 189<br>188<br>188 | Roots  | 7           | <u>0.06</u>      | 0.06                 | < LOD                        | < LOD    | < LOD    | 0.06       | <u>0.06</u> |
|                                                                                                |             |                  |                          |                   |        |             |                  | 0.06                 | < LOD                        | < LOD    | < LOD    | 0.06       |             |
|                                                                                                |             |                  |                          |                   | Roots  | 13          | 0.04             | (0.04, 0.05)<br>0.05 | < LOD                        | < LOD    | < LOD    | 0.05       | 0.04        |
|                                                                                                |             |                  |                          |                   |        |             |                  | (0.03, 0.03)<br>0.03 | (< LOD,<br>< 0.01)<br>< 0.01 | < LOD    | < LOD    | 0.03       |             |
|                                                                                                |             |                  |                          |                   | Roots  | 21          | 0.03             | (0.02, 0.04)<br>0.03 | (< LOD,<br>< 0.01)<br>< 0.01 | < LOD    | < LOD    | 0.03       | 0.03        |
|                                                                                                |             |                  |                          |                   |        |             |                  | (0.03, 0.03)<br>0.03 | < LOD                        | < LOD    | < LOD    | 0.03       |             |
| 2009/7003643<br>RCN R080473<br>USA<br>(Cass, North Dakota)<br>2008<br>(539 RR)                 | 3           | 6<br>8           | 99<br>98<br>100<br>297   | 186<br>183<br>187 | Roots  | 7           | <u>0.03</u>      | 0.02                 | < LOD                        | < LOD    | < LOD    | 0.02       | <u>0.03</u> |
|                                                                                                |             |                  |                          |                   |        |             |                  | 0.03                 | < LOD                        | < LOD    | < LOD    | 0.03       |             |
|                                                                                                |             |                  |                          |                   | Roots  | 14          | 0.02             | 0.02                 | < LOD                        | < LOD    | < LOD    | 0.02       | 0.02        |
|                                                                                                |             |                  |                          |                   |        |             |                  | 0.02                 | < LOD                        | < LOD    | < LOD    | 0.02       |             |
|                                                                                                |             |                  |                          |                   | Roots  | 21          | 0.02             | 0.02                 | < LOD                        | < LOD    | < LOD    | 0.02       | 0.02        |
|                                                                                                |             |                  |                          |                   |        |             |                  | 0.02                 | < LOD                        | < LOD    | < LOD    | 0.02       |             |
| 2009/7003643<br>RCN R080474<br>USA<br>(Jetterson, Iowa)<br>2008<br>(Crystal 539RR)             | 3           | 7<br>7           | 104<br>98<br>101<br>303  | 174<br>157<br>177 | Roots  | 7           | 0.04             | 0.05                 | < LOD                        | < LOD    | < LOD    | 0.05       | 0.04        |
|                                                                                                |             |                  |                          |                   |        |             |                  | 0.03                 | < LOD                        | < LOD    | < LOD    | 0.03       |             |
|                                                                                                |             |                  |                          |                   | Roots  | 14          | <u>0.06</u>      | (0.05, 0.04)<br>0.05 | < LOD                        | < LOD    | < LOD    | 0.05       | <u>0.06</u> |
|                                                                                                |             |                  |                          |                   |        |             |                  | (0.06, 0.06)<br>0.06 | (< LOD,<br>< 0.01)<br>< 0.01 | < LOD    | < LOD    | 0.06       |             |
|                                                                                                |             |                  |                          |                   | Roots  | 21          | 0.05             | (0.03, 0.04)<br>0.04 | (< LOD,<br>< 0.01)<br>< 0.01 | < LOD    | < LOD    | 0.04       | 0.05        |
|                                                                                                |             |                  |                          |                   |        |             |                  | (0.07, 0.05)<br>0.06 | (< LOD,<br>< 0.01)<br>< 0.01 | < LOD    | < LOD    | 0.06       |             |
| 2009/7003643<br>RCN R080475<br>Canada<br>(Strathcona, Alberta)<br>2008<br>(Betaseed Beta 1385) | 3           | 7<br>7           | 102<br>103<br>102<br>307 | 190<br>192<br>189 | Roots  | 7           | 0.01             | 0.01                 | < LOD                        | < LOD    | < LOD    | 0.01       | 0.01        |
|                                                                                                |             |                  |                          |                   |        |             |                  | (0.01, 0.01)<br>0.01 | < LOD                        | < LOD    | < LOD    | 0.01       |             |
|                                                                                                |             |                  |                          |                   | Roots  | 14          | <u>0.04</u>      | (0.03, 0.03)<br>0.03 | < LOD                        | < LOD    | < LOD    | 0.03       | <u>0.04</u> |
|                                                                                                |             |                  |                          |                   |        |             |                  | (0.04, 0.04)<br>0.04 | < LOD                        | < LOD    | < LOD    | 0.04       |             |
|                                                                                                |             |                  |                          |                   | Roots  | 21          | 0.04             | (0.02, 0.03)<br>0.03 | < LOD                        | < LOD    | < LOD    | 0.03       | 0.04        |
|                                                                                                |             |                  |                          |                   |        |             |                  | (0.03, 0.04)<br>0.04 | < LOD                        | < LOD    | < LOD    | 0.04       |             |
| 2009/7003643<br>RCN R080476<br>USA<br>(LaMoure, North<br>Dakota)<br>2008<br>(539 RR)           | 3           | 7<br>7           | 102<br>101<br>101<br>304 | 190<br>190<br>189 | Roots  | 7           | 0.02             | 0.02                 | < LOD                        | < LOD    | < LOD    | 0.02       | 0.02        |
|                                                                                                |             |                  |                          |                   |        |             |                  | 0.02                 | < LOD                        | < LOD    | < LOD    | 0.02       |             |
|                                                                                                |             |                  |                          |                   | Roots  | 13          | <u>0.04</u>      | 0.06                 | < LOD                        | < LOD    | < LOD    | 0.06       | <u>0.04</u> |
|                                                                                                |             |                  |                          |                   |        |             |                  | 0.02                 | < LOD                        | < LOD    | < LOD    | 0.02       |             |
|                                                                                                |             |                  |                          |                   | Roots  | 21          | 0.01             | < 0.01               | < LOD                        | < LOD    | < LOD    | < 0.01     | 0.01        |
|                                                                                                |             |                  |                          |                   |        |             |                  | 0.01                 | < LOD                        | < LOD    | < LOD    | 0.01       |             |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                 | Application |                  |                                 |                   | Matrix                                                                          | PHI<br>days | Residues (mg/kg) |                           |                   |          |          |             |             |             |       |       |      |             |
|----------------------------------------------------------------------------------------|-------------|------------------|---------------------------------|-------------------|---------------------------------------------------------------------------------|-------------|------------------|---------------------------|-------------------|----------|----------|-------------|-------------|-------------|-------|-------|------|-------------|
|                                                                                        | No          | Interval<br>Days | g<br>ai/ha                      | Water<br>(L/ha)   |                                                                                 |             | Fluxapyroxad     |                           | M700F002          | M700F008 | M700F048 | Total*      |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             | Mean             | Individual                |                   |          |          | Individual  | Mean        |             |       |       |      |             |
| 2009/7003643<br>RCN R080477<br>Canada<br>(Taber, Alberta)<br>2008<br>(Beta B85-Pro 15) | 3           | 7<br>10          | 99<br>100<br>99<br>298          | 150<br>151<br>150 | Roots                                                                           | 8           | < 0.01           | < 0.01                    | < LOD             | < LOD    | < LOD    | < 0.01      | < 0.01      |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | < 0.01                    | < LOD             | < LOD    | < LOD    | < 0.01      |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   | Roots                                                                           | 15          | < 0.01           | < 0.01                    | < LOD             | < LOD    | < LOD    | < LOD       | < 0.01      | < 0.01      |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | < 0.01                    | < LOD             | < LOD    | < LOD    | < 0.01      |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   | Roots                                                                           | 22          | <u>0.01</u>      | 0.01                      | < LOD             | < LOD    | < LOD    | 0.01        | <u>0.01</u> |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | < 0.01                    | < LOD             | < LOD    | < LOD    | < 0.01      |             |             |       |       |      |             |
| 2009/7003643<br>RCN R080478<br>USA<br>(Hockley, Texas)<br>2008<br>(Phoenix)            | 3           | 8<br>6           | 102<br>100<br>99<br>301         | 284<br>280<br>277 | Roots                                                                           | 7           | 0.02             | (0.02, 0.02)<br>0.02      | < LOD             | < LOD    | < LOD    | 0.02        | 0.02        |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | (0.01, 0.02)<br>0.02      | < LOD             | < LOD    | < LOD    | 0.02        |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | (0.03, 0.03)<br>0.03      | < LOD             | < LOD    | < LOD    | 0.03        |             | <u>0.03</u> |       |       |      |             |
|                                                                                        |             |                  |                                 |                   | Roots                                                                           | 14          | <u>0.03</u>      | (0.02, 0.03)<br>0.03      | < LOD             | < LOD    | < LOD    | 0.03        |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | (0.03, 0.02)<br>0.03      | < LOD             | < LOD    | < LOD    | 0.03        | 0.03        |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | (0.02, 0.02)<br>0.02      | < LOD             | < LOD    | < LOD    | 0.02        |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   | Roots                                                                           | 21          | 0.03             | (0.03, 0.02)<br>0.03      | < LOD             | < LOD    | < LOD    | 0.03        | 0.03        |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | (0.02, 0.02)<br>0.02      | < LOD             | < LOD    | < LOD    | 0.02        |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  |                           |                   |          |          |             |             |             |       |       |      |             |
| 2009/7003643<br>RCN R080479<br>USA<br>(Cache, Utah)<br>2008<br>(4023 R)                | 3           | 7<br>7           | 103<br>103<br><u>101</u><br>307 | 192<br>193<br>188 | Roots                                                                           | 8           | <u>0.01</u>      | 0.01                      | < LOD             | < LOD    | < LOD    | 0.01        | <u>0.01</u> |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | < 0.01                    | < LOD             | < LOD    | < LOD    | < 0.01      |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   | Roots                                                                           | 15          | 0.01             | < 0.01                    | < LOD             | < LOD    | < LOD    | < 0.01      | 0.01        |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | (< 0.01,<br>0.01)<br>0.01 | < LOD             | < LOD    | < LOD    | 0.01        |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   | Roots                                                                           | 21          | 0.01             | (< 0.01,<br>0.01)<br>0.01 | < LOD             | < LOD    | < LOD    | 0.01        | 0.01        |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | (< 0.01,<br>0.01)<br>0.01 | < LOD             | < LOD    | < LOD    | 0.01        |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  |                           |                   |          |          |             |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   | 2009/7003643<br>RCN R080480<br>USA<br>(Tulare, California)<br>2008<br>(Phoenix) | 3           | 7<br>7           | 91<br>100<br>99<br>290    | 286<br>287<br>286 | Roots    | 7        | <u>0.04</u> | 0.03        | < LOD       | < LOD | < LOD | 0.03 | <u>0.04</u> |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  |                           |                   |          |          |             | 0.04        | < LOD       | < LOD | < LOD | 0.04 |             |
| Roots                                                                                  | 14          | 0.03             | 0.03                            | < LOD             |                                                                                 |             |                  |                           |                   | < LOD    | < LOD    | 0.03        | 0.03        |             |       |       |      |             |
|                                                                                        |             |                  | 0.03                            | < LOD             |                                                                                 |             |                  |                           |                   | < LOD    | < LOD    | 0.03        |             |             |       |       |      |             |
| Roots                                                                                  | 21          | 0.03             | 0.02                            | < LOD             |                                                                                 |             |                  |                           |                   | < LOD    | < LOD    | 0.02        | 0.03        |             |       |       |      |             |
|                                                                                        |             |                  | 0.03                            | < LOD             |                                                                                 |             |                  |                           |                   | < LOD    | < LOD    | 0.03        |             |             |       |       |      |             |
| 2009/7003643<br>RCN R080481<br>USA<br>(Power, Idaho)<br>2008<br>(Hilleshog 9026)       | 3           | 7<br>7           | 98<br>101<br><u>98</u><br>297   | 185<br>190<br>183 | Roots                                                                           | 7           | <u>0.05</u>      | 0.07                      | < LOD             | < LOD    | < LOD    | 0.07        | <u>0.05</u> |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | 0.03                      | < LOD             | < LOD    | < LOD    | 0.03        |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   | Roots                                                                           | 10          | 0.04             | 0.03                      | < LOD             | < LOD    | < LOD    | 0.03        | 0.04        |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | 0.04                      | < LOD             | < LOD    | < LOD    | 0.04        |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   | Roots                                                                           | 15          | 0.03             | 0.05                      | < LOD             | < LOD    | < LOD    | 0.05        | 0.03        |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | 0.01                      | < LOD             | < LOD    | < LOD    | 0.01        |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   | Roots                                                                           | 21          | 0.04             | 0.04                      | < LOD             | < LOD    | < LOD    | 0.04        | 0.04        |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | 0.04                      | < LOD             | < LOD    | < LOD    | 0.04        |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | Roots                     | 28                | 0.02     | 0.02     | < LOD       |             | < LOD       | < LOD | 0.02  | 0.02 |             |
| 0.02                                                                                   | < LOD       | < LOD            | < LOD                           | 0.02              |                                                                                 |             |                  |                           |                   |          |          |             |             |             |       |       |      |             |
| 2009/7003643<br>RCN R080482<br>USA<br>(Bingham, Idaho)<br>2008<br>(BTS 25RR05)         | 3           | 7<br>7           | 98<br>103<br><u>99</u><br>300   | 183<br>191<br>183 | Roots                                                                           | 8           | 0.02             | 0.01                      | < LOD             | < LOD    | < LOD    | 0.01        | 0.02        |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | 0.02                      | < LOD             | < LOD    | < LOD    | 0.02        |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   | Roots                                                                           | 15          | 0.02             | 0.02                      | < LOD             | < LOD    | < LOD    | 0.02        | 0.02        |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | 0.02                      | < LOD             | < LOD    | < LOD    | 0.02        |             |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   | Roots                                                                           | 21          | <u>0.03</u>      | 0.02                      | < LOD             | < LOD    | < LOD    | 0.02        | <u>0.03</u> |             |       |       |      |             |
|                                                                                        |             |                  |                                 |                   |                                                                                 |             |                  | 0.03                      | < LOD             | < LOD    | < LOD    | 0.03        |             |             |       |       |      |             |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                           | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |      |
|------------------------------------------------------------------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|------------------|------------|----------|----------|----------|------------|------|
|                                                                                                                  | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |      |
|                                                                                                                  |             |                  |            |                 |        |             | Mean             | Individual |          |          |          | Individual | Mean |
| 2009/7003643<br>RCN R080483<br>Canada<br>(RM of Portage la<br>Prairie, Manitoba)<br>2008<br>(Betaseed Beta 1385) | 3           | 9<br>7           | 120        | 223             | Roots  | 8           | 0.05             | 0.05       | < LOD    | < LOD    | < LOD    | 0.05       | 0.05 |
|                                                                                                                  |             |                  | 101        | 189             |        |             | 0.04             | 0.04       | < LOD    | < LOD    | < LOD    | 0.04       |      |
|                                                                                                                  |             |                  | 105        | 196             | Roots  | 15          | 0.03             | 0.02       | < LOD    | < LOD    | < LOD    | 0.02       | 0.03 |
|                                                                                                                  |             |                  | 326        | 0.04            |        |             | 0.04             | < LOD      | < LOD    | < LOD    | 0.04     |            |      |
|                                                                                                                  |             |                  | Roots      | 20              | 0.03   | 0.02        | < LOD            | < LOD      | < LOD    | 0.02     | 0.03     |            |      |
|                                                                                                                  |             |                  |            |                 | 0.03   | 0.03        | < LOD            | < LOD      | < LOD    | 0.03     |          |            |      |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

### Cereal grains

Supervised trials were carried out on barley (12 trials – Table 91) in the USA and Canada during the 2008 and 2009 growing seasons (White 2010, 2010/7003693). At each site one untreated control plot and two treated plots were established. Two foliar applications of a 62.5 g/L EC formulation were made at 96–103 g ai/ha. Retreatment intervals were 6–10 days (198–205 g ai/ha/season). Applications were made to plots using spray volumes of 147–239 L/ha with ground equipment. An adjuvant was added to the spray mixture for all applications. Barley grain samples were harvested targeting 21 ± 1 DALA (BBCH 99). Barley hay samples were harvested targeting the milk to soft dough growth stage and field dried to a moisture content targeting 10–20%. Barley straw samples were harvested after grain harvest and consisted of dried stalks or stems remaining after grain harvest. At one site (Trial RCN R080746 - RM of Coldwell, Manitoba) additional samples were collected to examine the residue decline. Barley samples (grain, hay and straw) were collected targeting 21 ± 1, 22 ± 1, 24 ± 1, 28 ± 1 and 31 ± 1 days after the last application which corresponds to 0, 1, 3, 7 and 10 days after the targeted RAC sampling. Residues were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Residues in barley hay and straw are shown in Table 111.

Table 91 Residues from the foliar application of fluxapyroxad to barley in the USA and Canada (White 2010, 2010/7003693)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                        | Application |                  |                          |                 | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |             |
|-------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-------------|------------------|------------|----------|----------|----------|------------|-------------|
|                                                                               | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |             |
|                                                                               |             |                  |                          |                 |        |             | Mean             | Individual |          |          |          | Individual | Mean        |
| GAP, USA                                                                      | 2           |                  | 97-<br>100               |                 |        | 21          |                  |            |          |          |          |            |             |
| 2010/7003693<br>RCN R080409<br>USA<br>(Payette, Idaho)<br>2008<br>(Baronesse) | 2           | 8                | 103<br><u>102</u><br>205 | 239<br>237      | Grain  | 21          |                  | 0.49       | < LOD    | < 0.01   | < LOD    | 0.49       | <u>0.53</u> |
|                                                                               |             |                  |                          |                 |        |             | <u>0.52</u>      | 0.55       | < LOD    | 0.01     | < LOD    | 0.56       |             |
| 2010/7003693<br>RCN R080410<br>USA<br>(Wayne, New York)<br>2008<br>(Select)   | 2           | 7                | 99<br><u>101</u><br>200  | 185<br>188      | Grain  | 21          |                  | 0.42       | < LOD    | 0.02     | < 0.01   | 0.44       | <u>0.41</u> |
|                                                                               |             |                  |                          |                 |        |             | <u>0.39</u>      | 0.35       | < LOD    | 0.02     | < 0.01   | 0.37       |             |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                           | Application |                  |                          |                 | Matrix | PHI<br>days | Residues (mg/kg) |                                             |          |              |            |              |            |              |      |  |  |  |
|--------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-------------|------------------|---------------------------------------------|----------|--------------|------------|--------------|------------|--------------|------|--|--|--|
|                                                                                                  | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |             | Fluxapyroxad     |                                             | M700F002 | M700F008     | M700F048   | Total*       |            |              |      |  |  |  |
|                                                                                                  |             |                  |                          |                 |        |             | Mean             | Individual                                  |          |              |            | Individual   | Mean       |              |      |  |  |  |
| 2010/7003693<br>RCN R080411<br>USA<br>(Pepin, Wisconsin)<br>2008<br>(Kewaunee)                   | 2           | 8                | 102<br><u>100</u><br>202 | 192<br>188      | Grain  | 20          |                  | (< LOD,<br>< 0.01, < 0.01)<br>< 0.01        | < LOD    | < LOD        | < LOD      | < 0.01       | < 0.01     |              |      |  |  |  |
| 2010/7003693<br>RCN R080412<br>Canada<br>(RM of Dundurn,<br>Saskatchewan)<br>2008<br>(Legacy)    | 2           | 7                | 100<br><u>100</u><br>200 | 202<br>202      | Grain  | 21          |                  | 0.53<br>0.54<br><u>0.54</u>                 | < LOD    | < 0.01       | < LOD      | 0.53<br>0.54 | 0.54       |              |      |  |  |  |
| 2010/7003693<br>RCN R080413<br>Canada<br>(RM of Vanscoy,<br>Saskatchewan)<br>2008<br>(Legacy)    | 2           | 7                | 102<br><u>102</u><br>204 | 204<br>205      | Grain  | 20          |                  | 0.36<br>0.42<br><u>0.39</u>                 | < LOD    | < 0.01       | < LOD      | 0.36<br>0.42 | 0.39       |              |      |  |  |  |
| 2010/7003693<br>RCN R080414<br>USA<br>(Hall, Nebraska)<br>2008<br>(Baronesse)                    | 2           | 7                | 101<br><u>101</u><br>202 | 189<br>188      | Grain  | 21          |                  | (0.46, 0.55)<br>0.51<br>(0.54 0.50)<br>0.52 | < LOD    | 0.02         | < LOD      | 0.53<br>0.54 | 0.54       |              |      |  |  |  |
| 2010/7003693<br>RCN R080742<br>Canada<br>(MD of Lethbridge,<br>Alberta)<br>2009<br>(Panoka)      | 2           | 7                | 101<br><u>99</u><br>200  | 153<br>150      | Grain  | 21          |                  | 0.86<br>0.88<br><u>0.87</u>                 | < LOD    | < 0.01       | < LOD      | 0.86<br>0.88 | 0.87       |              |      |  |  |  |
| 2010/7003693<br>RCN R080743<br>Canada<br>(MD of Taber,<br>Alberta)<br>2009<br>(Metcalf)          | 2           | 10               | 102<br><u>98</u><br>200  | 154<br>147      | Grain  | 21          |                  | 1.09<br>0.94<br><u>1.02</u>                 | < LOD    | < 0.01       | < LOD      | 1.09<br>0.94 | 1.02       |              |      |  |  |  |
| 2010/7003693<br>RCN R080744<br>Canada<br>(MD of Laird,<br>Saskatchewan)<br>2009<br>(Copeland)    | 2           | 6                | 101<br><u>103</u><br>204 | 202<br>205      | Grain  | 22          |                  | 0.82<br>0.81<br><u>0.82</u>                 | < LOD    | 0.02         | < LOD      | 0.84<br>0.83 | 0.84       |              |      |  |  |  |
| 2010/7003693<br>RCN R080745<br>Canada<br>(RM of Rosthern,<br>Saskatchewan)<br>2009<br>(Copeland) | 2           | 6                | 101<br><u>103</u><br>204 | 203<br>205      | Grain  | 21          |                  | 0.54<br>0.45<br><u>0.50</u>                 | < LOD    | 0.02<br>0.01 | < LOD      | 0.56<br>0.46 | 0.51       |              |      |  |  |  |
| 2010/7003693<br>RCN R080746<br>Canada<br>(RM of Coldwell,<br>Manitoba)<br>2008<br>(Robust)       | 2           | 7                | 96<br><u>102</u><br>198  | 192<br>204      | Grain  | 20          | 0.33             | 0.38<br>0.28                                | < LOD    | 0.03<br>0.02 | < LOD      | 0.41<br>0.30 | 0.36       |              |      |  |  |  |
|                                                                                                  |             |                  |                          |                 |        | 21          | 0.32             | 0.27<br>0.37                                | < LOD    | 0.02<br>0.02 | < LOD      | 0.29<br>0.39 | 0.34       |              |      |  |  |  |
|                                                                                                  |             |                  |                          |                 |        |             |                  | 25                                          | 0.40     | 0.41<br>0.38 | < LOD      | 0.03<br>0.03 | < LOD      | 0.44<br>0.41 | 0.43 |  |  |  |
|                                                                                                  |             |                  |                          |                 |        | 27          | <u>0.41</u>      |                                             |          | -<br>0.41    | -<br>< LOD | -<br>0.03    | -<br>< LOD | -<br>0.44    | 0.44 |  |  |  |
|                                                                                                  |             |                  |                          |                 |        |             |                  |                                             |          |              |            |              |            |              |      |  |  |  |
|                                                                                                  |             |                  |                          |                 |        |             |                  |                                             |          |              |            |              |            |              |      |  |  |  |
|                                                                                                  |             |                  |                          |                 |        |             |                  |                                             |          |              |            |              |            |              |      |  |  |  |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                    | Application |                  |                  |                 | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |      |
|-------------------------------------------------------------------------------------------|-------------|------------------|------------------|-----------------|--------|-------------|------------------|------------|----------|----------|----------|------------|------|
|                                                                                           | No          | Interval<br>Days | g<br>ai/ha       | Water<br>(L/ha) |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |      |
|                                                                                           |             |                  |                  |                 |        |             | Mean             | Individual |          |          |          | Individual | Mean |
|                                                                                           |             |                  |                  |                 |        |             |                  |            |          |          |          |            |      |
|                                                                                           |             |                  |                  |                 |        |             |                  |            |          |          |          |            |      |
|                                                                                           |             |                  |                  |                 | 31     | 0.37        | 0.37             | < LOD      | 0.03     | < LOD    | 0.40     | 0.40       |      |
|                                                                                           |             |                  |                  |                 |        | 0.37        | < LOD            | 0.03       | < LOD    | 0.40     |          |            |      |
| 2010/7003693<br>RCN R080747<br>Canada<br>(RM of Woodlands,<br>Manitoba)<br>2008<br>(Trey) | 2           | 8                | 103<br>99<br>202 | 206<br>198      | Grain  | 20          |                  | 1.65       | < LOD    | 0.06     | < LOD    | 1.71       | 1.26 |
|                                                                                           |             |                  |                  |                 |        | 1.22        | 0.78             | < LOD      | 0.03     | < LOD    | 0.81     |            |      |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out on barley (four trials – Table 92) in Brazil during the 2009 growing season (Resende 2010, 2010/1057148). Two foliar applications of a 50 g fluxapyroxad/L EC co-formulation were made at 60 g fluxapyroxad/ha (total rate 120 g fluxapyroxad/ha/season). Applications were made to plots using spray volumes of 100 L/ha. An adjuvant was added to the spray mixture for all applications. Barley grain samples were harvested at 29–30 DALA for point trials while at two of the sites additional treated samples were collected at four additional sampling intervals (0, 7, 15 and 45 DALA) to examine residue decline. The grain was collected from plants at growth stages BBCH 87–97 except for samples from trial G090083 (GS 77). Residues were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Table 92 Residues from the foliar application of fluxapyroxad to barley in Brazil (Resende 2010, 2010/1057148)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                          | Application |                  |                        |                 | Matrix | PHI<br>days | Residues (mg/kg)     |          |          |          |        |
|-------------------------------------------------------------------------------------------------|-------------|------------------|------------------------|-----------------|--------|-------------|----------------------|----------|----------|----------|--------|
|                                                                                                 | No          | Interval<br>Days | g<br>ai/ha             | Water<br>(L/ha) |        |             | Fluxapyroxad         | M700F002 | M700F008 | M700F048 | Total* |
| GAP, Brazil                                                                                     | 2           | 15-20            | 60                     |                 |        | 30          |                      |          |          |          |        |
| 2010/1057148<br>G090081<br>Brazil<br>(Santo Antônio de Posse, São<br>Paulo)<br>2009<br>(BRS195) | 2           | 15               | 60<br><u>60</u><br>120 | 100             | Grain  | 0           | 0.77                 | < LOD    | < LOD    | < LOD    | 0.77   |
|                                                                                                 |             |                  |                        |                 |        | 7           | 0.59                 | < LOD    | < 0.01   | < LOD    | 0.59   |
|                                                                                                 |             |                  |                        |                 |        | 15          | 0.65                 | < LOD    | < 0.01   | < LOD    | 0.65   |
|                                                                                                 |             |                  |                        |                 |        | 30          | 0.14                 | < LOD    | < 0.01   | < LOD    | 0.14   |
|                                                                                                 |             |                  |                        |                 |        | 45          | < 0.01               | < LOD    | < LOD    | < LOD    | < 0.01 |
| 2010/1057148<br>G090082<br>Brazil<br>(Ponta Grossa, Paraná)<br>2009<br>(CAWE)                   | 2           | 15               | 60<br><u>60</u><br>120 | 100             | Grain  | 0           | 0.89                 | < LOD    | < 0.01   | < LOD    | 0.89   |
|                                                                                                 |             |                  |                        |                 |        | 7           | (0.97, 0.83)<br>0.90 | < LOD    | 0.01     | < LOD    | 0.91   |
|                                                                                                 |             |                  |                        |                 |        | 15          | 0.83                 | < LOD    | 0.01     | < LOD    | 0.84   |
|                                                                                                 |             |                  |                        |                 |        | 30          | 0.15                 | < LOD    | < 0.01   | < LOD    | 0.15   |
|                                                                                                 |             |                  |                        |                 |        | 45          | < 0.01               | < LOD    | < LOD    | < LOD    | < 0.01 |
| 2010/1057148<br>G090083<br>Brazil<br>(Castro, Paraná)<br>2009<br>(BRS195)                       | 2           | 15               | 60<br><u>60</u><br>120 | 100             | Grain  | 30          | 0.09                 | < LOD    | < 0.01   | < LOD    | 0.09   |
| 2010/1057148<br>G090084<br>Brazil<br>(Santa Cruz do Sul, Rio Grande do<br>Sul)                  | 2           | 15               | 60<br><u>60</u><br>120 | 100             | Grain  | 29          | 0.28                 | < 0.01   | 0.02     | < 0.01   | 0.30   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety) | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|--------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|------------------|----------|----------|----------|--------|
|                                                        | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2009<br>(MN743)                                        |             |                  |            |                 |        |             |                  |          |          |          |        |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials (eight each growing season) were carried out on barley in various European countries (France, Italy, Spain, the UK, Greece, Netherlands and Germany) during the 2007 and 2008 growing seasons (Erdmann 2009, 2007/1050093 and Erdmann 2009, 2009/1012125 respectively). Each trial consisted of a control plot and two treated plots. Two foliar applications of a 62.5 g ai/L EC formulation of fluxapyroxad were made at 77–90 g ai/ha or 121–135 g ai/ha. Retreatment intervals were 14–27 days (total rates 158–176 g ai/ha/season or 248–268 g ai/ha/season respectively). For the trials carried out in the 2007 growing season, the target application timing for the second treatment was crop growth stage BBCH 69 and for the first treatment was 21(±1) days prior to the second. For the trials carried out in the 2008 growing season, the application timing for the first treatment was growth stages BBCH 39–49 and for the second treatment BBCH 69. In trial L080051 the second application was made at BBCH 71. Applications were made to plots using ground equipment with a target spray volume of 200 L/ha (actual spray volumes of 185–217 L/ha).

Barley whole plant samples were harvested directly after the last application. For the 2007 trials after 35 (±1), 42 (±1) and 49 (±1) days either ears and rest of plant or grain and straw were taken directly depending on crop maturity. In those cases when growth stage 89 was not reached after 49 days, additional grain and straw sampling was conducted later. Commercial harvest was reached in seven trials at 49 DALA in seven trials and in one trial (L070248) was reached 61 DALA. For the 2008 trials after about 28, 35 and 42 days either ears and rest of plant or grain and straw were taken directly depending on crop maturity. In those cases when growth stage 89 was not reached after 49 days, additional grain and straw sampling was conducted later. Commercial harvest was reached within 42 DALA in seven trials and in one trial (L080047) was reached 63 DALA.

Residues were quantitated using LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Residues in barley whole plant without roots, ears, rest of plant without roots and straw are shown in Table 112.

Table 93 Residues from the foliar application of fluxapyroxad to barley in Europe (Erdmann 2009, 2007/1050093 and Erdmann 2009, 2009/1012125)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                       | Application |                  |                   |                 | Matrix | PHI<br>days    | Residues (mg/kg) |          |          |          |        |
|----------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|----------------|------------------|----------|----------|----------|--------|
|                                                                                              | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |                | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| GAP                                                                                          | 2           |                  | 125               |                 |        | 35 or not reqd |                  |          |          |          |        |
| 2007/1050093<br>L070245<br>Germany<br>(Mauchenheim,<br>Rheinland-Pfatz)<br>2007<br>(Braemar) | 2           | 20               | 85<br>84<br>169   | 204<br>202      | Grain  | 34             | 0.10             | < 0.01   | < 0.01   | < 0.01   | 0.10   |
|                                                                                              |             |                  |                   |                 |        | 42             | 0.10             | < 0.01   | < 0.01   | < 0.01   | 0.10   |
|                                                                                              |             |                  |                   |                 |        | 49             | 0.09             | < 0.01   | < 0.01   | < 0.01   | 0.09   |
|                                                                                              | 2           | 20               | 126<br>128<br>254 | 202<br>204      | Grain  | 34             | 0.16             | < 0.01   | < 0.01   | < 0.01   | 0.16   |
|                                                                                              |             |                  |                   |                 |        | 42             | 0.17             | < 0.01   | < 0.01   | < 0.01   | 0.17   |
|                                                                                              |             |                  |                   |                 |        | 49             | 0.19             | < 0.01   | < 0.01   | < 0.01   | 0.19   |
| 2007/1050093<br>L070246<br>Germany                                                           | 2           | 22               | 84<br>81<br>165   | 203<br>195      | Grain  | 43             | 0.04             | < 0.01   | < 0.01   | < 0.01   | 0.04   |
|                                                                                              |             |                  |                   |                 |        | 48             | 0.05             | < 0.01   | < 0.01   | < 0.01   | 0.05   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                        | Application |                  |                   |                 | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|---------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|-------------|------------------|----------|----------|----------|--------|
|                                                                                                               | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| (Brunne Brandenburg)<br>2007<br>(Campanile)                                                                   | 2           | 22               | 126<br>128<br>254 | 202<br>204      | Grain  | 43          | 0.08             | < 0.01   | < 0.01   | < 0.01   | 0.08   |
|                                                                                                               |             |                  |                   |                 |        | 48          | 0.08             | < 0.01   | < 0.01   | < 0.01   | 0.08   |
| 2007/1050093<br>L070247<br>France (N)<br>(Seebach, Alsace)<br>2007<br>(Platine)                               | 2           | 20               | 88<br>86<br>174   | 212<br>206      | Grain  | 36          | 0.04             | < 0.01   | < 0.01   | < 0.01   | 0.04   |
|                                                                                                               |             |                  |                   |                 |        | 43          | 0.05             | < 0.01   | < 0.01   | < 0.01   | 0.05   |
|                                                                                                               |             |                  |                   |                 |        | 50          | 0.05             | < 0.01   | < 0.01   | < 0.01   | 0.05   |
|                                                                                                               | 2           | 20               | 130<br>121<br>251 | 207<br>194      | Grain  | 36          | 0.13             | < 0.01   | < 0.01   | < 0.01   | 0.13   |
|                                                                                                               |             |                  |                   |                 |        | 43          | 0.10             | < 0.01   | < 0.01   | < 0.01   | 0.10   |
|                                                                                                               |             |                  |                   |                 |        | 50          | 0.10             | < 0.01   | < 0.01   | < 0.01   | 0.10   |
| 2007/1050093<br>L070248<br>UK<br>(Manningtree, Essex)<br>2007<br>(Pearl)                                      | 2           | 22               | 88<br>86<br>174   | 211<br>209      | Grain  | 61          | 0.02             | < 0.01   | < 0.01   | < 0.01   | 0.02   |
|                                                                                                               | 2           | 22               | 130<br>133<br>263 | 208<br>213      | Grain  | 61          | 0.02             | < 0.01   | < 0.01   | < 0.01   | 0.02   |
| 2007/1050093<br>L070249<br>France (S)<br>(Grenade, Midi Pyrenees)<br>2007<br>(Prestige)                       | 2           | 16               | 86<br>90<br>176   | 207<br>217      | Grain  | 42          | 0.07             | < 0.01   | < 0.01   | < 0.01   | 0.07   |
|                                                                                                               |             |                  |                   |                 |        | 49          | 0.05             | < 0.01   | < 0.01   | < 0.01   | 0.05   |
|                                                                                                               | 2           | 16               | 135<br>133<br>268 | 217<br>213      | Grain  | 42          | 0.08             | < 0.01   | < 0.01   | < 0.01   | 0.08   |
|                                                                                                               |             |                  |                   |                 |        | 49          | 0.10             | < 0.01   | < 0.01   | < 0.01   | 0.10   |
| 2007/1050093<br>L070250<br>France (S)<br>(Duras, Aquitaine)<br>2007<br>(Nikel)                                | 2           | 21               | 89<br>79<br>168   | 213<br>191      | Grain  | 42          | 0.15             | < 0.01   | < 0.01   | < 0.01   | 0.15   |
|                                                                                                               |             |                  |                   |                 |        | 49          | 0.12             | < 0.01   | < 0.01   | < 0.01   | 0.12   |
|                                                                                                               | 2           | 21               | 135<br>124<br>259 | 217<br>199      | Grain  | 42          | 0.24             | < 0.01   | < 0.01   | < 0.01   | 0.24   |
|                                                                                                               |             |                  |                   |                 |        | 49          | 0.24             | < 0.01   | < 0.01   | < 0.01   | 0.24   |
| 2007/1050093<br>L070251<br>Spain (S)<br>(Las Cabezas, Sevilla)<br>2007<br>(Belen)                             | 2           | 22               | 84<br>84<br>168   | 203<br>201      | Grain  | 42          | 0.07             | < 0.01   | < 0.01   | < 0.01   | 0.07   |
|                                                                                                               |             |                  |                   |                 |        | 49          | 0.06             | < 0.01   | < 0.01   | < 0.01   | 0.06   |
|                                                                                                               | 2           | 22               | 124<br>125<br>249 | 199<br>200      | Grain  | 42          | 0.08             | < 0.01   | < 0.01   | < 0.01   | 0.08   |
|                                                                                                               |             |                  |                   |                 |        | 49          | 0.09             | < 0.01   | < 0.01   | < 0.01   | 0.09   |
| 2007/1050093<br>L070252<br>Spain<br>(Andalucia, Lombardia)<br>2009<br>(Cecilia)                               | 2           | 21               | 85<br>81<br>166   | 204<br>196      | Grain  | 42          | 0.07             | < 0.01   | < 0.01   | < 0.01   | 0.07   |
|                                                                                                               |             |                  |                   |                 |        | 49          | 0.07             | < 0.01   | < 0.01   | < 0.01   | 0.07   |
|                                                                                                               | 2           | 21               | 127<br>125<br>252 | 203<br>200      | Grain  | 42          | 0.10             | < 0.01   | < 0.01   | < 0.01   | 0.10   |
|                                                                                                               |             |                  |                   |                 |        | 49          | 0.09             | < 0.01   | < 0.01   | < 0.01   | 0.09   |
| 2009/1012125<br>L080044<br>Germany (N)<br>(Mauchenheim, Rheinland-<br>Pfalz/ Rheinhessen)<br>2008<br>(Marthe) | 2           | 17               | 83<br>86<br>169   | 200<br>208      | Grain  | 35          | 0.13             | < 0.01   | < 0.01   | < 0.01   | 0.13   |
|                                                                                                               |             |                  |                   |                 |        | 41          | 0.12             | < 0.01   | < 0.01   | < 0.01   | 0.12   |
|                                                                                                               | 2           | 17               | 125<br>128<br>253 | 200<br>204      | Grain  | 35          | 0.23             | < 0.01   | 0.011    | < 0.01   | 0.23   |
|                                                                                                               |             |                  |                   |                 |        | 41          | 0.20             | < 0.01   | < 0.01   | < 0.01   | 0.20   |
| 2009/1012125<br>L080045<br>Netherlands (N)<br>(Ottersum Limburg/ Gennepe)<br>2008<br>(Sequel)                 | 2           | 18               | 83<br>84<br>167   | 200<br>202      | Grain  | 28          | 0.09             | < 0.01   | < 0.01   | < 0.01   | 0.09   |
|                                                                                                               |             |                  |                   |                 |        | 35          | 0.09             | < 0.01   | < 0.01   | < 0.01   | 0.09   |
|                                                                                                               |             |                  |                   |                 |        | 41          | 0.08             | < 0.01   | < 0.01   | < 0.01   | 0.08   |
|                                                                                                               | 2           | 18               | 126<br>128<br>254 | 201<br>205      | Grain  | 28          | 0.13             | < 0.01   | < 0.01   | < 0.01   | 0.13   |
|                                                                                                               |             |                  |                   |                 |        | 35          | 0.17             | < 0.01   | < 0.01   | < 0.01   | 0.17   |
|                                                                                                               |             |                  |                   |                 |        | 41          | 0.17             | < 0.01   | < 0.01   | < 0.01   | 0.17   |
| 2009/1012125<br>L080046<br>France (N)<br>(Seebach, Alsace)<br>2008<br>(Platine)                               | 2           | 25               | 87<br>87<br>174   | 209<br>209      | Grain  | 42          | 0.14             | < 0.01   | < 0.01   | < 0.01   | 0.14   |
|                                                                                                               | 2           | 25               | 134<br>134<br>268 | 215<br>215      | Grain  | 42          | 0.18             | < 0.01   | < 0.01   | < 0.01   | 0.18   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                  | Application |                  |                   |                 | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|---------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|-------------|------------------|----------|----------|----------|--------|
|                                                                                                         | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2009/1012125<br>L080047<br>UK<br>(Manningtree, Essex)<br>2008<br>(Saffron)                              | 2           | 21               | 86<br>85<br>171   | 206<br>204      | Grain  | 63          | 0.03             | < 0.01   | < 0.01   | < 0.01   | 0.03   |
|                                                                                                         | 2           | 21               | 133<br>129<br>262 | 212<br>206      | Grain  | 63          | 0.05             | < 0.01   | < 0.01   | < 0.01   | 0.05   |
| 2009/1012125<br>L080048<br>France (S)<br>(Duras, Aquitaine)<br>2008<br>(Nikel)                          | 2           | 14               | 84<br>85<br>169   | 203<br>204      | Grain  | 42          | 0.06             | < 0.01   | < 0.01   | < 0.01   | 0.06   |
|                                                                                                         | 2           | 14               | 125<br>133<br>258 | 200<br>212      | Grain  | 42          | 0.09             | < 0.01   | < 0.01   | < 0.01   | 0.09   |
| 2009/1012125<br>L080049<br>Greece (S)<br>(Aghios Mamas, Central<br>Macedonia)<br>2008<br>(Thessaloniki) | 2           | 27               | 77<br>81<br>158   | 185<br>196      | Grain  | 35          | 0.14             | < 0.01   | < 0.01   | < 0.01   | 0.14   |
|                                                                                                         |             |                  |                   |                 |        | 42          | 0.13             | < 0.01   | < 0.01   | < 0.01   | 0.13   |
|                                                                                                         | 2           | 27               | 126<br>126<br>252 | 202<br>201      | Grain  | 35          | 0.14             | < 0.01   | 0.01     | < 0.01   | 0.14   |
|                                                                                                         |             |                  |                   |                 |        | 42          | 0.15             | < 0.01   | 0.01     | < 0.01   | 0.16   |
| 2009/1012125<br>L080050<br>Spain (S)<br>(Utrera, Andalucia/ Sevilla)<br>2008<br>(Belen)                 | 2           | 24               | 82<br>84<br>166   | 198<br>203      | Grain  | 42          | 0.11             | < 0.01   | < 0.01   | < 0.01   | 0.11   |
|                                                                                                         | 2           | 24               | 124<br>124<br>248 | 198<br>198      | Grain  | 42          | 0.23             | < 0.01   | < 0.01   | < 0.01   | 0.23   |
| 2009/1012125<br>L080051<br>Italy (S)<br>(Lazze, Milano/ Lombardia)<br>2008<br>(Amillis)                 | 2           | 14               | 83<br>82<br>165   | 199<br>198      | Grain  | 29          | 0.13             | < 0.01   | 0.01     | < 0.01   | 0.14   |
|                                                                                                         |             |                  |                   |                 |        | 34          | 0.16             | < 0.01   | 0.02     | < 0.01   | 0.18   |
|                                                                                                         |             |                  |                   |                 |        | 42          | 0.18             | < 0.01   | 0.02     | < 0.01   | 0.20   |
|                                                                                                         | 2           | 14               | 129<br>127<br>256 | 206<br>203      | Grain  | 29          | 0.30             | < 0.01   | 0.02     | < 0.01   | 0.32   |
|                                                                                                         |             |                  |                   |                 |        | 34          | 0.36             | < 0.01   | 0.03     | < 0.01   | 0.39   |
|                                                                                                         |             |                  |                   |                 |        | 42          | 0.41             | < 0.01   | 0.032    | < 0.01   | 0.45   |

Fluxapyroxad, M700F008 and M700F048 are reported in terms of fluxapyroxad. M700F002 is reported in terms of itself.

\*Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out on barley (two trials – Table 94) in Australia during the 2008 growing season (Allen 2010, 2010/7003123). Each trial consisted of a control plot and two treated plots. Two foliar applications of a 62.5 g ai/L EC formulation were made targeting 62.5 g ai/ha (actual rates 61–62 g ai/ha) or 125 g ai/ha (actual rates 122–123 g ai/ha). Retreatment intervals were 17–20 days (total rates 122–125 g ai/ha/season or 244–245 g ai/ha/season respectively). The target application timing for the first treatment was Zadoks crop growth stage 39 (flag leaf ligule just visible) and for the second treatment was Zadoks crop growth stage 59 (90% of spikes visible). Applications were made to plots using ground equipment (backpack sprayer with handheld boom or handheld boom) with a target spray volume of 100 L/ha (actual spray volumes of 99–100 L/ha). The nominal collection times for samples of barley forage were 0, 7 and 14 days after the first application and immediately before the second application. In one trial forage was collected at 14 days after the first application and at -0, 0, 8 and 15 days after the second application. Residues were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Residues in barley forage and straw are shown in Table 113.

Table 94 Residues from the foliar application of fluxapyroxad to barley in Australia (Allen 2010, 2010/7003123)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                            | Application |                  |                   |              | Matrix | GS  | Residues (mg/kg) |          |          |          |        |
|---------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|--------------|--------|-----|------------------|----------|----------|----------|--------|
|                                                                                                   | No          | Interval<br>Days | g<br>ai/ha        | Water (L/ha) |        |     | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| GAP, Australia                                                                                    | 2           |                  | 62.5              |              |        | -   |                  |          |          |          |        |
| 2010/7003123<br>BASF-0802/S2<br>Australia<br>(Culcairn, New South<br>Wales)<br>2008<br>(Gairdner) | 2           | 20               | 62<br>61<br>125   | 99.9<br>99.2 | Grain  | Z61 | 0.05             | < LOD    | < 0.01   | < LOD    | 0.05   |
|                                                                                                   | 2           | 20               | 123<br>122<br>245 | 99.9<br>99.2 | Grain  | Z61 | 0.10             | < LOD    | < 0.01   | < LOD    | 0.10   |
| 2010/7003123<br>BASF-0802/S4<br>Australia<br>(Templers, South Australia)<br>2008<br>(Flagship)    | 2           | 17               | 61<br>61<br>122   | 99.2         | Grain  | Z59 | 0.03             | < LOD    | < 0.01   | < LOD    | 0.03   |
|                                                                                                   | 2           | 17               | 122<br>122<br>244 | 99.2         | Grain  | Z59 | 0.08             | < LOD    | < 0.01   | < LOD    | 0.08   |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

GS = Growth Stage at Last Application

Supervised trials were carried out on field corn (15 trials – Table 95) in the USA and Canada during the 2008 growing seasons (White 2010, 2010/7003693). At each site one untreated control plot and two treated plots were established. Two foliar applications of a 62.5 g/L EC formulation were made at 97–105 g ai/ha (195–207 g ai/ha/season). Retreatment intervals were 6–8 days. Applications were made to plots using spray volumes of 115–286 L/ha with ground equipment. An adjuvant was added to the spray mixture for all applications. Corn RAC samples were harvested targeting  $7 \pm 1$  DALA (field corn forage or  $21 \pm 1$  DALA (field corn grain and stover). Residues were quantitated by LC/MS/MS method L0137/01. Concurrent recoveries were acceptable.

Residues in corn stover and forage are shown in Table 114.

Table 95 Residues from the foliar application of fluxapyroxad to field corn in the USA and Canada (White 2010, 2010/7003693)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                          | Application |                  |                   |              | Matrix | PHI<br>days   | Residues (mg/kg)         |                          |                          |                          |                            |                            |
|-------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|--------------|--------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|----------------------------|
|                                                                                                 | No          | Interval<br>Days | g<br>ai/ha        | Water (L/ha) |        |               | Fluxapyroxad             |                          | M700F002                 | M700F008                 | M700F048                   | Total*                     |
|                                                                                                 |             |                  |                   |              |        |               | Mean                     | Individual               |                          |                          |                            | Individual<br>Mean         |
| GAP, USA                                                                                        | 2           |                  | 97-<br>100        |              |        | 21<br>(grain) |                          |                          |                          |                          |                            |                            |
| 2010/7003693<br>RCN R080383<br>USA<br>(Wayne, New<br>York)<br>2008<br>(Field corn–<br>L-6H07RR) | 2           | 7                | 101<br>105<br>206 | 187<br>194   | Grain  | 21            | < LOD<br>< LOD<br>< 0.01 | < LOD<br>< LOD<br>< 0.01 | < LOD<br>< LOD<br>< 0.01 | < LOD<br>< LOD<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01 |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                                     | Application |                  |                   |                 | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |        |
|----------------------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|-------------|------------------|------------|----------|----------|----------|------------|--------|
|                                                                                                                            | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |        |
|                                                                                                                            |             |                  |                   |                 |        |             | Mean             | Individual |          |          |          | Individual | Mean   |
| 2010/7003693<br>RCN R080384<br>USA<br>(Tift, Georgia)<br>2008<br>(Field corn –<br>31D5S)                                   | 2           | 7                | 102<br>101<br>203 | 256<br>268      | Grain  | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                                            |             |                  |                   |                 |        | < LOD       |                  | < LOD      | < LOD    | < LOD    | < 0.01   |            |        |
|                                                                                                                            |             |                  |                   |                 |        |             |                  |            |          |          |          |            |        |
| 2010/7003693<br>RCN R080385<br>USA<br>(Pepin, Wisconsin)<br>2008<br>(Field corn –<br>P-38 g16)                             | 2           | 7                | 100<br>102<br>202 | 187<br>190      | Grain  | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                                            |             |                  |                   |                 |        | < LOD       |                  | < LOD      | < LOD    | < LOD    | < 0.01   |            |        |
|                                                                                                                            |             |                  |                   |                 |        |             |                  |            |          |          |          |            |        |
| 2010/7003693<br>RCN R080387<br>USA<br>(Pepin, Wisconsin)<br>2008<br>(Field corn –<br>Dekalb 46-60)                         | 2           | 7                | 101<br>101<br>202 | 189<br>189      | Grain  | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                                            |             |                  |                   |                 |        | < LOD       |                  | < LOD      | < LOD    | < LOD    | < 0.01   |            |        |
|                                                                                                                            |             |                  |                   |                 |        |             |                  |            |          |          |          |            |        |
| 2010/7003693<br>RCN R080392<br>USA<br>(Pepin, Wisconsin)<br>2008<br>(Field corn –<br>B5202)                                | 2           | 7                | 100<br>102<br>202 | 187<br>190      | Grain  | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                                            |             |                  |                   |                 |        | < LOD       |                  | < LOD      | < LOD    | < LOD    | < 0.01   |            |        |
|                                                                                                                            |             |                  |                   |                 |        |             |                  |            |          |          |          |            |        |
| 2010/7003693<br>RCN R080386<br>Canada<br>(RM of Portage la<br>Prairie, Manitoba)<br>2008<br>(Field corn –<br>Dekalb 26-79) | 2           | 7                | 99<br>101<br>200  | 186<br>187      | Grain  | 22          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                                            |             |                  |                   |                 |        | < LOD       |                  | < LOD      | < LOD    | < LOD    | < 0.01   |            |        |
|                                                                                                                            |             |                  |                   |                 |        |             |                  |            |          |          |          |            |        |
| 2010/7003693<br>RCN R080388<br>USA<br>(York, Nebraska)<br>2008<br>(Field corn –<br>34F96)                                  | 2           | 8                | 100<br>98<br>198  | 188<br>183      | Grain  | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                                            |             |                  |                   |                 |        | < LOD       |                  | < LOD      | < LOD    | < LOD    | < 0.01   |            |        |
|                                                                                                                            |             |                  |                   |                 |        |             |                  |            |          |          |          |            |        |
| 2010/7003693<br>RCN R080389<br>USA<br>(Cass, North<br>Dakota)<br>2008<br>(Field corn –<br>Hybrid 2K154)                    | 2           | 7                | 101<br>100<br>201 | 190<br>188      | Grain  | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                                            |             |                  |                   |                 |        | < LOD       |                  | < LOD      | < LOD    | < LOD    | < 0.01   |            |        |
|                                                                                                                            |             |                  |                   |                 |        |             |                  |            |          |          |          |            |        |
| 2010/7003693<br>RCN R080390<br>USA<br>(Ottawa, Michigan)<br>2008<br>(Field corn –<br>DKC48-46)                             | 2           | 7                | 100<br>100<br>200 | 283<br>286      | Grain  | 20          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                                                            |             |                  |                   |                 |        | < LOD       |                  | < LOD      | < LOD    | < LOD    | < 0.01   |            |        |
|                                                                                                                            |             |                  |                   |                 |        |             |                  |            |          |          |          |            |        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                      | Application |                  |                          |                 | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |               |
|-------------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-------------|------------------|------------|----------|----------|----------|------------|---------------|
|                                                                                                             | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |               |
|                                                                                                             |             |                  |                          |                 |        |             | Mean             | Individual |          |          |          | Individual | Mean          |
| 2010/7003693<br>RCN R080391<br>USA<br>(Freeborn,<br>Minnesota)<br>2008<br>(Field corn –<br>Pioneer 37Y14)   | 2           | 6                | 102<br><u>100</u><br>202 | 191<br>187      | Grain  | 21          | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                                             |             |                  |                          |                 |        |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |
| 2010/7003693<br>RCN R080393<br>USA<br>(Steele, Minnesota)<br>2008<br>(Field corn –<br>Pioneer 37Y14)        | 2           | 6                | 102<br><u>99</u><br>201  | 191<br>185      | Grain  | 21          | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                                             |             |                  |                          |                 |        |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |
| 2010/7003693<br>RCN R080394<br>USA<br>(Stoddard,<br>Missouri)<br>2008<br>(Field corn –<br>31P42)            | 2           | 7                | 100<br><u>100</u><br>200 | 187<br>187      | Grain  | 22          | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                                             |             |                  |                          |                 |        |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |
| 2010/7003693<br>RCN R080395<br>USA<br>(Clinton, Illinois)<br>2008<br>(Field corn –<br>616XLR)               | 2           | 7                | 97<br><u>98</u><br>195   | 115<br>122      | Grain  | 21          | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                                             |             |                  |                          |                 |        |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |
| 2010/7003693<br>RCN R080396<br>Canada<br>(RM of Grey,<br>Manitoba)<br>2008<br>(Field corn – DKC-<br>26-79)  | 2           | 7                | 101<br><u>104</u><br>205 | 202<br>207      | Grain  | 21          | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                                             |             |                  |                          |                 |        |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |
| 2010/7003693<br>RCN R080397<br>USA<br>(Wharton, Texas)<br>2008<br>(Field corn –<br>DKC66-23 (RR2,<br>YGCB)) | 2           | 8                | 104<br><u>103</u><br>207 | 132<br>133      | Grain  | 20          | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                                             |             |                  |                          |                 |        |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out in corn (four trials – Table 96) in Brazil during the 2009 growing season (Resende and Takahashi 2010, 2010/1057150). Two foliar applications of a 50 g fluxapyroxad/L co-formulation were made at 60 g fluxapyroxad /ha (total rate 120 g fluxapyroxad /ha/season). Retreatment intervals were 15 days. Applications were made to plots using spray volumes of 100 L/ha. An adjuvant was added to the spray mixture for all applications. Corn grain samples were harvested at 44/45 DALA for point trials while at two of the sites additional treated samples were

collected at four additional sampling intervals (0, 15, 30 and 60 DALA) to examine residue decline. The grain was collected from plants at growth stages BBCH 83–97. Residues were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Table 96 Residues from the foliar application of fluxapyroxad to corn in Brazil (Resende and Takahashi 2010, 2010/1057150)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                           | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|--------------------------------------------------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|------------------|----------|----------|----------|--------|
|                                                                                                  | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| GAP, Brazil                                                                                      | 2           | 15-20            | 60         |                 |        | 45          |                  |          |          |          |        |
| 2010/1057150<br>G090057<br>Brazil<br>(Santo Antônio de Posse, São Paulo)<br>2009<br>(Yieldogard) | 2           | 15               | 60<br>60   | 100             | Grain  | 0           | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                                  |             |                  |            |                 |        | 15          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                                  |             |                  |            |                 |        | 30          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                                  |             |                  |            |                 |        | 45          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                                  |             |                  |            |                 |        | 60          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
| 2010/1057150<br>G090058<br>Brazil<br>(Uberlândia, Minas Gerais)<br>2009<br>(Pioneer)             | 2           | 15               | 60<br>60   | 100             | Grain  | 0           | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                                  |             |                  |            |                 |        | 15          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                                  |             |                  |            |                 |        | 30          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                                  |             |                  |            |                 |        | 45          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                                  |             |                  |            |                 |        | 60          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
| 2010/1057150<br>G090059<br>Brazil<br>(Senador Canedo, Goiás)<br>2009<br>(AL Bandeirante)         | 2           | 15               | 60<br>60   | 100             | Grain  | 44          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
| 2010/1057150<br>G090060<br>Brazil<br>(Ponta Grossa, Paraná)<br>2009<br>(P30R50)                  | 2           | 15               | 60<br>60   | 100             | Grain  | 45          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out in oats (four trials – Table 97) in Brazil during the 2009 growing season (Resende 2010, 2010/1057149). Two foliar applications of a 50 g fluxapyroxad/L co-formulation were made at 60 g fluxapyroxad /ha (total rate 120 g fluxapyroxad /ha/season). Retreatment intervals were 15 days. Applications were made to plots using spray volumes of 100 L/ha. Oat grain samples were harvested at 30 DALA for point trials while at two of the sites additional treated samples were collected at four additional sampling intervals (0, 7, 15 and 45 DALA) to examine residue decline. The grains were collected from plants at growth stages BBCH 61–97. Residues were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Table 97 Residues from the foliar application of fluxapyroxad to oats in Brazil (Resende 2010, 2010/1057149)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                             | Application |                  |                        |                 | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|----------------------------------------------------------------------------------------------------|-------------|------------------|------------------------|-----------------|--------|-------------|------------------|----------|----------|----------|--------|
|                                                                                                    | No          | Interval<br>Days | g<br>ai/ha             | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| GAP, Brazil                                                                                        | 2           | 15-20            | 60                     |                 |        | 30          |                  |          |          |          |        |
| 2010/1057149<br>G090078<br>Brazil<br>(Ponta Grossa, Paraná)<br>2009<br>(FAPA 2)                    | 2           | 15               | 60<br><u>60</u><br>120 | 100             | Grain  | 0           | 4.41             | < LOD    | < 0.01   | < LOD    | 4.41   |
|                                                                                                    |             |                  |                        |                 |        | 7           | 1.59             | < LOD    | < 0.01   | < LOD    | 1.59   |
|                                                                                                    |             |                  |                        |                 |        | 15          | 0.41             | < LOD    | < LOD    | < LOD    | 0.41   |
|                                                                                                    |             |                  |                        |                 |        | 30          | < 0.01           | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                                    |             |                  |                        |                 |        | 45          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
| 2010/1057149<br>G090079<br>Brazil<br>(Castro, Paraná)<br>2009<br>(FAPA 2)                          | 2           | 15               | 60<br><u>60</u><br>120 | 100             | Grain  | 30          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
| 2010/1057149<br>G090080<br>Brazil<br>(Santa Cruz do Sul, Rio Grande<br>do Sul)<br>2009<br>(FAPA 2) | 2           | 15               | 60<br><u>60</u><br>120 | 100             | Grain  | 30          | 0.28             | < LOD    | < LOD    | < LOD    | 0.28   |
| 2010/1057149<br>G090101<br>Brazil<br>(Santa Antônio de Posse, São<br>Paulo)<br>2009<br>(BRS Guapa) | 2           | 15               | 60<br><u>60</u><br>120 | 100             | Grain  | 0           | 4.88             | < LOD    | < 0.01   | < LOD    | 4.88   |
|                                                                                                    |             |                  |                        |                 |        | 7           | 2.12             | < LOD    | < 0.01   | < LOD    | 2.12   |
|                                                                                                    |             |                  |                        |                 |        | 15          | 1.11             | < LOD    | < 0.01   | < LOD    | 1.11   |
|                                                                                                    |             |                  |                        |                 |        | 30          | 0.05             | < LOD    | < LOD    | < LOD    | 0.05   |
|                                                                                                    |             |                  |                        |                 |        | 45          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out on rice (12 trials – Table 98) in the USA during the 2008 and 2009 growing seasons (White 2010, 2010/7003693).

At each site one untreated control plot and one treated plot were established. Two foliar applications of a 62.5 g/L EC formulation were made at 97–102 g ai/ha (197–204 g ai/ha/season). Retreatment intervals were 6–8 days. Applications were made to plots using spray volumes of 136–280 L/ha with ground equipment. An adjuvant was added to the spray mixture for all applications except for the first application at trial RCN R080739. Rice grain and straw samples were harvested targeting 21±1 DALA. Rice straw samples consisted of dried stalks or stems remaining after grain harvest. At one site (RCN R080736 – Wharton, Texas) additional samples were collected to examine the residue decline. Rice samples (grain and straw) were collected targeting 21±1, 22±1, 24±1, 28±1 and 31±1 days after the last application which corresponds to 0, 1, 3, 7 and 10 days after the targeted RAC sampling. Residues were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Residues in rice straw are shown in Table 115.

Table 98 Residues from the foliar application of fluxapyroxad to rice in the USA (White 2010, 2010/7003693)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                           | Application |                  |                          |                 | Matrix | PHI<br>days | Residues (mg/kg) |              |                |                  |                  |                  |                  |
|----------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-------------|------------------|--------------|----------------|------------------|------------------|------------------|------------------|
|                                                                                  | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |             | Fluxapyroxad     |              | M700F002       | M700F008         | M700F048         | Total*           |                  |
|                                                                                  |             |                  |                          |                 |        |             | Mean             | Individual   |                |                  |                  | Individual       | Mean             |
| 2010/7003693<br>RCN R080403<br>USA<br>(Stoddard, Missouri)<br>2008<br>(Cybonnet) | 2           | 7                | 101<br><u>100</u><br>201 | 188<br>187      | Grain  | 22          | 0.52             | 0.50<br>0.53 | < LOD<br>< LOD | 0.02<br>0.02     | < LOD<br>< LOD   | 0.52<br>0.55     | 0.54             |
| 2010/7003693<br>RCN R080404<br>USA<br>(Butler, Missouri)<br>2008<br>(CL-171)     | 2           | 8                | 100<br><u>101</u><br>201 | 187<br>189      | Grain  | 22          | 0.71             | 0.67<br>0.75 | < LOD<br>< LOD | 0.02<br>0.02     | < 0.01<br>< 0.01 | 0.69<br>0.77     | 0.73             |
| 2010/7003693<br>RCN R080405<br>USA<br>(Pima, Arkansas)<br>2008<br>(Wells)        | 2           | 7                | 100<br><u>100</u><br>200 | 166<br>166      | Grain  | 21          | 0.08             | 0.08<br>0.08 | < LOD<br>< LOD | < 0.01<br>< 0.01 | < 0.01<br>< 0.01 | 0.08<br>0.08     | 0.08             |
| 2010/7003693<br>RCN R080406<br>USA<br>(Clay, Arkansas)<br>2008<br>(Silver Blend) | 2           | 8                | 101<br><u>99</u><br>200  | 188<br>185      | Grain  | 21          | 0.33             | 0.35<br>0.30 | < LOD<br>< LOD | < 0.01<br>< 0.01 | < LOD<br>< LOD   | 0.35<br>0.30     | 0.33             |
| 2010/7003693<br>RCN R080407<br>USA<br>(Wharton, Texas)<br>2008<br>(Cocodrie)     | 2           | 7                | 97<br><u>100</u><br>197  | 150<br>145      | Grain  | 20          | 0.51             | 0.51<br>0.51 | < LOD<br>< LOD | < 0.01<br>< 0.01 | < LOD<br>< LOD   | 0.51<br>0.51     | 0.51             |
| 2010/7003693<br>RCN R080408<br>USA<br>(Glenn, California)<br>2008<br>(M204)      | 2           | 7                | 100<br><u>99</u><br>199  | 186<br>185      | Grain  | 21          | 1.77             | 1.58<br>1.96 | < LOD<br>< LOD | < 0.01<br>< 0.01 | < LOD<br>< LOD   | 1.58<br>1.96     | 1.77             |
| 2010/7003693<br>RCN R080736<br>USA<br>(Wharton, Texas)<br>2009<br>(Cheniere)     | 2           | 6                | 99<br><u>101</u><br>200  | 147<br>145      | Grain  | 21          | 1.36             | 1.21<br>1.51 | < LOD<br>< LOD | 0.03<br>0.03     | < 0.01<br>< 0.01 | 1.24<br>1.54     | 1.39             |
|                                                                                  |             |                  |                          |                 |        |             |                  | 22           | 1.21           | 1.25<br>1.16     | < LOD<br>< LOD   | 0.03<br>0.03     | < 0.01<br>< 0.01 |
|                                                                                  |             |                  |                          |                 |        | 24          | 1.36             |              |                | 1.43<br>1.29     | < LOD<br>< LOD   | 0.03<br>0.03     | < 0.01<br>< 0.01 |
|                                                                                  |             |                  |                          |                 |        |             |                  | 28           | 1.28           | 1.29<br>1.26     | < LOD<br>< LOD   | 0.03<br>0.03     | < 0.01<br>< 0.01 |
|                                                                                  |             |                  |                          |                 |        | 30          | 1.27             |              |                | 1.33<br>1.21     | < LOD<br>< LOD   | 0.03<br>0.03     | < 0.01<br>< 0.01 |
|                                                                                  |             |                  |                          |                 |        |             |                  | 21           | 1.17           | 1.28<br>1.05     | < LOD<br>< LOD   | < 0.01<br>< 0.01 | < LOD<br>< LOD   |
|                                                                                  |             |                  |                          |                 |        | 21          | 1.17             |              |                | 1.28<br>1.05     | < LOD<br>< LOD   | < 0.01<br>< 0.01 | < LOD<br>< LOD   |
|                                                                                  |             |                  |                          |                 |        |             |                  | 21           | 1.17           | 1.28<br>1.05     | < LOD<br>< LOD   | < 0.01<br>< 0.01 | < LOD<br>< LOD   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                           | Application |                  |                   |                 | Matrix | PHI<br>days | Residues (mg/kg) |              |          |          |          |              |      |
|--------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|-------------|------------------|--------------|----------|----------|----------|--------------|------|
|                                                                                                  | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |             | Fluxapyroxad     |              | M700F002 | M700F008 | M700F048 | Total*       | Mean |
|                                                                                                  |             |                  |                   |                 |        |             | Mean             | Individual   |          |          |          | Individual   |      |
| 2010/7003693<br>RCN R080738<br>USA<br>(Rapides Parish,<br>Louisiana)<br>2009<br>(Clearfield 161) | 2           | 7                | 99<br>100<br>199  | 175<br>177      | Grain  | 20          | 1.18             | 1.17<br>1.18 | < LOD    | 0.01     | < 0.01   | 1.18<br>1.19 | 1.19 |
| 2010/7003693<br>RCN R080739<br>USA<br>(Rapides Parish,<br>Louisiana)<br>2009<br>(Cocodrie)       | 2           | 7                | 101<br>101<br>202 | 177<br>178      | Grain  | 20          | 1.27             | 1.19<br>1.35 | < LOD    | 0.02     | < 0.01   | 1.21<br>1.37 | 1.29 |
| 2010/7003693<br>RCN R080740<br>USA<br>(Washington,<br>Mississippi)<br>2009<br>(Clearfield 161)   | 2           | 7                | 99<br>102<br>201  | 153<br>136      | Grain  | 21          | 0.64             | 0.65<br>0.63 | < LOD    | < 0.01   | < 0.01   | 0.65<br>0.63 | 0.64 |
| 2010/7003693<br>RCN R080741<br>USA<br>(Washington,<br>Mississippi)<br>2009<br>(Cocodrie)         | 2           | 7                | 100<br>102<br>202 | 160<br>159      | Grain  | 26          | 0.38             | 0.36<br>0.40 | < LOD    | < 0.01   | < LOD    | 0.36<br>0.40 | 0.38 |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out on grain sorghum (nine trials – Table 99) in the USA during the 2008 growing season (White 2010, 2010/7003693). At each site one untreated control plot and two treated plots were established. Two foliar applications of a 62.5 g/L EC formulation were made at 97–104 g ai/ha, or 199–201 g ai/ha/season. Retreatment intervals were 6–7 days. Applications were made to plots using spray volumes of 133–274 L/ha with ground equipment. An adjuvant was added to the spray mixture for all applications. Sorghum RAC samples were harvested targeting 7 ± 1 DALA (grain sorghum forage) or 21 ± 1 DALA (sorghum grain and stover). Residues were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Residues in sorghum forage and stover are shown in Table 116.

Table 99 Residues from the foliar application of fluxapyroxad to grain sorghum in the USA (White 2010, 2010/7003693)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                         | Application |                  |                          |                 | Matrix | PHI<br>days | Residues (mg/kg) |                                                                 |                |                  |                |              |      |
|--------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-------------|------------------|-----------------------------------------------------------------|----------------|------------------|----------------|--------------|------|
|                                                                                | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |             | Fluxapyroxad     |                                                                 | M700F002       | M700F008         | M700F048       | Total*       |      |
|                                                                                |             |                  |                          |                 |        |             | Mean             | Individual                                                      |                |                  |                | Individual   | Mean |
| 2010/7003693<br>RCN R080440<br>USA<br>(Butler, Missouri)<br>2008<br>(LGX-47)   | 2           | 7                | 101<br><u>100</u><br>201 | 188<br>189      | Grain  | 21          | 0.13             | 0.13                                                            | < LOD          | < 0.01           | < LOD          | 0.13         | 0.13 |
| 2010/7003693<br>RCN R080441<br>USA<br>(Ottawa,<br>Michigan)<br>2008<br>(9135)  | 2           | 7                | 100<br><u>99</u><br>199  | 274<br>270      | Grain  | 20          | 0.15             | 0.14                                                            | < LOD          | < 0.01           | < LOD          | 0.15         | 0.15 |
| 2010/7003693<br>RCN R080442<br>USA<br>(Cass, North<br>Dakota)<br>2008<br>(WGF) | 2           | 7                | 100<br><u>100</u><br>200 | 187<br>187      | Grain  | 21          | 0.15             | 0.13                                                            | < LOD          | 0.04             | < 0.01         | 0.17         | 0.20 |
| 2010/7003693<br>RCN R080443<br>USA<br>(Caddo,<br>Oklahoma)<br>2008<br>(753)    | 2           | 6                | 99<br><u>102</u><br>201  | 178<br>234      | Grain  | 23          | 0.19             | 0.18                                                            | < LOD          | < 0.01           | < LOD          | 0.18         | 0.19 |
| 2010/7003693<br>RCN R080444<br>USA<br>(Wharton,<br>Texas)<br>2008<br>(84 g50)  | 2           | 7                | 100<br><u>101</u><br>201 | 134<br>133      | Grain  | 20          | 0.31             | 0.19                                                            | < LOD          | < 0.01           | < LOD          | 0.19         | 0.32 |
| 2010/7003693<br>RCN R080445<br>USA<br>(Clarke, Georgia)<br>2008<br>(82 g10)    | 2           | 7                | 99<br><u>101</u><br>200  | 273<br>254      | Grain  | 21          | 0.40             | (< LOD, 0.58,<br>0.64)<br>0.41<br>(0.22, 0.44,<br>0.47)<br>0.38 | < LOD          | < LOQ            | < LOD          | 0.41         | 0.40 |
| 2010/7003693<br>RCN R080446<br>USA<br>(York, Nebraska)<br>2008<br>(7R34)       | 2           | 7                | 99<br><u>100</u><br>199  | 186<br>187      | Grain  | 22          | 0.21             | 0.21                                                            | < LOD          | 0.01             | < 0.01         | 0.22         | 0.22 |
| 2010/7003693<br>RCN R080447<br>USA<br>(Pawnee, Kansas)<br>2008<br>(84 g62)     | 2           | 7                | 99<br><u>100</u><br>199  | 186<br>187      | Grain  | 21          | 0.17             | 0.16<br>0.17                                                    | < LOD<br>< LOD | < 0.01<br>< 0.01 | < LOD<br>< LOD | 0.16<br>0.17 | 0.17 |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                           | Application |                  |                  |                 | Matrix | PHI<br>days | Residues (mg/kg) |              |                |              |                  |              |      |      |
|----------------------------------------------------------------------------------|-------------|------------------|------------------|-----------------|--------|-------------|------------------|--------------|----------------|--------------|------------------|--------------|------|------|
|                                                                                  | No          | Interval<br>Days | g<br>ai/ha       | Water<br>(L/ha) |        |             | Fluxapyroxad     |              | M700F002       | M700F008     | M700F048         | Total*       |      |      |
|                                                                                  |             |                  |                  |                 |        |             | Mean             | Individual   |                |              |                  | Individual   |      | Mean |
|                                                                                  |             |                  |                  |                 |        |             |                  |              |                |              |                  |              |      |      |
| 2010/7003693<br>RCN R080448<br>USA<br>(Stafford,<br>Kansas)<br>2008<br>(84 g/62) | 2           | 7                | 104<br>97<br>201 | 194<br>182      | Grain  | 21          | 0.24             | 0.30<br>0.17 | < LOD<br>< LOD | 0.08<br>0.04 | < 0.01<br>< 0.01 | 0.38<br>0.21 | 0.30 |      |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out on wheat (25 trials – Table 100) in the USA and Canada during the 2008 growing season (White 2010, 2010/7003693). At each site one untreated control plot and two treated plots were established. Two foliar applications of a 62.5 g/L EC formulation were made at 97–105 g ai/ha, or 194–205 g ai/ha/season. Retreatment intervals were 6–8 days. Applications were made to plots using spray volumes of 133–234 L/ha with ground equipment. An adjuvant was added to the spray mixture for all applications except for the first application for trial RCN R080426. Wheat RAC samples were harvested targeting  $7 \pm 1$  DALA (wheat forage and hay) or  $21 \pm 1$  DALA (wheat grain and straw). At two sites additional samples were collected to examine the residue decline. Wheat samples were collected targeting 0,  $7 \pm 1$ , and  $10 \pm 1$  days or  $7 \pm 1$ ,  $14 \pm 1$ ,  $21 \pm 1$ , and  $28 \pm 1$  days after the last application. Residues were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Residues in wheat forage, hay and straw are shown in Table 117.

Table 100 Residues from the foliar application of fluxapyroxad to spring and winter wheat in the USA and Canada (White 2010, 2010/7003693)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                             | Application |                  |                         |                 | Matrix | PHI<br>days | Residues (mg/kg) |                                     |                    |                      |                    |                  |                         |
|----------------------------------------------------------------------------------------------------|-------------|------------------|-------------------------|-----------------|--------|-------------|------------------|-------------------------------------|--------------------|----------------------|--------------------|------------------|-------------------------|
|                                                                                                    | No          | Interval<br>Days | g<br>ai/ha              | Water<br>(L/ha) |        |             | Fluxapyroxad     |                                     | M700F002           | M700F008             | M700F048           | Total *          |                         |
|                                                                                                    |             |                  |                         |                 |        |             | Mean             | Individual                          |                    |                      |                    | Individual       | Mean                    |
| GAP, USA                                                                                           | 2           |                  | 97-<br>100              |                 |        | 21          |                  |                                     |                    |                      |                    |                  |                         |
| 2010/7003693<br>RCN R080415<br>USA<br>(Tift, Georgia)<br>2008<br>(Winter wheat –<br>Pioneer 26R61) | 2           | 7                | 99<br><u>97</u><br>196  | 215<br>217      | Grain  | 22          |                  | 0.06<br><br>0.05<br><br><u>0.06</u> | < LOD<br><br>< LOD | < 0.01<br><br>< 0.01 | < LOD<br><br>< LOD | 0.06<br><br>0.05 | <br><br><br><u>0.06</u> |
| 2010/7003693<br>RCN R080416<br>USA<br>(Butler, Missouri)<br>2008<br>(Winter wheat – Coker<br>9663) | 2           | 7                | 99<br><u>100</u><br>199 | 186<br>187      | Grain  | 21          |                  | 0.14<br><br>0.10<br><br><u>0.12</u> | < LOD<br><br>< LOD | 0.03<br><br>0.02     | < LOD<br><br>< LOD | 0.17<br><br>0.12 | <br><br><br><u>0.15</u> |
| 2010/7003693<br>RCN R080417<br>USA<br>(Polk, Nebraska)<br>2008<br>Spring wheat – Kelby<br>HRS)     | 2           | 7                | 100<br><u>99</u><br>199 | 187<br>186      | Grain  | 21          |                  | 0.07<br><br>0.07<br><br><u>0.07</u> | < LOD<br><br>< LOD | 0.01<br><br>0.01     | < LOD<br><br>< LOD | 0.08<br><br>0.08 | <br><br><br><u>0.08</u> |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                              | Application |                  |                          |                 | Matrix | PHI<br>days                                                                                         | Residues (mg/kg)    |                         |                          |                  |                  |                  |                     |
|-----------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-----------------------------------------------------------------------------------------------------|---------------------|-------------------------|--------------------------|------------------|------------------|------------------|---------------------|
|                                                                                                     | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |                                                                                                     | Fluxapyroxad        |                         | M700F002                 | M700F008         | M700F048         | Total *          |                     |
|                                                                                                     |             |                  |                          |                 |        |                                                                                                     | Mean                | Individual              |                          |                  |                  | Individual       | Mean                |
| 2010/7003693<br>RCN R080418<br>USA<br>(Cass, North Dakota)<br>2008<br>(Spring wheat – Ada)          | 2           | 7                | 101<br><u>98</u><br>199  | 188<br>183      | Grain  | 20                                                                                                  |                     | 0.02<br><br><u>0.03</u> | < LOD<br>< LOD           | < 0.01<br>< 0.01 | < LOD<br>< LOD   | 0.02<br><br>0.03 | <br><br><u>0.03</u> |
| 2010/7003693<br>RCN R080419<br>USA<br>(Kent, Michigan)<br>2008<br>(Winter wheat – AC<br>Mountain)   | 2           | 7                | 99<br><u>100</u><br>199  | 203<br>209      | Grain  | 21                                                                                                  |                     | 0.05<br><br><u>0.05</u> | < LOD<br>< LOD           | < 0.01<br>0.01   | < LOD<br>< LOD   | 0.05<br><br>0.05 | <br><br><u>0.05</u> |
| 2010/7003693<br>RCN R080420<br>USA<br>(Wharton, Texas)<br>2008<br>(Winter wheat –<br>Fannin)        | 2           | 8                | 100<br><u>101</u><br>201 | 141<br>143      | Grain  | 20                                                                                                  |                     | 0.07<br><br><u>0.06</u> | < LOD<br>< LOD           | < 0.01<br>< LOD  | < LOD<br>< LOD   | 0.07<br><br>0.04 | <br><br><u>0.06</u> |
| 2010/7003693<br>RCN R080421<br>USA<br>(Hall, Nebraska)<br>2008<br>(Spring wheat – Kelby)            | 2           | 7                | 100<br><u>101</u><br>201 | 187<br>188      | Grain  | 21                                                                                                  |                     | 0.07<br><br><u>0.08</u> | < LOD<br>< LOD           | 0.01<br>0.02     | < LOD<br>< LOD   | 0.08<br><br>0.10 | <br><br><u>0.09</u> |
| 2010/7003693<br>RCN R080422<br>USA<br>(York, Nebraska)<br>2008<br>(Spring wheat – Kelby)            | 2           | 7                | 100<br><u>101</u><br>201 | 187<br>188      | Grain  | 7                                                                                                   | 0.39                | 0.40<br>0.38            | < LOD<br>< LOD           | 0.05<br>0.05     | < 0.01<br>< 0.01 | 0.45<br>0.43     | 0.44                |
|                                                                                                     |             |                  |                          |                 |        |                                                                                                     | 14                  | 0.28                    | 0.28<br>0.27             | < LOD<br>< LOD   | 0.05<br>0.05     | < 0.01<br>< 0.01 | 0.33<br>0.32        |
|                                                                                                     |             |                  |                          |                 |        | 21                                                                                                  |                     | <u>0.11</u>             | 0.11<br>0.10             | < LOD<br>< LOD   | 0.02<br>0.02     | < LOD<br>< LOD   | 0.13<br>0.12        |
|                                                                                                     |             |                  |                          |                 |        |                                                                                                     | 28                  | 0.09                    | 0.09<br>0.09             | < LOD<br>< LOD   | 0.02<br>0.02     | < LOD<br>< LOD   | 0.11<br>0.11        |
|                                                                                                     |             |                  |                          |                 |        | 0.09<br>0.09                                                                                        |                     |                         | < LOD<br>< LOD           | 0.02<br>0.02     | < LOD<br>< LOD   | 0.11<br>0.11     |                     |
|                                                                                                     |             |                  |                          |                 |        | 0.06                                                                                                |                     | 0.04<br>0.07            | < LOD<br>< LOD           | < 0.01<br>< 0.01 | < LOD<br>< LOD   | 0.04<br>0.07     | 0.06                |
|                                                                                                     |             |                  |                          |                 |        |                                                                                                     |                     | 0.06                    | 0.06                     | < LOD<br>< LOD   | < 0.01<br>< 0.01 | < LOD<br>< LOD   |                     |
|                                                                                                     |             |                  |                          |                 |        | 2010/7003693<br>RCN R080424<br>USA<br>(Stutsman, North<br>Dakota)<br>2008<br>(Spring wheat – Alsen) | 2                   | 7                       | 102<br><u>101</u><br>203 | 190<br>189       | Grain            | 20               | 0.05<br><br>0.05    |
| 2010/7003693<br>RCN R080438<br>USA<br>(Stutsman, North<br>Dakota)<br>2008<br>(Winter wheat – Jerry) | 2           | 8                | 100<br><u>102</u><br>202 | 187<br>191      | Grain  | 20                                                                                                  | <br><br><u>0.10</u> | 0.11<br><br>0.08        | < LOD<br>< LOD           | 0.02<br>0.01     | < LOD<br>< LOD   | 0.13<br><br>0.09 | <br><br><u>0.11</u> |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                                    | Application |                  |                          |                 | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |      |
|---------------------------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-------------|------------------|------------|----------|----------|----------|------------|------|
|                                                                                                                           | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total *    |      |
|                                                                                                                           |             |                  |                          |                 |        |             | Mean             | Individual |          |          |          | Individual | Mean |
| 2010/7003693<br>RCN R080425<br>Canada<br>(RM of Portage la<br>Prairie, Manitoba)<br>2008<br>(Spring wheat – AC<br>Domain) | 2           | 7                | 100<br><u>97</u><br>197  | 188<br>184      | Grain  | 21          | 0.05             | 0.05       | < LOD    | < 0.01   | < LOD    | 0.05       | 0.05 |
|                                                                                                                           |             |                  |                          |                 |        |             |                  | 0.05       | < LOD    | < 0.01   | < LOD    | 0.05       |      |
|                                                                                                                           |             |                  |                          |                 |        |             |                  |            |          |          |          |            |      |
| 2010/7003693<br>RCN R080426<br>Canada<br>(MD of Taber, Alberta)<br>2008<br>(Spring wheat – AC<br>MaKenzie)                | 2           | 7                | 105<br><u>100</u><br>205 | 149<br>141      | Grain  | 27          | 0.08             | 0.08       | < LOD    | < 0.01   | < LOD    | 0.08       | 0.08 |
|                                                                                                                           |             |                  |                          |                 |        |             |                  | 0.08       | < LOD    | < 0.01   | < LOD    | 0.08       |      |
|                                                                                                                           |             |                  |                          |                 |        |             |                  |            |          |          |          |            |      |
| 2010/7003693<br>RCN R080427<br>USA<br>(Caddo, Oklahoma)<br>2008<br>(Winter wheat –<br>Jagger)                             | 2           | 8                | 97<br><u>97</u><br>194   | 133<br>135      | Grain  | 25          | 0.02             | 0.02       | < LOD    | < 0.01   | < LOD    | 0.02       | 0.02 |
|                                                                                                                           |             |                  |                          |                 |        |             |                  | 0.02       | < LOD    | < 0.01   | < LOD    | 0.02       |      |
|                                                                                                                           |             |                  |                          |                 |        |             |                  |            |          |          |          |            |      |
| 2010/7003693<br>RCN R080428<br>USA<br>(Pawnee, Kansas)<br>2008<br>(Winter wheat –<br>Jagger)                              | 2           | 7                | 102<br><u>102</u><br>204 | 192<br>192      | Grain  | 21          | 0.13             | 0.12       | < LOD    | < 0.01   | < LOD    | 0.12       | 0.13 |
|                                                                                                                           |             |                  |                          |                 |        |             |                  | 0.14       | < LOD    | < 0.01   | < LOD    | 0.14       |      |
|                                                                                                                           |             |                  |                          |                 |        |             |                  |            |          |          |          |            |      |
| 2010/7003693<br>RCN R080429<br>USA<br>(Barton, Kansas)<br>2008<br>(Winter wheat –<br>Jagger)                              | 2           | 7                | 100<br><u>100</u><br>200 | 188<br>187      | Grain  | 21          | 0.03             | < LOQ      | < LOD    | < 0.01   | < LOD    | < 0.01     | 0.03 |
|                                                                                                                           |             |                  |                          |                 |        |             |                  | 0.05       | < LOD    | < 0.01   | < LOD    | 0.05       |      |
|                                                                                                                           |             |                  |                          |                 |        |             |                  |            |          |          |          |            |      |
| 2010/7003693<br>RCN R080430<br>USA<br>(Washita, Oklahoma)<br>2008<br>(Winter wheat –<br>Jagger)                           | 2           | 8                | 101<br><u>102</u><br>203 | 137<br>142      | Grain  | 21          | 0.09             | 0.11       | < LOD    | < 0.01   | < LOD    | 0.11       | 0.09 |
|                                                                                                                           |             |                  |                          |                 |        |             |                  | 0.07       | < LOD    | < 0.01   | < LOD    | 0.07       |      |
|                                                                                                                           |             |                  |                          |                 |        |             |                  |            |          |          |          |            |      |
| 2010/7003693<br>RCN R080431<br>USA<br>(Payette, Idaho)<br>2008<br>(Spring wheat –<br>Alturas)                             | 2           | 7                | 101<br><u>100</u><br>201 | 234<br>234      | Grain  | 21          | 0.05             | 0.05       | < LOD    | < LOD    | < LOD    | 0.05       | 0.05 |
|                                                                                                                           |             |                  |                          |                 |        |             |                  | 0.04       | < LOD    | < LOD    | < LOD    | 0.04       |      |
|                                                                                                                           |             |                  |                          |                 |        |             |                  |            |          |          |          |            |      |
| 2010/7003693<br>RCN R080432<br>Canada<br>(RM of Laird,<br>Saskatchewan)<br>2008<br>(Spring wheat – AC<br>Barrie)          | 2           | 8                | 99<br><u>100</u><br>199  | 199<br>200      | Grain  | 20          | 0.16             | 0.17       | < LOD    | < 0.01   | < LOD    | 0.17       | 0.16 |
|                                                                                                                           |             |                  |                          |                 |        |             |                  | 0.15       | < LOD    | < 0.01   | < LOD    | 0.15       |      |
|                                                                                                                           |             |                  |                          |                 |        |             |                  |            |          |          |          |            |      |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                               | Application |                  |                          |                 | Matrix | PHI<br>days | Residues (mg/kg) |                         |               |                |               |              |                     |
|----------------------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-------------|------------------|-------------------------|---------------|----------------|---------------|--------------|---------------------|
|                                                                                                                      | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |             | Fluxapyroxad     |                         | M700F002      | M700F008       | M700F048      | Total *      |                     |
|                                                                                                                      |             |                  |                          |                 |        |             | Mean             | Individual              |               |                |               | Individual   | Mean                |
| 2010/7003693<br>RCN R080433<br>Canada<br>(RM of Laird,<br>Saskatchewan)<br>2008<br>(Spring wheat –<br>Lillian)       | 2           | 8                | 99<br><u>99</u><br>198   | 200<br>200      | Grain  | 20          |                  | 0.19<br><br><u>0.19</u> | < LOD<br><br> | < 0.01<br><br> | < LOD<br><br> | 0.19<br><br> | <br><br><u>0.19</u> |
| 2010/7003693<br>RCN R080434<br>Canada<br>(RM of Whitewater,<br>Manitoba)<br>2008<br>(Spring wheat –<br>Superb)       | 2           | 7                | 101<br><u>101</u><br>202 | 162<br>162      | Grain  | 21          |                  | 0.05<br><br><u>0.05</u> | < LOD<br><br> | 0.04<br><br>   | < LOD<br><br> | 0.09<br><br> | <br><br><u>0.07</u> |
| 2010/7003693<br>RCN R080435<br>Canada<br>(RM of Rosthern,<br>Saskatchewan)<br>2008<br>(Spring wheat – AC<br>Lillian) | 2           | 6                | 101<br><u>102</u><br>203 | 202<br>204      | Grain  | 21          |                  | 0.10<br><br><u>0.11</u> | < LOD<br><br> | < 0.01<br><br> | < LOD<br><br> | 0.10<br><br> | <br><br><u>0.11</u> |
| 2010/7003693<br>RCN R080436<br>Canada<br>(RM of Rosthern,<br>Saskatchewan)<br>2008<br>(Spring wheat – AC<br>Barrie)  | 2           | 6                | 99<br><u>103</u><br>202  | 197<br>207      | Grain  | 21          |                  | 0.11<br><br>0.11        | < LOD<br><br> | < 0.01<br><br> | < LOD<br><br> | 0.11<br><br> | <br><br>0.11        |
| 2010/7003693<br>RCN R080437<br>Canada<br>(RM of Dundurn,<br>Saskatchewan)<br>2008<br>(Spring wheat –<br>Lillian)     | 2           | 7                | 100<br><u>100</u><br>200 | 202<br>202      | Grain  | 21          |                  | 0.12<br><br><u>0.12</u> | < LOD<br><br> | < 0.01<br><br> | < LOD<br><br> | 0.12<br><br> | <br><br><u>0.12</u> |
| 2010/7003693<br>RCN R080439<br>Canada<br>(Strathcona, Alberta)<br>2008<br>(Spring wheat – AC<br>Foremost)            | 2           | 8                | 98<br><u>99</u><br>197   | 187<br>188      | Grain  | 7           | 0.19             | 0.19<br>0.18            | < LOD<br><br> | < 0.01<br><br> | < LOD<br><br> | 0.19<br>0.18 | <br><br>0.19        |
|                                                                                                                      |             |                  |                          |                 |        | 13          | 0.16             | 0.17<br>0.15            | < LOD<br><br> | < 0.01<br><br> | < LOD<br><br> | 0.17<br>0.15 | <br><br>0.16        |
|                                                                                                                      |             |                  |                          |                 |        | 20          | 0.19             | 0.21<br>0.16            | < LOD<br><br> | < 0.01<br><br> | < LOD<br><br> | 0.21<br>0.16 | <br><br>0.19        |
|                                                                                                                      |             |                  |                          |                 |        | 27          | <u>0.21</u>      | 0.21<br>0.20            | < LOD<br><br> | < 0.01<br><br> | < LOD<br><br> | 0.21<br>0.20 | <br><br><u>0.21</u> |

\*All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out on wheat (four trials – Table 101) in Brazil during the 2009 growing season (Porto and Resende 2010, 2010/1057147). Three foliar applications of a 50 g

fluxapyroxad/L co-formulation were made at 60 g fluxapyroxad /ha (total rate 180 g fluxapyroxad/ha/season). Retreatment intervals were 15 days. Applications were made to plots using spray volumes of 100 L/ha. Wheat grain samples were harvested at 30 DALA for point trials while at two of the sites additional treated samples were collected at four additional sampling intervals (0, 5–7, 15 and 45 DALA) to examine residue decline. The grain was collected from plants at growth stages BBCH 85-97. Residues were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Table 101 Residues from the foliar application of fluxapyroxad to wheat in Brazil (Porto and Resende 2010, 2010/1057147)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                               | Application |                  |                       |                 | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|------------------------------------------------------------------------------------------------------|-------------|------------------|-----------------------|-----------------|--------|-------------|------------------|----------|----------|----------|--------|
|                                                                                                      | No          | Interval<br>Days | g<br>ai/ha            | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| GAP, Brazil                                                                                          | 4           | 15-20            | 60                    |                 |        | 30          |                  |          |          |          |        |
| 2010/1057147<br>G090085<br>Brazil<br>(Santa Antônio de Posse, São Paulo)<br>2009<br>(BRS 208)        | 3           | 15               | 60                    | 100             | Grain  | 0           | 0.23             | < LOD    | < 0.01   | < LOD    | 0.23   |
|                                                                                                      |             |                  | 60                    |                 |        | 5           | 0.23             | < LOD    | < 0.01   | < LOD    | 0.23   |
|                                                                                                      |             |                  | 60                    |                 |        | 15          | 0.21             | < LOD    | < 0.01   | < LOD    | 0.21   |
|                                                                                                      |             |                  | 180                   |                 |        | 30          | 0.08             | < LOD    | < 0.01   | < LOD    | 0.08   |
|                                                                                                      |             |                  |                       |                 |        | 45          | 0.02             | < LOD    | < 0.01   | < LOD    | 0.02   |
| 2010/1057147<br>G090086<br>Brazil<br>(Ponta Grossa, Paraná)<br>2009<br>(BRS Guamirim)                | 3           | 15               | 60                    | 100             | Grain  | 0           | 0.20             | < LOD    | < 0.01   | < LOD    | 0.20   |
|                                                                                                      |             |                  | 60                    |                 |        | 7           | 0.14             | < LOD    | < 0.01   | < LOD    | 0.14   |
|                                                                                                      |             |                  | 60                    |                 |        | 15          | 0.05             | < LOD    | < 0.01   | < LOD    | 0.05   |
|                                                                                                      |             |                  | 180                   |                 |        | 30          | 0.03             | < LOD    | < 0.01   | < LOD    | 0.03   |
|                                                                                                      |             |                  |                       |                 |        | 45          | < 0.01           | < LOD    | < 0.01   | < LOD    | < 0.01 |
| 2010/1057147<br>G090087<br>Brazil<br>(Castro, Paraná)<br>2009<br>(BRS Guamirim)                      | 3           | 15               | 60<br>60<br>60<br>180 | 100             | Grain  | 30          | 0.04             | < LOD    | < 0.01   | < LOD    | 0.04   |
| 2010/1057147<br>G090088<br>Brazil<br>(Santa Cruz do Sul, Rio Grande do Sul)<br>2009<br>(Fundacep 51) | 3           | 15               | 60<br>60<br>60<br>180 | 100             | Grain  | 30          | 0.02             | < LOD    | < 0.01   | < LOD    | 0.02   |

\*All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials (eight each growing season) were carried out on wheat and triticale in various European countries (Germany, the UK, France, Spain and Italy) during the 2007 and 2008 growing seasons (Erdmann 2009, 2007/1050092 and Erdmann 2009, 2009/1012126 respectively). Each trial consisted of a control plot and a treated plot. Two foliar applications of a 62.5 g ai/L EC formulation were made at 116–135 g ai/ha (total rates 242–265 g ai/ha/season). For the trials conducted in 2007, the application timing for the second treatment was BBCH 69 and the first treatment was 21(± 1) days prior to the first treatment. For the trials conducted in 2008, the application timing for the first treatment was BBCH 39–49 and the second treatment was BBCH 69. Retreatment intervals were 8–27 days. Applications were made to plots using ground equipment with a target spray volume of 200 L/ha (actual spray volumes of 186–216 L/ha). Wheat whole plant samples were harvested directly after the last application. After 35(±1), 42(±1) and 49(±1) days either

ears and rest of plant or grain and straw were taken directly depending on crop maturity. In those cases when growth stage 89 was not reached after 49 days, additional grain and straw sampling was conducted later. Residues were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Residues in wheat and triticale whole plant without roots, ears, rest of plant without roots and straw are shown in Table 118.

Table 102 Residues from the foliar application of fluxapyroxad to wheat and triticale in Europe (Erdmann 2009, 2009/1012126 and Erdmann 2009, 2007/1050092)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                             | Application |                  |                   |                 | Matrix | PHI<br>days             | Residues (mg/kg) |          |          |          |        |
|--------------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|-------------------------|------------------|----------|----------|----------|--------|
|                                                                                                                    | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |                         | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| GAP,                                                                                                               | 2           |                  | 125               |                 |        | 21 or 35 or<br>not reqd |                  |          |          |          |        |
| 2007/1050092<br>L070253<br>Germany (N)<br>(Gerolsheim, Rheinland-<br>Pfalz Vorderpfalz)<br>2007<br>(Wheat - Tommi) | 2           | 8                | 128               | 204             | Grain  | 36                      | 0.03             | < 0.01   | < 0.01   | < 0.01   | 0.03   |
|                                                                                                                    |             |                  | 125               | 200             |        | 42                      | 0.04             | < 0.01   | < 0.01   | < 0.01   | 0.04   |
|                                                                                                                    |             |                  | 253               |                 |        | 48                      | 0.03             | < 0.01   | < 0.01   | < 0.01   | 0.03   |
| 2007/1050092<br>L070254<br>Germany (N)<br>(Brunne Brandenburg)<br>2007<br>(Wheat - Brilliant)                      | 2           | 18               | 120               | 192             | Grain  | 36                      | 0.03             | < 0.01   | < 0.01   | < 0.01   | 0.03   |
|                                                                                                                    |             |                  | 124               | 198             |        | 41                      | 0.03             | < 0.01   | < 0.01   | < 0.01   | 0.03   |
|                                                                                                                    |             |                  | 250               |                 |        | 49                      | 0.04             | < 0.01   | < 0.01   | < 0.01   | 0.04   |
| 2007/1050092<br>L070255<br>UK<br>(Manningtree, Essex)<br>2007<br>(Wheat - Claire)                                  | 2           | 20               | 130<br>123<br>253 | 208<br>196      | Grain  | 59                      | 0.01             | < 0.01   | < 0.01   | < 0.01   | 0.01   |
| 2007/1050092<br>L070256<br>France (N)<br>(Kleingoeft, Alsace)<br>2007<br>(Triticale - Talentro)                    | 2           | 14               | 129<br>127<br>256 | 206<br>203      | Grain  | 54                      | < 0.01           | < 0.01   | < 0.01   | < 0.01   | < 0.01 |
| 2007/1050092<br>L070257<br>France (S)<br>(Asheer de duras Aquitaine)<br>2007<br>(Triticale - Triptic)              | 2           | 21               | 129<br>117<br>246 | 206<br>188      | Grain  | 60                      | 0.02             | < 0.01   | < 0.01   | < 0.01   | 0.02   |
| 2007/1050092<br>L070258<br>France (S)<br>(St Paul les Romans Rhône<br>Alpes)<br>2007<br>(Wheat - Epidoc)           | 2           | 27               | 116               | 186             | Grain  | 35                      | 0.04             | < 0.01   | < 0.01   | < 0.01   | 0.04   |
|                                                                                                                    |             |                  | 134               | 214             |        | 42                      | 0.02             | < 0.01   | < 0.01   | < 0.01   | 0.02   |
|                                                                                                                    |             |                  | 250               |                 |        | 48                      | 0.05             | < 0.01   | < 0.01   | < 0.01   | 0.05   |
| 2007/1050092<br>L070259<br>Spain (S)<br>(Las Cabezas, Andalucia/<br>Sevilla)<br>2007                               | 2           | 20               | 125               | 200             | Grain  | 42                      | 0.02             | < 0.01   | < 0.01   | < 0.01   | 0.02   |
|                                                                                                                    |             |                  | 124<br>249        | 199             |        | 49                      | 0.02             | < 0.01   | < 0.01   | < 0.01   | 0.02   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                                  | Application |                  |                   |                 | Matrix | PHI<br>days    | Residues (mg/kg)     |                            |                            |                            |                      |
|-------------------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|----------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------|
|                                                                                                                         | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |                | Fluxapyroxad         | M700F002                   | M700F008                   | M700F048                   | Total*               |
| (Wheat - Diablon)                                                                                                       |             |                  |                   |                 |        |                |                      |                            |                            |                            |                      |
| 2007/1050092<br>L070260<br>Spain (S)<br>(Puerto Sta. Maria,<br>Andalucia/ Cádiz, Sevilla)<br>2007<br>(Wheat - Jerezano) | 2           | 21               | 129<br>125<br>254 | 206<br>200      | Grain  | 42<br>49       | 0.01<br>0.01         | < 0.01<br>< 0.01           | < 0.01<br>< 0.01           | < 0.01<br>< 0.01           | 0.01<br>0.01         |
| 2009/1012126<br>L080052<br>Germany (N)<br>(Gerolsheim, Rheinland-<br>Pfalz Vorderpfalz)<br>2008<br>(Wheat - Tommi)      | 2           | 22               | 128<br>123<br>251 | 204<br>196      | Grain  | 34<br>43<br>49 | 0.02<br>0.01<br>0.02 | < 0.01<br>< 0.01<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01 | 0.02<br>0.01<br>0.02 |
| 2009/1012126<br>L080053<br>Germany<br>(Brunne Brandenburg)<br>2008<br>(Wheat - Triso)                                   | 2           | 25               | 120<br>126<br>246 | 191<br>202      | Grain  | 41<br>49       | 0.06<br>0.05         | < 0.01<br>< 0.01           | < 0.01<br>< 0.01           | < 0.01<br>< 0.01           | 0.06<br>0.05         |
| 2009/1012126<br>L080054<br>UK<br>(Manningtree, Essex)<br>2008<br>(Wheat - Cordiale)                                     | 2           | 25               | 135<br>129<br>264 | 216<br>206      | Grain  | 49             | 0.03                 | < 0.01                     | < 0.01                     | < 0.01                     | 0.03                 |
| 2009/1012126<br>L080055<br>France (N)<br>(Fondettes Indre et Loire)<br>2008<br>(Triticale - Tremplein)                  | 2           | 13               | 125<br>127<br>252 | 200<br>203      | Grain  | 60             | 0.03                 | < 0.01                     | < 0.01                     | < 0.01                     | 0.03                 |
| 2009/1012126<br>L080056<br>France (S)<br>(Lautignac Gers/ Midi<br>Pyrenees)<br>2008<br>(Triticale - Triskell)           | 2           | 20               | 117<br>125<br>242 | 187<br>200      | Grain  | 49             | 0.02                 | < 0.01                     | < 0.01                     | < 0.01                     | 0.02                 |
| 2009/1012126<br>L080057<br>France (S)<br>(Lorignac, Charente-<br>Maritime)<br>2008<br>(Wheat - Apache)                  | 2           | 13               | 129<br>121<br>250 | 206<br>193      | Grain  | 49             | 0.01                 | < 0.01                     | < 0.01                     | < 0.01                     | 0.01                 |
| 2009/1012126<br>L080058<br>Italy (S)<br>(Cusago Milano/<br>Lombardia)<br>2008<br>(Wheat - Isengrain)                    | 2           | 22               | 134<br>131<br>265 | 215<br>209      | Grain  | 36<br>42<br>49 | 0.03<br>0.03<br>0.03 | < 0.01<br>< 0.01<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01 | < 0.01<br>< 0.01<br>< 0.01 | 0.03<br>0.03<br>0.03 |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                               | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|------------------------------------------------------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|------------------|----------|----------|----------|--------|
|                                                                                                      | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2009/1012126<br>L080059<br>Spain (S)<br>(Utrera, Andalucia, Sevilla)<br>2008<br>(Wheat – Califa sur) | 2           | 24               | 129        | 207             | Grain  | 42          | 0.01             | < 0.01   | < 0.01   | < 0.01   | 0.01   |
|                                                                                                      |             |                  | 128<br>257 | 204             |        | 49          | 0.01             | < 0.01   | < 0.01   | < 0.01   | 0.01   |

Fluxapyroxad, M700F008 and M700F048 are reported in terms of fluxapyroxad. M700F002 is reported in terms of itself. All analytes are reported in terms of themselves.

Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out on wheat (four trials – Table 103) in Australia during the 2008 growing season (Allen 2010, 2010/7003123). Each trial consisted of a control plot and two treated plots. Two foliar applications of a 62.5 g ai/L EC formulation were made at 61–62 g ai/ha or 122–124 g ai/ha (total rates 122–124 g ai/ha/season or 244–247 g ai/ha/season respectively). Retreatment intervals were 4–20 days. The target application timing for the first treatment was Zadoks crop growth stage 39 (flag leaf ligule just visible) and for the second treatment was Zadoks crop growth stage 59 (90% of spikes visible). Applications were made to plots using ground equipment (backpack boom sprayer, handheld boom or quad-bike mounted boom) with a target spray volume of 100L/ha (actual spray volumes of 90–100 L/ha). The nominal collection times for samples of wheat forage were 0, 7 and 14 days after the first application and immediately before the second application. In one trial forage was collected at 14 days after the first application and at -0, 0, 8 and 15 days after the second application. Residues were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Residues in wheat forage and straw are shown in Table 119.

Table 103 Residues from the foliar application of fluxapyroxad to wheat in Australia (Allen 2010, 2010/7003123)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                        | Application |                  |                   |                 | Matrix | GS  | Residues (mg/kg) |          |          |          |        |
|-----------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|-----|------------------|----------|----------|----------|--------|
|                                                                                               | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |     | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2010/7003123<br>BASF-0802/S1<br>Australia<br>(Culcairn, New South Wales)<br>2008<br>(Ventura) | 2           | 20               | 62<br>61<br>123   | 100<br>99.2     | Grain  | Z61 | 0.01             | < LOD    | < 0.01   | < LOD    | 0.01   |
|                                                                                               | 2           | 20               | 123<br>122<br>245 | 100<br>99.2     | Grain  | Z61 | 0.03             | < LOD    | < 0.01   | < LOD    | 0.03   |
| 2010/7003123<br>BASF-0802/S3<br>Australia<br>(Templers, South Australia)<br>2008<br>(Young)   | 2           | 17               | 61<br>61<br>122   | 99.2<br>99.2    | Grain  | Z59 | < 0.01           | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                               | 2           | 17               | 122<br>122<br>244 | 99.2<br>99.2    | Grain  | Z59 | < 0.01           | < LOD    | < LOD    | < LOD    | < 0.01 |
| 2010/7003123<br>BASF-0802/S5<br>Australia<br>(Devonport, Tasmania)<br>2008/2009<br>(McKellar) | 2           | 13               | 62<br>62<br>124   | 90.4<br>99.9    | Grain  | Z59 | < 0.01           | < LOD    | < 0.01   | < LOD    | < 0.01 |
|                                                                                               | 2           | 13               | 124<br>123<br>247 | 90.4<br>99.9    | Grain  | Z59 | < 0.01           | < LOD    | < 0.01   | < LOD    | < 0.01 |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                     | Application |                  |                   |                 | Matrix | GS  | Residues (mg/kg) |          |          |          |        |
|------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|-----|------------------|----------|----------|----------|--------|
|                                                                                                            | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |     | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2010/7003123<br>BASF-0802/S6<br>Australia<br>(Southern River, Western<br>Australia)<br>2008<br>(Wyalatarn) | 2           | 4                | 62<br>62<br>124   | 99.6<br>99.6    | Grain  | Z59 | 0.01             | < LOD    | < LOD    | < LOD    | 0.01   |
|                                                                                                            | 2           | 4                | 123<br>123<br>246 | 99.6<br>99.6    | Grain  | Z59 | 0.01             | < LOD    | < LOD    | < LOD    | 0.01   |

\*All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

GS = Growth Stage at Last Application

### Oilseeds

Supervised trials were carried out on canola (16 trials – Table 104) and sunflower seed (eight trials – Table 105) in the USA and Canada during the 2008 growing season (Johnston 2010, 2009/7003064). At each site one untreated control plot and one treated plot were established. Two foliar applications of a 62.5 g/L EC formulation were made at 96–105 g ai/ha (197–208 g ai/ha/season) with a 13–15 day retreatment interval. Applications were made to plots using spray volumes of 179–195 L/ha with ground equipment (e.g., tractor-mounted sprayer or backpack sprayer). An adjuvant was added to the spray mixture for all applications. One control and two treated RAC samples (canola or sunflower seed) were harvested by hand or mechanical equipment 21–22 days after treatment. At two canola trials (Idaho, RCN R080132 and Saskatchewan, RCN R080133) and one sunflower trial (Kansas, RCN R080146) treated samples were also collected at 14, 18–19, 24–25 and 27–28 DALA to assess residue decline. Residues in canola and sunflower seed were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Table 104 Residues from the foliar application of fluxapyroxad to canola in the USA and Canada (Johnston 2010, 2009/7003064)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                        | Application |                  |                          |                 | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |                |             |
|-----------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-------------|------------------|------------|----------|----------|----------|----------------|-------------|
|                                                                                               | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total residue* |             |
|                                                                                               |             |                  |                          |                 |        |             | Mean             | Individual |          |          |          | Individual     | Mean        |
| GAP, USA                                                                                      | 2           |                  | 97-<br>101               |                 |        | 21          |                  |            |          |          |          |                |             |
| 2009/7003064<br>RCN R080129<br>USA<br>(Macon, Georgia)<br>2008<br>(Flint)                     | 2           | 14               | 103<br><u>105</u><br>208 | 189<br>194      | Seed   | 21          |                  | 0.11       | < LOD    | 0.02     | 0.01     | 0.14           |             |
|                                                                                               |             |                  |                          |                 |        |             | <u>0.09</u>      | 0.07       | < LOD    | 0.01     | < 0.01   | 0.08           |             |
| 2009/7003064<br>RCN R080130<br>Canada<br>(Portage la Prairie,<br>Manitoba)<br>2008<br>(45H72) | 2           | 14               | 100<br><u>98</u><br>198  | 188<br>186      | Seed   | 22          |                  | 0.04       | < LOD    | < 0.01   | < 0.01   | 0.04           | <u>0.04</u> |
|                                                                                               |             |                  |                          |                 |        |             | <u>0.04</u>      | 0.03       | < LOD    | < 0.01   | < 0.01   | 0.03           |             |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                       | Application |                  |                          |                 | Matrix | PHI<br>days | Residues (mg/kg) |                                                                    |                     |                      |                      |                                      |                     |
|----------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-------------|------------------|--------------------------------------------------------------------|---------------------|----------------------|----------------------|--------------------------------------|---------------------|
|                                                                                              | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |             | Fluxapyroxad     |                                                                    | M700F002            | M700F008             | M700F048             | Total residue*                       |                     |
|                                                                                              |             |                  |                          |                 |        |             | Mean             | Individual                                                         |                     |                      |                      | Individual                           | Mean                |
| 2009/7003064<br>RCN R080131<br>Canada<br>(RM314,<br>Saskatchewan)<br>2008<br>(Gateway 46P50) | 2           | 14               | 99<br><u>100</u><br>199  | 188<br>189      | Seed   | 21          |                  | 0.13<br><br><u>0.16</u>                                            | < 0.01<br><br>< LOD | 0.02<br><br>         | < 0.01<br><br>< 0.01 | 0.15<br><br>0.21                     | <br><br><u>0.18</u> |
| 2009/7003064<br>RCN R080132<br>USA<br>(Power, Idaho)<br>2008<br>(v1036)                      | 2           | 13               | 98<br><u>104</u><br>202  | 183<br>195      | Seed   | 14          | 0.25             | 0.29<br><br>0.20                                                   | < LOD<br><br>< LOD  | 0.10<br><br>0.08     | 0.10<br><br>0.04     | 0.46<br>(c 0.01)<br>0.31<br>(c 0.01) | 0.39                |
|                                                                                              |             |                  |                          |                 |        | 18          | 0.27             | 0.27<br><br>0.26                                                   | < LOD<br><br>< LOD  | 0.10<br><br>0.10     | 0.12<br><br>0.10     | 0.46<br><br>0.43                     | 0.45                |
|                                                                                              |             |                  |                          |                 |        | 21          | 0.11             | 0.11<br><br>0.11                                                   | < LOD<br><br>< LOD  | 0.03<br><br>< LOD    | 0.02<br><br>< 0.01   | 0.15<br><br>0.11                     | 0.13                |
|                                                                                              |             |                  |                          |                 |        | 24          | 0.12             | 0.12<br><br>0.12                                                   | < LOD<br><br>< LOD  | 0.02<br><br>0.03     | 0.02<br><br>0.02     | 0.15<br><br>0.16                     | 0.16                |
|                                                                                              |             |                  |                          |                 |        | 28          | <u>0.19</u>      | 0.18<br><br>0.19                                                   | < LOD<br><br>< LOD  | 0.04<br><br>0.04     | 0.03<br><br>0.04     | 0.24<br><br>0.26                     | <u>0.25</u>         |
| 2009/7003064<br>RCN R080133<br>Canada<br>(RM404,<br>Saskatchewan)<br>2008<br>(45H72)         | 2           | 15               | 99<br><u>98</u><br>197   | 187<br>186      | Seed   | 14          | 0.15             | (0.23,<br>0.20, 0.21)<br>0.21<br><br>(0.10,<br>0.06, 0.07)<br>0.08 | < LOD<br><br>< LOD  | 0.03<br><br>0.01     | 0.01<br><br>< 0.01   | 0.25<br><br>0.09                     | 0.17                |
|                                                                                              |             |                  |                          |                 |        | 19          | 0.13             | 0.15<br><br>0.11                                                   | < LOD<br><br>< LOD  | 0.02<br><br>0.01     | 0.01<br><br>< 0.01   | 0.18<br><br>0.12                     | 0.15                |
|                                                                                              |             |                  |                          |                 |        | 21          | 0.19             | (0.14,<br>0.14, 0.14)<br>0.14<br><br>(0.26,<br>0.24, 0.23)<br>0.24 | < LOD<br><br>< LOD  | 0.01<br><br>0.02     | < 0.01<br><br>0.01   | 0.15<br><br>0.27                     | 0.21                |
|                                                                                              |             |                  |                          |                 |        | 25          | <u>0.73</u>      | 0.81<br><br>0.64                                                   | < LOD<br><br>< 0.01 | 0.09<br><br>0.05     | 0.05<br><br>0.04     | 0.94<br><br>0.72                     | <u>0.83</u>         |
|                                                                                              |             |                  |                          |                 |        | 27          | 0.15             | 0.11<br><br>0.18                                                   | < LOD<br><br>< LOD  | 0.02<br><br>0.02     | 0.01<br><br>0.01     | 0.14<br><br>0.21                     | 0.18                |
| 2009/7003064<br>RCN R080137<br>Canada<br>(RM404,<br>Saskatchewan)<br>2008<br>(45H73)         | 2           | 15               | 99<br><u>99</u><br>198   | 187<br>186      | Seed   | 21          | 0.23             | 0.27<br><br>0.18                                                   | < LOD<br><br>< LOD  | 0.02<br><br>0.02     | 0.02<br><br>0.01     | 0.30<br><br>0.21                     | 0.26                |
| 2009/7003064<br>RCN R080134<br>USA<br>(Franklin, Idaho)<br>2008<br>(Hyola357RRMag)           | 2           | 14               | 101<br><u>102</u><br>203 | 189<br>191      | Seed   | 21          | <u>0.02</u>      | 0.02<br><br>0.02                                                   | < LOD<br><br>< LOD  | < 0.01<br><br>< 0.01 | < 0.01<br><br>< 0.01 | 0.02<br><br>0.02                     | <u>0.02</u>         |

## Fluxapyroxad

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                              | Application |                  |                          |                 | Matrix | PHI<br>days                   | Residues (mg/kg) |                               |          |          |          |                |      |
|-----------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-------------------------------|------------------|-------------------------------|----------|----------|----------|----------------|------|
|                                                                                                     | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |                               | Fluxapyroxad     |                               | M700F002 | M700F008 | M700F048 | Total residue* |      |
|                                                                                                     |             |                  |                          |                 |        |                               | Mean             | Individual                    |          |          |          | Individual     | Mean |
| 2009/7003064<br>RCN R080135<br>Canada<br>(North Cypress,<br>Manitoba)<br>2008<br>(45H72)            | 2           | 15               | 98<br><u>100</u><br>198  | 185<br>188      | Seed   | 22                            | 0.02             | 0.02                          | < LOD    | < 0.01   | < 0.01   | 0.02           | 0.02 |
|                                                                                                     |             |                  |                          |                 |        | 0.02                          |                  | 0.02                          | < LOD    | < 0.01   | < 0.01   | 0.02           |      |
|                                                                                                     |             |                  |                          |                 |        |                               |                  |                               |          |          |          |                |      |
| 2009/7003064<br>RCN R080136<br>Canada<br>(North Cypress,<br>Manitoba)<br>2008<br>(45H73)            | 2           | 15               | 99<br><u>99</u><br>198   | 187<br>186      | Seed   | 22                            | 0.02             | 0.02                          | < LOD    | < 0.01   | < LOD    | 0.02           | 0.02 |
|                                                                                                     |             |                  |                          |                 |        | 0.01                          |                  | < LOD                         | < 0.01   | < LOD    | 0.01     |                |      |
|                                                                                                     |             |                  |                          |                 |        |                               |                  |                               |          |          |          |                |      |
| 2009/7003064<br>RCN R080138<br>Canada<br>(RM402,<br>Saskatchewan)<br>2008<br>(45H72)                | 2           | 15               | 99<br><u>100</u><br>199  | 188<br>188      | Seed   | 21                            | 0.22             | 0.19                          | < LOD    | 0.04     | 0.02     | 0.24           | 0.27 |
|                                                                                                     |             |                  |                          |                 |        | 0.24                          |                  | < LOD                         | 0.04     | 0.02     | 0.29     |                |      |
|                                                                                                     |             |                  |                          |                 |        |                               |                  |                               |          |          |          |                |      |
| 2009/7003064<br>RCN R080139<br>Canada<br>(RM402,<br>Saskatchewan)<br>2008<br>(45H73)                | 2           | 15               | 100<br><u>100</u><br>200 | 189<br>188      | Seed   | 21                            | 0.22             | 0.20                          | < LOD    | 0.03     | 0.03     | 0.25           | 0.27 |
|                                                                                                     |             |                  |                          |                 |        | 0.24                          |                  | < LOD                         | 0.03     | 0.02     | 0.28     |                |      |
|                                                                                                     |             |                  |                          |                 |        |                               |                  |                               |          |          |          |                |      |
| 2009/7003064<br>RCN R080140<br>Canada<br>(Strathcona, Alberta)<br>2008<br>(RR Weathermax<br>Canola) | 2           | 14               | 96<br><u>101</u><br>197  | 181<br>188      | Seed   | 21                            | 0.09             | 0.09                          | < LOD    | 0.01     | 0.01     | 0.11           | 0.11 |
|                                                                                                     |             |                  |                          |                 |        | 0.09                          |                  | < LOD                         | 0.01     | < 0.01   | 0.10     |                |      |
|                                                                                                     |             |                  |                          |                 |        |                               |                  |                               |          |          |          |                |      |
| 2009/7003064<br>RCN R080141<br>Canada<br>(Strathcona, Alberta)<br>2008<br>(45H72)                   | 2           | 15               | 97<br><u>103</u><br>200  | 179<br>191      | Seed   | 21                            | -                | (0.04, 0.05,<br>0.04)<br>0.04 | < LOD    | < 0.01   | < 0.01   | (c 0.06)       | -    |
|                                                                                                     |             |                  |                          |                 |        | (0.13, 0.11,<br>0.11)<br>0.12 |                  | < LOD                         | < 0.01   | < 0.01   |          |                |      |
|                                                                                                     |             |                  |                          |                 |        |                               |                  |                               |          |          |          |                |      |
| 2009/7003064<br>RCN R080142<br>Canada<br>(Lamont, Alberta)<br>2008<br>(45H72)                       | 2           | 14               | 101<br><u>101</u><br>202 | 187<br>188      | Seed   | 21                            | 0.05             | 0.06                          | < LOD    | < 0.01   | < 0.01   | 0.06           | 0.05 |
|                                                                                                     |             |                  |                          |                 |        | 0.04                          |                  | < LOD                         | < 0.01   | < 0.01   | 0.04     |                |      |
|                                                                                                     |             |                  |                          |                 |        |                               |                  |                               |          |          |          |                |      |
| 2009/7003064<br>RCN R080143<br>Canada<br>(Lamont, Alberta)<br>2008<br>(45H73)                       | 2           | 14               | 102<br><u>103</u><br>205 | 189<br>191      | Seed   | 21                            | 0.05             | 0.05                          | < LOD    | < 0.01   | < 0.01   | 0.05           | 0.05 |
|                                                                                                     |             |                  |                          |                 |        | 0.05                          |                  | < 0.01                        | < 0.01   | < 0.01   | 0.05     |                |      |
|                                                                                                     |             |                  |                          |                 |        |                               |                  |                               |          |          |          |                |      |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                              | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |                |      |
|-------------------------------------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|------------------|------------|----------|----------|----------|----------------|------|
|                                                                                     | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total residue* |      |
|                                                                                     |             |                  |            |                 |        |             | Mean             | Individual |          |          |          | Individual     | Mean |
| 2009/7003064<br>RCN R080144<br>Canada<br>(RM434,<br>Saskatchewan)<br>2008<br>(5020) | 2           | 14               | 100        | 190             | Seed   | 21          |                  | 0.12       | < 0.01   | 0.02     | 0.02     | 0.15           |      |
|                                                                                     |             |                  | 100        | 189             |        |             |                  | 0.11       | < LOD    | 0.02     | 0.01     | 0.14           |      |
|                                                                                     |             |                  | 200        |                 |        |             | 0.12             |            |          |          |          |                |      |

\*All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 105 Residues from the foliar application of fluxapyroxad to sunflowers in the USA and Canada (Johnston 2010, 2009/7003064)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                              | Application |                  |                          |                 | Matrix | PHI<br>days | Residues (mg/kg) |            |          |          |          |                    |             |
|-----------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-------------|------------------|------------|----------|----------|----------|--------------------|-------------|
|                                                                                                     | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*             |             |
|                                                                                                     |             |                  |                          |                 |        |             | Mean             | Individual |          |          |          | Individual         | Mean        |
| GAP, USA                                                                                            | 2           |                  | 97-101                   |                 |        | 21          |                  |            |          |          |          |                    |             |
| 2009/7003064<br>RCN R080145<br>Canada<br>(Portage la Prairie,<br>Manitoba)<br>2008<br>(NuSun 8N358) | 2           | 15               | 102<br><u>102</u><br>204 | 189<br>188      | Seed   | 21          |                  | 0.02       | < LOD    | < LOD    | < LOD    | 0.02               | 0.02        |
|                                                                                                     |             |                  |                          |                 |        |             |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01             |             |
|                                                                                                     |             |                  |                          |                 |        |             | <u>0.02</u>      |            |          |          |          |                    |             |
| 2009/7003064<br>RCN R080146<br>USA<br>(Rice, Kansas)<br>2008<br>(63M91)                             | 2           | 14               | 101<br><u>102</u><br>203 | 189<br>190      | Seed   | 14          | 0.06             | 0.06       | < LOD    | < LOD    | < LOD    | 0.06               | 0.06        |
|                                                                                                     |             |                  |                          |                 |        |             |                  | 0.06       | < LOD    | < LOD    | < LOD    | 0.06               |             |
|                                                                                                     |             |                  |                          |                 |        | 18          | 0.03             | 0.02       | < LOD    | < LOD    | < LOD    | 0.02               | 0.03        |
|                                                                                                     |             |                  |                          |                 |        |             |                  | 0.04       | < LOD    | < LOD    | < LOD    | 0.04               |             |
|                                                                                                     |             |                  |                          |                 |        | 21          | -                | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01<br>(c 0.01) | -           |
|                                                                                                     |             |                  |                          |                 |        |             |                  | 0.01       | < LOD    | < LOD    | < LOD    | 0.01<br>(c 0.01)   |             |
|                                                                                                     |             |                  |                          |                 |        | 24          | <u>0.05</u>      | 0.04       | < LOD    | < LOD    | < LOD    | 0.04               | <u>0.05</u> |
|                                                                                                     |             |                  |                          |                 |        |             |                  | 0.05       | < LOD    | < LOD    | < LOD    | 0.05               |             |
|                                                                                                     |             |                  |                          |                 |        | 28          | 0.03             | 0.03       | < LOD    | < LOD    | < LOD    | 0.03               | 0.03        |
|                                                                                                     |             |                  |                          |                 |        |             |                  | 0.02       | < LOD    | < LOD    | < LOD    | 0.02               |             |
| 2009/7003064<br>RCN R080147<br>Canada<br>(RM314,<br>Saskatchewan)<br>2008<br>(Viper)                | 2           | 14               | 100<br><u>99</u><br>199  | 190<br>187      | Seed   | 21          | -                | 0.15       | < LOD    | < LOD    | < LOD    | 0.15<br>(c 0.02)   | -           |
|                                                                                                     |             |                  |                          |                 |        |             |                  | 0.10       | < LOD    | < LOD    | < LOD    | 0.10<br>(c 0.02)   |             |
| 2009/7003064<br>RCN R080148<br>Canada<br>(RM314,<br>Saskatchewan)<br>2008<br>(Jaguar)               | 2           | 14               | 101<br><u>98</u><br>199  | 191<br>186      | Seed   | 21          |                  | 0.09       | < LOD    | < LOD    | < LOD    | 0.09               | 0.09        |
|                                                                                                     |             |                  |                          |                 |        |             |                  | 0.09       | < LOD    | < LOD    | < LOD    | 0.09               |             |
|                                                                                                     |             |                  |                          |                 |        |             | <u>0.09</u>      |            |          |          |          |                    |             |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                           | Application |                  |                          |                 | Matrix | PHI<br>days | Residues (mg/kg)    |                  |                    |                    |                    |                  |                     |
|--------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|--------|-------------|---------------------|------------------|--------------------|--------------------|--------------------|------------------|---------------------|
|                                                                                                  | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |        |             | Fluxapyroxad        |                  | M700F002           | M700F008           | M700F048           | Total*           |                     |
|                                                                                                  |             |                  |                          |                 |        |             | Mean                | Individual       |                    |                    |                    | Individual       | Mean                |
| 2009/7003064<br>RCN R080149<br>Canada<br>(RM283,<br>Saskatchewan)<br>2008<br>(Viper)             | 2           | 13               | 99<br><u>100</u><br>199  | 187<br>188      | Seed   | 21          | <br><br><u>0.06</u> | 0.06<br><br>0.06 | < LOD<br><br>< LOD | < LOD<br><br>< LOD | < LOD<br><br>< LOD | 0.06<br><br>0.06 | <br><br><u>0.06</u> |
| 2009/7003064<br>RCN R080150<br>USA<br>(Hockley, Texas)<br>2008<br>(378DMRHO)                     | 2           | 14               | 99<br><u>98</u><br>197   | 187<br>184      | Seed   | 21          | <br><br><u>0.11</u> | 0.10<br><br>0.12 | < LOD<br><br>< LOD | < LOD<br><br>< LOD | < LOD<br><br>< LOD | 0.10<br><br>0.12 | <br><br><u>0.11</u> |
| 2009/7003064<br>RCN R080151<br>Canada<br>(North Cypress,<br>Manitoba)<br>2008<br>(Defender Plus) | 2           | 15               | 100<br><u>101</u><br>201 | 185<br>187      | Seed   | 21          | <br><br>0.01        | 0.01<br><br>0.01 | < LOD<br><br>< LOD | < LOD<br><br>< LOD | < LOD<br><br>< LOD | 0.01<br><br>0.01 | <br><br>0.01        |
| 2009/7003064<br>RCN R080152<br>Canada<br>(North Cypress,<br>Manitoba)<br>2008<br>(Jupiter)       | 2           | 15               | 101<br><u>101</u><br>202 | 187<br>186      | Seed   | 21          | <br><br><u>0.02</u> | 0.02<br><br>0.02 | < LOD<br><br>< LOD | < LOD<br><br>< LOD | < LOD<br><br>< LOD | 0.02<br><br>0.02 | <br><br><u>0.02</u> |

\*All analytes are reported in terms of themselves. Total residues (Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out on cotton (12 trials – Table 106) in the USA during the 2008 growing season (Jordan and Gordon 2010, 2010/7003260). In addition data were generated showing the potential for concentration of residues of fluxapyroxad in gin by-products (stems, leaves, burrs, immature seed and dust removed from the seed cotton during the ginning process) and processed commodities of cotton. At each site cotton was grown from seed treated with a 300 g/L SC formulation prior to planting, targeting 20 g ai/100kg seed. At two of the trial sites an additional treated plot was planted with cotton seed treated with an exaggerated rate of 100 g ai/100kg seed to generate treated cotton RAC samples and to produce bulk seed cotton samples for processing. Residues in undelinted cotton seed and processed commodities were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Residues in gin by-products are shown in Table 120.

Table 106 Residues from the seed treatment application of fluxapyroxad to cotton in the USA (Jordan and Gordon 2010, 2010/7003260)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                       | Application |                  |            |                            | Matrix             | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |        |
|----------------------------------------------------------------------------------------------|-------------|------------------|------------|----------------------------|--------------------|-------------|------------------|------------|----------|----------|----------|------------|--------|
|                                                                                              | No          | Interval<br>Days | g<br>ai/ha | g ai/<br>100<br>kg<br>seed |                    |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |        |
|                                                                                              |             |                  |            |                            |                    |             | Mean             | Individual |          |          |          | Individual | Mean   |
| GAP, USA                                                                                     | 1           |                  |            | 20                         |                    | -           |                  |            |          |          |          |            |        |
| 2010/7003260<br>RCN R080304<br>USA<br>(Turner, Georgia)<br>2008<br>(DP 555 BG/RR)            | 1           | -                | 2.2        | 20                         | Undelinted<br>seed | 156         | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                              |             |                  |            |                            |                    |             |                  |            |          | < LOD    | < LOD    | < LOD      |        |
|                                                                                              |             |                  | 10.6       | 100                        | Undelinted<br>seed | 156         | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                              |             |                  |            |                            |                    |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2010/7003260<br>RCN R080305<br>USA<br>(Monroe,<br>Arkansas)<br>2008<br>(DP 445 BG/RR)        | 1           | -                | 2.1        | 20                         | Undelinted<br>seed | 162         | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                              |             |                  |            |                            |                    |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2010/7003260<br>RCN R080306<br>USA<br>(Woodruff,<br>Arkansas)<br>2008<br>(DP 445 BG/RR)      | 1           | -                | 2.0        | 20                         | Undelinted<br>seed | 161         | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                              |             |                  |            |                            |                    |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2010/7003260<br>RCN R080307<br>USA<br>(Washington,<br>Mississippi)<br>2008<br>(DP 445 BG/RR) | 1           | -                | 2.2        | 20                         | Undelinted<br>seed | 155         | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                              |             |                  |            |                            |                    |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2010/7003260<br>RCN R080308<br>USA<br>(Wilbarger,<br>Texas)<br>2008<br>(DP 143 B2FR)         | 1           | -                | 2.0        | 20                         | Undelinted<br>seed | 174         | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                              |             |                  |            |                            |                    |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2010/7003260<br>RCN R080309<br>USA<br>(Gray, Texas)<br>2008<br>(DP 143 B2FR)                 | 1           | -                | 2.0        | 20                         | Undelinted<br>seed | 190         | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                              |             |                  |            |                            |                    |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |        |
|                                                                                              | 1           | -                | 10.1       | 100                        | Undelinted<br>seed | 190         | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                              |             |                  |            |                            |                    |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2010/7003260<br>RCN R080310<br>USA<br>(Armstrong,<br>Texas)<br>2008<br>(DP 143 B2FR)         | 1           | -                | 2.0        | 20                         | Undelinted<br>seed | 193         | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                              |             |                  |            |                            |                    |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |        |
| 2010/7003260<br>RCN R080311<br>USA<br>(Carson, Texas)<br>2008<br>(DP 143 B2FR)               | 1           | -                | 2.0        | 20                         | Undelinted<br>seed | 193         | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                              |             |                  |            |                            |                    |             |                  | < LOD      | < LOD    | < LOD    | < 0.01   | < 0.01     |        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                  | Application |                  |         |                            | Matrix             | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |        |
|-----------------------------------------------------------------------------------------|-------------|------------------|---------|----------------------------|--------------------|-------------|------------------|------------|----------|----------|----------|------------|--------|
|                                                                                         | No          | Interval<br>Days | g ai/ha | g ai/<br>100<br>kg<br>seed |                    |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |        |
|                                                                                         |             |                  |         |                            |                    |             | Mean             | Individual |          |          |          | Individual | Mean   |
| 2010/7003260<br>RCN R080312<br>USA<br>(Marshall,<br>Oklahoma)<br>2008<br>(DP 143 B2FR)  | 1           | -                | 2.0     | 20                         | Undelinted<br>seed | 186         | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2010/7003260<br>RCN R080313<br>USA<br>(Yuma, Arizona)<br>2008<br>(DP 444 BG/RR)         | 1           | -                | 5.2     | 20                         | Undelinted<br>seed | 174         | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2010/7003260<br>RCN R080314<br>USA<br>(Fresno,<br>California)<br>2008<br>(DP 444 BG/RR) | 1           | -                | 2.7     | 20                         | Undelinted<br>seed | 172         | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2010/7003260<br>RCN R080315<br>USA<br>(Madera,<br>California)<br>2008<br>(DP 444 BG/RR) | 1           | -                | 1.8     | 20                         | Undelinted<br>seed | 176         | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.003125 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Supervised trials were carried out on peanuts (12 trials – Table 107) in the USA during the 2008 growing season (Becker 2010, 2009/7006381). Three foliar applications of a 62.5 g/L EC formulation were made at 101–105 g ai/ha or 302–310 g ai/ha/season. Applications were made to plots using spray volumes of 184–223 L/ha with ground boom equipment (backpack CO<sub>2</sub> hand boom) at 13–15 days retreatment intervals so that the first harvest of peanut nutmeat and hay occurred 3 or 7 days (excluding decline trial) after the last application. Peanut samples were also harvested at 7, 14 and 21 DALA except for one trial which was harvested at 3, 10 and 17 DALA. One untreated and two treated samples of each peanut RAC were harvested at each interval. At one site in Georgia (Trial R080493) the typical “RAC” samples from both plots were collected at 7 DALA and additional duplicate samples of treated peanut hay and nutmeat were harvested at 0, 4, 14 and 21 DALA to examine residue decline. An adjuvant was added to the spray mixture for all applications except for those in Trial R080501. Residues in peanut nutmeat and hay were quantitated by LC/MS/MS method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Residues in peanut hay are shown in Table 121.

Table 107 Residues from the foliar application of fluxapyroxad to peanuts in the USA (Becker 2010, 2009/7006381)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                              | Application |                  |                          |                   | Matrix  | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |        |
|-------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|---------|-------------|------------------|------------|----------|----------|----------|------------|--------|
|                                                                                     | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(/ha)    |         |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total *    |        |
|                                                                                     |             |                  |                          |                   |         |             | Mean             | Individual |          |          |          | Individual | Mean   |
| GAP, USA                                                                            | 3           |                  | 97                       |                   |         | 7           |                  |            |          |          |          |            |        |
| 2009/7006381<br>RCN R080492<br>USA<br>(Worth, Georgia)<br>2008<br>(03L)             | 3           | 14<br>13         | 101<br>101<br>101<br>303 | 189<br>193<br>191 | Nutmeat | 7           | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 14          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 21          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7006381<br>RCN R080493<br>USA<br>(Colquit, Georgia)<br>2008<br>(03L)           | 3           | 14<br>14         | 101<br>101<br>101<br>303 | 189<br>189<br>197 | Nutmeat | 0           | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 4           | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < 0.01   | < 0.01     |        |
|                                                                                     |             |                  |                          |                   |         | 7           | < 0.01           | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 14          | < 0.01           | < 0.01     | < LOD    | < 0.01   | < 0.01   | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < 0.01     | < LOD    | < 0.01   | < 0.01   | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 21          | < 0.01           | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < 0.01     | < LOD    | < 0.01   | < LOD    | < 0.01     | < 0.01 |
| 2009/7006381<br>RCN R080494<br>USA<br>(Turner, Georgia)<br>2008<br>(GA-02)          | 3           | 14<br>14         | 101<br>101<br>101<br>303 | 189<br>184<br>188 | Nutmeat | 7           | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 21          | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7006381<br>RCN R080495<br>USA<br>(Tift, Georgia)<br>2008<br>(03L)              | 3           | 14<br>13         | 101<br>101<br>101<br>303 | 186<br>190<br>188 | Nutmeat | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7006381<br>RCN R080496<br>USA<br>(Jasper, South<br>Carolina)<br>2008<br>(03L)  | 3           | 14<br>14         | 101<br>101<br>101<br>303 | 194<br>193<br>191 | Nutmeat | 7           | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
| 2009/7006381<br>RCN R080497<br>USA<br>(Hampton, South<br>Carolina)<br>2008<br>(03L) | 3           | 14<br>14         | 101<br>101<br>101<br>303 | 195<br>191<br>191 | Nutmeat | 7           | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |
|                                                                                     |             |                  |                          |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01 |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                              | Application |                  |                                 |                   | Matrix  | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |               |
|-------------------------------------------------------------------------------------|-------------|------------------|---------------------------------|-------------------|---------|-------------|------------------|------------|----------|----------|----------|------------|---------------|
|                                                                                     | No          | Interval<br>Days | g<br>ai/ha                      | Water<br>(/ha)    |         |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total *    |               |
|                                                                                     |             |                  |                                 |                   |         |             | Mean             | Individual |          |          |          | Individual | Mean          |
| 2009/7006381<br>RCN R080498<br>USA<br>(Dale, Alabama)<br>2008<br>(GA Green)         | 3           | 13<br>14         | 101<br>101<br><u>101</u><br>303 | 191<br>187<br>187 | Nutmeat | 7           | < <u>0.01</u>    | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
| 2009/7006381<br>RCN R080499<br>USA<br>(Houston, Alabama)<br>2008<br>(GA Green)      | 3           | 14<br>14         | 101<br>101<br><u>101</u><br>303 | 190<br>189<br>190 | Nutmeat | 7           | < <u>0.01</u>    | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
| 2009/7006381<br>RCN R080500<br>USA<br>(Madison, Florida)<br>2008<br>(GA 02)         | 3           | 15<br>14         | 101<br>101<br><u>100</u><br>302 | 190<br>195<br>191 | Nutmeat | 3           | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         | 10          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         | 17          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < LOD      | < 0.01   | < LOD    | < LOD    | < 0.01     | < 0.01        |
| 2009/7006381<br>RCN R080501<br>USA<br>(Marshall,<br>Oklahoma)<br>2008<br>(Tamspon)  | 3           | 13<br>14         | 103<br>102<br><u>102</u><br>307 | 223<br>221<br>221 | Nutmeat | 7           | < <u>0.01</u>    | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
| 2009/7006381<br>RCN R080502<br>USA<br>(Wilbarger, Texas)<br>2008<br>(Tamrun)        | 3           | 14<br>14         | 103<br>105<br><u>102</u><br>310 | 206<br>210<br>204 | Nutmeat | 7           | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         | 14          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         | 21          | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
| 2009/7006381<br>RCN R080503<br>USA<br>(Collingsworth,<br>Texas)<br>2008<br>(Tamrun) | 3           | 14<br>14         | 101<br>103<br><u>102</u><br>306 | 201<br>205<br>202 | Nutmeat | 7           | < <u>0.01</u>    | < LOD      | < LOD    | 0.07     | < LOD    | 0.07       | <u>0.08</u>   |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < LOD      | < LOD    | 0.09     | < LOD    | 0.09       |               |
|                                                                                     |             |                  |                                 |                   |         | 14          | < 0.01           | < LOD      | < LOD    | 0.04     | < LOD    | 0.04       | 0.07          |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < LOD      | < LOD    | 0.09     | < LOD    | 0.09       |               |
|                                                                                     |             |                  |                                 |                   |         | 21          | < 0.01           | < LOD      | < LOD    | 0.05     | < LOD    | 0.05       | 0.05          |
|                                                                                     |             |                  |                                 |                   |         |             | < 0.01           | < LOD      | < LOD    | 0.04     | < LOD    | 0.04       | 0.05          |

\*All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

### Animal feeds

Note: Animal feed residues are expressed on a wet weight basis. Percent moisture content values, where available, are also tabulated.

Table 108 Residues from the foliar application of fluxapyroxad to garden peas in the USA and Canada (Johnston 2010, 2010/7003486)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                              | Application |                  |                   |                 | Matrix<br>(%<br>moisture)        | PHI<br>days | Residues (mg/kg) |                 |                   |                 |                 |            |      |
|-----------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|----------------------------------|-------------|------------------|-----------------|-------------------|-----------------|-----------------|------------|------|
|                                                                                                     | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                                  |             | Fluxapyroxad     |                 | M700F002          | M700F008        | M700F048        | Total*     |      |
|                                                                                                     |             |                  |                   |                 |                                  |             | Mean             | Individual      |                   |                 |                 | Individual | Mean |
| GAP, USA                                                                                            | 2           |                  | 97-<br>100        |                 |                                  | 7           |                  |                 |                   |                 |                 |            |      |
| 2010/7003486<br>RCN<br>R080343<br>USA<br>(North Rose,<br>New York)<br>2008<br>(Durango)             | 2           | 7                | 100<br>100<br>200 | 186<br>186      | Vines                            | 7           | 1.76             | 1.79            | < LOD             | < 0.01          | < LOD           | 1.79       | 1.76 |
|                                                                                                     |             |                  |                   |                 |                                  |             | 1.72             | < LOD           | < 0.01            | < LOD           | 1.72            |            |      |
|                                                                                                     |             |                  |                   |                 | Hay                              | 7           |                  | 7.19            | < LOD             | 0.02            | < 0.01          | 7.21       | 7.22 |
|                                                                                                     |             |                  |                   |                 |                                  |             | 7.20             | 7.20            | < LOD             | 0.02            | < 0.01          | 7.22       |      |
| 2010/7003486<br>RCN<br>R080344<br>USA<br>(Germansville,<br>Pennsylvania)<br>2008<br>(Wando)         | 2           | 6                | 102<br>101<br>203 | 288<br>286      | Vines                            | 6           | 3.35             | 3.28            | < LOD             | 0.01            | < 0.01          | 3.29       | 3.35 |
|                                                                                                     |             |                  |                   |                 |                                  |             | 3.41             | < LOD           | < 0.01            | < 0.01          | 3.41            |            |      |
|                                                                                                     |             |                  |                   |                 | Hay                              | 6           |                  | 10.81           | < LOD             | 0.03            | < 0.01          | 10.84      | 10.8 |
|                                                                                                     |             |                  |                   |                 |                                  |             | 10.8             | 10.78           | < LOD             | 0.03            | 0.01            | 10.82      |      |
| 2010/7003486<br>RCN<br>R080345<br>Canada<br>(Portage la<br>Prairie,<br>Manitoba)<br>2008<br>(Tudor) | 2           | 6                | 102<br>99<br>201  | 193<br>187      | Vines                            | 7           | 2.88             | 2.85            | < LOD             | 0.02            | < 0.01          | 2.87       | 2.90 |
|                                                                                                     |             |                  |                   |                 |                                  |             | 2.91             | < LOD           | 0.02              | < 0.01          | 2.93            |            |      |
|                                                                                                     |             |                  |                   |                 | Hay                              | 7           |                  | 8.89            | < LOD             | 0.06            | 0.02            | 8.96       | 9.56 |
|                                                                                                     |             |                  |                   |                 |                                  |             | 9.49             | 10.08           | < 0.01            | 0.07            | 0.02            | 10.16      |      |
| 2010/7003486<br>RCN<br>R080346<br>USA<br>(Geneva,<br>Minnesota)<br>2008<br>(Midas)                  | 2           | 7                | 102<br>105<br>207 | 188<br>193      | Vines                            | 4           | 4.11             | 3.85            | < LOD             | 0.01            | < 0.01          | 3.86       | 4.12 |
|                                                                                                     |             |                  |                   |                 |                                  |             | 4.36             | < LOD           | 0.01              | < 0.01          | 4.37            |            |      |
|                                                                                                     |             |                  |                   |                 | Hay                              | 4           |                  | 7.55            | < 0.01            | 0.03            | 0.01            | 7.59       | 7.75 |
|                                                                                                     |             |                  |                   |                 |                                  |             | 7.71             | 7.87            | < 0.01            | 0.04            | < 0.01          | 7.91       |      |
| 2010/7003486<br>RCN<br>R080347<br>USA<br>(Eldridge,<br>Illinois)<br>2008<br>(Admiral)               | 2           | 7                | 100<br>102<br>202 | 189<br>191      | Vines<br>(80.8)                  | 0           | 4.27             | 4.24            | < LOD             | 0.02            | 0.02            | 4.28       | 4.29 |
|                                                                                                     |             |                  |                   |                 |                                  |             |                  | 4.29            | < LOD             | < 0.01          | < LOD           | 4.29       |      |
|                                                                                                     |             |                  |                   |                 |                                  | 4           | 3.19             | 2.77            | < LOD             | 0.02            | 0.02            | 2.80       | 3.22 |
|                                                                                                     |             |                  |                   |                 |                                  |             |                  | 3.6             | < LOD             | 0.03            | 0.02            | 3.64       |      |
|                                                                                                     |             |                  |                   |                 |                                  | 7           | 2.78             | 2.89            | < LOD             | 0.03            | 0.04            | 2.95       | 2.85 |
|                                                                                                     |             |                  |                   |                 |                                  |             |                  | 2.67            | < LOD             | 0.04            | 0.06            | 2.75       |      |
|                                                                                                     |             |                  |                   |                 |                                  | 13          | 2.60             | 2.41            | < LOD             | 0.02            | 0.03            | 2.45       | 2.65 |
|                                                                                                     |             |                  |                   |                 |                                  |             |                  | 2.79            | < LOD             | 0.03            | 0.04            | 2.85       |      |
|                                                                                                     |             |                  |                   |                 | Hay<br>(14.8,<br>13 day<br>21.4) | 0           | 15.8             | 14.66           | < LOD             | 0.09            | 0.05            | 14.8       | 15.9 |
|                                                                                                     |             |                  |                   |                 |                                  |             |                  | 16.95           | < LOD             | 0.07            | 0.03            | 17.0       |      |
|                                                                                                     |             |                  |                   |                 |                                  | 4           | 9.29             | 8.69            | < LOD             | 0.06            | 0.05            | 8.79       | 9.45 |
|                                                                                                     |             |                  |                   |                 |                                  |             |                  | 9.89            | < LOD             | 0.10            | 0.07            | 10.1       |      |
|                                                                                                     |             |                  |                   |                 |                                  | 7           | 9.18             | 8.94            | < LOD             | 0.11            | 0.13            | 9.14       | 9.38 |
|                                                                                                     |             |                  |                   |                 |                                  |             |                  | 9.42            | < LOD             | 0.10            | 0.13            | 9.61       |      |
|                                                                                                     |             |                  |                   |                 |                                  | 13          | 5.48             | (4.65,<br>5.27) | (< LOD,<br>< LOD) | (0.05,<br>0.05) | (0.07,<br>0.08) | 5.07       | 5.60 |
|                                                                                                     |             |                  |                   |                 |                                  |             |                  | 4.96            | < LOD             | 0.05            | 0.08            |            |      |

## Fluxapyroxad

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                  | Application |                  |                   |                 | Matrix<br>(%<br>moisture) | PHI<br>days   | Residues (mg/kg) |                 |                   |                     |                   |            |      |      |
|-----------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|---------------------------|---------------|------------------|-----------------|-------------------|---------------------|-------------------|------------|------|------|
|                                                                                         | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                           |               | Fluxapyroxad     |                 | M700F002          | M700F008            | M700F048          | Total*     |      |      |
|                                                                                         |             |                  |                   |                 |                           |               | Mean             | Individual      |                   |                     |                   | Individual | Mean |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 5.99            |                   |                     |                   | < LOD      | 0.07 | 0.09 |
| 2010/7003486<br>RCN<br>R080349<br>USA<br>(Fresno,<br>California)<br>2008<br>(Strike)    | 2           | 7                | 102<br>101<br>203 | 285<br>280      | Vines                     | 7             | 3.23             | (2.96,<br>3.59) | (< LOD,<br>< LOD) | (< 0.01,<br>< 0.01) | (< LOD,<br>< LOD) | 3.28       | 3.23 |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 3.28            | < LOD             | < 0.01              | < LOD             |            |      |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 3.17            | < LOD             | < 0.01              | < LOD             | 3.17       |      |      |
|                                                                                         |             |                  |                   |                 | Hay<br>(24.51)            | 7             | 12.1             | 11.03           | < LOD             | 0.02                | < LOD             | 11.1       | 12.2 |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 13.21           | < LOD             | 0.02                | < LOD             | 13.2       |      |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  |                 |                   |                     |                   |            |      |      |
| 2010/7003486<br>RCN<br>R080350<br>USA<br>(Jerome,<br>Idaho)<br>2008<br>(Pendleton)      | 2           | 6                | 100<br>100<br>200 | 218<br>208      | Vines<br>(82.3)           | 7             | 0.82             | 0.84            | < LOD             | < 0.01              | < 0.01            | 0.84       | 0.83 |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 0.80            | < LOD             | 0.01                | < 0.01            | 0.81       |      |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  |                 |                   |                     |                   |            |      |      |
|                                                                                         |             |                  |                   |                 | Hay<br>(13.0)             | 7             | 4.53             | 4.34            | < 0.01            | 0.07                | 0.01              | 4.42       | 4.61 |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 4.71            | < 0.01            | 0.07                | 0.01              | 4.79       |      |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  |                 |                   |                     |                   |            |      |      |
| 2010/7003486<br>RCN<br>R080348<br>USA<br>(Ephrata,<br>Washington)<br>2008<br>(Deshutes) | 2           | 7                | 101<br>100<br>201 | 283<br>280      | Vines<br>(76.1)           | 7             | 1.60             | -               | -                 | -                   | -                 | -          | 1.62 |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 1.60            | < LOD             | 0.01                | 0.01              | 1.62       |      |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  |                 |                   |                     |                   |            |      |      |
|                                                                                         |             |                  |                   |                 | Hay<br>(12.5)             | 7             | 6.01             | 5.61            | < 0.01            | 0.07                | 0.05              | 5.72       | 6.12 |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 6.40            | < 0.01            | 0.07                | 0.05              | 6.51       |      |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  |                 |                   |                     |                   |            |      |      |
| 2010/7003486<br>RCN<br>R080351<br>USA<br>(Ephrata,<br>Washington)<br>2008<br>(Kalamo)   | 2           | 7                | 100<br>100<br>200 | 281<br>280      | Vines<br>(83.9)           | 0             | 2.62             | 2.80            | < LOD             | < 0.01              | < LOD             | 2.80       | 2.62 |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 2.44            | < LOD             | < 0.01              | < LOD             | 2.44       |      |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  |                 |                   |                     |                   |            |      |      |
|                                                                                         |             |                  |                   |                 |                           | 4             | 0.99             | 0.96            | < LOD             | < 0.01              | < LOD             | 0.96       | 0.99 |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 1.02            | < LOD             | < 0.01              | < LOD             | 1.02       |      |      |
|                                                                                         |             |                  |                   |                 |                           | 7             | 0.62             | 0.55            | < LOD             | < 0.01              | < LOD             | 0.55       | 0.62 |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 0.68            | < LOD             | < 0.01              | < LOD             | 0.68       |      |      |
|                                                                                         |             |                  |                   |                 |                           | 14            | 0.79             | 0.75            | < LOD             | < 0.01              | < 0.01            | 0.75       | 0.79 |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 0.82            | < LOD             | < 0.01              | < 0.01            | 0.82       |      |      |
|                                                                                         |             |                  |                   |                 |                           | Hay<br>(20.4) | 0                | 9.76            | 9.42              | < LOD               | 0.06              | 0.01       | 9.49 | 9.85 |
|                                                                                         |             |                  |                   |                 |                           |               |                  |                 | 10.09             | < LOD               | 0.07              | 0.02       | 10.2 |      |
|                                                                                         |             |                  |                   |                 |                           |               | 4                | 3.32            | 2.99              | < LOD               | 0.03              | 0.01       | 3.03 | 3.37 |
|                                                                                         |             |                  |                   |                 | 3.65                      |               |                  |                 | < LOD             | 0.04                | 0.02              | 3.70       |      |      |
|                                                                                         |             |                  |                   |                 | 7                         |               | 1.65             | 1.60            | < LOD             | 0.02                | 0.01              | 1.63       | 1.68 |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 1.69            | < LOD             | 0.02                | 0.02              | 1.72       |      |      |
|                                                                                         |             |                  |                   |                 | 14                        |               | 1.17             | 1.12            | < LOD             | 0.01                | 0.01              | 1.14       | 1.19 |      |
|                                                                                         |             |                  |                   |                 |                           |               |                  | 1.22            | < LOD             | 0.01                | 0.01              | 1.24       |      |      |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.003125 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Moisture content was determined for selected samples using an infrared moisture determination balance.

Moisture content is for untreated controls unless indicated otherwise.

Table 109 Residues from the foliar application of fluxapyroxad to soya beans in the USA and Canada (Johnston 2010, 2010/7003486)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                         | Application |                  |                          |                 | Matrix<br>(%<br>moisture) | PHI<br>days                      | Residues (mg/kg) |                         |                               |                               |                         |            |      |
|------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|---------------------------|----------------------------------|------------------|-------------------------|-------------------------------|-------------------------------|-------------------------|------------|------|
|                                                                                                | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |                           |                                  | Fluxapyroxad     |                         | M700F002                      | M700F008                      | M700F048                | Total*     |      |
|                                                                                                |             |                  |                          |                 |                           |                                  | Mean             | Individual              |                               |                               |                         | Individual | Mean |
| GAP, USA                                                                                       | 2           |                  | 97-<br>100               |                 |                           | 7                                |                  |                         |                               |                               |                         |            |      |
| 2010/7003486<br>RCN R080367<br>USA<br>(Chula, Georgia)<br>2008<br>(4R492)                      | 2           | 6                | 100<br><u>101</u><br>201 | 207<br>209      | Forage                    | 7                                | 2.17             | 2.17                    | < LOD                         | 0.02                          | 0.05                    | 2.23       | 2.24 |
|                                                                                                |             |                  |                          |                 | (74.0,<br>7 day-<br>70.9) | 2.17                             |                  | < LOD                   | 0.03                          | 0.05                          | 2.24                    |            |      |
|                                                                                                |             |                  |                          |                 | Hay                       | 7                                | <u>6.32</u>      | 6.06                    | < 0.01                        | 0.06                          | 0.16                    | 6.24       | 6.51 |
|                                                                                                |             |                  |                          |                 | (12.2,<br>7 day-<br>14.4) | 6.58                             |                  | < 0.01                  | 0.07                          | 0.17                          | 6.77                    |            |      |
| 2010/7003486<br>RCN R080368<br>USA<br>(Sunsweet,<br>Georgia)<br>2008<br>(4R492)                | 2           | 6                | 99<br><u>99</u><br>198   | 204<br>205      | Forage                    | 7                                | 2.90             | 3.04                    | < 0.01                        | 0.03                          | 0.05                    | 3.11       | 2.95 |
|                                                                                                |             |                  |                          |                 | (73.3)                    | 2.75                             |                  | < 0.01                  | 0.02                          | 0.03                          | 2.79                    |            |      |
|                                                                                                |             |                  |                          |                 | Hay                       | 7                                | <u>6.44</u>      | 6.73                    | < 0.01                        | 0.08                          | 0.14                    | 6.91       | 6.60 |
|                                                                                                |             |                  |                          |                 | (12.9)                    | 6.14                             |                  | < 0.01                  | 0.07                          | 0.11                          | 6.29                    |            |      |
| 2010/7003486<br>RCN R080369<br>USA<br>(Fisk, Missouri)<br>2009<br>(Gateway<br>4R492)           | 2           | 8                | 99<br><u>100</u><br>199  | 185<br>188      | Forage                    | 6                                | 1.66             | 1.58                    | < LOD                         | 0.02                          | 0.03                    | 1.62       | 1.70 |
|                                                                                                |             |                  |                          |                 | (73.5)                    | 1.74                             |                  | < LOD                   | 0.02                          | 0.03                          | 1.78                    |            |      |
|                                                                                                |             |                  |                          |                 | Hay                       | 6                                | <u>5.20</u>      | 5.47                    | < 0.01                        | 0.05                          | 0.10                    | 5.59       | 5.30 |
|                                                                                                |             |                  |                          |                 | (42.8)                    | 4.92                             |                  | < 0.01                  | 0.03                          | 0.08                          | 5.01                    |            |      |
| 2010/7003486<br>RCN R080370<br>USA<br>(Proctor,<br>Arkansas)<br>2008<br>(4R492RR)              | 2           | 7                | 100<br><u>100</u><br>200 | 138<br>138      | Forage                    | 7                                | 3.24             | (3.23,<br>3.09)<br>3.16 | < 0.01<br>(mean)              | (0.02,<br>0.02)<br>0.02       | (0.05,<br>0.05)<br>0.05 | 3.22       | 3.31 |
|                                                                                                |             |                  |                          |                 | (73.2)                    | (2.85,<br>3.46,<br>3.64)<br>3.32 |                  | < 0.01<br>(mean)        | (0.03,<br>0.03, 0.03)<br>0.03 | (0.06,<br>0.06, 0.06)<br>0.06 | 3.39                    |            |      |
|                                                                                                |             |                  |                          |                 | Hay                       | 7                                |                  | <u>4.60</u>             | 4.34                          | < 0.01                        | 0.03                    | 0.06       |      |
|                                                                                                |             |                  |                          |                 | (52.9)                    | 4.85                             | < 0.01           |                         | 0.03                          | 0.07                          | 4.93                    |            |      |
| 2010/7003486<br>RCN R080371<br>USA<br>(Carlyle,<br>Illinois)<br>2008<br>(4R492)                | 2           | 7                | 101<br><u>100</u><br>201 | 236<br>236      | Forage                    | 7                                | 1.16             | 0.95                    | < LOD                         | 0.02                          | 0.02                    | 0.98       | 1.20 |
|                                                                                                |             |                  |                          |                 | (77.4)                    | 1.36                             |                  | < LOD                   | 0.03                          | 0.03                          | 1.41                    |            |      |
|                                                                                                |             |                  |                          |                 | Hay                       | 7                                | <u>4.39</u>      | 4.34                    | < 0.01                        | 0.06                          | 0.06                    | 4.44       | 4.49 |
|                                                                                                |             |                  |                          |                 | (39.6)                    | 4.43                             |                  | < 0.01                  | 0.06                          | 0.07                          | 4.54                    |            |      |
| 2010/7003486<br>RCN R080372<br>USA<br>(Durand,<br>Wisconsin)<br>2008<br>(Renk Seed<br>RS165RR) | 2           | 7                | 101<br><u>100</u><br>201 | 201<br>200      | Forage                    | 8                                | 1.10             | 1.01                    | < LOD                         | 0.04                          | 0.06                    | 1.09       | 1.18 |
|                                                                                                |             |                  |                          |                 | (78.1)                    | 1.19                             |                  | < LOD                   | 0.04                          | 0.06                          | 1.27                    |            |      |
|                                                                                                |             |                  |                          |                 | Hay                       | 8                                | <u>3.60</u>      | 3.31                    | < 0.01                        | 0.08                          | 0.14                    | 3.49       | 3.79 |
|                                                                                                |             |                  |                          |                 | (8.6)                     | 3.88                             |                  | < 0.01                  | 0.08                          | 0.17                          | 4.08                    |            |      |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                        | Application |                  |                          |                 | Matrix<br>(%<br>moisture)                                                        | PHI<br>days | Residues (mg/kg) |                                  |             |          |          |            |      |        |      |      |      |      |
|---------------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|----------------------------------------------------------------------------------|-------------|------------------|----------------------------------|-------------|----------|----------|------------|------|--------|------|------|------|------|
|                                                                                                               | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |                                                                                  |             | Fluxapyroxad     |                                  | M700F002    | M700F008 | M700F048 | Total*     |      |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             | Mean             | Individual                       |             |          |          | Individual | Mean |        |      |      |      |      |
| 2010/7003486<br>RCN R080373<br>USA<br>(GranPFork,<br>Illinois)<br>2008<br>(4R492)                             | 2           | 6                | 100<br><u>98</u><br>198  | 232<br>228      | Forage                                                                           | 8           | 0.83             | 0.77                             | < LOD       | 0.02     | 0.03     | 0.81       | 0.87 |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  | 0.89                             | < LOD       | 0.02     | 0.03     | 0.93       |      |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 | Hay                                                                              | 8           | <u>1.79</u>      | 1.72                             | < 0.01      | 0.02     | 0.07     | 1.79       | 1.87 |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  | 1.86                             | < 0.01      | 0.02     | 0.09     | 1.94       |      |        |      |      |      |      |
| 2010/7003486<br>RCN R080374<br>USA<br>(Gardner, North<br>Dakota)<br>2008<br>(0702RR)                          | 2           | 7                | 96<br><u>102</u><br>198  | 180<br>191      | Forage                                                                           | 7           | 2.42             | (2.66,<br>2.75,<br>3.45)<br>2.95 | < LOD       | 0.02     | < 0.01   | 2.97       | 2.43 |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  | (1.19,<br>2.23,<br>2.24)<br>1.89 | < LOD       | < 0.01   | < 0.01   | 1.89       |      |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 | Hay                                                                              |             |                  | 7                                | <u>4.79</u> | 4.97     | < LOD    | 0.04       |      | 0.01   | 5.02 | 4.83 |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  |                                  |             | 4.60     | < LOD    | 0.03       |      | 0.01   | 4.64 |      |      |      |
|                                                                                                               |             |                  |                          |                 | 2010/7003486<br>RCN R080375<br>USA<br>(Geneva,<br>Minnesota)<br>2008<br>(0710RR) | 2           | 7                | 103<br><u>101</u><br>204         | 193<br>190  | Forage   | 7        | 2.19       | 1.90 | < 0.01 | 0.03 | 0.04 | 1.96 | 2.25 |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  |                                  |             |          |          |            | 2.47 | < 0.01 | 0.03 | 0.04 | 2.53 |      |
| Hay                                                                                                           | 7           | <u>3.64</u>      | 3.62                     | < 0.01          |                                                                                  |             |                  |                                  |             | 0.04     | 0.07     | 3.71       | 3.73 |        |      |      |      |      |
|                                                                                                               |             |                  | 3.66                     | < 0.01          |                                                                                  |             |                  |                                  |             | 0.04     | 0.06     | 3.74       |      |        |      |      |      |      |
| 2010/7003486<br>RCN R080376<br>USA<br>(Ellendale,<br>Minnesota)<br>2008<br>(0710RR)                           | 2           | 7                | 103<br><u>101</u><br>204 | 193<br>189      | Forage                                                                           | 7           | 2.25             | 2.17                             | < LOD       | 0.03     | 0.04     | 2.23       | 2.31 |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  | 2.32                             | < 0.01      | 0.03     | 0.04     | 2.38       |      |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 | Hay                                                                              | 7           | <u>2.33</u>      | 2.44                             | < LOD       | 0.02     | 0.03     | 2.48       | 2.38 |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  | 2.22                             | < 0.01      | 0.03     | 0.04     | 2.28       |      |        |      |      |      |      |
| 2010/7003486<br>RCN R080377<br>USA<br>(Frankfort<br>Township,<br>Wisconsin)<br>2008<br>(Renk Seed<br>RS165RR) | 2           | 7                | 102<br><u>100</u><br>202 | 204<br>201      | Forage                                                                           | 28          | 0.98             | 0.99                             | < 0.01      | 0.02     | 0.07     | 1.06       | 1.05 |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  | 0.97                             | < 0.01      | 0.02     | 0.07     | 1.04       |      |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 | Hay                                                                              | 28          | 3.91             | 3.96                             | < LOD       | 0.04     | 0.19     | 4.14       | 4.07 |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  | 3.85                             | < LOD       | 0.03     | 0.17     | 4.00       |      |        |      |      |      |      |
| 2010/7003486<br>RCN R080378<br>USA<br>(Bloomsfield,<br>Missouri)<br>2008<br>(Gateway<br>4R492)                | 2           | 6                | 99<br><u>100</u><br>199  | 185<br>186      | Forage                                                                           | 8           | 1.93             | 1.72                             | < LOD       | 0.03     | 0.03     | 1.77       | 1.98 |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  | 2.13                             | < LOD       | 0.03     | 0.03     | 2.18       |      |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 | Hay                                                                              | 8           | <u>5.87</u>      | 6.13                             | < 0.01      | 0.06     | 0.10     | 6.26       | 5.99 |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  | 5.61                             | < LOD       | 0.04     | 0.08     | 5.71       |      |        |      |      |      |      |
| 2010/7003486<br>RCN R080379<br>Canada<br>(Elm Creek,<br>Manitoba)<br>2008<br>(NSC Warren<br>RR)               | 2           | 6                | 98<br><u>99</u><br>197   | 197<br>198      | Forage                                                                           | 8           | 0.93             | 0.99                             | < LOD       | 0.02     | 0.01     | 1.02       | 0.96 |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  | 0.87                             | < LOD       | 0.02     | < 0.01   | 0.89       |      |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 | Hay                                                                              | 8           | 0.48             | 0.50                             | < LOD       | 0.01     | < 0.01   | 0.51       | 0.49 |        |      |      |      |      |
|                                                                                                               |             |                  |                          |                 |                                                                                  |             |                  | 0.45                             | < LOD       | 0.01     | < 0.01   | 0.46       |      |        |      |      |      |      |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                | Application |                  |                   |                 | Matrix<br>(%<br>moisture)                                       | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |       |
|-------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|-----------------------------------------------------------------|-------------|------------------|------------|----------|----------|----------|------------|-------|
|                                                                                                       | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                                                                 |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |       |
|                                                                                                       |             |                  |                   |                 |                                                                 |             | Mean             | Individual |          |          |          | Individual | Mean  |
| 2010/7003486<br>RCN R080380<br>Canada<br>(Elm Creek,<br>Manitoba)<br>2008<br>(NSC Warren<br>RR)       | 2           | 6                | 102<br>101<br>203 | 204<br>203      | Forage<br><br>(78.8,<br>79.9;<br>4-day<br>78.2, 7-<br>day 76.6) | 0           | 6.49             | 5.03       | < LOD    | 0.02     | < 0.01   | 5.05       | 6.52  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 7.94       | < LOD    | 0.03     | 0.01     | 7.98       |       |
|                                                                                                       |             |                  |                   |                 |                                                                 | 4           | 1.47             | 1.15       | < LOD    | 0.01     | < 0.01   | 1.16       | 1.49  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 1.78       | < LOD    | 0.03     | 0.01     | 1.82       |       |
|                                                                                                       |             |                  |                   |                 |                                                                 | 7           | 0.88             | 0.85       | < LOD    | 0.01     | < 0.01   | 0.86       | 0.89  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 0.91       | < LOD    | 0.01     | < 0.01   | 0.92       |       |
|                                                                                                       |             |                  |                   |                 |                                                                 | 13          | 0.60             | 0.49       | < LOD    | 0.01     | < 0.01   | 0.50       | 0.62  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 0.71       | < LOD    | 0.01     | 0.01     | 0.73       |       |
|                                                                                                       |             |                  |                   |                 | Hay<br><br>(59.4,<br>60.3; 13-<br>day 59.8)                     | 0           | 2.08             | 2.22       | < LOD    | 0.03     | 0.01     | 2.26       | 2.12  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 1.93       | < LOD    | 0.03     | 0.01     | 1.97       |       |
|                                                                                                       |             |                  |                   |                 |                                                                 | 4           | 0.99             | 1.03       | < LOD    | 0.02     | 0.01     | 1.06       | 1.02  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 0.94       | < LOD    | 0.02     | 0.01     | 0.97       |       |
|                                                                                                       |             |                  |                   |                 |                                                                 | 7           | 0.54             | 0.58       | < LOD    | 0.02     | < 0.01   | 0.60       | 0.56  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 0.50       | < LOD    | 0.02     | < 0.01   | 0.52       |       |
|                                                                                                       |             |                  |                   |                 |                                                                 | 13          | 0.41             | 0.41       | < LOD    | 0.01     | < 0.01   | 0.42       | 0.42  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 0.40       | < LOD    | 0.01     | < 0.01   | 0.41       |       |
| 2010/7003486<br>RCN R080381<br>Canada<br>(Portage la<br>Prairie,<br>Manitoba)<br>2008<br>(RR Portage) | 2           | 8                | 93<br>99<br>192   | 175<br>187      | Forage<br><br>(74.8;<br>8 day-<br>74.7<br>15 day-<br>73.0)      | 0           | 7.54             | 7.48       | < LOD    | 0.07     | 0.03     | 7.57       | 7.63  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 7.59       | < LOD    | 0.07     | 0.03     | 7.68       |       |
|                                                                                                       |             |                  |                   |                 |                                                                 | 5           | 5.23             | 4.87       | < 0.01   | 0.06     | 0.05     | 4.97       | 5.33  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 5.58       | < LOD    | 0.07     | 0.05     | 5.69       |       |
|                                                                                                       |             |                  |                   |                 |                                                                 | 8           | 6.43             | 6.39       | < 0.01   | 0.07     | 0.08     | 6.52       | 6.56  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 6.46       | < 0.01   | 0.07     | 0.08     | 6.59       |       |
|                                                                                                       |             |                  |                   |                 |                                                                 | 15          | 2.88             | 3.07       | < 0.01   | 0.05     | 0.08     | 3.18       | 2.99  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 2.68       | < 0.01   | 0.05     | 0.08     | 2.79       |       |
|                                                                                                       |             |                  |                   |                 | Hay<br><br>(17.3)                                               | 0           | 20.5             | 17.78      | < 0.01   | 0.13     | 0.13     | 18.0       | 20.7  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 23.14      | < 0.01   | 0.11     | 0.12     | 23.4       |       |
|                                                                                                       |             |                  |                   |                 |                                                                 | 5           | 19.4             | 20.97      | < 0.01   | 0.15     | 0.20     | 21.3       | 19.7  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 17.77      | < 0.01   | 0.13     | 0.17     | 18.0       |       |
|                                                                                                       |             |                  |                   |                 |                                                                 | 8           | 16.25            | 16.8       | < 0.01   | 0.13     | 0.20     | 17.0       | 16.45 |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 15.7       | < 0.01   | 0.12     | 0.19     | 15.9       |       |
|                                                                                                       |             |                  |                   |                 |                                                                 | 15          | 7.82             | 7.37       | < 0.01   | 0.09     | 0.26     | 7.65       | 8.09  |
|                                                                                                       |             |                  |                   |                 |                                                                 |             |                  | 8.26       | < 0.01   | 0.10     | 0.22     | 8.52       |       |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.003125 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Moisture content was determined for selected samples using an infrared moisture determination balance.

Moisture content is for untreated controls unless indicated otherwise.

Table 110 Residues in sugar beet tops (leaves) from the foliar application of fluxapyroxad to sugar beet in the USA and Canada (Johnston and Saha 2010, 2009/7003643)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                               | Application |                  |                          |                   | Matrix                | PHI<br>days | Residues (mg/kg) |                                  |                                        |                               |          |            |      |
|------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|-----------------------|-------------|------------------|----------------------------------|----------------------------------------|-------------------------------|----------|------------|------|
|                                                                                                      | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |                       |             | Fluxapyroxad     |                                  | M700F002                               | M700F008                      | M700F048 | Total *    |      |
|                                                                                                      |             |                  |                          |                   |                       |             | Mean             | Individual                       |                                        |                               |          | Individual | Mean |
| GAP, USA                                                                                             | 3           |                  | 97-<br>101               |                   |                       | 7           |                  |                                  |                                        |                               |          |            |      |
| 2009/7003643<br>RCN R080472<br>USA<br>(Freeborn,<br>Minnesota)<br>2008<br>(Beta 130R)                | 3           | 7<br>7           | 101<br>100<br>100<br>301 | 189<br>188<br>188 | Sugar<br>Beet<br>Tops | 7           | 3.82             | 3.56                             | < LOD                                  | 0.06                          | < LOD    | 3.62       | 3.88 |
|                                                                                                      |             |                  |                          |                   |                       |             |                  | (4.25,<br>3.74,<br>4.21)<br>4.07 | (< LOD,<br>< 0.01,<br>< LOD)<br>< 0.01 | (0.06,<br>0.06, 0.06)<br>0.06 | < LOD    | 4.13       |      |
|                                                                                                      |             |                  |                          |                   | Sugar<br>Beet<br>Tops | 13          | 2.50             | 2.57                             | < 0.01                                 | 0.05                          | < LOD    | 2.62       | 2.55 |
|                                                                                                      |             |                  |                          |                   |                       |             |                  | 2.43                             | < LOD                                  | 0.05                          | < LOD    | 2.48       |      |
|                                                                                                      |             |                  |                          |                   | Sugar<br>Beet<br>Tops | 21          | 2.04             | 2.04                             | < 0.01                                 | 0.05                          | < LOD    | 2.09       | 2.09 |
|                                                                                                      |             |                  |                          |                   |                       |             |                  | 2.03                             | < 0.01                                 | 0.05                          | < LOD    | 2.08       |      |
| 2009/7003643<br>RCN R080473<br>USA<br>(Cass, North<br>Dakota)<br>2008<br>(539 RR)                    | 3           | 6<br>8           | 99<br>98<br>100<br>297   | 186<br>183<br>187 | Sugar<br>Beet<br>Tops | 7           | 1.16             | 1.10                             | < LOD                                  | 0.02                          | < LOD    | 1.12       | 1.18 |
|                                                                                                      |             |                  |                          |                   |                       |             |                  | 1.22                             | < LOD                                  | 0.02                          | < LOD    | 1.24       |      |
|                                                                                                      |             |                  |                          |                   | Sugar<br>Beet<br>Tops | 14          | 0.86             | 0.85                             | < LOD                                  | 0.02                          | < LOD    | 0.87       | 0.88 |
|                                                                                                      |             |                  |                          |                   |                       |             |                  | 0.86                             | < LOD                                  | 0.02                          | < LOD    | 0.88       |      |
|                                                                                                      |             |                  |                          |                   | Sugar<br>Beet<br>Tops | 21          | 0.68             | 0.62                             | < LOD                                  | 0.02                          | < LOD    | 0.64       | 0.70 |
|                                                                                                      |             |                  |                          |                   |                       |             |                  | 0.74                             | < 0.01                                 | 0.02                          | < LOD    | 0.76       |      |
| 2009/7003643<br>RCN R080474<br>USA<br>(Jetterson, Iowa)<br>2008<br>(Crystal 539RR)                   | 3           | 7<br>7           | 104<br>98<br>101<br>303  | 174<br>157<br>177 | Sugar<br>Beet<br>Tops | 7           | 3.79             | 4.17                             | < 0.01                                 | 0.06                          | < LOD    | 4.23       | 3.84 |
|                                                                                                      |             |                  |                          |                   |                       |             |                  | 3.40                             | < 0.01                                 | 0.04                          | < LOD    | 3.44       |      |
|                                                                                                      |             |                  |                          |                   | Sugar<br>Beet<br>Tops | 14          | 1.90             | 1.99                             | < 0.01                                 | (0.05,<br>0.06)<br>0.05       | < LOD    | 2.04       | 1.95 |
|                                                                                                      |             |                  |                          |                   |                       |             |                  | 1.80                             | < 0.01                                 | (0.06,<br>0.05)<br>0.06       | < LOD    | 1.86       |      |
|                                                                                                      |             |                  |                          |                   | Sugar<br>Beet<br>Tops | 21          | 1.48             | 1.21                             | < 0.01                                 | (0.05,<br>0.05)<br>0.05       | < LOD    | 1.26       | 1.54 |
|                                                                                                      |             |                  |                          |                   |                       |             |                  | 1.75                             | < 0.01                                 | (0.06,<br>0.06)<br>0.06       | < LOD    | 1.81       |      |
| 2009/7003643<br>RCN R080475<br>Canada<br>(Strathcona,<br>Alberta)<br>2008<br>(Betaseed Beta<br>1385) | 3           | 7<br>7           | 102<br>103<br>102<br>307 | 190<br>192<br>189 | Sugar<br>Beet<br>Tops | 7           | 2.57             | 2.51                             | < LOD                                  | (0.02,<br>0.03)<br>0.02       | < LOD    | 2.53       | 2.59 |
|                                                                                                      |             |                  |                          |                   |                       |             |                  | 2.62                             | < LOD                                  | (0.02,<br>0.03)<br>0.03       | < LOD    | 2.65       |      |
|                                                                                                      |             |                  |                          |                   | Sugar<br>Beet<br>Tops | 14          | 2.11             | 2.04                             | < LOD                                  | (0.03,<br>0.03)<br>0.03       | < LOD    | 2.07       | 2.14 |
|                                                                                                      |             |                  |                          |                   |                       |             |                  | 2.17                             | < LOD                                  | (0.04,<br>0.03)<br>0.04       | < LOD    | 2.21       |      |
|                                                                                                      |             |                  |                          |                   | Sugar<br>Beet         | 21          | 1.69             | 1.66                             | < LOD                                  | (0.03,<br>0.03)               | < LOD    | 1.69       | 1.72 |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                               | Application |                  |                                 |                         | Matrix                                                                             | PHI<br>days | Residues (mg/kg) |                                |                              |                         |          |             |        |                         |                              |       |             |  |
|--------------------------------------------------------------------------------------|-------------|------------------|---------------------------------|-------------------------|------------------------------------------------------------------------------------|-------------|------------------|--------------------------------|------------------------------|-------------------------|----------|-------------|--------|-------------------------|------------------------------|-------|-------------|--|
|                                                                                      | No          | Interval<br>Days | g<br>ai/ha                      | Water<br>(L/ha)         |                                                                                    |             | Fluxapyroxad     |                                | M700F002                     | M700F008                | M700F048 | Total *     |        |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         |                                                                                    |             | Mean             | Individual                     |                              |                         |          | Individual  | Mean   |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         |                                                                                    |             | Tops             |                                |                              |                         |          |             |        |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         |                                                                                    |             |                  | 1.72                           | (< 0.01,<br>< LOD)<br>< 0.01 | (0.03,<br>0.03)<br>0.03 | < LOD    | 1.75        |        |                         |                              |       |             |  |
| 2009/7003643<br>RCN R080476<br>USA<br>(LaMoure, North<br>Dakota)<br>2008<br>(539 RR) | 3           | 7<br>7           | 102<br>101<br><u>101</u><br>304 | 190<br>190<br>189       | Sugar<br>Beet<br>Tops                                                              | 7           | 0.75             | 0.70                           | < LOD                        | 0.01                    | < LOD    | 0.71        |        |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         |                                                                                    |             | 0.79             | < LOD                          | 0.01                         | < LOD                   | 0.80     | <u>0.76</u> |        |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         | Sugar<br>Beet<br>Tops                                                              | 13          | 0.54             | 0.59                           | < LOD                        | 0.01                    | < LOD    | 0.60        | 0.56   |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         |                                                                                    |             | 0.49             | < 0.01                         | 0.02                         | < LOD                   | 0.51     |             |        |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         | Sugar<br>Beet<br>Tops                                                              | 21          | 0.43             | 0.38                           | < 0.01                       | 0.01                    | < LOD    | 0.39        | 0.44   |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         |                                                                                    |             | 0.47             | < 0.01                         | 0.01                         | < LOD                   | 0.48     |             |        |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         | 2009/7003643<br>RCN R080478<br>USA<br>(Hockley, Texas)<br>2008<br>(Phoenix)        | 3           | 8<br>6           | 102<br>100<br><u>99</u><br>301 | 284<br>280<br>277            | Sugar<br>Beet<br>Tops   | 7        | 2.98        | 2.95   | < LOD                   | (0.02,<br>0.04)<br>0.03      | < LOD | 2.98        |  |
|                                                                                      |             |                  |                                 |                         |                                                                                    |             |                  |                                |                              |                         |          | 3.00        | < LOD  | (0.03,<br>0.04)<br>0.03 | (< LOD,<br>< 0.01)<br>< 0.01 | 3.03  | <u>3.01</u> |  |
| Sugar<br>Beet<br>Tops                                                                | 14          | 1.34             | 1.38                            | < LOD                   |                                                                                    |             |                  |                                |                              | (0.04,<br>0.04)<br>0.04 | < LOD    | 1.42        | 1.37   |                         |                              |       |             |  |
|                                                                                      |             | 1.29             | < LOD                           | (0.03,<br>0.03)<br>0.03 |                                                                                    |             |                  |                                |                              | < LOD                   | 1.32     |             |        |                         |                              |       |             |  |
| Sugar<br>Beet<br>Tops                                                                | 21          | 0.76             | 0.76                            | < LOD                   |                                                                                    |             |                  |                                |                              | (0.03,<br>0.02)<br>0.02 | < LOD    | 0.78        | 0.78   |                         |                              |       |             |  |
|                                                                                      |             | 0.75             | (< LOD,<br>< 0.01)<br>< 0.01    | 0.02                    |                                                                                    |             |                  |                                |                              | < LOD                   | 0.77     |             |        |                         |                              |       |             |  |
| 2009/7003643<br>RCN R080479<br>USA<br>(Cache, Utah)<br>2008<br>(4023 R)              | 3           | 7<br>7           | 103<br>103<br><u>101</u><br>307 | 192<br>193<br>188       |                                                                                    |             |                  |                                |                              | Sugar<br>Beet<br>Tops   | 8        | 1.81        | 1.93   | < LOD                   | 0.03                         | < LOD | 1.96        |  |
|                                                                                      |             |                  |                                 |                         |                                                                                    |             |                  |                                |                              |                         |          | 1.69        | < LOD  | 0.02                    | < LOD                        | 1.71  | <u>1.84</u> |  |
|                                                                                      |             |                  |                                 |                         | Sugar<br>Beet<br>Tops                                                              | 15          | 0.82             | 0.82                           | < LOD                        | (0.02,<br>0.03)<br>0.03 | < LOD    | 0.85        | 0.84   |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         |                                                                                    |             | 0.81             | < LOD                          | (0.02,<br>0.02)<br>0.02      | < LOD                   | 0.83     |             |        |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         | Sugar<br>Beet<br>Tops                                                              | 21          | 0.76             | 0.80                           | < 0.01                       | (0.03,<br>0.03)<br>0.03 | < LOD    | 0.83        | 0.79   |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         |                                                                                    |             | 0.72             | < LOD                          | (0.03,<br>0.03)<br>0.03      | < LOD                   | 0.75     |             |        |                         |                              |       |             |  |
|                                                                                      |             |                  |                                 |                         | 2009/7003643<br>RCN R080480<br>USA<br>(Tulare,<br>California)<br>2008<br>(Phoenix) | 3           | 7<br>7           | 91<br>100<br><u>99</u><br>290  | 286<br>287<br>286            | Sugar<br>Beet<br>Tops   | 7        | 2.11        | 1.65   | < 0.01                  | 0.05                         | < LOD | 1.70        |  |
|                                                                                      |             |                  |                                 |                         |                                                                                    |             |                  |                                |                              |                         |          | 2.57        | < 0.01 | 0.07                    | < LOD                        | 2.64  | <u>2.17</u> |  |
| Sugar<br>Beet<br>Tops                                                                | 14          | 1.47             | 1.28                            | < 0.01                  |                                                                                    |             |                  |                                |                              | 0.05                    | < LOD    | 1.33        | 1.53   |                         |                              |       |             |  |
|                                                                                      |             | 1.66             | < 0.01                          | 0.06                    |                                                                                    |             |                  |                                |                              | < LOD                   | 1.72     |             |        |                         |                              |       |             |  |
| Sugar<br>Beet<br>Tops                                                                | 21          | 0.78             | 0.83                            | < 0.01                  |                                                                                    |             |                  |                                |                              | 0.03                    | < LOD    | 0.86        | 0.81   |                         |                              |       |             |  |
|                                                                                      |             | 0.73             | < 0.01                          | 0.03                    |                                                                                    |             |                  |                                |                              | < LOD                   | 0.76     |             |        |                         |                              |       |             |  |

## Fluxapyroxad

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                            | Application |                  |                        |                   | Matrix                                                                                                                 | PHI<br>days | Residues (mg/kg) |                          |                   |                       |          |            |                         |       |      |       |      |      |
|-----------------------------------------------------------------------------------|-------------|------------------|------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|-----------------------|----------|------------|-------------------------|-------|------|-------|------|------|
|                                                                                   | No          | Interval<br>Days | g<br>ai/ha             | Water<br>(L/ha)   |                                                                                                                        |             | Fluxapyroxad     |                          | M700F002          | M700F008              | M700F048 | Total *    |                         |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   |                                                                                                                        |             | Mean             | Individual               |                   |                       |          | Individual | Mean                    |       |      |       |      |      |
| 2009/7003643<br>RCN R080481<br>USA<br>(Power, Idaho)<br>2008<br>(Hilleshog 9026)  | 3           | 7<br>7           | 98<br>101<br>98<br>297 | 185<br>190<br>183 | Sugar<br>Beet<br>Tops                                                                                                  | 7           | 2.07             | 2.37                     | < LOD             | 0.04                  | < LOD    | 2.41       | 2.11                    |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   |                                                                                                                        |             |                  | 1.77                     | < LOD             | 0.03                  | < LOD    | 1.80       |                         |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   | Sugar<br>Beet<br>Tops                                                                                                  | 10          | 1.49             | 1.28                     | < LOD             | 0.04                  | < LOD    | 1.32       | 1.53                    |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   |                                                                                                                        |             |                  | 1.70                     | < LOD             | 0.04                  | < LOD    | 1.74       |                         |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   | Sugar<br>Beet<br>Tops                                                                                                  | 15          | 1.15             | 0.98                     | < 0.01            | 0.03                  | < LOD    | 1.01       | 1.18                    |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   |                                                                                                                        |             |                  | 1.31                     | < 0.01            | 0.04                  | < LOD    | 1.35       |                         |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   | Sugar<br>Beet<br>Tops                                                                                                  | 21          | 0.89             | 0.90                     | < 0.01            | 0.04                  | < LOD    | 0.94       | 0.92                    |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   |                                                                                                                        |             |                  | 0.87                     | < LOD             | 0.03                  | < LOD    | 0.90       |                         |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   | Sugar<br>Beet<br>Tops                                                                                                  | 28          | 0.72             | 0.79                     | < 0.01            | 0.05                  | < LOD    | 0.84       | 0.76                    |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   |                                                                                                                        |             |                  | 0.64                     | < 0.01            | 0.04                  | < LOD    | 0.68       |                         |       |      |       |      |      |
| 2009/7003643<br>RCN R080482<br>USA<br>(Bingham,<br>Idaho)<br>2008<br>(BTS 25RR05) | 3           | 7<br>7           | 98<br>103<br>99<br>300 | 183<br>191<br>183 | Sugar<br>Beet<br>Tops                                                                                                  | 8           | 0.84             | 0.84                     | < LOD             | < 0.01                | < LOD    | 0.84       | 0.84                    |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   |                                                                                                                        |             |                  | 0.83                     | < LOD             | < 0.01                | < LOD    | 0.83       |                         |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   | Sugar<br>Beet<br>Tops                                                                                                  | 15          | 0.69             | 0.69                     | < LOD             | 0.01                  | < LOD    | 0.70       | 0.70                    |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   |                                                                                                                        |             |                  | 0.69                     | < LOD             | 0.01                  | < LOD    | 0.70       |                         |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   | Sugar<br>Beet<br>Tops                                                                                                  | 21          | 0.73             | 0.85                     | < 0.01            | 0.02                  | < LOD    | 0.87       | 0.74                    |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   |                                                                                                                        |             |                  | 0.60                     | < LOD             | 0.01                  | < LOD    | 0.61       |                         |       |      |       |      |      |
|                                                                                   |             |                  |                        |                   | 2009/7003643<br>RCN R080483<br>Canada<br>(RM of Portage<br>la Prairie,<br>Manitoba)<br>2008<br>(Betaseed Beta<br>1385) | 3           | 9<br>7           | 120<br>101<br>105<br>326 | 223<br>189<br>196 | Sugar<br>Beet<br>Tops | 8        | 3.41       | (4.15,<br>3.64)<br>3.89 | < LOD | 0.03 | < LOD | 3.92 | 3.43 |
|                                                                                   |             |                  |                        |                   |                                                                                                                        |             |                  |                          |                   |                       |          |            | 2.92                    | < LOD | 0.02 | < LOD | 2.94 |      |
| Sugar<br>Beet<br>Tops                                                             | 15          | 2.17             | 2.32                   | < LOD             |                                                                                                                        |             |                  |                          |                   | 0.02                  | < LOD    | 2.34       | 2.19                    |       |      |       |      |      |
|                                                                                   |             |                  | 2.02                   | < 0.01            |                                                                                                                        |             |                  |                          |                   | 0.02                  | < LOD    | 2.04       |                         |       |      |       |      |      |
| Sugar<br>Beet<br>Tops                                                             | 20          | 1.94             | 2.05                   | < 0.01            |                                                                                                                        |             |                  |                          |                   | 0.03                  | < LOD    | 2.08       | 1.97                    |       |      |       |      |      |
|                                                                                   |             |                  | 1.83                   | < LOD             |                                                                                                                        |             |                  |                          |                   | 0.02                  | < LOD    | 1.85       |                         |       |      |       |      |      |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 111 Residues from the foliar application of fluxapyroxad to barley in the USA and Canada (White 2010, 2010/7003693)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                        | Application |                  |                   |                 | Matrix<br><br>(% moisture) | PHI<br>days              | Residues (mg/kg) |            |          |          |          |            |      |
|-----------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|----------------------------|--------------------------|------------------|------------|----------|----------|----------|------------|------|
|                                                                                               | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                            |                          | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |      |
|                                                                                               |             |                  |                   |                 |                            |                          | Mean             | Individual |          |          |          | Individual | Mean |
| GAP, USA                                                                                      | 2           |                  | 97-100            |                 |                            | 21<br>(7 hay and forage) |                  |            |          |          |          |            |      |
| 2010/7003693<br>RCN R080742<br>Canada<br>(MD of Lethbridge, Alberta)<br>2009<br>(Panoka)      | 2           | 7                | 101<br>99<br>200  | 153<br>150      | Hay<br>(47.0)              | 21                       | 5.60             | 5.36       | < LOD    | 0.07     | < 0.01   | 5.43       | 6.07 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 6.63       | < LOD    | 0.07     | < 0.01   | 6.70       |      |
|                                                                                               |             |                  |                   |                 | Straw<br>(45.3)            | 21                       | 5.43             | 4.89       | < LOD    | 0.06     | < LOD    | 4.95       | 5.49 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 5.96       | < LOD    | 0.06     | < 0.01   | 6.02       |      |
| 2010/7003693<br>RCN R080743<br>Canada<br>(MD of Taber, Alberta)<br>2009<br>(Metcalf)          | 2           | 10               | 102<br>98<br>200  | 154<br>147      | Hay<br>(27.9)              | 21                       | 5.84             | 5.96       | < LOD    | 0.08     | < 0.01   | 6.04       | 5.90 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 5.71       | < LOD    | 0.05     | < LOD    | 5.76       |      |
|                                                                                               |             |                  |                   |                 | Straw<br>(32.7)            | 21                       | 3.89             | 3.22       | < LOD    | 0.07     | < 0.01   | 3.29       | 3.96 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 4.55       | < LOD    | 0.07     | < 0.01   | 4.62       |      |
| 2010/7003693<br>RCN R080744<br>Canada<br>(MD of Laird, Saskatchewan)<br>2009<br>(Copeland)    | 2           | 6                | 101<br>103<br>204 | 202<br>205      | Hay<br>(14.2)              | 26                       | 7.80             | 8.85       | < LOD    | 0.19     | < 0.01   | 9.05       | 7.98 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 6.74       | < LOD    | 0.15     | < 0.01   | 6.90       |      |
|                                                                                               |             |                  |                   |                 | Straw<br>(32.6)            | 22                       | 9.52             | 10.10      | < LOD    | 0.26     | < 0.01   | 10.4       | 9.82 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 8.94       | < LOD    | 0.28     | < 0.01   | 9.23       |      |
| 2010/7003693<br>RCN R080745<br>Canada<br>(RM of Rosthern, Saskatchewan)<br>2009<br>(Copeland) | 2           | 6                | 101<br>103<br>204 | 203<br>205      | Hay<br>(14.8)              | 26                       | 3.90             | 3.11       | < LOD    | 0.12     | < 0.01   | 3.23       | 4.04 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 4.69       | < LOD    | 0.14     | < 0.01   | 4.84       |      |
|                                                                                               |             |                  |                   |                 | Straw<br>(48.7)            | 21                       | 3.45             | 3.95       | < LOD    | 0.16     | < 0.01   | 4.12       | 3.60 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 2.95       | < LOD    | 0.12     | < 0.01   | 3.07       |      |
| 2010/7003693<br>RCN R080746<br>Canada<br>(RM of Coldwell, Manitoba)<br>2008<br>(Robust)       | 2           | 7                | 96<br>102<br>198  | 192<br>204      | Hay<br>(40.9)              | 20                       | 0.78             | 0.80       | < LOD    | 0.07     | < 0.01   | 0.87       | 0.85 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 0.75       | < LOD    | 0.07     | < 0.01   | 0.82       |      |
|                                                                                               |             |                  |                   |                 |                            | 21                       | 0.79             | 0.94       | < LOD    | 0.09     | 0.02     | 1.04       | 0.87 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 0.64       | < LOD    | 0.06     | < 0.01   | 0.70       |      |
|                                                                                               |             |                  |                   |                 |                            | 25                       |                  | -          | -        | -        | -        | -          |      |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | -          | -        | -        | -        | -          |      |
|                                                                                               |             |                  |                   |                 |                            | 27                       | 0.79             | 0.84       | < LOD    | 0.09     | 0.01     | 0.94       | 0.89 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 0.74       | < LOD    | 0.08     | 0.01     | 0.83       |      |
|                                                                                               |             |                  |                   |                 |                            | 31                       | 0.71             | 0.81       | < LOD    | 0.10     | 0.01     | 0.92       | 0.79 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 0.60       | < LOD    | 0.05     | < 0.01   | 0.65       |      |
|                                                                                               |             |                  |                   |                 | Straw<br>(55.2)            | 20                       | 0.65             | 0.69       | < LOD    | 0.09     | < 0.01   | 0.78       | 0.74 |
|                                                                                               |             |                  |                   |                 |                            |                          |                  | 0.61       | < LOD    | 0.09     | < 0.01   | 0.70       |      |
| 21                                                                                            | 0.68        | 0.69             | < LOD             | 0.09            | 0.02                       | 0.79                     | 0.78             |            |          |          |          |            |      |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                       | Application |                  |                  |                 | Matrix<br>(%<br>moisture) | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |      |      |      |  |
|----------------------------------------------------------------------------------------------|-------------|------------------|------------------|-----------------|---------------------------|-------------|------------------|------------|----------|----------|----------|------------|------|------|------|--|
|                                                                                              | No          | Interval<br>Days | g<br>ai/ha       | Water<br>(L/ha) |                           |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |      |      |      |  |
|                                                                                              |             |                  |                  |                 |                           |             | Mean             | Individual |          |          |          | Individual | Mean |      |      |  |
|                                                                                              |             |                  |                  |                 |                           |             |                  | 0.67       |          |          |          | < LOD      | 0.09 | 0.02 | 0.77 |  |
|                                                                                              |             |                  |                  |                 |                           |             |                  | 0.66       |          |          |          | < LOD      | 0.10 | 0.02 | 0.77 |  |
| 2010/7003693<br>RCN R080747<br>Canada<br>(RM of<br>Woodlands,<br>Manitoba)<br>2008<br>(Trey) | 2           | 8                | 103<br>99<br>202 | 206<br>198      | Hay<br>(60.0)             | 25          | 0.72             | 0.78       | < LOD    | 0.12     | 0.02     | 0.91       | 0.84 |      |      |  |
|                                                                                              |             |                  |                  |                 |                           |             |                  | 0.67       | < LOD    | 0.11     | 0.02     | 0.79       |      |      |      |  |
|                                                                                              |             |                  |                  |                 |                           | 27          | 0.72             | 0.76       | < LOD    | 0.11     | 0.02     | 0.88       | 0.84 |      |      |  |
|                                                                                              |             |                  |                  |                 |                           |             |                  | 0.55       | < LOD    | 0.07     | < 0.01   | 0.62       |      |      |      |  |
|                                                                                              |             |                  |                  |                 | 31                        | 0.56        | 0.57             | < LOD      | 0.08     | 0.01     | 0.66     | 0.64       |      |      |      |  |
|                                                                                              |             |                  |                  |                 |                           |             | 4.30             | < LOD      | 0.24     | 0.05     | 4.59     |            |      |      |      |  |
|                                                                                              |             |                  |                  |                 | Straw<br>(59.3)           | 20          | 3.27             | 2.34       | < LOD    | 0.15     | 0.07     | 2.55       | 3.57 |      |      |  |
|                                                                                              |             |                  |                  |                 |                           |             |                  | 4.11       | < LOD    | 0.33     | 0.04     | 4.48       |      |      |      |  |
|                                                                                              |             |                  |                  |                 |                           | 20          | 3.17             | 2.23       | < LOD    | 0.19     | 0.05     | 2.47       | 3.48 |      |      |  |
|                                                                                              |             |                  |                  |                 |                           |             |                  |            |          |          |          |            |      |      |      |  |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Moisture content was determined for selected control samples using an infrared moisture determination balance.

Table 112 Residues from the foliar application of fluxapyroxad to barley in Europe (Erdmann 2009, 2007/1050093 and Erdmann 2009, 2009/1012125)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                        | Application |                  |                   |                 | Matrix                          | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|---------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|---------------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                                                               | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                                 |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| GAP,                                                                                                          | 2           |                  | 125               |                 |                                 | -           |                  |          |          |          |        |
| 2009/1012125<br>L080044<br>Germany (N)<br>(Mauchenheim, Rheinland-<br>Pfalz/ Rheinhessen)<br>2008<br>(Marthe) | 2           | 17               | 83<br>86<br>169   | 200<br>208      | Whole plant<br>no roots         | 0           | 1.39             | < 0.01   | 0.01     | < 0.01   | 1.40   |
|                                                                                                               |             |                  |                   |                 | Ears                            | 27          | 0.50             | < 0.01   | 0.04     | < 0.01   | 0.54   |
|                                                                                                               |             |                  |                   |                 | Rest of plants<br>without roots | 27          | 0.74             | < 0.01   | 0.03     | < 0.01   | 0.77   |
|                                                                                                               |             |                  |                   |                 | Straw                           | 35          | 1.19             | < 0.01   | 0.05     | < 0.01   | 1.24   |
|                                                                                                               |             |                  |                   |                 | Straw                           | 41          | 1.11             | < 0.01   | 0.06     | < 0.01   | 1.17   |
|                                                                                                               | 2           | 17               | 125<br>128<br>253 | 200<br>204      | Whole plant<br>no roots         | 0           | 2.47             | < 0.01   | 0.02     | < 0.01   | 2.49   |
|                                                                                                               |             |                  |                   |                 | Ears                            | 27          | 0.74             | < 0.01   | 0.05     | < 0.01   | 0.79   |
|                                                                                                               |             |                  |                   |                 | Rest of plants<br>without roots | 27          | 0.93             | < 0.01   | 0.04     | < 0.01   | 0.97   |
|                                                                                                               |             |                  |                   |                 | Straw                           | 35          | 2.37             | < 0.01   | 0.09     | < 0.01   | 2.46   |
|                                                                                                               |             |                  |                   |                 | Straw                           | 41          | 1.92             | < 0.01   | 0.09     | < 0.01   | 2.01   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                          | Application |                  |                   |                 | Matrix                          | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|-------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|---------------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                                                 | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                                 |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2009/1012125<br>L080045<br>Netherlands (N)<br>(Ottersum Limburg/<br>Gennep)<br>2008<br>(Sequel) | 2           | 18               | 83<br>84<br>167   | 200<br>202      | Whole plant<br>no roots         | 0           | 1.91             | < 0.01   | 0.01     | < 0.01   | 1.92   |
|                                                                                                 |             |                  |                   |                 | Straw                           | 28          | 1.13             | < 0.01   | 0.04     | < 0.01   | 1.17   |
|                                                                                                 |             |                  |                   |                 | Straw                           | 35          | 0.55             | < 0.01   | 0.02     | < 0.01   | 0.57   |
|                                                                                                 |             |                  |                   |                 | Straw                           | 41          | 0.86             | < 0.01   | 0.03     | < 0.01   | 0.89   |
|                                                                                                 | 2           | 18               | 126<br>128<br>254 | 201<br>205      | Whole plant<br>no roots         | 0           | 3.18             | < 0.01   | 0.01     | < 0.01   | 3.19   |
|                                                                                                 |             |                  |                   |                 | Straw                           | 28          | 1.38             | < 0.01   | 0.04     | < 0.01   | 1.42   |
|                                                                                                 |             |                  |                   |                 | Straw                           | 35          | 1.58             | < 0.01   | 0.04     | < 0.01   | 1.62   |
|                                                                                                 |             |                  |                   |                 | Straw                           | 41          | 1.79             | < 0.01   | 0.03     | < 0.01   | 1.82   |
| 2009/1012125<br>L080046<br>France (N)<br>(Seebach, Alsace)<br>2008<br>(Platine)                 | 2           | 25               | 87<br>87<br>174   | 209<br>209      | Whole plant<br>no roots         | 0           | 2.22             | < 0.01   | < 0.01   | < 0.01   | 2.22   |
|                                                                                                 |             |                  |                   |                 | Ears                            | 29          | 0.25             | < 0.01   | 0.02     | < 0.01   | 0.27   |
|                                                                                                 |             |                  |                   |                 | Rest of plants<br>without roots | 29          | 0.15             | < 0.01   | < 0.01   | < 0.01   | 0.15   |
|                                                                                                 |             |                  |                   |                 | Ears                            | 36          | 0.39             | < 0.01   | 0.03     | < 0.01   | 0.42   |
|                                                                                                 |             |                  |                   |                 | Rest of plants<br>without roots | 36          | 0.20             | < 0.01   | < 0.01   | < 0.01   | 0.20   |
|                                                                                                 |             |                  |                   |                 | Straw                           | 42          | 0.43             | < 0.01   | 0.02     | < 0.01   | 0.45   |
|                                                                                                 | 2           | 25               | 134<br>134<br>268 | 215<br>215      | Whole plant<br>no roots         | 0           | 2.80             | < 0.01   | 0.01     | < 0.01   | 2.81   |
|                                                                                                 |             |                  |                   |                 | Ears                            | 29          | 0.44             | < 0.01   | 0.03     | < 0.01   | 0.47   |
|                                                                                                 |             |                  |                   |                 | Rest of plants<br>without roots | 29          | 0.41             | < 0.01   | 0.01     | < 0.01   | 0.42   |
|                                                                                                 |             |                  |                   |                 | Ears                            | 36          | 0.50             | < 0.01   | 0.03     | < 0.01   | 0.53   |
|                                                                                                 |             |                  |                   |                 | Rest of plants<br>without roots | 36          | 0.48             | < 0.01   | 0.01     | < 0.01   | 0.50   |
|                                                                                                 |             |                  |                   |                 | Straw                           | 42          | 0.74             | < 0.01   | 0.02     | < 0.01   | 0.76   |
| 2009/1012125<br>L080047<br>UK<br>(Manningtree, Essex)<br>2008<br>(Saffron)                      | 2           | 21               | 86<br>85<br>171   | 206<br>204      | Whole plant<br>no roots         | 0           | 1.00             | < 0.01   | 0.02     | < 0.01   | 1.02   |
|                                                                                                 |             |                  |                   |                 | Ears                            | 28          | 0.06             | < 0.01   | < 0.01   | < 0.01   | 0.06   |
|                                                                                                 |             |                  |                   |                 | Rest of plants<br>without roots | 28          | 0.15             | < 0.01   | 0.01     | < 0.01   | 0.16   |
|                                                                                                 |             |                  |                   |                 | Ears                            | 34          | 0.04             | < 0.01   | < 0.01   | < 0.01   | 0.04   |
|                                                                                                 |             |                  |                   |                 | Rest of plants<br>without roots | 34          | 0.18             | < 0.01   | 0.02     | < 0.01   | 0.20   |
|                                                                                                 |             |                  |                   |                 | Ears                            | 42          | 0.03             | < 0.01   | < 0.01   | < 0.01   | 0.03   |
|                                                                                                 |             |                  |                   |                 | Rest of plants<br>without roots | 42          | 0.11             | < 0.01   | 0.02     | < 0.01   | 0.13   |
|                                                                                                 |             |                  |                   |                 | Straw                           | 63          | 0.23             | < 0.01   | 0.02     | < 0.01   | 0.25   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                  | Application |                  |                   |                 | Matrix                          | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|---------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|---------------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                                                         | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                                 |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
|                                                                                                         | 2           | 21               | 133<br>129<br>262 | 212<br>206      | Whole plant<br>no roots         | 0           | 1.91             | < 0.01   | 0.03     | < 0.01   | 1.94   |
|                                                                                                         |             |                  |                   |                 | Ears                            | 28          | 0.07             | < 0.01   | < 0.01   | < 0.01   | 0.07   |
|                                                                                                         |             |                  |                   |                 | Rest of plants<br>without roots | 28          | 0.14             | < 0.01   | 0.01     | < 0.01   | 0.15   |
|                                                                                                         |             |                  |                   |                 | Ears                            | 34          | 0.07             | < 0.01   | 0.01     | < 0.01   | 0.08   |
|                                                                                                         |             |                  |                   |                 | Rest of plants<br>without roots | 34          | 0.13             | < 0.01   | 0.02     | < 0.01   | 0.15   |
|                                                                                                         |             |                  |                   |                 | Ears                            | 42          | 0.05             | < 0.01   | 0.01     | < 0.01   | 0.06   |
|                                                                                                         |             |                  |                   |                 | Rest of plants<br>without roots | 42          | 0.23             | < 0.01   | 0.02     | < 0.01   | 0.25   |
|                                                                                                         |             |                  |                   |                 | Straw                           | 63          | 0.44             | < 0.01   | 0.03     | < 0.01   | 0.47   |
| 2009/1012125<br>L080048<br>France (S)<br>(Duras, Aquitaine)<br>2008<br>(Nikel)                          | 2           | 14               | 84<br>85<br>169   | 203<br>204      | Whole plant<br>no roots         | 0           | 0.96             | < 0.01   | < 0.01   | < 0.01   | 0.96   |
|                                                                                                         |             |                  |                   |                 | Ears                            | 28          | 0.08             | < 0.01   | 0.01     | < 0.01   | 0.09   |
|                                                                                                         |             |                  |                   |                 | Rest of plants<br>without roots | 28          | 0.07             | < 0.01   | < 0.01   | < 0.01   | 0.07   |
|                                                                                                         |             |                  |                   |                 | Ears                            | 34          | 0.09             | < 0.01   | 0.01     | < 0.01   | 0.10   |
|                                                                                                         |             |                  |                   |                 | Rest of plants<br>without roots | 34          | 0.08             | < 0.01   | < 0.01   | < 0.01   | 0.08   |
|                                                                                                         |             |                  |                   |                 | Straw                           | 42          | 0.12             | < 0.01   | < 0.01   | < 0.01   | 0.12   |
|                                                                                                         | 2           | 14               | 125<br>133<br>258 | 200<br>212      | Whole plant<br>no roots         | 0           | 1.90             | < 0.01   | 0.01     | < 0.01   | 1.91   |
|                                                                                                         |             |                  |                   |                 | Ears                            | 28          | 0.11             | < 0.01   | 0.01     | < 0.01   | 0.12   |
|                                                                                                         |             |                  |                   |                 | Rest of plants<br>without roots | 28          | 0.12             | < 0.01   | < 0.01   | < 0.01   | 0.12   |
|                                                                                                         |             |                  |                   |                 | Ears                            | 34          | 0.12             | < 0.01   | 0.02     | < 0.01   | 0.14   |
|                                                                                                         |             |                  |                   |                 | Rest of plants<br>without roots | 34          | 0.13             | < 0.01   | < 0.01   | < 0.01   | 0.13   |
|                                                                                                         |             |                  |                   |                 | Straw                           | 42          | 0.11             | < 0.01   | < 0.01   | < 0.01   | 0.11   |
| 2009/1012125<br>L080049<br>Greece (S)<br>(Aghios Mamas, Central<br>Macedonia)<br>2008<br>(Thessaloniki) | 2           | 27               | 77<br>81<br>158   | 185<br>196      | Whole plant<br>no roots         | 0           | 1.88             | < 0.01   | 0.01     | < 0.01   | 1.89   |
|                                                                                                         |             |                  |                   |                 | Ears                            | 28          | 0.60             | < 0.01   | 0.04     | < 0.01   | 0.64   |
|                                                                                                         |             |                  |                   |                 | Rest of plants<br>without roots | 28          | 0.44             | < 0.01   | 0.02     | < 0.01   | 0.46   |
|                                                                                                         |             |                  |                   |                 | Straw                           | 35          | 0.91             | < 0.01   | 0.04     | < 0.01   | 0.95   |
|                                                                                                         |             |                  |                   |                 | Straw                           | 42          | 1.12             | < 0.01   | 0.04     | < 0.01   | 1.16   |
|                                                                                                         | 2           | 27               | 126<br>126<br>252 | 202<br>201      | Whole plant<br>no roots         | 0           | 2.58             | < 0.01   | 0.01     | < 0.01   | 2.59   |
|                                                                                                         |             |                  |                   |                 | Ears                            | 28          | 0.55             | < 0.01   | 0.04     | < 0.01   | 0.59   |
|                                                                                                         |             |                  |                   |                 | Rest of plants<br>without roots | 28          | 0.75             | < 0.01   | 0.03     | < 0.01   | 0.78   |
|                                                                                                         |             |                  |                   |                 | Straw                           | 35          | 0.95             | < 0.01   | 0.03     | < 0.01   | 0.98   |
|                                                                                                         |             |                  |                   |                 | Straw                           | 42          | 1.24             | < 0.01   | 0.03     | < 0.01   | 1.27   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                        | Application |                  |                   |                 | Matrix                          | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|-----------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|---------------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                                               | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                                 |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2009/1012125<br>L080050<br>Spain (S)<br>(Utrera, Andalucia/<br>Sevilla)<br>2008<br>(Belen)    | 2           | 24               | 82<br>84<br>166   | 198<br>203      | Whole plant<br>no roots         | 0           | 2.48             | < 0.01   | 0.01     | < 0.01   | 2.49   |
|                                                                                               |             |                  |                   |                 | Ears                            | 28          | 0.41             | < 0.01   | 0.03     | < 0.01   | 0.44   |
|                                                                                               |             |                  |                   |                 | Rest of plants<br>without roots | 28          | 0.32             | < 0.01   | 0.03     | < 0.01   | 0.35   |
|                                                                                               |             |                  |                   |                 | Ears                            | 35          | 0.39             | < 0.01   | 0.03     | < 0.01   | 0.42   |
|                                                                                               |             |                  |                   |                 | Rest of plants<br>without roots | 35          | 0.28             | < 0.01   | 0.03     | < 0.01   | 0.31   |
|                                                                                               |             |                  |                   |                 | Straw                           | 42          | 0.55             | < 0.01   | 0.03     | < 0.01   | 0.58   |
|                                                                                               | 2           | 24               | 124<br>124<br>248 | 198<br>198      | Whole plant<br>no roots         | 0           | 3.60             | < 0.01   | 0.01     | < 0.01   | 3.61   |
|                                                                                               |             |                  |                   |                 | Ears                            | 28          | 0.38             | < 0.01   | 0.03     | < 0.01   | 0.41   |
|                                                                                               |             |                  |                   |                 | Rest of plants<br>without roots | 28          | 0.49             | < 0.01   | 0.04     | < 0.01   | 0.53   |
|                                                                                               |             |                  |                   |                 | Ears                            | 35          | 0.48             | < 0.01   | 0.04     | < 0.01   | 0.52   |
|                                                                                               |             |                  |                   |                 | Rest of plants<br>without roots | 35          | 0.66             | < 0.01   | 0.04     | < 0.01   | 0.70   |
|                                                                                               |             |                  |                   |                 | Straw                           | 42          | 0.96             | < 0.01   | 0.07     | < 0.01   | 1.03   |
| 2009/1012125<br>L080051<br>Italy (S)<br>(Lazzate, Milano/<br>Lombardia)<br>2008<br>(Amillis)  | 2           | 14               | 83<br>82<br>165   | 199<br>198      | Whole plant<br>no roots         | 0           | 0.89             | < 0.01   | < 0.01   | < 0.01   | 0.89   |
|                                                                                               |             |                  |                   |                 | Straw                           | 29          | 0.06             | < 0.01   | < 0.01   | < 0.01   | 0.06   |
|                                                                                               |             |                  |                   |                 | Straw                           | 34          | 0.11             | < 0.01   | < 0.01   | < 0.01   | 0.11   |
|                                                                                               |             |                  |                   |                 | Straw                           | 42          | 0.12             | < 0.01   | 0.02     | < 0.01   | 0.14   |
|                                                                                               | 2           | 14               | 129<br>127<br>256 | 206<br>203      | Whole plant<br>no roots         | 0           | 2.44             | < 0.01   | 0.01     | < 0.01   | 2.45   |
|                                                                                               |             |                  |                   |                 | Straw                           | 29          | 0.22             | < 0.01   | 0.02     | < 0.01   | 0.24   |
|                                                                                               |             |                  |                   |                 | Straw                           | 34          | 0.45             | < 0.01   | 0.03     | < 0.01   | 0.48   |
|                                                                                               |             |                  |                   |                 | Straw                           | 42          | 0.23             | < 0.01   | 0.03     | < 0.01   | 0.26   |
| 2007/1050093<br>L070245<br>Germany<br>(Mauchenheim, Rheinland-<br>Pfalz)<br>2007<br>(Braemar) | 2           | 20               | 85<br>84<br>169   | 204<br>202      | Whole plant<br>no roots         | 0           | 1.33             | < 0.01   | 0.02     | < 0.01   | 1.35   |
|                                                                                               |             |                  |                   |                 | Straw                           | 34          | 0.22             | < 0.01   | 0.01     | < 0.01   | 0.23   |
|                                                                                               |             |                  |                   |                 | Straw                           | 42          | 0.23             | < 0.01   | 0.01     | < 0.01   | 0.24   |
|                                                                                               |             |                  |                   |                 | Straw                           | 49          | 0.30             | < 0.01   | 0.01     | < 0.01   | 0.31   |
|                                                                                               | 2           | 20               | 126<br>128<br>254 | 202<br>204      | Whole plant<br>no roots         | 0           | 1.85             | < 0.01   | 0.02     | < 0.01   | 1.87   |
|                                                                                               |             |                  |                   |                 | Straw                           | 34          | 0.47             | < 0.01   | 0.02     | < 0.01   | 0.49   |
|                                                                                               |             |                  |                   |                 | Straw                           | 42          | 0.64             | < 0.01   | 0.02     | < 0.01   | 0.66   |
|                                                                                               |             |                  |                   |                 | Straw                           | 49          | 0.56             | < 0.01   | 0.02     | < 0.01   | 0.58   |
| 2007/1050093<br>L070246<br>Germany<br>(Brunne Brandenburg)<br>2007<br>(Campanile)             | 2           | 22               | 84<br>81<br>165   | 203<br>195      | Whole plant<br>no roots         | 0           | 1.75             | < 0.01   | < 0.01   | < 0.01   | 1.75   |
|                                                                                               |             |                  |                   |                 | Ears                            | 36          | 0.05             | < 0.01   | < 0.01   | < 0.01   | 0.05   |
|                                                                                               |             |                  |                   |                 | Rest of plants<br>without roots | 36          | 0.07             | < 0.01   | < 0.01   | < 0.01   | 0.07   |
|                                                                                               |             |                  |                   |                 | Straw                           | 43          | 0.09             | < 0.01   | < 0.01   | < 0.01   | 0.09   |
|                                                                                               |             |                  |                   |                 | Straw                           | 48          | 0.09             | < 0.01   | < 0.01   | < 0.01   | 0.09   |
|                                                                                               | 2           | 22               | 126<br>128<br>254 | 202<br>204      | Whole plant<br>no roots         | 0           | 2.41             | < 0.01   | 0.01     | < 0.01   | 2.42   |
|                                                                                               |             |                  |                   |                 | Ears                            | 36          | 0.11             | < 0.01   | 0.01     | < 0.01   | 0.12   |
|                                                                                               |             |                  |                   |                 | Rest of plants<br>without roots | 36          | 0.11             | < 0.01   | < 0.01   | < 0.01   | 0.11   |

## Fluxapyroxad

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                               | Application |                  |                   |                 | Matrix                          | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|--------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|---------------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                                      | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                                 |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
|                                                                                      |             |                  |                   |                 | Straw                           | 43          | 0.11             | < 0.01   | < 0.01   | < 0.01   | 0.11   |
|                                                                                      |             |                  |                   |                 | Straw                           | 48          | 0.12             | < 0.01   | < 0.01   | < 0.01   | 0.12   |
|                                                                                      |             |                  |                   |                 | Whole plant<br>no roots         | 0           | 1.69             | < 0.01   | 0.01     | < 0.01   | 1.70   |
|                                                                                      |             |                  |                   |                 | Straw                           | 36          | 0.19             | < 0.01   | < 0.01   | < 0.01   | 0.19   |
|                                                                                      |             |                  |                   |                 | Straw                           | 43          | 0.16             | < 0.01   | < 0.01   | < 0.01   | 0.16   |
| 2007/1050093<br>L070247<br>France (N)<br>(Seebach, Alsace)<br>2007<br>(Platine)      | 2           | 20               | 88<br>86<br>174   | 212<br>206      | Straw                           | 50          | 0.12             | < 0.01   | < 0.01   | < 0.01   | 0.12   |
|                                                                                      |             |                  |                   |                 | Whole plant<br>no roots         | 0           | 2.88             | < 0.01   | 0.02     | < 0.01   | 2.90   |
|                                                                                      |             |                  |                   |                 | Straw                           | 36          | 0.47             | < 0.01   | 0.01     | < 0.01   | 0.48   |
|                                                                                      |             |                  |                   |                 | Straw                           | 43          | 0.37             | < 0.01   | < 0.01   | < 0.01   | 0.37   |
|                                                                                      |             |                  |                   |                 | Straw                           | 50          | 0.21             | < 0.01   | < 0.01   | < 0.01   | 0.21   |
|                                                                                      | 2           | 20               | 130<br>121<br>251 | 207<br>194      | Whole plant<br>no roots         | 0           | 2.88             | < 0.01   | 0.02     | < 0.01   | 2.90   |
|                                                                                      |             |                  |                   |                 | Straw                           | 36          | 0.47             | < 0.01   | 0.01     | < 0.01   | 0.48   |
|                                                                                      |             |                  |                   |                 | Straw                           | 43          | 0.37             | < 0.01   | < 0.01   | < 0.01   | 0.37   |
|                                                                                      |             |                  |                   |                 | Straw                           | 50          | 0.21             | < 0.01   | < 0.01   | < 0.01   | 0.21   |
|                                                                                      |             |                  |                   |                 | Straw                           | 50          | 0.21             | < 0.01   | < 0.01   | < 0.01   | 0.21   |
| 2007/1050093<br>L070248<br>UK<br>(Manningtree, Essex)<br>2007<br>(Pearl)             | 2           | 22               | 88<br>86<br>174   | 211<br>209      | Whole plant<br>no roots         | 0           | 1.35             | < 0.01   | < 0.01   | < 0.01   | 1.35   |
|                                                                                      |             |                  |                   |                 | Ears                            | 34          | 0.07             | < 0.01   | < 0.01   | < 0.01   | 0.07   |
|                                                                                      |             |                  |                   |                 | Rest of plants<br>without roots | 34          | 0.05             | < 0.01   | < 0.01   | < 0.01   | 0.05   |
|                                                                                      |             |                  |                   |                 | Ears                            | 41          | 0.11             | < 0.01   | < 0.01   | < 0.01   | 0.11   |
|                                                                                      |             |                  |                   |                 | Rest of plants<br>without roots | 41          | 0.11             | < 0.01   | < 0.01   | < 0.01   | 0.11   |
|                                                                                      |             |                  |                   |                 | Ears                            | 48          | 0.10             | < 0.01   | < 0.01   | < 0.01   | 0.10   |
|                                                                                      |             |                  |                   |                 | Rest of plants<br>without roots | 48          | 0.14             | < 0.01   | < 0.01   | < 0.01   | 0.14   |
|                                                                                      |             |                  |                   |                 | Straw                           | 61          | 0.07             | < 0.01   | < 0.01   | < 0.01   | 0.07   |
|                                                                                      | 2           | 22               | 130<br>133<br>263 | 208<br>213      | Whole plant<br>no roots         | 0           | 2.29             | < 0.01   | < 0.01   | < 0.01   | 2.29   |
|                                                                                      |             |                  |                   |                 | Ears                            | 34          | 0.11             | < 0.01   | < 0.01   | < 0.01   | 0.11   |
|                                                                                      |             |                  |                   |                 | Rest of plants<br>without roots | 34          | 0.08             | < 0.01   | < 0.01   | < 0.01   | 0.08   |
|                                                                                      |             |                  |                   |                 | Ears                            | 41          | 0.10             | < 0.01   | < 0.01   | < 0.01   | 0.10   |
|                                                                                      |             |                  |                   |                 | Rest of plants<br>without roots | 41          | 0.11             | < 0.01   | < 0.01   | < 0.01   | 0.11   |
|                                                                                      |             |                  |                   |                 | Ears                            | 48          | 0.09             | < 0.01   | < 0.01   | < 0.01   | 0.09   |
|                                                                                      |             |                  |                   |                 | Rest of plants<br>without roots | 48          | 0.17             | < 0.01   | < 0.01   | < 0.01   | 0.17   |
|                                                                                      |             |                  |                   |                 | Straw                           | 61          | 0.11             | < 0.01   | < 0.01   | < 0.01   | 0.11   |
| 2007/1050093<br>L070249<br>France (S)<br>(Grenade, Midi Pyrenees)<br>2007<br>(Nikel) | 2           | 16               | 86<br>90<br>176   | 207<br>217      | Whole plant<br>no roots         | 0           | 1.84             | < 0.01   | 0.01     | < 0.01   | 1.85   |
|                                                                                      |             |                  |                   |                 | Ears                            | 35          | 0.11             | < 0.01   | 0.01     | < 0.01   | 0.12   |
|                                                                                      |             |                  |                   |                 | Rest of plants<br>without roots | 35          | 0.17             | < 0.01   | < 0.01   | < 0.01   | 0.17   |
|                                                                                      |             |                  |                   |                 | Straw                           | 42          | 0.21             | < 0.01   | < 0.01   | < 0.01   | 0.21   |
|                                                                                      |             |                  |                   |                 | Straw                           | 49          | 0.37             | < 0.01   | 0.01     | < 0.01   | 0.38   |
|                                                                                      | 2           | 16               | 135<br>133<br>268 | 217<br>213      | Whole plant<br>no roots         | 0           | 3.53             | < 0.01   | 0.01     | < 0.01   | 3.54   |
|                                                                                      |             |                  |                   |                 | Ears                            | 35          | 0.15             | < 0.01   | 0.02     | < 0.01   | 0.17   |
|                                                                                      |             |                  |                   |                 | Rest of plants<br>without roots | 35          | 0.21             | < 0.01   | 0.01     | < 0.01   | 0.22   |
|                                                                                      |             |                  |                   |                 | Straw                           | 42          | 0.32             | < 0.01   | 0.02     | < 0.01   | 0.34   |
|                                                                                      |             |                  |                   |                 | Straw                           | 49          | 0.36             | < 0.01   | 0.03     | < 0.01   | 0.39   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                            | Application |                  |                   |                 | Matrix                          | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|-----------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|---------------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                                   | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                                 |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2007/1050093<br>L070250<br>France (S)<br>(Duras, Aquitaine)<br>2007<br>(Nikel)    | 2           | 21               | 89<br>79<br>168   | 213<br>191      | Whole plant<br>no roots         | 0           | 1.90             | < 0.01   | 0.01     | < 0.01   | 1.91   |
|                                                                                   |             |                  |                   |                 | Ears                            | 35          | 0.27             | < 0.01   | 0.01     | < 0.01   | 0.28   |
|                                                                                   |             |                  |                   |                 | Rest of plants<br>without roots | 35          | 0.68             | < 0.01   | 0.02     | < 0.01   | 0.70   |
|                                                                                   |             |                  |                   |                 | Straw                           | 42          | 0.84             | < 0.01   | 0.02     | < 0.01   | 0.86   |
|                                                                                   |             |                  |                   |                 | Straw                           | 49          | 0.80             | < 0.01   | 0.02     | < 0.01   | 0.82   |
|                                                                                   | 2           | 21               | 135<br>124<br>259 | 217<br>199      | Whole plant<br>no roots         | 0           | 3.33             | < 0.01   | 0.02     | < 0.01   | 3.35   |
|                                                                                   |             |                  |                   |                 | Ears                            | 35          | 0.33             | < 0.01   | 0.01     | < 0.01   | 0.34   |
|                                                                                   |             |                  |                   |                 | Rest of plants<br>without roots | 35          | 1.30             | < 0.01   | 0.03     | < 0.01   | 1.33   |
|                                                                                   |             |                  |                   |                 | Straw                           | 42          | 1.29             | < 0.01   | 0.04     | < 0.01   | 1.33   |
|                                                                                   |             |                  |                   |                 | Straw                           | 49          | 0.98             | < 0.01   | 0.03     | < 0.01   | 1.01   |
| 2007/1050093<br>L070251<br>Spain (S)<br>(Las Cabezas, Sevilla)<br>2007<br>(Belen) | 2           | 22               | 84<br>84<br>168   | 203<br>201      | Whole plant<br>no roots         | 0           | 2.18             | < 0.01   | < 0.01   | < 0.01   | 2.18   |
|                                                                                   |             |                  |                   |                 | Ears                            | 36          | 0.22             | < 0.01   | 0.01     | < 0.01   | 0.23   |
|                                                                                   |             |                  |                   |                 | Rest of plants<br>without roots | 36          | 0.28             | < 0.01   | 0.02     | < 0.01   | 0.30   |
|                                                                                   |             |                  |                   |                 | Straw                           | 42          | 0.68             | < 0.01   | 0.03     | < 0.01   | 0.71   |
|                                                                                   |             |                  |                   |                 | Straw                           | 49          | 0.47             | < 0.01   | 0.03     | < 0.01   | 0.50   |
|                                                                                   | 2           | 22               | 124<br>125<br>249 | 199<br>200      | Whole plant<br>no roots         | 0           | 3.58             | < 0.01   | < 0.01   | < 0.01   | 3.58   |
|                                                                                   |             |                  |                   |                 | Ears                            | 36          | 0.35             | < 0.01   | 0.02     | < 0.01   | 0.37   |
|                                                                                   |             |                  |                   |                 | Rest of plants<br>without roots | 36          | 0.23             | < 0.01   | 0.01     | < 0.01   | 0.24   |
|                                                                                   |             |                  |                   |                 | Straw                           | 42          | 0.79             | < 0.01   | 0.04     | < 0.01   | 0.83   |
|                                                                                   |             |                  |                   |                 | Straw                           | 49          | 0.80             | < 0.01   | 0.04     | < 0.01   | 0.84   |
| 2007/1050093<br>L080052<br>Spain<br>(Andalucia, Lombardia)<br>2009<br>(Cecilia)   | 2           | 21               | 85<br>81<br>166   | 204<br>196      | Whole plant<br>no roots         | 0           | 2.21             | < 0.01   | < 0.01   | < 0.01   | 2.21   |
|                                                                                   |             |                  |                   |                 | Ears                            | 35          | 0.20             | < 0.01   | 0.02     | < 0.01   | 0.22   |
|                                                                                   |             |                  |                   |                 | Rest of plants<br>without roots | 35          | 0.23             | < 0.01   | 0.02     | < 0.01   | 0.25   |
|                                                                                   |             |                  |                   |                 | Straw                           | 42          | 0.50             | < 0.01   | 0.03     | < 0.01   | 0.53   |
|                                                                                   |             |                  |                   |                 | Straw                           | 49          | 0.64             | < 0.01   | 0.04     | < 0.01   | 0.68   |
|                                                                                   | 2           | 21               | 127<br>125<br>252 | 203<br>200      | Whole plant<br>no roots         | 0           | 3.18             | < 0.01   | 0.01     | < 0.01   | 3.19   |
|                                                                                   |             |                  |                   |                 | Ears                            | 35          | 0.17             | < 0.01   | 0.01     | < 0.01   | 0.18   |
|                                                                                   |             |                  |                   |                 | Rest of plants<br>without roots | 35          | 0.25             | < 0.01   | 0.02     | < 0.01   | 0.27   |
|                                                                                   |             |                  |                   |                 | Straw                           | 42          | 0.92             | < 0.01   | 0.06     | < 0.01   | 0.98   |
|                                                                                   |             |                  |                   |                 | Straw                           | 49          | 1.03             | < 0.01   | 0.06     | < 0.01   | 1.09   |

Fluxapyroxad, M700F008 and M700F048 are reported in terms of fluxapyroxad. M700F002 is reported in terms of itself. \*

\*Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 113 Residues from the foliar application of fluxapyroxad to barley in Australia (Allen 2010, 2010/7003123)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                   | Application |                  |                   |                 | Matrix | PHI<br>days                    | Residues (mg/kg)             |                          |                          |                          |                  |
|----------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|--------------------------------|------------------------------|--------------------------|--------------------------|--------------------------|------------------|
|                                                                                                          | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |                                | Fluxapyroxad<br>(dry weight) | M700F002<br>(dry weight) | M700F008<br>(dry weight) | M700F048<br>(dry weight) | Total*           |
| GAP,<br>Australia                                                                                        | 2           |                  | 62.5              |                 |        | -                              |                              |                          |                          |                          |                  |
| 2010/7003123<br>BASF-<br>0802/S2<br>Australia<br>(Culcairn,<br>New South<br>Wales)<br>2008<br>(Gairdner) | 2           | 20               | 62<br>61<br>125   | 99.9<br>99.2    | Forage | 0 (after<br>1 <sup>st</sup> )  | 2.26 (13.86)                 | < LOD<br>(< LOD)         | < LOD<br>(< LOD)         | < LOD<br>(< LOD)         | 2.26<br>(13.86)  |
|                                                                                                          |             |                  |                   |                 |        | 7                              | 1.07 (5.60)                  | < LOD<br>(< LOD)         | 0.01<br>(0.06)           | < LOD<br>(< LOD)         | 1.08<br>(5.66)   |
|                                                                                                          |             |                  |                   |                 |        | 14                             | 0.84 (3.28)                  | < LOD<br>(< LOD)         | 0.03<br>(0.11)           | < LOD<br>(< LOD)         | 0.87<br>(3.39)   |
|                                                                                                          |             |                  |                   |                 |        | -0 (after<br>2 <sup>nd</sup> ) | 0.66 (2.23)                  | < LOD<br>(< LOD)         | 0.03<br>(0.11)           | < LOD<br>(< LOD)         | 0.69<br>(2.34)   |
|                                                                                                          |             |                  |                   |                 | Straw  | Harvest                        | 2.15 (2.57)                  | < LOD<br>(< LOD)         | 0.08<br>(0.10)           | < LOD<br>(< LOD)         | 2.23<br>(2.67)   |
|                                                                                                          | 2           | 20               | 123<br>122<br>245 | 99.9<br>99.2    | Forage | 0 (after<br>1 <sup>st</sup> )  | 2.11 (11.54)                 | < LOD<br>(< LOD)         | < LOD<br>(< LOD)         | < LOD<br>(< LOD)         | 2.11<br>(11.54)) |
|                                                                                                          |             |                  |                   |                 |        | 7                              | 1.45 (6.87)                  | < LOD<br>(< LOD)         | 0.02<br>(0.09)           | < LOD<br>(< LOD)         | 1.47<br>(6.96)   |
|                                                                                                          |             |                  |                   |                 |        | 14                             | 1.02 (3.65)                  | < LOD<br>(< LOD)         | 0.03<br>(0.12)           | < LOD<br>(< LOD)         | 1.05<br>(3.77)   |
|                                                                                                          |             |                  |                   |                 |        | -0 (after<br>2 <sup>nd</sup> ) | 0.69 (2.11)                  | < LOD<br>(< LOD)         | 0.03<br>(0.08)           | < LOD<br>(< LOD)         | 0.72<br>(2.19)   |
|                                                                                                          |             |                  |                   |                 | Straw  | Harvest                        | 4.36 (5.34)                  | < LOD<br>(< LOD)         | 0.18<br>(0.22)           | < LOD<br>(< LOD)         | 4.54<br>(5.57)   |
| 2010/7003123<br>BASF-<br>0802/S4<br>Australia<br>(Templers,<br>South<br>Australia)<br>2008<br>(Flagship) | 2           | 17               | 61<br>61<br>122   | 99.2            | Forage | 14 (after<br>1 <sup>st</sup> ) | 0.40 (2.31)                  | < LOD<br>(< LOD)         | 0.02<br>(0.14)           | < LOD<br>(< LOD)         | 0.42<br>(2.46)   |
|                                                                                                          |             |                  |                   |                 |        | -0 (after<br>2 <sup>nd</sup> ) | 0.24 (1.22)                  | < LOD<br>(< LOD)         | 0.01<br>(0.06)           | < LOD<br>(< LOD)         | 0.25<br>(1.28)   |
|                                                                                                          |             |                  |                   |                 |        | 0                              | 0.91 (3.57)                  | < LOD<br>(< LOD)         | 0.02<br>(0.09)           | < LOD<br>(< LOD)         | 0.93<br>(3.66)   |
|                                                                                                          |             |                  |                   |                 |        | 8                              | 0.55 (1.87)                  | < LOD<br>(< LOD)         | 0.03<br>(0.10)           | < LOD<br>(< LOD)         | 0.58<br>(1.97)   |
|                                                                                                          |             |                  |                   |                 |        | 15                             | 0.39 (1.13)                  | < LOD<br>(< LOD)         | 0.02<br>(0.06)           | < LOD<br>(< LOD)         | 0.41<br>(1.19)   |
|                                                                                                          |             |                  |                   |                 | Straw  | Harvest                        | 0.91 (1.07)                  | < LOD<br>(< LOD)         | 0.05<br>(0.06)           | < LOD<br>(< LOD)         | 0.96<br>(1.13)   |
|                                                                                                          | 2           | 17               | 122<br>122<br>244 | 99.2            | Forage | 14 (after<br>1 <sup>st</sup> ) | 0.66 (4.02)                  | < LOD<br>(< LOD)         | 0.03<br>(0.20)           | < LOD<br>(< LOD)         | 0.69<br>(4.23)   |
|                                                                                                          |             |                  |                   |                 |        | -0 (after<br>2 <sup>nd</sup> ) | 0.52 (2.54)                  | < LOD<br>(< LOD)         | 0.02<br>(0.11)           | < LOD<br>(< LOD)         | 0.54<br>(2.65)   |
|                                                                                                          |             |                  |                   |                 |        | 0                              | 0.84 (3.45)                  | < LOD<br>(< LOD)         | 0.01<br>(0.04)           | < LOD<br>(< LOD)         | 0.85<br>(3.49)   |
|                                                                                                          |             |                  |                   |                 |        | 8                              | 0.87 (2.66)                  | < LOD<br>(< LOD)         | 0.03<br>(0.09)           | < LOD<br>(< LOD)         | 0.90<br>(2.75)   |
|                                                                                                          |             |                  |                   |                 |        | 15                             | 0.81 (2.12)                  | < LOD<br>(< LOD)         | 0.03<br>(0.07)           | < LOD<br>(< LOD)         | 0.84<br>(2.19)   |
|                                                                                                          |             |                  |                   |                 | Straw  | Harvest                        | 2.40 (2.84)                  | < LOQ<br>(< LOQ)         | 0.10<br>(0.12)           | < LOD<br>(< LOD)         | 2.50<br>(2.96)   |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 114 Residues from the foliar application of fluxapyroxad to corn in the USA and Canada (White 2010, 2010/7003693)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                     | Application |                  |                   |                 | Matrix<br><br>(% moisture) | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |      |
|------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|----------------------------|-------------|------------------|------------|----------|----------|----------|------------|------|
|                                                                                                            | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                            |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |      |
|                                                                                                            |             |                  |                   |                 |                            |             | Mean             | Individual |          |          |          | Individual | Mean |
| GAP, USA                                                                                                   | 2           |                  | 97-<br>100        |                 |                            | 7           |                  |            |          |          |          |            |      |
| 2010/7003693<br>RCN R080383<br>USA<br>(Wayne, New York)<br>2008<br>(L-6H07RR)                              | 2           | 7                | 101<br>101<br>202 | 188<br>189      | Forage<br><br>(67.2)       | 7           | 0.66             | 0.60       | < LOD    | 0.03     | < 0.01   | 0.63       | 0.69 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 0.72       | < LOD    | 0.03     | < 0.01   | 0.75       |      |
|                                                                                                            | 2           | 7                | 101<br>105<br>206 | 187<br>194      | Stover<br><br>(71.4)       | 21          | 0.23             | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | 0.25 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 0.45       | < LOD    | 0.03     | 0.01     | 0.49       |      |
| 2010/7003693<br>RCN R080384<br>USA<br>(Tift, Georgia)<br>2008<br>(31D5S)                                   | 2           | 7                | 102<br>100<br>202 | 298<br>294      | Forage<br><br>(72.7)       | 7           | 0.20             | 0.22       | < LOD    | 0.03     | < 0.01   | 0.25       | 0.23 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 0.18       | < LOD    | 0.02     | < 0.01   | 0.20       |      |
|                                                                                                            | 2           | 7                | 102<br>101<br>203 | 256<br>268      | Stover<br><br>(58.2)       | 21          | 0.96             | 0.77       | < LOD    | 0.05     | < LOD    | 0.82       | 1.01 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 1.15       | < LOD    | 0.05     | < 0.01   | 1.20       |      |
| 2010/7003693<br>RCN R080386<br>Canada<br>(RM of Portage la<br>Prairie, Manitoba)<br>2008<br>(Dekalb 26-79) | 2           | 7                | 99<br>101<br>200  | 188<br>187      | Forage<br><br>(77.5)       | 7           | 0.64             | 0.61       | < LOD    | 0.05     | < 0.01   | 0.66       | 0.68 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 0.66       | < LOD    | 0.04     | < 0.01   | 0.70       |      |
|                                                                                                            | 2           | 7                | 99<br>101<br>200  | 186<br>187      | Stover                     | 22          | 0.93             | 0.81       | < LOD    | 0.04     | < 0.01   | 0.85       | 0.98 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 1.05       | < LOD    | 0.05     | < 0.01   | 1.10       |      |
| 2010/7003693<br>RCN R080385<br>Canada<br>(Pepin, Wisconsin)<br>2008<br>(P-38 g16)                          | 2           | 7                | 101<br>101<br>202 | 189<br>189      | Forage<br><br>(61.9)       | 7           | 1.33             | 1.43       | < LOD    | 0.05     | < 0.01   | 1.48       | 1.38 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 1.23       | < LOD    | 0.04     | < 0.01   | 1.27       |      |
|                                                                                                            | 2           | 7                | 100<br>102<br>202 | 187<br>190      | Stover<br><br>(63.6)       | 21          | 1.10             | 1.00       | < LOD    | 0.01     | < LOD    | 1.01       | 1.11 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 1.19       | < LOD    | 0.02     | < LOD    | 1.21       |      |
| 2010/7003693<br>RCN R080387<br>USA<br>(Pepin, Wisconsin)<br>2008<br>(Dekalb 46-60)                         | 2           | 7                | 102<br>101<br>203 | 191<br>190      | Forage<br><br>(64.3)       | 7           | 0.90             | 0.84       | < LOD    | 0.04     | < 0.01   | 0.88       | 0.94 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 0.96       | < LOD    | 0.04     | < 0.01   | 1.00       |      |
|                                                                                                            | 2           | 7                | 101<br>101<br>202 | 189<br>189      | Stover<br><br>(56.9)       | 21          | 1.13             | 1.25       | < LOD    | 0.03     | < 0.01   | 1.28       | 1.16 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 1.01       | < LOD    | 0.03     | < LOD    | 1.04       |      |
| 2010/7003693<br>RCN R080392<br>USA<br>(Pepin, Wisconsin)<br>2008<br>(B5202)                                | 2           | 7                | 101<br>102<br>203 | 189<br>191      | Forage<br><br>(70.7)       | 7           | 0.44             | 0.48       | < LOD    | 0.02     | < 0.01   | 0.50       | 0.46 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 0.39       | < LOD    | 0.02     | < 0.01   | 0.41       |      |
|                                                                                                            | 2           | 7                | 100<br>102<br>202 | 187<br>190      | Stover<br><br>(67.4)       | 21          | 1.45             | 1.30       | < LOD    | 0.03     | < LOD    | 1.33       | 1.48 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 1.59       | < LOD    | 0.03     | < 0.01   | 1.62       |      |
| 2010/7003693<br>RCN R080388<br>USA<br>(York, New England)<br>2008<br>(34F96)                               | 2           | 7                | 101<br>100<br>201 | 188<br>188      | Forage<br><br>(74.1)       | 7           | 0.40             | 0.42       | < LOD    | 0.02     | < 0.01   | 0.44       | 0.42 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 0.38       | < LOD    | 0.02     | < 0.01   | 0.40       |      |
|                                                                                                            | 2           | 8                | 100<br>98<br>198  | 188<br>183      | Stover<br><br>(59.9)       | 21          | 1.43             | 1.44       | < LOD    | 0.02     | < LOD    | 1.46       | 1.45 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 1.41       | < LOD    | 0.02     | < LOD    | 1.43       |      |
| 2010/7003693<br>RCN R080389<br>USA<br>(Cass, North Dakota)<br>2008<br>(Hybrid 2K154)                       | 2           | 8                | 100<br>102<br>202 | 188<br>190      | Forage<br><br>(74.5)       | 6           | 0.87             | 0.77       | < LOD    | < 0.01   | < LOD    | 0.77       | 0.88 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 0.97       | < LOD    | 0.02     | < LOD    | 0.99       |      |
|                                                                                                            | 2           | 7                | 101<br>100<br>201 | 190<br>188      | Stover<br><br>(77.4)       | 21          | 0.60             | 0.63       | < LOD    | 0.02     | < 0.01   | 0.65       | 0.62 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 0.56       | < LOD    | 0.03     | < 0.01   | 0.59       |      |
| 2010/7003693<br>RCN R080390<br>USA<br>(Ottawa, Minnesota)<br>2008<br>(DKC48-46)                            | 2           | 7                | 99<br>100<br>199  | 284<br>284      | Forage<br><br>(70.2)       | 7           | 1.04             | 1.10       | < LOD    | 0.04     | < 0.01   | 1.14       | 1.07 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 0.97       | < LOD    | 0.03     | < 0.01   | 1.00       |      |
|                                                                                                            | 2           | 7                | 100<br>100<br>200 | 283<br>286      | Stover<br><br>(52.2)       | 20          | 2.22             | 2.67       | < LOD    | 0.04     | < 0.01   | 2.71       | 2.25 |
|                                                                                                            |             |                  |                   |                 |                            |             |                  | 1.76       | < LOD    | 0.03     | < 0.01   | 1.79       |      |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                       | Application |                  |                   |                 | Matrix<br>(%<br>moisture) | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |      |
|----------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|---------------------------|-------------|------------------|------------|----------|----------|----------|------------|------|
|                                                                                              | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                           |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |      |
|                                                                                              |             |                  |                   |                 |                           |             | Mean             | Individual |          |          |          | Individual | Mean |
| 2010/7003693<br>RCN R080391<br>USA<br>(Freeborn, Minnesota)<br>2008<br>(Pioneer 37Y14)       | 2           | 7                | 100<br>104<br>204 | 186<br>194      | Forage<br>(67.9)          | 7           | 0.84             | 0.88       | < LOD    | 0.04     | < 0.01   | 0.92       | 0.88 |
|                                                                                              |             |                  |                   |                 |                           |             |                  | 0.79       | < LOD    | 0.04     | < 0.01   | 0.83       |      |
|                                                                                              | 2           | 6                | 102<br>100<br>202 | 191<br>187      | Stover<br>(57.9)          | 21          | 2.12             | 2.05       | < LOD    | 0.05     | < 0.01   | 2.10       | 2.17 |
|                                                                                              |             |                  |                   |                 |                           |             |                  | 2.18       | < LOD    | 0.05     | < 0.01   | 2.23       |      |
| 2010/7003693<br>RCN R080393<br>USA<br>(Steele, Minnesota)<br>2008<br>(Pioneer 37Y14)         | 2           | 7                | 99<br>104<br>203  | 185<br>193      | Forage<br>(70.6)          | 8           | 0.90             | 0.78       | < LOD    | 0.04     | < 0.01   | 0.82       | 0.95 |
|                                                                                              |             |                  |                   |                 |                           |             |                  | 1.02       | < LOD    | 0.05     | < 0.01   | 1.07       |      |
|                                                                                              | 2           | 6                | 102<br>99<br>201  | 191<br>185      | Stover<br>(51.3)          | 21          | 2.13             | 1.84       | < LOD    | 0.06     | < 0.01   | 1.90       | 2.19 |
|                                                                                              |             |                  |                   |                 |                           |             |                  | 2.42       | < LOD    | 0.06     | < 0.01   | 2.48       |      |
| 2010/7003693<br>RCN R080394<br>USA<br>(Stoddard, Missouri)<br>2008<br>(31P42)                | 2           | 7                | 99<br>99<br>198   | 185<br>185      | Forage<br>(76.3)          | 7           | 0.69             | 0.76       | < LOD    | 0.05     | < 0.01   | 0.81       | 0.73 |
|                                                                                              |             |                  |                   |                 |                           |             |                  | 0.61       | < LOD    | 0.04     | < 0.01   | 0.65       |      |
|                                                                                              | 2           | 7                | 100<br>100<br>200 | 187<br>187      | Stover<br>(65.2)          | 22          | 0.59             | 0.58       | < LOD    | 0.04     | < 0.01   | 0.62       | 0.63 |
|                                                                                              |             |                  |                   |                 |                           |             |                  | 0.59       | < LOD    | 0.04     | < 0.01   | 0.63       |      |
| 2010/7003693<br>RCN R080395<br>USA<br>(Clinton, Illinois)<br>2008<br>(616XLR)                | 2           | 7                | 99<br>99<br>198   | 219<br>230      | Forage<br>(71.3)          | 7           | 0.78             | 0.67       | < LOD    | 0.02     | < LOD    | 0.69       | 0.81 |
|                                                                                              |             |                  |                   |                 |                           |             |                  | 0.89       | < LOD    | 0.03     | < 0.01   | 0.92       |      |
|                                                                                              | 2           | 7                | 97<br>98<br>197   | 115<br>122      | Stover<br>(59.4)          | 21          | 0.39             | 0.43       | < LOD    | < 0.01   | < LOD    | 0.43       | 0.39 |
|                                                                                              |             |                  |                   |                 |                           |             |                  | 0.34       | < LOD    | < 0.01   | < LOD    | 0.34       |      |
| 2010/7003693<br>RCN R080396<br>Canada<br>(RM of Grey,<br>Manitoba)<br>2008<br>(DKC-26-79)    | 2           | 7                | 100<br>95<br>195  | 199<br>191      | Forage<br>(74.7)          | 7           | 0.33             | 0.31       | < LOD    | 0.02     | < 0.01   | 0.33       | 0.36 |
|                                                                                              |             |                  |                   |                 |                           |             |                  | 0.35       | < LOD    | 0.03     | < LOD    | 0.38       |      |
|                                                                                              | 2           | 7                | 101<br>104<br>205 | 202<br>207      | Stover<br>(62.5)          | 21          | 2.21             | 2.28       | < LOD    | 0.05     | < LOD    | 2.33       | 2.25 |
|                                                                                              |             |                  |                   |                 |                           |             |                  | 2.13       | < LOD    | 0.04     | < LOD    | 2.17       |      |
| 2010/7003693<br>RCN R080397<br>USA<br>(Wharton, Texas)<br>2008<br>(DK C66-23 (RR2,<br>YGCB)) | 2           | 7                | 101<br>101<br>202 | 129<br>131      | Forage<br>(73.4)          | 8           | 0.43             | 0.46       | < LOD    | 0.05     | 0.01     | 0.52       | 0.48 |
|                                                                                              |             |                  |                   |                 |                           |             |                  | 0.40       | < LOD    | 0.04     | < 0.01   | 0.44       |      |
|                                                                                              | 2           | 8                | 104<br>103<br>207 | 132<br>133      | Stover<br>(44.6)          | 20          | 3.57             | 3.68       | < LOD    | 0.07     | 0.01     | 3.76       | 3.64 |
|                                                                                              |             |                  |                   |                 |                           |             |                  | 3.45       | < LOD    | 0.06     | 0.01     | 3.52       |      |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Moisture content was determined for selected control samples using an infrared moisture determination balance.

Table 115 Residues from the foliar application of fluxapyroxad to rice in the USA (White 2010, 2010/7003693)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                        | Application |                  |                          |              | Matrix<br>(% moisture) | PHI<br>days | Residues (mg/kg) |                    |                      |                      |                  |
|-----------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|--------------|------------------------|-------------|------------------|--------------------|----------------------|----------------------|------------------|
|                                                                                               | No          | Interval<br>Days | g<br>ai/ha               | Water (L/ha) |                        |             | Fluxapyroxad     | M700F002           | M700F008             | M700F048             | Total*           |
| 2010/7003693<br>RCN R080403<br>USA<br>(Stoddard, Missouri)<br>2008<br>(Cybonnet)              | 2           | 7                | 101<br><u>100</u><br>201 | 188<br>187   | Straw<br><br>(69.1)    | 22          | 0.25<br><br>0.26 | < LOD<br><br>< LOD | 0.03<br><br>0.04     | < LOD<br><br>< LOD   | 0.28<br><br>0.30 |
| 2010/7003693<br>RCN R080404<br>USA<br>(Butler, Missouri)<br>2008<br>(CL-171)                  | 2           | 8                | 100<br><u>101</u><br>201 | 187<br>189   | Straw<br><br>(65.6)    | 22          | 0.67<br><br>0.56 | < LOD<br><br>< LOD | 0.02<br><br>0.02     | < 0.01<br><br>< LOD  | 0.69<br><br>0.58 |
| 2010/7003693<br>RCN R080406<br>USA<br>(Clay, Arkansas)<br>2008<br>(Silver Blend)              | 2           | 8                | 101<br><u>99</u><br>200  | 188<br>185   | Straw<br><br>(70.7)    | 21          | 0.60<br><br>0.47 | < LOD<br><br>< LOD | 0.01<br><br>< 0.01   | < LOD<br><br>< 0.01  | 0.61<br><br>0.47 |
| 2010/7003693<br>RCN R080408<br>USA<br>(Glenn, California)<br>2008<br>(M204)                   | 2           | 7                | 100<br><u>99</u><br>199  | 186<br>185   | Straw<br><br>(66.9)    | 21          | 1.45<br><br>1.94 | < LOD<br><br>< LOD | < 0.01<br><br>< 0.01 | < LOD<br><br>< LOD   | 1.45<br><br>1.94 |
| 2010/7003693<br>RCN R080736<br>USA<br>(Wharton, Texas)<br>2009<br>(Cheniere)                  | 2           | 6                | 99<br><u>101</u><br>200  | 147<br>145   | Straw<br><br>(67.9)    | 21          | 0.86             | < LOD              | 0.01                 | < 0.01               | 0.87             |
|                                                                                               |             |                  |                          |              |                        |             | 0.74             | < LOD              | 0.01                 | < 0.01               | 0.75             |
|                                                                                               |             |                  |                          |              |                        | 22          | 0.85             | < LOD              | 0.02                 | < 0.01               | 0.87             |
|                                                                                               |             |                  |                          |              |                        |             | 0.61             | < LOD              | 0.01                 | < 0.01               | 0.62             |
|                                                                                               |             |                  |                          |              |                        | 24          | 0.75             | < LOD              | 0.01                 | < 0.01               | 0.76             |
|                                                                                               |             |                  |                          |              |                        |             | 0.61             | < LOD              | < LOD                | < 0.01               | 0.61             |
|                                                                                               |             |                  |                          |              |                        | 28          | 0.68             | < LOD              | 0.01                 | < 0.01               | 0.69             |
|                                                                                               |             |                  |                          |              |                        |             | 0.67             | < LOD              | 0.01                 | < 0.01               | 0.68             |
|                                                                                               |             |                  |                          |              |                        | 30          | 0.57             | < LOD              | < LOD                | < LOD                | 0.57             |
| 0.62                                                                                          | < LOD       | < 0.01           | < 0.01                   | 0.62         |                        |             |                  |                    |                      |                      |                  |
| 2010/7003693<br>RCN R080737<br>USA<br>(Glenn, California)<br>2009<br>(M206)                   | 2           | 7                | 102<br><u>102</u><br>204 | 280<br>280   | Straw<br><br>(70.4)    | 21          | 0.69<br><br>2.25 | < LOD<br><br>< LOD | < 0.01<br><br>0.01   | < LOD<br><br>< 0.01  | 0.70<br><br>2.26 |
| 2010/7003693<br>RCN R080738<br>USA<br>(Rapides Parish, Louisiana)<br>2009<br>(Clearfield 161) | 2           | 7                | 99<br><u>100</u><br>199  | 175<br>177   | Straw<br><br>(66.6)    | 20          | 0.70<br><br>0.61 | < LOD<br><br>< LOD | 0.02<br><br>0.02     | < 0.01<br><br>< 0.01 | 0.72<br><br>0.63 |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                      | Application |                  |            |              | Matrix<br>(% moisture) | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|---------------------------------------------------------------------------------------------|-------------|------------------|------------|--------------|------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                                             | No          | Interval<br>Days | g<br>ai/ha | Water (L/ha) |                        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2010/7003693<br>RCN R080739<br>Canada<br>(Rapides Parish, Louisiana)<br>2009<br>(Cocodrie)  | 2           | 7                | 101        | 177          | Straw<br>(57.7)        | 20          | 1.09             | < LOD    | 0.03     | < 0.01   | 1.12   |
|                                                                                             |             |                  | 101<br>202 | 178          |                        |             | 1.08             | < LOD    | 0.02     | < 0.01   | 1.10   |
| 2010/7003693<br>RCN R080740<br>USA<br>(Washington, Mississippi)<br>2008<br>(Clearfield 161) | 2           | 7                | 99         | 153          | Straw<br>(68.8)        | 21          | 0.31             | < LOD    | < 0.01   | < LOD    | 0.31   |
|                                                                                             |             |                  | 102<br>201 | 136          |                        |             | 0.42             | < LOD    | 0.01     | < 0.01   | 0.43   |
| 2010/7003693<br>RCN R080741<br>USA<br>(Washington, Mississippi)<br>2008<br>(Cocodrie)       | 2           | 7                | 100        | 160          | Straw<br>(67.6)        | 26          | 0.24             | < LOD    | 0.01     | < 0.01   | 0.25   |
|                                                                                             |             |                  | 102<br>202 | 159          |                        |             | 0.17             | < LOD    | 0.01     | < 0.01   | 0.18   |

All analytes are reported in terms of themselves. Total residues are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Moisture content was determined for selected control samples using an infrared moisture determination balance.

Table 116 Residues from the foliar application of fluxapyroxad to grain sorghum in the USA (White 2010, 2010/7003693)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                       | Application |                  |                 |                 | Matrix<br>(% moisture) | PHI<br>days | Residues (mg/kg) |          |          |          |                                                     |
|------------------------------------------------------------------------------|-------------|------------------|-----------------|-----------------|------------------------|-------------|------------------|----------|----------|----------|-----------------------------------------------------|
|                                                                              | No          | Interval<br>Days | g<br>ai/ha      | Water<br>(L/ha) |                        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) |
| 2010/7003693<br>RCN R080440<br>USA<br>(Butler, Missouri)<br>2008<br>(LGX-47) | 2           | 7                | 101             | 190             | Forage<br>(73.8)       | 7           | 0.79             | < LOD    | 0.01     | < 0.01   | 0.80                                                |
|                                                                              |             |                  | 100<br>201      | 187             |                        |             | 0.65             | < LOD    | 0.01     | < 0.01   | 0.66                                                |
|                                                                              | 2           | 7                | 100             | 188             | Stover<br>(66.7)       | 21          | 0.44             | < LOD    | 0.02     | < 0.01   | 0.46                                                |
|                                                                              |             |                  | 101<br>201      | 189             |                        |             | 0.40             | < LOD    | 0.02     | 0.02     | 0.43                                                |
| 2010/7003693<br>RCN R080441<br>USA<br>(Ottawa, Michigan)<br>2008<br>(9135)   | 2           | 7                | 99              | 275             | Forage<br>(58.7)       | 7           | 1.41             | < LOD    | 0.02     | < 0.01   | 1.43                                                |
|                                                                              |             |                  | 100<br>199      | 286             |                        |             | 1.46             | < LOD    | 0.02     | < 0.01   | 1.48                                                |
|                                                                              | 2           | 7                | 100             | 274             | Stover<br>(70.8)       | 20          | 0.89             | < LOD    | 0.02     | < LOD    | 0.91                                                |
|                                                                              |             |                  | 99<br>199       | 270             |                        |             | 0.77             | < LOD    | 0.01     | < LOD    | 0.78                                                |
| 2010/7003693<br>RCN R080442<br>USA<br>(Cass, North Dakota)<br>2008<br>(WGF)  | 2           | 8                | 100             | 187             | Forage<br>(72.8)       | 6           | 0.77             | < LOD    | 0.03     | < 0.01   | 0.80                                                |
|                                                                              |             |                  | 100<br>200      | 187             |                        |             | 0.81             | < LOD    | 0.04     | < 0.01   | 0.85                                                |
|                                                                              | 2           | 7                | 100             | 187             | Stover<br>(77.9)       | 21          | 0.34             | < LOD    | 0.03     | < 0.01   | 0.37                                                |
|                                                                              |             |                  | 100<br>200      | 190             |                        |             | 0.35             | < LOD    | 0.04     | 0.02     | 0.40                                                |
| 2010/7003693<br>RCN R080443<br>USA<br>(Caddo, Oklahoma)                      | 2           | 8                | 99<br>98<br>197 | 131<br>175      | Forage<br>(66.0)       | 7           | 2.22             | < LOD    | 0.04     | 0.02     | 2.27                                                |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                       | Application |                  |                          |                 | Matrix<br>(%<br>moisture) | PHI<br>days | Residues (mg/kg) |          |          |          |                                                     |
|------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|---------------------------|-------------|------------------|----------|----------|----------|-----------------------------------------------------|
|                                                                              | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |                           |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) |
| 2008                                                                         |             |                  |                          |                 |                           |             | 2.37             | < LOD    | 0.04     | 0.02     | 2.42                                                |
| (753)                                                                        | 2           | 6                | 99<br><u>102</u><br>201  | 178<br>234      | Stover<br><br>(75.8)      | 23          | 0.46             | < LOD    | 0.02     | 0.02     | 0.49                                                |
|                                                                              |             |                  |                          |                 |                           |             | 0.33             | < LOD    | 0.02     | 0.02     | 0.36                                                |
| 2010/7003693<br>RCN R080444<br>USA<br>(Wharton, Texas)<br>2008<br>(84 g50)   | 2           | 6                | 99<br><u>102</u><br>201  | 129<br>137      | Forage<br><br>(61.6)      | 7           | 1.21             | < LOD    | 0.04     | 0.04     | 1.28                                                |
|                                                                              |             |                  |                          |                 |                           |             | 1.15             | < LOD    | 0.04     | 0.03     | 1.21                                                |
|                                                                              | 2           | 7                | 100<br><u>101</u><br>201 | 134<br>133      | Stover<br><br>(69.4)      | 20          | 0.71             | < LOD    | 0.03     | 0.04     | 0.77                                                |
|                                                                              |             |                  |                          |                 |                           |             | 0.79             | < LOD    | 0.03     | 0.03     | 0.84                                                |
| 2010/7003693<br>RCN R080445<br>USA<br>(Clarke, Georgia)<br>2008<br>(82 g10)  | 2           | 7                | 97<br><u>101</u><br>198  | 184<br>193      | Forage<br><br>(85.4)      | 7           | 0.70             | < LOD    | 0.04     | 0.01     | 0.75                                                |
|                                                                              |             |                  |                          |                 |                           |             | 1.18             | < LOD    | 0.06     | 0.03     | 1.26                                                |
|                                                                              | 2           | 7                | 99<br><u>101</u><br>200  | 273<br>254      | Stover<br><br>(59.4)      | 21          | 0.89             | < LOD    | 0.02     | 0.02     | 0.92                                                |
|                                                                              |             |                  |                          |                 |                           |             | 1.17             | < LOD    | 0.03     | 0.02     | 1.21                                                |
| 2010/7003693<br>RCN R080446<br>USA<br>(York, Nebraska)<br>2008<br>(7R34)     | 2           | 7                | 102<br><u>101</u><br>203 | 191<br>188      | Forage<br><br>(74.7)      | 6           | 0.38             | < LOD    | 0.04     | 0.01     | 0.43                                                |
|                                                                              |             |                  |                          |                 |                           |             | 0.51             | < LOD    | 0.04     | 0.01     | 0.56                                                |
|                                                                              | 2           | 7                | 99<br><u>100</u><br>199  | 186<br>187      | Stover<br><br>(72.1)      | 22          | 0.17             | < LOD    | < LOD    | < LOD    | 0.17                                                |
|                                                                              |             |                  |                          |                 |                           |             | 0.23             | < LOD    | < LOD    | < LOD    | 0.23                                                |
| 2010/7003693<br>RCN R080447<br>USA<br>(Pawnee, Kansas)<br>2008<br>(84 g62)   | 2           | 7                | 102<br><u>100</u><br>202 | 191<br>188      | Forage<br><br>(68.4)      | 7           | 0.43             | < LOD    | 0.02     | < 0.01   | 0.45                                                |
|                                                                              |             |                  |                          |                 |                           |             | 0.50             | < LOD    | 0.02     | < 0.01   | 0.52                                                |
|                                                                              | 2           | 7                | 99<br><u>100</u><br>199  | 186<br>187      | Stover<br><br>(68.7)      | 21          | 0.54             | < LOD    | 0.02     | < 0.01   | 0.56                                                |
|                                                                              |             |                  |                          |                 |                           |             | 0.77             | < LOD    | 0.03     | 0.01     | 0.81                                                |
| 2010/7003693<br>RCN R080448<br>USA<br>(Stafford, Kansas)<br>2008<br>(84 g62) | 2           | 7                | 99<br><u>101</u><br>200  | 185<br>189      | Forage<br><br>(75.2)      | 7           | 0.54             | < LOD    | 0.03     | < 0.01   | 0.57                                                |
|                                                                              |             |                  |                          |                 |                           |             | 0.57             | < LOD    | 0.03     | < 0.01   | 0.60                                                |
|                                                                              | 2           | 7                | 104<br><u>97</u><br>201  | 194<br>182      | Stover<br><br>(72.6)      | 21          | 0.97             | < LOD    | 0.04     | < LOD    | 1.01                                                |
|                                                                              |             |                  |                          |                 |                           |             | 0.77             | < LOD    | 0.03     | < 0.01   | 0.80                                                |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Moisture content was determined for selected control samples using an infrared moisture determination balance.

Table 117 Residues from the foliar application of fluxapyroxad to spring and winter wheat in the USA and Canada (White 2010, 2010/7003693)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                  | Application |                  |                          |                 | Matrix<br>(% moisture) | PHI<br>days                    | Residues (mg/kg) |            |          |          |          |            |             |
|---------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|------------------------|--------------------------------|------------------|------------|----------|----------|----------|------------|-------------|
|                                                                                                         | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |                        |                                | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |             |
|                                                                                                         |             |                  |                          |                 |                        |                                | Mean             | Individual |          |          |          | Individual | Mean        |
| GAP, USA                                                                                                | 2           |                  | 97-<br>100               |                 |                        | 21<br>(7 hay<br>and<br>forage) |                  |            |          |          |          |            |             |
| 2010/7003693<br>RCN R080415<br>USA<br>(Tift, Georgia)<br>2008<br>(Winter wheat<br>– Pioneer<br>26R61)   | 2           | 6                | 101<br><u>100</u><br>201 | 195<br>208      | Forage                 | 7                              | 0.17             | 0.17       | < LOD    | 0.01     | < 0.01   | 0.18       | <u>0.19</u> |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 0.17       | < LOD    | 0.02     | < 0.01   | 0.19       |             |
|                                                                                                         |             |                  |                          |                 | Hay                    | 7                              | <u>0.33</u>      | 0.64       | < LOD    | 0.04     | 0.01     | 0.69       | <u>0.35</u> |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | < 0.01     | < LOD    | < LOD    | < LOD    | < 0.01     |             |
|                                                                                                         | 2           | 7                | 99<br><u>97</u><br>196   | 215<br>217      | Straw                  | 22                             | 1.92             | 2.00       | < LOD    | 0.16     | < 0.01   | 2.17       | 2.09        |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 1.84       | < LOD    | 0.16     | < 0.01   | 2.01       |             |
| 2010/7003693<br>RCN R080416<br>USA<br>(Butler,<br>Missouri)<br>2008<br>(Winter wheat<br>– Coker 9663)   | 2           | 6                | 99<br><u>100</u><br>199  | 186<br>187      | Forage                 | 8                              | 0.92             | 0.99       | < LOD    | 0.07     | 0.01     | 1.07       | <u>0.99</u> |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 0.84       | < LOD    | 0.06     | 0.01     | 0.91       |             |
|                                                                                                         |             |                  |                          |                 | Hay                    | 8                              | <u>2.72</u>      | 2.85       | < LOD    | 0.23     | 0.04     | 3.12       | <u>2.98</u> |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 2.58       | < LOD    | 0.21     | 0.04     | 2.83       |             |
|                                                                                                         | 2           | 7                | 99<br><u>100</u><br>199  | 186<br>187      | Straw                  | 21                             | 0.99             | 0.73       | < LOD    | 0.22     | < LOD    | 0.96       | 1.25        |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 1.24       | < LOD    | 0.29     | < 0.01   | 1.54       |             |
| 2010/7003693<br>RCN R080417<br>USA<br>(Polk,<br>Nebraska)<br>2008<br>Spring wheat<br>– Kelby HRS)       | 2           | 7                | 102<br><u>100</u><br>202 | 190<br>188      | Forage                 | 8                              | 1.17             | 1.47       | < LOD    | 0.08     | 0.02     | 1.56       | <u>1.23</u> |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 0.86       | < LOD    | 0.03     | 0.01     | 0.90       |             |
|                                                                                                         |             |                  |                          |                 | Hay                    | 8                              | <u>2.86</u>      | 3.10       | < LOD    | 0.24     | 0.06     | 3.39       | <u>3.13</u> |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 2.61       | < LOD    | 0.20     | 0.05     | 2.86       |             |
|                                                                                                         | 2           | 7                | 100<br><u>99</u><br>199  | 187<br>186      | Straw                  | 21                             | 1.07             | 0.98       | < 0.01   | 0.19     | 0.02     | 1.19       | 1.29        |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 1.16       | < 0.01   | 0.21     | 0.02     | 1.39       |             |
| 2010/7003693<br>RCN R080418<br>USA<br>(Cass, North<br>Dakota)<br>2008<br>(Spring wheat<br>– Ada)        | 2           | 7                | 100<br><u>100</u><br>200 | 188<br>188      | Forage                 | 8                              | 0.60             | 0.62       | < LOD    | 0.04     | < 0.01   | 0.66       | <u>0.64</u> |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 0.57       | < LOD    | 0.03     | 0.01     | 0.61       |             |
|                                                                                                         |             |                  |                          |                 | Hay                    | 8                              | <u>1.42</u>      | 1.33       | < LOD    | 0.10     | 0.03     | 1.45       | <u>1.53</u> |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 1.51       | < LOD    | 0.09     | 0.02     | 1.61       |             |
|                                                                                                         | 2           | 7                | 101<br><u>98</u><br>199  | 188<br>183      | Straw                  | 20                             | 0.80             | 0.18       | < LOD    | 0.07     | < 0.01   | 0.25       | 0.91        |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 1.41       | < LOD    | 0.15     | < 0.01   | 1.57       |             |
| 2010/7003693<br>RCN R080419<br>USA<br>(Kent,<br>Michigan)<br>2008<br>(Winter wheat<br>– AC<br>Mountain) | 2           | 6                | 99<br><u>99</u><br>198   | 210<br>204      | Forage                 | 7                              | 0.80             | 0.75       | < LOD    | 0.01     | < LOD    | 0.76       | <u>0.81</u> |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 0.85       | < LOD    | 0.01     | < LOD    | 0.86       |             |
|                                                                                                         |             |                  |                          |                 | Hay                    | 7                              | <u>1.38</u>      | 1.35       | < LOD    | 0.04     | < 0.01   | 1.39       | <u>1.42</u> |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 1.41       | < LOD    | 0.03     | < 0.01   | 1.44       |             |
|                                                                                                         | 2           | 7                | 99<br><u>100</u><br>199  | 203<br>209      | Straw                  | 21                             | 0.75             | 0.97       | < LOD    | 0.23     | < 0.01   | 1.21       | 1.00        |
|                                                                                                         |             |                  |                          |                 |                        |                                |                  | 0.52       | < LOD    | 0.25     | < 0.01   | 0.78       |             |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                          | Application |                   |                   |                     | Matrix<br>(% moisture) | PHI<br>days | Residues (mg/kg)                     |                                      |                                      |          |          |            |      |      |      |
|-------------------------------------------------------------------------------------------------|-------------|-------------------|-------------------|---------------------|------------------------|-------------|--------------------------------------|--------------------------------------|--------------------------------------|----------|----------|------------|------|------|------|
|                                                                                                 | No          | Interval<br>Days  | g<br>ai/ha        | Water<br>(L/ha)     |                        |             | Fluxapyroxad                         |                                      | M700F002                             | M700F008 | M700F048 | Total*     |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             | Mean                                 | Individual                           |                                      |          |          | Individual | Mean |      |      |
| 2010/7003693<br>RCN R080420<br>USA<br>(Wharton,<br>Texas)<br>2008<br>(Winter wheat<br>– Fannin) | 2           | 6                 | 102<br>100<br>202 | 141<br>142          | Forage                 | 7           | 4.69                                 | 4.53                                 | < LOD                                | 0.11     | 0.01     | 4.65       | 4.80 |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      | 4.84                                 | < LOD                                | 0.10     | 0.01     | 4.95       |      |      |      |
|                                                                                                 |             |                   |                   |                     | Hay                    | 7           | 9.60                                 | 9.71                                 | < LOD                                | 0.25     | 0.02     | 9.98       | 9.93 |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      | 9.49                                 | < LOD                                | 0.22     | 0.22     | 9.88       |      |      |      |
|                                                                                                 | 2           | 8                 | 100<br>101<br>201 | 141<br>143          | Straw                  | 20          | 6.39                                 | 6.34                                 | < LOD                                | 0.02     | < LOD    | 6.36       | 6.41 |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      | 6.44                                 | < LOD                                | 0.01     | < LOD    | 6.45       |      |      |      |
| 2010/7003693<br>RCN R080421<br>USA<br>(Hall,<br>Nebraska)<br>2008<br>(Spring wheat<br>– Kelby)  | 2           | 7                 | 101<br>103<br>204 | 189<br>193          | Forage                 | 7           | 0.10                                 | (0.18,<br>0.18,<br>0.17)<br>0.18     | < LOD                                | < LOQ    | < 0.01   | 0.18       | 0.10 |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      | (< LOD,<br>< LOD,<br>< LOD)<br>< LOD | < LOD                                | < LOD    | < LOD    | < 0.01     |      |      |      |
|                                                                                                 |             |                   |                   |                     | Hay                    | 7           |                                      | 0.37                                 | 0.35                                 | < LOD    | 0.04     | 0.02       |      | 0.40 | 0.42 |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      |                                      | 0.39                                 | < LOD    | 0.04     | 0.02       |      | 0.44 |      |
|                                                                                                 | 2           | 7                 | 100<br>101<br>201 | 187<br>188          | Straw                  | 21          | 0.85                                 | 1.52                                 | < LOD                                | 0.15     | < 0.01   | 1.68       | 0.97 |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      | 0.17                                 | < LOD                                | 0.08     | < 0.01   | 0.25       |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      |                                      |                                      |          |          |            |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      |                                      |                                      |          |          |            |      |      |      |
| 2010/7003693<br>RCN R080422<br>USA<br>(York,<br>Nebraska)<br>2008<br>(Spring wheat<br>– Kelby)  | 2           | 8                 | 102<br>102<br>204 | 192<br>191          | Forage                 | 0           | 6.32                                 | (5.41,<br>6.71,<br>6.25)<br>6.12     | < LOD                                | 0.04     | < 0.01   | 6.16       | 6.36 |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      | (5.77,<br>6.87,<br>6.92)<br>6.52     | < LOD                                | 0.04     | < 0.01   | 6.56       |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      |                                      |                                      |          |          |            |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      |                                      |                                      |          |          |            |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        | 7           | 0.19                                 | 0.19                                 | < LOD                                | 0.02     | < 0.01   | 0.21       | 0.21 |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      | 0.18                                 | < LOD                                | 0.02     | < 0.01   | 0.20       |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        | 9           | 0.07                                 | 0.06                                 | < LOD                                | < 0.01   | < 0.01   | 0.06       | 0.08 |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      | 0.08                                 | < LOD                                | 0.01     | < 0.01   | 0.09       |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        | Hay         | 0                                    | 24.9                                 | (23.70,<br>24.95,<br>23.76)<br>24.14 | < LOD    | 0.32     | 0.04       | 24.5 | 25.2 |      |
|                                                                                                 |             |                   |                   |                     |                        |             | (22.11,<br>28.55,<br>26.13)<br>25.60 |                                      | < LOD                                | 0.28     | 0.04     | 25.9       |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      |                                      |                                      |          |          |            |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      |                                      |                                      |          |          |            |      |      |      |
|                                                                                                 |             | 7                 | 0.51              | 0.46                | < LOD                  | 0.04        | 0.02                                 | 0.51                                 | 0.56                                 |          |          |            |      |      |      |
|                                                                                                 |             |                   |                   | 0.55                | < LOD                  | 0.04        | 0.02                                 | 0.60                                 |                                      |          |          |            |      |      |      |
|                                                                                                 |             | 9                 | 0.23              | 0.20                | < LOD                  | 0.02        | 0.02                                 | 0.02                                 | 0.23                                 | 0.26     |          |            |      |      |      |
|                                                                                                 |             |                   |                   | 0.25                | < LOD                  | 0.03        | 0.02                                 | 0.02                                 | 0.29                                 |          |          |            |      |      |      |
| 2                                                                                               | 7           | 100<br>101<br>201 | 187<br>188        | Straw<br><br>(36.2) | 7                      | 0.96        | 0.97                                 | < LOD                                | 0.13                                 | 0.01     | 1.12     | 1.12       |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      | 0.95                                 | < LOD                                | 0.14     | 0.01     |            | 1.11 |      |      |
|                                                                                                 |             |                   |                   |                     | 14                     | 1.87        | 1.92                                 | < LOD                                | 0.14                                 | 0.02     | 2.08     | 2.03       |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      | 1.82                                 | < LOD                                | 0.14     | 0.02     |            | 1.98 |      |      |
|                                                                                                 |             |                   |                   |                     | 21                     | 2.56        | 2.60                                 | < LOD                                | 0.22                                 | 0.02     | 2.84     | 2.79       |      |      |      |
|                                                                                                 |             |                   |                   |                     |                        |             |                                      |                                      | 2.51                                 | < LOD    | 0.21     |            | 0.02 | 2.74 |      |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                                          | Application                                                                                                      |                  |                   |                   | Matrix<br>(%<br>moisture) | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |        |        |      |      |      |
|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------|-------------------|-------------------|---------------------------|-------------|------------------|------------|----------|----------|----------|------------|--------|--------|------|------|------|
|                                                                                                                                 | No                                                                                                               | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha)   |                           |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |        |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             | Mean             | Individual |          |          |          | Individual | Mean   |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            |          |          |          |            |        |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   | 28                        | 1.96        | 1.88             | < LOD      | 0.22     | < 0.01   | 2.11     | 2.20       |        |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             | 2.04             | < LOD      | 0.24     | < LOD    | 2.29     |            |        |        |      |      |      |
| 2010/7003693<br>RCN R080423<br>Canada<br>(RM of<br>Vanscoy,<br>Saskatchewan)<br>2008<br>(Spring wheat<br>– Lillian)             | 2                                                                                                                | 7                | 102<br>101<br>203 | 205<br>203        | Forage                    | 7           | 0.56             | 0.53       | < LOD    | 0.04     | < 0.01   | 0.57       | 0.60   |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  | 0.58       | < LOD    | 0.04     | < 0.01   | 0.62       |        |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            | Hay      | 7        | 2.24     | 2.17       | < LOD  | 0.09   | 0.01 | 2.27 | 2.34 |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            |          |          | 2.30     | < LOD      | 0.10   | 0.02   | 2.41 |      |      |
|                                                                                                                                 | 2                                                                                                                | 7                | 100<br>100<br>200 | 201<br>201        | Straw                     | 20          | 3.40             | 3.33       | < LOD    | 0.18     | < LOD    | 3.52       | 3.59   |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            |          | 3.46     | < LOD    | 0.18       |        | < LOD  | 3.65 |      |      |
| 2010/7003693<br>RCN R080424<br>USA<br>(Stutsman,<br>North Dakota)<br>2008<br>(Spring wheat<br>– Alsen)                          | 2                                                                                                                | 7                | 99<br>105<br>204  | 185<br>197        | Forage                    | 7           | 0.13             | 0.11       | < LOD    | 0.01     | < 0.01   | 0.12       | 0.15   |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  | 0.15       | < LOD    | 0.02     | < 0.01   | 0.17       |        |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            | Hay      | 7        | 0.27     | 0.24       | < LOD  | 0.02   | 0.02 | 0.27 | 0.30 |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            |          |          |          | 0.29       | < LOD  | 0.02   | 0.02 | 0.32 |      |
|                                                                                                                                 | 2                                                                                                                | 7                | 102<br>101<br>203 | 190<br>189        | Straw                     | 20          | 0.78             | 0.74       | < LOD    | 0.26     | < 0.01   | 1.01       | 1.05   |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            |          | 0.81     | < LOD    | 0.27       |        | < 0.01 | 1.09 |      |      |
|                                                                                                                                 | 2010/7003693<br>RCN R080438<br>USA<br>(Stutsman,<br>North Dakota)<br>2008<br>(Winter wheat<br>- Jerry)           | 2                | 7                 | 100<br>101<br>201 | 187<br>188                | Forage      | 8                | 0.84       | 0.85     | < LOD    | 0.06     | < 0.01     | 0.91   | 0.89   |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            | 0.82     | < LOD    | 0.05     | < 0.01     | 0.87   |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            | Hay      | 8        | 2.58     | 2.64       | < LOD  | 0.14   | 0.02 | 2.80 | 2.74 |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            |          |          | 2.52     | < LOD      | 0.14   | 0.02   | 2.68 |      |      |
| 2                                                                                                                               |                                                                                                                  | 8                | 100<br>102<br>202 | 187<br>191        | Straw                     | 20          | 0.56             | 0.58       | < LOD    | 0.16     | < 0.01   | 0.75       | 0.72   |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            |          | 0.54     | < LOD    | 0.13       |        | < 0.01 | 0.68 |      |      |
| 2010/7003693<br>RCN R080425<br>Canada<br>(RM of<br>Portage la<br>Prairie,<br>Manitoba)<br>2008<br>(Spring wheat<br>– AC Domain) |                                                                                                                  | 2                | 7                 | 102<br>93<br>195  | 285<br>175                | Forage      | 7                | 0.32       | 0.34     | < LOD    | 0.04     | < 0.01     | 0.38   | 0.36   |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            | 0.30     | < LOD    | 0.04     | < 0.01     | 0.34   |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            | Hay      | 7        | 2.12     | 2.19       | < 0.01 | 0.20   | 0.05 | 2.44 | 2.35 |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            |          |          | 2.04     | < LOD      | 0.17   | 0.06   | 2.26 |      |      |
|                                                                                                                                 | 2                                                                                                                | 7                | 100<br>97<br>197  | 188<br>184        | Straw                     | 21          | 0.97             | 1.00       | < LOD    | 0.22     | < 0.01   | 1.23       | 1.21   |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            |          | 0.94     | < LOD    | 0.22       |        | 0.01   | 1.18 |      |      |
|                                                                                                                                 | 2010/7003693<br>RCN R080426<br>Canada<br>(MD of Taber,<br>Alberta)<br>2008<br>(Spring wheat<br>– AC<br>MaKenzie) | 2                | 7                 | 104<br>98<br>202  | 146<br>141                | Forage      | 7                | 1.13       | 1.32     | < LOD    | 0.06     | < 0.01     | 1.38   | 1.19   |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            | 0.94     | < LOD    | 0.05     | < 0.01     | 0.99   |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            | Hay      | 7        | 2.74     | 2.99       | < LOD  | 0.13   | 0.02 | 3.14 | 2.88 |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            |          |          | 2.49     | < LOD      | 0.11   | 0.02   | 2.61 |      |      |
| 2                                                                                                                               |                                                                                                                  | 7                | 105<br>100<br>205 | 149<br>141        | Straw                     | 27          | 2.63             | 2.85       | < LOD    | 0.06     | < LOD    | 2.91       | 2.70   |        |      |      |      |
|                                                                                                                                 |                                                                                                                  |                  |                   |                   |                           |             |                  |            |          | 2.41     | < LOD    | 0.07       |        | < LOD  | 2.48 |      |      |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                             | Application |                  |                          |                 | Matrix<br>(%<br>moisture) | PHI<br>days | Residues (mg/kg) |                                  |          |          |          |            |      |
|----------------------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-----------------|---------------------------|-------------|------------------|----------------------------------|----------|----------|----------|------------|------|
|                                                                                                    | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha) |                           |             | Fluxapyroxad     |                                  | M700F002 | M700F008 | M700F048 | Total*     |      |
|                                                                                                    |             |                  |                          |                 |                           |             | Mean             | Individual                       |          |          |          | Individual | Mean |
| 2010/7003693<br>RCN R080427<br>USA<br>(Caddo,<br>Oklahoma)<br>2008<br>(Winter wheat<br>– Jagger)   | 2           | 6                | 98<br><u>100</u><br>198  | 131<br>131      | Forage                    | 8           | 1.36             | 1.28                             | < LOD    | 0.03     | < 0.01   | 1.31       |      |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 1.44                             | < LOD    | 0.04     | < 0.01   | 1.48       |      |
|                                                                                                    |             |                  |                          |                 | Hay                       | 8           | <u>2.09</u>      | 1.95                             | < LOD    | 0.07     | 0.02     | 2.03       |      |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 2.23                             | < LOD    | 0.10     | 0.02     | 2.34       |      |
|                                                                                                    | 2           | 8                | 97<br><u>97</u><br>194   | 133<br>135      | Straw                     | 25          | 1.84             | 1.80                             | < LOD    | 0.12     | 0.02     | 1.93       | 1.97 |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 1.87                             | < LOD    | 0.12     | 0.01     | 2.00       |      |
| 2010/7003693<br>RCN R080428<br>USA<br>(Pawnee,<br>Kansas)<br>2008<br>(Winter wheat<br>– Jagger)    | 2           | 8                | 98<br><u>101</u><br>199  | 185<br>190      | Forage                    | 7           | 0.25             | 0.24                             | < LOD    | < 0.01   | < 0.01   | 0.24       |      |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 0.25                             | < LOD    | < 0.01   | < 0.01   | 0.25       |      |
|                                                                                                    |             |                  |                          |                 | Hay                       | 7           | <u>0.51</u>      | 0.55                             | < LOD    | 0.03     | < 0.01   | 0.58       |      |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 0.47                             | < LOD    | 0.03     | < 0.01   | 0.50       |      |
|                                                                                                    | 2           | 7                | 102<br><u>102</u><br>204 | 192<br>192      | Straw                     | 21          | 5.14             | 4.88                             | < LOD    | 0.24     | 0.02     | 5.14       | 5.40 |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 5.39                             | < LOD    | 0.25     | 0.02     | 5.66       |      |
| 2010/7003693<br>RCN R080429<br>USA<br>(Barton,<br>Kansas)<br>2008<br>(Winter wheat<br>– Jagger)    | 2           | 7                | 100<br><u>102</u><br>202 | 187<br>190      | Forage                    | 7           | 9.20             | 8.95                             | < LOD    | 0.06     | 0.01     | 9.02       |      |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 9.44                             | < LOD    | 0.07     | 0.01     | 9.52       |      |
|                                                                                                    |             |                  |                          |                 | Hay                       | 7           | <u>5.75</u>      | 5.80                             | < LOD    | 0.14     | 0.02     | 5.96       |      |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 5.70                             | < LOD    | 0.14     | 0.02     | 5.86       |      |
|                                                                                                    | 2           | 7                | 100<br><u>100</u><br>200 | 188<br>187      | Straw                     | 21          | 7.29             | 6.26                             | < LOD    | 0.62     | 0.02     | 6.91       | 8.00 |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 8.32                             | < LOD    | 0.72     | 0.02     | 9.08       |      |
| 2010/7003693<br>RCN R080430<br>USA<br>(Washita,<br>Oklahoma)<br>2008<br>(Winter wheat<br>– Jagger) | 2           | 7                | 103<br><u>101</u><br>204 | 138<br>135      | Forage                    | 7           | 3.51             | 3.51                             | < LOD    | 0.07     | 0.02     | 3.59       |      |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 3.51                             | < LOD    | 0.11     | < LOD    | 3.62       |      |
|                                                                                                    |             |                  |                          |                 | Hay                       | 7           | <u>4.80</u>      | 4.94                             | < LOD    | 0.18     | 0.03     | 5.15       |      |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 4.65                             | < LOD    | 0.16     | 0.02     | 4.83       |      |
|                                                                                                    | 2           | 8                | 101<br><u>102</u><br>203 | 137<br>142      | Straw                     | 21          | 4.61             | 4.67                             | < LOD    | 0.17     | < 0.01   | 4.85       | 4.79 |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 4.55                             | < LOD    | 0.17     | < 0.01   | 4.73       |      |
| 2010/7003693<br>RCN R080431<br>USA<br>(Payette,<br>Idaho)<br>2008<br>(Spring wheat<br>– Alturas)   | 2           | 7                | 100<br><u>101</u><br>201 | 234<br>235      | Forage                    | 7           | 0.83             | (1.03,<br>0.97,<br>0.95)<br>0.98 | < LOD    | 0.02     | < LOD    | 1.00       |      |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | (0.11,<br>0.94,<br>0.97)<br>0.67 | < LOD    | 0.03     | < LOD    | 0.70       |      |
|                                                                                                    |             |                  |                          |                 | Hay                       | 7           | <u>2.64</u>      | 2.66                             | < LOD    | 0.09     | 0.02     | 2.76       |      |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 2.61                             | < LOD    | 0.09     | 0.02     | 2.71       |      |
|                                                                                                    | 2           | 7                | 101<br><u>100</u><br>201 | 234<br>234      | Straw                     | 21          | 1.08             | 1.19                             | < LOD    | 0.01     | < LOD    | 1.20       | 1.09 |
|                                                                                                    |             |                  |                          |                 |                           |             |                  | 0.97                             | < LOD    | 0.01     | < LOD    | 0.98       |      |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                                  | Application |                   |                   |                 | Matrix<br>(% moisture)                                                                                            | PHI<br>days                | Residues (mg/kg) |                                  |                            |                         |                            |            |       |       |      |      |      |      |
|-------------------------------------------------------------------------------------------------------------------------|-------------|-------------------|-------------------|-----------------|-------------------------------------------------------------------------------------------------------------------|----------------------------|------------------|----------------------------------|----------------------------|-------------------------|----------------------------|------------|-------|-------|------|------|------|------|
|                                                                                                                         | No          | Interval<br>Days  | g<br>ai/ha        | Water<br>(L/ha) |                                                                                                                   |                            | Fluxapyroxad     |                                  | M700F002                   | M700F008                | M700F048                   | Total*     |       |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 |                                                                                                                   |                            | Mean             | Individual                       |                            |                         |                            | Individual | Mean  |       |      |      |      |      |
| 2010/7003693<br>RCN R080432<br>Canada<br>(RM of Laird,<br>Saskatchewan)<br>2008<br>(Spring wheat<br>– AC Barrie)        | 2           | 7                 | 100<br>100<br>200 | 202<br>201      | Forage                                                                                                            | 7                          | 0.98             | 1.04                             | < LOD                      | 0.02                    | < LOD                      | 1.06       | 1.00  |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | (81.9)                                                                                                            | 0.92                       |                  | < LOD                            | 0.02                       | < LOD                   | 0.94                       |            |       |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | Hay                                                                                                               | 7                          | 3.37             | 3.16                             | < LOD                      | 0.12                    | < 0.01                     | 3.28       | 3.51  |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | (15.1)                                                                                                            | 3.57                       |                  | < LOD                            | 0.14                       | 0.01                    | 3.73                       |            |       |       |      |      |      |      |
|                                                                                                                         | 2           | 8                 | 99<br>100<br>199  | 199<br>200      | Straw                                                                                                             | 20                         | 2.20             | 2.15                             | < LOD                      | 1.06                    | < LOD                      | 3.25       | 3.21  |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | (38.9)                                                                                                            | 2.25                       |                  | < LOD                            | 0.88                       | < LOD                   | 3.17                       |            |       |       |      |      |      |      |
| 2010/7003693<br>RCN R080433<br>Canada<br>(RM of Laird,<br>Saskatchewan)<br>2008<br>(Spring wheat<br>- Lillian)          | 2           | 7                 | 100<br>100<br>200 | 202<br>201      | Forage                                                                                                            | 7                          | 0.91             | (0.81,<br>1.10,<br>0.88)<br>0.93 | < LOD                      | 0.04                    | < 0.01                     | 0.97       | 0.95  |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | (0.80,<br>0.95,<br>0.93)<br>0.89                                                                                  | < LOD                      |                  | 0.04                             | < 0.01                     | 0.93                    |                            |            |       |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | Hay                                                                                                               | 7                          | 3.29             | 3.47                             | < LOD                      | 0.12                    | 0.01                       | 3.60       | 3.41  |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | (21.4)                                                                                                            | 3.10                       |                  | < LOD                            | 0.12                       | 0.01                    | 3.23                       |            |       |       |      |      |      |      |
|                                                                                                                         | 2           | 8                 | 99<br>99<br>198   | 200<br>200      | Straw                                                                                                             | 20                         | 3.08             | (3.17,<br>2.95)<br>3.06          | (< LOD,<br>< LOD)<br>< LOD | (1.02,<br>0.86)<br>0.94 | (< LOD,<br>< LOD)<br>< LOD | 4.04       | 4.13  |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | (3.07,<br>3.10)<br>3.09                                                                                           | (< LOD,<br>< LOD)<br>< LOD |                  | (1.18,<br>0.98)<br>1.08          | (< LOD,<br>< LOD)<br>< LOD | 4.21                    |                            |            |       |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | 2010/7003693<br>RCN R080434<br>Canada<br>(RM of<br>Whitewater,<br>Manitoba)<br>2008<br>(Spring wheat<br>– Superb) | 2                          | 7                | 102<br>104<br>206                | 164<br>168                 | Forage                  | 8                          | 0.27       | 0.28  | < LOD | 0.04 | 0.01 | 0.33 | 0.32 |
|                                                                                                                         |             |                   |                   |                 |                                                                                                                   |                            |                  |                                  |                            | (82.6)                  | 0.25                       |            | < LOD | 0.04  | 0.02 | 0.30 |      |      |
| 2                                                                                                                       | 7           | 101<br>101<br>202 | 162<br>162        | Hay             | 8                                                                                                                 | 7.46                       | 7.60             | < LOD                            | 0.07                       | 0.04                    | 7.70                       | 7.56       |       |       |      |      |      |      |
|                                                                                                                         |             |                   |                   | (46.8,<br>33.1) | 7.31                                                                                                              |                            | < LOD            | 0.07                             | 0.04                       | 7.41                    |                            |            |       |       |      |      |      |      |
| 2010/7003693<br>RCN R080435<br>Canada<br>(RM of<br>Rosthern,<br>Saskatchewan)<br>2008<br>(Spring wheat<br>– AC Lillian) | 2           | 8                 | 102<br>99<br>201  | 203<br>198      | Forage                                                                                                            | 7                          | 0.54             | 0.57                             | < LOD                      | 0.03                    | < 0.01                     | 0.60       | 0.57  |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | (83.1)                                                                                                            | 0.50                       |                  | < LOD                            | 0.03                       | < 0.01                  | 0.53                       |            |       |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | Hay                                                                                                               | 7                          | 2.87             | 2.98                             | < LOD                      | 0.09                    | 0.02                       | 3.08       | 2.97  |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | (23.0)                                                                                                            | 2.76                       |                  | < LOD                            | 0.09                       | 0.02                    | 2.86                       |            |       |       |      |      |      |      |
|                                                                                                                         | 2           | 6                 | 101<br>102<br>203 | 202<br>204      | Straw                                                                                                             | 21                         | 2.29             | 2.50                             | < LOD                      | 0.56                    | < LOD                      | 3.08       | 2.87  |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | (44.4)                                                                                                            | 2.08                       |                  | < LOD                            | 0.55                       | < LOD                   | 2.65                       |            |       |       |      |      |      |      |
| 2010/7003693<br>RCN R080436<br>Canada<br>(RM of<br>Rosthern,<br>Saskatchewan)<br>2008<br>(Spring wheat<br>– AC Barrie)  | 2           | 8                 | 102<br>100<br>202 | 203<br>200      | Forage                                                                                                            | 7                          | 0.50             | 0.49                             | < LOD                      | 0.02                    | < 0.01                     | 0.51       | 0.52  |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | (82.6)                                                                                                            | 0.51                       |                  | < 0.01                           | 0.02                       | < 0.01                  | 0.53                       |            |       |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | Hay                                                                                                               | 7                          | 2.42             | 2.38                             | < LOD                      | 0.07                    | 0.01                       | 2.46       | 2.50  |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 | (20.5)                                                                                                            | 2.46                       |                  | < LOD                            | 0.06                       | 0.01                    | 2.53                       |            |       |       |      |      |      |      |
|                                                                                                                         | 2           | 6                 | 99<br>103<br>202  | 197<br>207      | Straw                                                                                                             |                            |                  | -                                | -                          | -                       | -                          |            |       |       |      |      |      |      |
|                                                                                                                         |             |                   |                   |                 |                                                                                                                   |                            |                  | -                                | -                          | -                       | -                          |            |       |       |      |      |      |      |
| 2010/7003693<br>RCN R080437<br>Canada                                                                                   | 2           | 7                 | 99<br>96<br>195   | 201<br>195      | Forage                                                                                                            | 6                          | 3.25             | (2.95,<br>3.67,<br>3.28)         | < LOD                      | 0.18                    | 0.03                       | 3.51       | 3.45  |       |      |      |      |      |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                          | Application |                  |                   |                 | Matrix<br>(%<br>moisture)          | PHI<br>days                     | Residues (mg/kg) |                                  |                            |                                                                |                           |            |      |       |      |       |      |      |
|-----------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|------------------------------------|---------------------------------|------------------|----------------------------------|----------------------------|----------------------------------------------------------------|---------------------------|------------|------|-------|------|-------|------|------|
|                                                                                                                 | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                                    |                                 | Fluxapyroxad     |                                  | M700F002                   | M700F008                                                       | M700F048                  | Total*     |      |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 | Mean             | Individual                       |                            |                                                                |                           | Individual | Mean |       |      |       |      |      |
| (RM of<br>Dundurn,<br>Saskatchewan)<br>2008<br>(Spring wheat<br>– Lillian)                                      |             |                  |                   |                 |                                    |                                 |                  | 3.30                             |                            |                                                                |                           |            |      |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 |                  | (2.61,<br>3.35,<br>3.62)<br>3.19 | < LOD                      | 0.16                                                           | 0.03                      | 3.38       |      |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 | Hay<br>(22.2)                      | 6                               |                  | 6.52                             | < LOD                      | 0.28                                                           | 0.03                      | 6.83       |      |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 | 6.68             | 6.85                             | < LOD                      | 0.31                                                           | 0.03                      | 7.19       | 7.01 |       |      |       |      |      |
|                                                                                                                 | 2           | 7                | 100<br>100<br>200 | 202<br>202      | Straw<br>(35.1)                    | 21                              | 6.53             | 7.00                             | < LOD                      | 0.49                                                           | < LOD                     | 7.51       | 7.03 |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 |                  | 6.06                             | < LOD                      | 0.46                                                           | < LOD                     | 6.54       |      |       |      |       |      |      |
| 2010/7003693<br>RCN R080439<br>Canada<br>(Strathcona,<br>Alberta)<br>2008<br>(Spring wheat<br>– AC<br>Foremost) | 2           | 8                | 100<br>99<br>199  | 192<br>189      | Forage<br>(80.9;<br>0 day<br>77.7) | 0                               | 4.61             | (3.05,<br>8.27)<br>5.66          | < LOD                      | < LOD                                                          | 0.01                      | 5.67       | 4.67 |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 |                  |                                  | 3.56                       | < LOD                                                          | 0.10                      | 0.01       |      | 3.67  |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 |                  | 7                                | 3.64                       | 3.53                                                           | < LOD                     | 0.12       |      | 0.02  | 3.66 | 3.71  |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    | 3.74                            | < LOD            |                                  |                            | < LOD                                                          | 0.02                      | 3.75       |      |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    | 10                              | 1.43             | 1.32                             | < LOD                      | 0.06                                                           | 0.02                      | 1.39       | 1.51 |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 |                  | 1.54                             | < LOD                      | 0.08                                                           | 0.02                      | 1.63       |      |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    | Hay<br>(31.5,<br>36.8,<br>41.5) | 5                | 8.61                             | 8.39                       | < LOD                                                          | 0.23                      | < 0.01     | 8.63 | 8.85  |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 |                  |                                  | 8.83                       | < LOD                                                          | 0.23                      | < 0.01     | 9.07 |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 | 7                | 5.97                             | 5.93                       | < LOD                                                          | 0.19                      | < 0.01     | 6.13 | 6.17  |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 | 6.01                               |                                 |                  |                                  | < LOD                      | 0.19                                                           | < 0.01                    | 6.21       |      |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 | 10                                 |                                 | 3.57             | 3.55                             | < LOD                      | 0.11                                                           | < 0.01                    | 3.66       | 3.72 |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 |                  | (3.98,<br>3.20)<br>3.59          | (< LOD,<br>< LOD)<br>< LOD | (0.16,<br>0.15)<br>0.16                                        | (0.02,<br>< 0.01)<br>0.01 | 3.77       |      |       |      |       |      |      |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 |                  |                                  |                            | Straw<br>(46.9,<br>18.7;<br>7 day-<br>19.4<br>20 day-<br>14.3) | 7                         | 4.11       | 3.99 | < LOD | 0.26 | < LOD | 4.26 | 4.37 |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 |                  |                                  |                            |                                                                |                           |            | 4.23 | < LOD | 0.24 | < LOD | 4.48 |      |
|                                                                                                                 |             |                  |                   |                 |                                    |                                 |                  |                                  |                            |                                                                | 13                        | 4.98       | 5.07 | < LOD | 0.25 | < LOD | 5.33 | 5.25 |
|                                                                                                                 | 4.88        | < LOD            | 0.27              | < 0.01          |                                    |                                 |                  |                                  |                            |                                                                |                           |            | 5.16 |       |      |       |      |      |
| 20                                                                                                              | 7.16        | 7.43             | < LOD             | 0.38            |                                    |                                 |                  |                                  |                            |                                                                | < LOD                     | 7.83       | 7.61 |       |      |       |      |      |
|                                                                                                                 |             | 6.89             | < LOD             | 0.48            |                                    |                                 |                  |                                  |                            |                                                                | < LOD                     | 7.39       |      |       |      |       |      |      |
| 27                                                                                                              | 5.69        | 5.66             | < LOD             | 0.32            |                                    |                                 |                  |                                  |                            |                                                                | < 0.01                    | 5.99       | 6.01 |       |      |       |      |      |
|                                                                                                                 |             | 5.71             | < LOD             | 0.30            |                                    |                                 |                  |                                  |                            |                                                                | < LOD                     | 6.02       |      |       |      |       |      |      |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.003125 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Moisture content was determined for selected samples using an infrared moisture determination balance.

Moisture content is for untreated controls unless indicated otherwise.

Table 118 Residues from the foliar application of fluxapyroxad to wheat and triticale in Europe (Erdmann 2009, 2009/1012126 and Erdmann 2009, 2007/1050092)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                             | Application |                  |                   |                 | Matrix                       | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|--------------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|------------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                                                                    | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                              |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| GAP                                                                                                                | 2           | 125              |                   |                 |                              | -           |                  |          |          |          |        |
| 2009/1012126<br>L080052<br>Germany (N)<br>(Gerolsheim, Rheinland-<br>Pfalz Vorderpfalz)<br>2008<br>(Wheat - Tommi) | 2           | 22               | 128<br>123<br>251 | 204<br>196      | Whole plant no roots         | 0           | 1.85             | < 0.01   | 0.03     | < 0.01   | 1.88   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 34          | 0.99             | < 0.01   | 0.05     | 0.01     | 1.05   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 43          | 1.73             | < 0.01   | 0.10     | 0.02     | 1.84   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 49          | 1.80             | < 0.01   | 0.13     | 0.03     | 1.96   |
| 2009/1012126<br>L080053<br>Germany (N)<br>(Brunne Brandenburg)<br>2008<br>(Wheat - Triso)                          | 2           | 25               | 120<br>126<br>246 | 191<br>202      | Whole plant no roots         | 0           | 3.48             | < 0.01   | 0.03     | < 0.01   | 3.51   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 34          | 0.60             | < 0.01   | 0.04     | < 0.01   | 0.64   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 34          | 4.91             | < 0.01   | 0.14     | < 0.01   | 5.05   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 41          | 6.05             | < 0.01   | 0.17     | 0.02     | 6.24   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 49          | 5.25             | < 0.01   | 0.15     | 0.01     | 5.41   |
| 2009/1012126<br>L080054<br>UK<br>(Manningtree, Essex)<br>2008<br>(Wheat - Cordiale)                                | 2           | 25               | 135<br>129<br>264 | 216<br>206      | Whole plant no roots         | 0           | 2.03             | < 0.01   | 0.02     | < 0.01   | 2.05   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 36          | 0.36             | < 0.01   | 0.03     | < 0.01   | 0.39   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 36          | 1.79             | < 0.01   | 0.08     | < 0.01   | 1.87   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 43          | 0.43             | < 0.01   | 0.03     | < 0.01   | 0.46   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 43          | 2.45             | < 0.01   | 0.10     | 0.01     | 2.56   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 49          | 2.78             | < 0.01   | 0.13     | 0.01     | 2.92   |
| 2009/1012126<br>L080055<br>France (N)<br>(Fondettes Indre et Loire)<br>2008<br>(Triticale - Tremplein)             | 2           | 13               | 125<br>127<br>252 | 200<br>203      | Whole plant no roots         | 0           | 2.48             | < 0.01   | 0.01     | < 0.01   | 2.49   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 35          | 0.17             | < 0.01   | 0.02     | < 0.01   | 0.19   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 35          | 0.44             | < 0.01   | 0.02     | < 0.01   | 0.46   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 42          | 0.22             | < 0.01   | 0.03     | < 0.01   | 0.25   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 42          | 0.56             | < 0.01   | 0.03     | < 0.01   | 0.59   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 48          | 0.24             | < 0.01   | 0.03     | < 0.01   | 0.27   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 48          | 0.57             | < 0.01   | 0.04     | < 0.01   | 0.61   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 60          | 1.55             | < 0.01   | 0.07     | < 0.01   | 1.62   |
| 2009/1012126<br>L080056<br>France (S)<br>(Lautignac Gers/ Midi<br>Pyrenees)<br>2008<br>(Triticale - Triskell)      | 2           | 20               | 117<br>125<br>242 | 187<br>200      | Whole plant no roots         | 0           | 2.15             | < 0.01   | < 0.01   | < 0.01   | 2.15   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 35          | 0.22             | < 0.01   | 0.03     | < 0.01   | 0.25   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 35          | 0.21             | < 0.01   | 0.01     | < 0.01   | 0.22   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 42          | 0.29             | < 0.01   | 0.04     | < 0.01   | 0.33   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 42          | 0.21             | < 0.01   | 0.01     | < 0.01   | 0.22   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 49          | 0.49             | < 0.01   | 0.04     | < 0.01   | 0.53   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                             | Application |                  |                   |                 | Matrix                       | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|--------------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|------------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                                                                    | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                              |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2009/1012126<br>L080057<br>France (S)<br>(Lorignac, Charente-<br>Maritime)<br>2008<br>(Wheat - Apache)             | 2           | 13               | 129<br>121<br>250 | 206<br>193      | Whole plant no roots         | 0           | 3.28             | < 0.01   | 0.06     | < 0.01   | 3.34   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 35          | 0.09             | < 0.01   | 0.01     | < 0.01   | 0.10   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 35          | 0.20             | < 0.01   | 0.04     | < 0.01   | 0.24   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 41          | 0.08             | < 0.01   | 0.01     | < 0.01   | 0.09   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 41          | 0.21             | < 0.01   | 0.04     | < 0.01   | 0.25   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 49          | 0.46             | < 0.01   | 0.09     | 0.01     | 0.56   |
| 2009/1012126<br>L080058<br>Italy (S)<br>(Cusago Milano/<br>Lombardia)<br>2008<br>(Wheat - Isengrain)               | 2           | 22               | 134<br>131<br>265 | 215<br>209      | Whole plant no roots         | 0           | 1.85             | < 0.01   | 0.01     | < 0.01   | 1.86   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 36          | 0.38             | < 0.01   | 0.04     | < 0.01   | 0.42   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 42          | 0.45             | < 0.01   | 0.06     | < 0.01   | 0.51   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 49          | 0.55             | < 0.01   | 0.06     | < 0.01   | 0.61   |
| 2009/1012126<br>L080059<br>Spain (S)<br>(Utrera, Andalucia,<br>Sevilla)<br>2008<br>(Wheat – Califa sur)            | 2           | 24               | 129<br>128<br>257 | 207<br>204      | Whole plant no roots         | 0           | 3.10             | < 0.01   | < 0.01   | < 0.01   | 3.10   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 34          | 0.12             | < 0.01   | 0.01     | < 0.01   | 0.13   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 34          | 0.61             | < 0.01   | 0.03     | < 0.01   | 0.64   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 42          | 0.66             | < 0.01   | 0.04     | < 0.01   | 0.70   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 49          | 1.00             | < 0.01   | 0.08     | < 0.01   | 1.08   |
| 2007/1050092<br>L070253<br>Germany (N)<br>(Gerolsheim, Rheinland-<br>Pfalz Vorderpfalz)<br>2007<br>(Wheat - Tommi) | 2           | 8                | 128<br>125<br>253 | 204<br>200      | Whole plant no roots         | 0           | 2.73             | < 0.01   | 0.05     | < 0.01   | 2.78   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 36          | < 0.01           | < 0.01   | < 0.01   | < 0.01   | < 0.01 |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 42          | 1.02             | < 0.01   | 0.10     | < 0.01   | 1.12   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 48          | 0.86             | < 0.01   | 0.08     | < 0.01   | 0.94   |
| 2007/1050092<br>L070254<br>Germany (N)<br>(Brunne Brandenburg)<br>2007<br>(Wheat - Brilliant)                      | 2           | 18               | 120<br>124<br>250 | 192<br>198      | Whole plant no roots         | 0           | 2.26             | < 0.01   | 0.02     | < 0.01   | 2.28   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 36          | 0.50             | < 0.01   | 0.07     | < 0.01   | 0.57   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 41          | 0.80             | < 0.01   | 0.09     | < 0.01   | 0.89   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 49          | 1.00             | < 0.01   | 0.08     | < 0.01   | 1.08   |
| 2007/1050092<br>L070255<br>UK<br>(Manningtree, Essex)<br>2007<br>(Wheat - Claire)                                  | 2           | 20               | 130<br>123<br>253 | 208<br>196      | Whole plant no roots         | 0           | 1.72             | < 0.01   | 0.02     | < 0.01   | 1.74   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 35          | 0.13             | < 0.01   | 0.02     | < 0.01   | 0.15   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 35          | 0.23             | < 0.01   | 0.03     | < 0.01   | 0.26   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 42          | 0.15             | < 0.01   | 0.02     | < 0.01   | 0.17   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 42          | 0.17             | < 0.01   | 0.03     | < 0.01   | 0.20   |
|                                                                                                                    |             |                  |                   |                 | Ears                         | 49          | 0.24             | < 0.01   | 0.03     | < 0.01   | 0.27   |
|                                                                                                                    |             |                  |                   |                 | Rest of plants without roots | 49          | 0.27             | < 0.01   | 0.06     | < 0.01   | 0.33   |
|                                                                                                                    |             |                  |                   |                 | Straw                        | 59          | 0.44             | < 0.01   | 0.07     | < 0.01   | 0.51   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                               | Application |                  |                   |                 | Matrix                       | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|----------------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|------------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                                                                      | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                              |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2007/1050092<br>L070256<br>France (N)<br>(Kleingoeft, Alsace)<br>2007<br>(Triticale - Talentro)                      | 2           | 14               | 129<br>127<br>256 | 206<br>203      | Whole plant no roots         | 0           | 2.78             | < 0.01   | 0.03     | < 0.01   | 2.81   |
|                                                                                                                      |             |                  |                   |                 | Ears                         | 36          | 0.25             | < 0.01   | 0.04     | < 0.01   | 0.29   |
|                                                                                                                      |             |                  |                   |                 | Rest of plants without roots | 36          | 0.36             | < 0.01   | 0.03     | < 0.01   | 0.39   |
|                                                                                                                      |             |                  |                   |                 | Ears                         | 41          | 0.23             | < 0.01   | 0.03     | < 0.01   | 0.26   |
|                                                                                                                      |             |                  |                   |                 | Rest of plants without roots | 41          | 0.27             | < 0.01   | 0.03     | < 0.01   | 0.30   |
|                                                                                                                      |             |                  |                   |                 | Ears                         | 48          | 0.21             | < 0.01   | 0.04     | < 0.01   | 0.25   |
|                                                                                                                      |             |                  |                   |                 | Rest of plants without roots | 48          | 0.22             | < 0.01   | 0.02     | < 0.01   | 0.24   |
|                                                                                                                      |             |                  |                   |                 | Straw                        | 54          | 0.32             | < 0.01   | 0.03     | < 0.01   | 0.35   |
| 2007/1050092<br>L070257<br>France (S)<br>(Asheer de duras Aquitaine)<br>2007<br>(Triticale - Triptic)                | 2           | 21               | 129<br>117<br>246 | 206<br>188      | Whole plant no roots         | 0           | 2.73             | < 0.01   | 0.03     | < 0.01   | 2.76   |
|                                                                                                                      |             |                  |                   |                 | Ears                         | 35          | 0.42             | < 0.01   | 0.05     | < 0.01   | 0.47   |
|                                                                                                                      |             |                  |                   |                 | Rest of plants without roots | 35          | 0.51             | < 0.01   | 0.04     | < 0.01   | 0.55   |
|                                                                                                                      |             |                  |                   |                 | Ears                         | 41          | 0.39             | < 0.01   | 0.04     | < 0.01   | 0.43   |
|                                                                                                                      |             |                  |                   |                 | Rest of plants without roots | 41          | 0.68             | < 0.01   | 0.05     | < 0.01   | 0.73   |
|                                                                                                                      |             |                  |                   |                 | Ears                         | 48          | 0.73             | < 0.01   | 0.08     | < 0.01   | 0.81   |
|                                                                                                                      |             |                  |                   |                 | Rest of plants without roots | 48          | 0.71             | < 0.01   | 0.06     | < 0.01   | 0.77   |
|                                                                                                                      |             |                  |                   |                 | Straw                        | 60          | 0.55             | < 0.01   | 0.03     | < 0.01   | 0.58   |
| 2007/1050092<br>L070258<br>France (S)<br>(St Paul les Romans Rhône Alpes)<br>2007<br>(Wheat - Epidoc)                | 2           | 27               | 116<br>134<br>250 | 186<br>214      | Whole plant no roots         | 0           | 1.62             | < 0.01   | < 0.01   | < 0.01   | 1.62   |
|                                                                                                                      |             |                  |                   |                 | Straw                        | 35          | 0.48             | < 0.01   | 0.04     | < 0.01   | 0.52   |
|                                                                                                                      |             |                  |                   |                 | Straw                        | 42          | 0.43             | < 0.01   | 0.04     | < 0.01   | 0.47   |
|                                                                                                                      |             |                  |                   |                 | Straw                        | 48          | 0.64             | < 0.01   | 0.04     | < 0.01   | 0.68   |
| 2007/1050092<br>L070259<br>Spain (S)<br>(Las Cabezas, Andalucia/ Sevilla)<br>2007<br>(Wheat - Diablon)               | 2           | 20               | 125<br>124<br>249 | 200<br>199      | Whole plant no roots         | 0           | 3.00             | < 0.01   | 0.05     | < 0.01   | 3.05   |
|                                                                                                                      |             |                  |                   |                 | Ears                         | 35          | 0.49             | < 0.01   | 0.06     | < 0.01   | 0.55   |
|                                                                                                                      |             |                  |                   |                 | Rest of plants without roots | 35          | 1.08             | < 0.01   | 0.13     | 0.02     | 1.23   |
|                                                                                                                      |             |                  |                   |                 | Straw                        | 42          | 2.58             | < 0.01   | 0.24     | 0.03     | 2.85   |
|                                                                                                                      |             |                  |                   |                 | Straw                        | 49          | 1.62             | < 0.01   | 0.17     | 0.03     | 1.82   |
| 2007/1050092<br>L070260<br>Spain (S)<br>(Puerto Sta. Maria, Andalucia/ Cádiz, Sevilla)<br>2007<br>(Wheat - Jerezano) | 2           | 21               | 129<br>125<br>254 | 206<br>200      | Whole plant no roots         | 0           | 3.05             | < 0.01   | 0.02     | < 0.01   | 3.07   |
|                                                                                                                      |             |                  |                   |                 | Ears                         | 35          | 0.22             | < 0.01   | 0.03     | < 0.01   | 0.25   |
|                                                                                                                      |             |                  |                   |                 | Rest of plants without roots | 35          | 0.49             | < 0.01   | 0.04     | < 0.01   | 0.53   |
|                                                                                                                      |             |                  |                   |                 | Straw                        | 42          | 1.19             | < 0.01   | 0.11     | 0.01     | 1.31   |
|                                                                                                                      |             |                  |                   |                 | Straw                        | 49          | 0.87             | < 0.01   | 0.07     | < 0.01   | 0.94   |

Fluxapyroxad, M700F008 and M700F048 are reported in terms of fluxapyroxad. M700F002 is reported in terms of itself. \*

\*Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 119 Residues from the foliar application of fluxapyroxad to wheat in Australia (Allen 2010, 2010/7003123)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                           | Application |                  |                   |                 | Matrix | PHI<br>days                    | Residues (mg/kg) |                  |                  |                    |                    |
|--------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|--------------------------------|------------------|------------------|------------------|--------------------|--------------------|
|                                                                                                  | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |                                | Fluxapyroxad     | M700F002         | M700F008         | M700F048           | Total*             |
| 2010/7003123<br>BASF-0802/S1<br>Australia<br>(Culcairn, New<br>South Wales)<br>2008<br>(Ventura) | 2           | 20               | 62<br>61<br>123   | 100<br>99.2     | Forage | 0 (after<br>1 <sup>st</sup> )  | 1.10 (5.57)      | < LOD<br>(< LOD) | < LOD<br>(< LOD) | < LOD<br>(< LOD)   | 1.10<br>(5.57)     |
|                                                                                                  |             |                  |                   |                 |        | 7                              | 0.99 (3.66)      | < LOD<br>(< LOD) | 0.02 (0.06)      | < LOD<br>(< LOD)   | 1.01<br>(3.72)     |
|                                                                                                  |             |                  |                   |                 |        | 14                             | 0.52 (1.66)      | < LOD<br>(< LOD) | 0.01 (0.05)      | < LOD<br>(< LOD)   | 0.53<br>(1.71)     |
|                                                                                                  |             |                  |                   |                 |        | -0 (after<br>2 <sup>nd</sup> ) | 0.78 (1.96)      | < LOD<br>(< LOD) | 0.02 (0.06)      | < 0.01<br>(< 0.01) | 0.80<br>(2.02)     |
|                                                                                                  |             |                  |                   |                 | Straw  | Harvest                        | 3.72 (4.53)      | < LOD<br>(< LOD) | 0.14 (0.17)      | 0.02 (0.02)        | 3.88<br>(4.72)     |
|                                                                                                  | 2           | 20               | 123<br>122<br>245 | 100<br>99.2     | Forage | 0 (after<br>1 <sup>st</sup> )  | 2.82 (15.84)     | < LOD<br>(< LOD) | < LOD<br>(< LOD) | < LOD<br>(< LOD)   | 2.82<br>(15.84)    |
|                                                                                                  |             |                  |                   |                 |        | 7                              | 2.16 (8.59)      | < LOD<br>(< LOD) | 0.03 (0.13)      | < LOD<br>(< LOD)   | 2.19<br>(8.73)     |
|                                                                                                  |             |                  |                   |                 |        | 14                             | 1.29 (4.47)      | < LOD<br>(< LOD) | 0.04 (0.13)      | < 0.01<br>(< 0.01) | 1.33<br>(4.61)     |
|                                                                                                  |             |                  |                   |                 |        | -0 (after<br>2 <sup>nd</sup> ) | 1.83 (5.42)      | < LOD<br>(< LOD) | 0.07 (0.19)      | < 0.01<br>(< 0.01) | 1.90<br>(5.62)     |
|                                                                                                  |             |                  |                   |                 | Straw  | Harvest                        | 5.62 (6.99)      | < LOD<br>(< LOD) | 0.22 (0.27)      | 0.01 (0.02)        | 5.86<br>(7.28)     |
| 2010/7003123<br>BASF-0802/S3<br>Australia<br>(Templers, South<br>Australia)<br>2008<br>(Young)   | 2           | 17               | 61<br>61<br>122   | 99.2<br>99.2    | Forage | 14 (after<br>1 <sup>st</sup> ) | 0.21 (1.15)      | < LOD<br>(< LOD) | 0.01 (0.07)      | < LOD<br>(< LOD)   | 0.22<br>(1.22)     |
|                                                                                                  |             |                  |                   |                 |        | -0 (after<br>2 <sup>nd</sup> ) | 0.37 (1.45)      | < LOD<br>(< LOD) | 0.01 (0.06)      | < LOD<br>(< LOD)   | 0.38<br>(1.51)     |
|                                                                                                  |             |                  |                   |                 |        | 0                              | 1.45 (6.07)      | < LOD<br>(< LOD) | 0.01 (0.06)      | < LOD<br>(< LOD)   | 1.46<br>(6.13)     |
|                                                                                                  |             |                  |                   |                 |        | 8                              | 1.02 (3.16)      | < LOD<br>(< LOD) | 0.03 (0.10)      | < 0.01<br>(< 0.01) | 1.05<br>(3.26)     |
|                                                                                                  |             |                  |                   |                 |        | 15                             | 0.54 (1.38)      | < LOD<br>(< LOD) | 0.01 (0.04)      | < LOD<br>(< LOD)   | 0.55<br>(1.42)     |
|                                                                                                  |             |                  |                   |                 | Straw  | Harvest                        | 0.54 (0.58)      | < LOD<br>(< LOD) | 0.06 (0.06)      | < LOD<br>(< LOD)   | 0.60<br>(0.64)     |
|                                                                                                  | 2           | 17               | 122<br>122<br>244 | 99.2<br>99.2    | Forage | 14 (after<br>1 <sup>st</sup> ) | 0.52 (2.47)      | < LOD<br>(< LOD) | 0.03 (0.13)      | < LOD<br>(< LOD)   | 0.55<br>(2.61)     |
|                                                                                                  |             |                  |                   |                 |        | -0 (after<br>2 <sup>nd</sup> ) | 0.61 (2.21)      | < LOD<br>(< LOD) | 0.02 (0.08)      | < LOD<br>(< LOD)   | 0.63<br>(2.29)     |
|                                                                                                  |             |                  |                   |                 |        | 0                              | 1.82 (6.01)      | < LOD<br>(< LOD) | 0.02 (0.08)      | < LOD<br>(< LOD)   | 1.84<br>(6.09)     |
|                                                                                                  |             |                  |                   |                 |        | 8                              | 0.90 (2.59)      | < LOD<br>(< LOD) | 0.01 (0.04)      | < LOD<br>(< LOD)   | 0.91<br>(2.63)     |
|                                                                                                  |             |                  |                   |                 |        | 15                             | 1.32 (3.48)      | < LOD<br>(< LOD) | 0.04 (0.09)      | < 0.01<br>(< 0.01) | 1.36<br>(3.57)     |
|                                                                                                  |             |                  |                   |                 | Straw  | Harvest                        | < LOQ<br>(< LOQ) | < LOD<br>(< LOD) | < LOD<br>(< LOD) | < LOD<br>(< LOD)   | < 0.01<br>(< 0.01) |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                      | Application |                  |                   |                 | Matrix | PHI<br>days                    | Residues (mg/kg) |                  |                    |                    |                 |
|-------------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------|--------------------------------|------------------|------------------|--------------------|--------------------|-----------------|
|                                                                                                             | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |        |                                | Fluxapyroxad     | M700F002         | M700F008           | M700F048           | Total*          |
| 2010/7003123<br>BASF-0802/S5<br>Australia<br>(Devonport,<br>Tasmania)<br>2008/2009<br>(McKellar)            | 2           | 13               | 62<br>62<br>124   | 90.4<br>99.9    | Forage | 0 (after<br>1 <sup>st</sup> )  | 0.58 (2.91)      | < LOD<br>(< LOD) | < LOD<br>(< LOD)   | < LOD<br>(< LOD)   | 0.58<br>(2.91)  |
|                                                                                                             |             |                  |                   |                 |        | 7                              | 0.17 (0.63)      | < LOD<br>(< LOD) | < 0.01<br>(< 0.01) | < LOD<br>(< LOD)   | 0.17<br>(0.63)  |
|                                                                                                             |             |                  |                   |                 | Straw  | Harvest                        | 0.43 (0.52)      | < LOD<br>(< LOD) | 0.05 (0.06)        | < 0.01<br>(< 0.01) | 0.48<br>(0.58)  |
|                                                                                                             | 2           | 13               | 124<br>123<br>247 | 90.4<br>99.9    | Forage | 0 (after<br>1 <sup>st</sup> )  | 1.39 (7.04)      | < LOD<br>(< LOD) | < LOD<br>(< LOD)   | < LOD<br>(< LOD)   | 1.39<br>(7.04)  |
|                                                                                                             |             |                  |                   |                 |        | 7                              | 0.33 (1.29)      | < LOD<br>(< LOD) | 0.01 (0.03)        | < LOD<br>(< LOD)   | 0.34<br>(1.32)  |
|                                                                                                             |             |                  |                   |                 |        | -0 (after<br>2 <sup>nd</sup> ) | 0.18 (0.50)      | < LOD<br>(< LOD) | 0.03 (0.07)        | < LOD<br>(< LOD)   | 0.21<br>(0.57)  |
|                                                                                                             |             |                  |                   |                 | Straw  | Harvest                        | 0.18 (0.22)      | < LOD<br>(< LOD) | 0.04 (0.05)        | < LOD<br>(< LOD)   | 0.22<br>(0.27)  |
| 2010/7003123<br>BASF-0802/S6<br>Australia<br>(Southern River,<br>Western Australia)<br>2008<br>(Wyalkatarn) | 2           | 4                | 62<br>62<br>124   | 99.6<br>99.6    | Forage | 0 (after<br>1 <sup>st</sup> )  | 0.52 (2.47)      | < LOD<br>(< LOD) | < LOD<br>(< LOD)   | < LOD<br>(< LOD)   | 0.52<br>(2.47)  |
|                                                                                                             |             |                  |                   |                 |        | -0 (after<br>2 <sup>nd</sup> ) | 1.01 (2.94)      | < LOD<br>(< LOD) | < 0.01<br>(< 0.01) | < LOD<br>(< LOD)   | 1.01<br>(2.94)  |
|                                                                                                             |             |                  |                   |                 | Straw  | Harvest                        | 0.35 (0.43)      | < LOD<br>(< LOD) | 0.07 (0.09)        | 0.01 (0.01)        | 0.43<br>(0.53)  |
|                                                                                                             | 2           | 4                | 123<br>123<br>246 | 99.6<br>99.6    | Forage | 0 (after<br>1 <sup>st</sup> )  | 2.29 (11.97)     | < LOD<br>(< LOD) | < 0.01<br>(< 0.01) | < LOD<br>(< LOD)   | 2.29<br>(11.97) |
|                                                                                                             |             |                  |                   |                 |        | -0 (after<br>2 <sup>nd</sup> ) | 2.03 (5.72)      | < LOD<br>(< LOD) | 0.01 (0.03)        | < LOD<br>(< LOD)   | 2.04<br>(5.75)  |
|                                                                                                             |             |                  |                   |                 | Straw  | Harvest                        | 1.01 (1.22)      | < LOD<br>(< LOD) | 0.06 (0.07)        | 0.01 (0.01)        | 1.08<br>(1.30)  |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 120 Residues from the seed treatment application of fluxapyroxad to cotton in the USA (Jordan and Gordon 2010, 2010/7003260)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                  | Application |                  |            |                     | Matrix            | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |               |
|-----------------------------------------------------------------------------------------|-------------|------------------|------------|---------------------|-------------------|-------------|------------------|------------|----------|----------|----------|------------|---------------|
|                                                                                         | No          | Interval<br>Days | g<br>ai/ha | g ai/100<br>kg seed |                   |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |               |
|                                                                                         |             |                  |            |                     |                   |             | Mean             | Individual |          |          |          | Individual | Mean          |
| GAP, USA                                                                                | 1           |                  |            | 20                  |                   |             |                  |            |          |          |          |            |               |
| 2010/7003260<br>RCN R080304<br>USA<br>(Turner,<br>Georgia)<br>2008<br>(DP 555<br>BG/RR) | 1           | -                | 2.2        | 20                  | Gin<br>byproducts | 156         | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                         |             |                  |            |                     |                   |             |                  |            |          |          |          |            |               |
|                                                                                         |             |                  |            |                     |                   |             |                  |            |          |          |          |            |               |
|                                                                                         |             |                  | 10.6       | 100                 | Gin<br>byproducts | 156         | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < 0.01        |
| 2010/7003260<br>RCN R080308<br>USA<br>(Wilbarger,<br>Texas) 2008<br>(DP 143 B2FR)       | 1           | -                | 2.0        | 20                  | Gin<br>byproducts | 174         | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                         |             |                  |            |                     |                   |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                     | Application |                  |            |                     | Matrix            | PHI<br>days | Residues (mg/kg) |            |          |          |          |            |               |
|--------------------------------------------------------------------------------------------|-------------|------------------|------------|---------------------|-------------------|-------------|------------------|------------|----------|----------|----------|------------|---------------|
|                                                                                            | No          | Interval<br>Days | g<br>ai/ha | g ai/100<br>kg seed |                   |             | Fluxapyroxad     |            | M700F002 | M700F008 | M700F048 | Total*     |               |
|                                                                                            |             |                  |            |                     |                   |             | Mean             | Individual |          |          |          | Individual | Mean          |
| 2010/7003260<br>RCN R080309<br>USA<br>(Gray, Texas)<br>2008<br>(DP 143 B2FR)               | 1           | -                | 2.0        | 20                  | Gin<br>byproducts | 190         | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                            |             |                  |            |                     |                   |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |
|                                                                                            | 1           | -                | 10.1       | 100                 | Gin<br>byproducts | 190         | < 0.01           | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                            |             |                  |            |                     |                   |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |
| 2010/7003260<br>RCN R080310<br>USA<br>(Armstrong,<br>Texas)<br>2008<br>(DP 143 B2FR)       | 1           | -                | 2.0        | 20                  | Gin<br>byproducts | 193         | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                            |             |                  |            |                     |                   |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |
|                                                                                            |             |                  |            |                     |                   |             |                  |            |          |          |          |            |               |
|                                                                                            |             |                  |            |                     |                   |             |                  |            |          |          |          |            |               |
| 2010/7003260<br>RCN R080311<br>USA<br>(Carson, Texas)<br>2008<br>(DP 143 B2FR)             | 1           | -                | 2.0        | 20                  | Gin<br>byproducts | 193         | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                            |             |                  |            |                     |                   |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |
|                                                                                            |             |                  |            |                     |                   |             |                  |            |          |          |          |            |               |
|                                                                                            |             |                  |            |                     |                   |             |                  |            |          |          |          |            |               |
| 2010/7003260<br>RCN R080313<br>USA<br>(Yuma,<br>Arizona)<br>2008<br>(DP 444<br>BG/RR)      | 1           | -                | 5.2        | 20                  | Gin<br>byproducts | 174         | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                            |             |                  |            |                     |                   |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |
|                                                                                            |             |                  |            |                     |                   |             |                  |            |          |          |          |            |               |
|                                                                                            |             |                  |            |                     |                   |             |                  |            |          |          |          |            |               |
| 2010/7003260<br>RCN R080314<br>USA<br>(Fresno,<br>California)<br>2008<br>(DP 444<br>BG/RR) | 1           | -                | 2.7        | 20                  | Gin<br>byproducts | 172         | < <u>0.01</u>    | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     | < <u>0.01</u> |
|                                                                                            |             |                  |            |                     |                   |             |                  | < LOD      | < LOD    | < LOD    | < LOD    | < 0.01     |               |
|                                                                                            |             |                  |            |                     |                   |             |                  |            |          |          |          |            |               |
|                                                                                            |             |                  |            |                     |                   |             |                  |            |          |          |          |            |               |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.003125 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 121 Residues from the foliar application of fluxapyroxad to peanuts in the USA (Becker 2010, 2009/7006381

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                  | Application |                  |            |                 | Matrix<br>(% moisture) | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|-------------------------------------------------------------------------|-------------|------------------|------------|-----------------|------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                         | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |                        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| GAP, USA                                                                | 3           |                  | 97         |                 |                        |             |                  |          |          |          |        |
| 2009/7006381<br>RCN R080492<br>USA<br>(Worth, Georgia)<br>2008<br>(03L) | 3           | 14<br>13         | 101        | 189             | Hay<br>(19.7)          | 7           | 6.15             | < LOD    | 1.01     | 1.31     | 8.14   |
|                                                                         |             |                  | 101        | 193             |                        |             | 6.14             | < LOD    | 1.04     | 1.27     | 8.13   |
|                                                                         |             |                  | 101        | 191             |                        | 14          | 2.01             | < LOD    | 0.52     | 1.24     | 3.44   |
|                                                                         |             |                  | 303        |                 |                        |             | 2.24             | < LOD    | 0.69     | 1.43     | 3.99   |
|                                                                         |             |                  |            |                 |                        | 21          | 0.80             | < LOD    | 0.34     | 0.76     | 1.70   |
|                                                                         |             |                  |            |                 |                        |             | 0.87             | < LOD    | 0.26     | 0.66     | 1.62   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                              | Application |                  |                          |                   | Matrix<br>(% moisture)            | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|-------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|-----------------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                                     | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |                                   |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2009/7006381<br>RCN R080493<br>USA<br>(Colquit, Georgia)<br>2008<br>(03L)           | 3           | 14<br>14         | 101<br>101<br>101<br>303 | 189<br>189<br>197 | Hay<br>(18.9)                     | 0           | 5.38             | < LOD    | 0.38     | 1.00     | 6.50   |
|                                                                                     |             |                  |                          |                   |                                   |             | 6.20             | < LOD    | 0.45     | 1.10     | 7.46   |
|                                                                                     |             |                  |                          |                   |                                   | 4           | 0.89             | < LOD    | 0.18     | 0.27     | 1.27   |
|                                                                                     |             |                  |                          |                   |                                   |             | 1.25             | < LOD    | 0.24     | 0.34     | 1.74   |
|                                                                                     |             |                  |                          |                   |                                   | 7           | 1.97             | < LOD    | 0.53     | 1.45     | 3.56   |
|                                                                                     |             |                  |                          |                   |                                   |             | 1.92             | < LOD    | 0.50     | 1.43     | 3.47   |
|                                                                                     |             |                  |                          |                   |                                   | 14          | 1.87             | < LOD    | 0.68     | 1.73     | 3.83   |
|                                                                                     |             |                  |                          |                   |                                   |             | 2.00             | < LOD    | 0.77     | 1.89     | 4.16   |
|                                                                                     |             |                  |                          |                   |                                   | 21          | 1.11             | < LOD    | 0.43     | 1.07     | 2.33   |
|                                                                                     |             |                  |                          |                   |                                   |             | 1.05             | < LOD    | 0.37     | 0.99     | 2.14   |
| 2009/7006381<br>RCN R080494#<br>USA<br>(Turner, Georgia)<br>2008<br>(GA-02)         | 3           | 14<br>14         | 101<br>101<br>101<br>303 | 189<br>184<br>188 | Hay<br>(33.9;<br>14 day-<br>32.1) | 7           | 0.04             | < LOD    | < 0.01   | < 0.01   | 0.04   |
|                                                                                     |             |                  |                          |                   |                                   |             | 0.90             | < LOD    | 0.09     | 0.34     | 1.23   |
|                                                                                     |             |                  |                          |                   |                                   | 14          | 0.65             | < LOD    | 0.11     | 0.29     | 0.97   |
|                                                                                     |             |                  |                          |                   |                                   |             | 0.71             | < LOD    | 0.13     | 0.35     | 1.10   |
|                                                                                     |             |                  |                          |                   |                                   | 21          | 0.53             | < LOD    | 0.09     | 0.30     | 0.84   |
|                                                                                     |             |                  |                          |                   |                                   |             | 1.23             | < LOD    | 0.24     | 0.68     | 1.97   |
| 2009/7006381<br>RCN R080495<br>USA<br>(Tift, Georgia)<br>2008<br>(03L)              | 3           | 14<br>13         | 101<br>101<br>101<br>303 | 186<br>190<br>188 | Hay<br>(19.0)                     | 7           | 5.63             | < LOD    | 1.00     | 1.20     | 7.53   |
|                                                                                     |             |                  |                          |                   |                                   |             | 6.13             | < LOD    | 1.13     | 1.33     | 8.27   |
|                                                                                     |             |                  |                          |                   |                                   | 14          | 2.01             | < LOD    | 0.44     | 0.39     | 2.75   |
|                                                                                     |             |                  |                          |                   |                                   |             | 2.01             | < LOD    | 0.54     | 0.46     | 2.90   |
|                                                                                     |             |                  |                          |                   |                                   | 21          | 1.08             | < LOD    | 0.30     | 0.21     | 1.54   |
|                                                                                     |             |                  |                          |                   |                                   |             | 1.05             | < LOD    | 0.31     | 0.24     | 1.54   |
| 2009/7006381<br>RCN R080496<br>USA<br>(Jasper, South Carolina)<br>2008<br>(03L)     | 3           | 14<br>14         | 101<br>101<br>101<br>303 | 194<br>193<br>191 | Hay<br>(19.3)                     | 7           | 2.03             | < LOD    | 0.93     | 1.50     | 4.08   |
|                                                                                     |             |                  |                          |                   |                                   |             | 2.34             | < LOD    | 1.15     | 1.69     | 4.76   |
|                                                                                     |             |                  |                          |                   |                                   | 14          | 2.10             | < LOD    | 0.45     | 1.30     | 3.50   |
|                                                                                     |             |                  |                          |                   |                                   |             | 2.33             | < LOD    | 0.44     | 1.25     | 3.69   |
|                                                                                     |             |                  |                          |                   |                                   | 21          | 1.45             | < LOD    | 0.38     | 0.42     | 2.15   |
|                                                                                     |             |                  |                          |                   |                                   |             | 2.24             | < LOD    | 0.60     | 0.75     | 3.40   |
| 2009/7006381<br>RCN R080497<br>USA<br>(Hampton, South<br>Carolina)<br>2008<br>(03L) | 3           | 14<br>14         | 101<br>101<br>101<br>303 | 195<br>191<br>191 | Hay<br>(19.1)                     | 7           | 4.01             | < LOD    | 0.47     | 2.27     | 6.13   |
|                                                                                     |             |                  |                          |                   |                                   |             | 3.99             | < LOD    | 0.49     | 2.23     | 6.11   |
|                                                                                     |             |                  |                          |                   |                                   | 14          | 1.45             | < LOD    | 0.63     | 0.82     | 2.70   |
|                                                                                     |             |                  |                          |                   |                                   |             | 1.35             | < LOD    | 0.55     | 0.80     | 2.50   |
|                                                                                     |             |                  |                          |                   |                                   | 21          | 1.86             | < LOD    | 0.48     | 0.52     | 2.73   |
|                                                                                     |             |                  |                          |                   |                                   |             | 1.30             | < LOD    | 0.34     | 0.52     | 2.02   |
| 2009/7006381<br>RCN R080498<br>USA<br>(Dale, Alabama)<br>2008<br>(GA Green)         | 3           | 13<br>14         | 101<br>101<br>101<br>303 | 191<br>187<br>187 | Hay<br>(18.6)                     | 7           | 5.00             | < LOD    | 0.61     | 2.65     | 7.54   |
|                                                                                     |             |                  |                          |                   |                                   |             | 6.15             | < LOD    | 0.65     | 3.66     | 9.47   |
|                                                                                     |             |                  |                          |                   |                                   | 14          | 1.30             | < LOD    | 0.44     | 3.07     | 3.97   |
|                                                                                     |             |                  |                          |                   |                                   |             | 1.17             | < LOD    | 0.43     | 2.96     | 3.75   |
|                                                                                     |             |                  |                          |                   |                                   | 21          | 1.81             | < LOD    | 0.45     | 0.50     | 2.64   |
|                                                                                     |             |                  |                          |                   |                                   |             | 1.74             | < LOD    | 0.48     | 0.53     | 2.62   |
| 2009/7006381<br>RCN R080499<br>USA<br>(Houston, Alabama)<br>2008<br>(GA Green)      | 3           | 14<br>14         | 101<br>101<br>101<br>303 | 190<br>189<br>190 | Hay<br>(18.8)                     | 7           | 8.89             | < LOD    | 1.44     | 2.01     | 11.8   |
|                                                                                     |             |                  |                          |                   |                                   |             | 8.83             | < LOD    | 1.35     | 2.02     | 11.7   |
|                                                                                     |             |                  |                          |                   |                                   | 14          | 2.38             | < LOD    | 0.52     | 1.18     | 3.77   |
|                                                                                     |             |                  |                          |                   |                                   |             | 4.96             | < LOD    | 1.75     | 3.82     | 9.53   |
|                                                                                     |             |                  |                          |                   |                                   | 21          | 1.27             | < LOD    | 0.34     | 0.34     | 1.86   |
|                                                                                     |             |                  |                          |                   |                                   |             | 2.58             | < LOD    | 0.71     | 0.72     | 3.84   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                              | Application |                  |            |                 | Matrix<br>(% moisture) | PHI<br>days | Residues (mg/kg) |          |          |          |        |
|-------------------------------------------------------------------------------------|-------------|------------------|------------|-----------------|------------------------|-------------|------------------|----------|----------|----------|--------|
|                                                                                     | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |                        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 | Total* |
| 2009/7006381<br>RCN R080500<br>USA<br>(Madison, Florida)<br>2008<br>(GA 02)         | 3           | 15<br>14         | 101        | 190             | Hay<br>(19.8)          | 3           | 7.83             | < LOD    | 1.21     | 1.87     | 10.4   |
|                                                                                     |             |                  | 101        | 195             |                        |             | 7.95             | < LOD    | 1.31     | 1.92     | 10.7   |
|                                                                                     |             |                  | 100        | 191             |                        | 10          | 0.03             | < LOD    | < 0.01   | < 0.01   | 0.03   |
|                                                                                     |             |                  | 302        |                 |                        |             | 0.09             | < LOD    | 0.04     | 0.02     | 0.14   |
|                                                                                     |             |                  |            |                 |                        | 17          | 1.51             | < LOD    | 0.35     | 0.41     | 2.17   |
|                                                                                     |             |                  |            |                 |                        |             | 1.13             | < LOD    | 0.32     | 0.34     | 1.70   |
| 2009/7006381<br>RCN R080501<br>USA<br>(Marshall, Oklahoma)<br><br>2008<br>(Tamspar) | 3           | 13<br>14         | 103        | 223             | Hay<br>(72.0)          | 7           | 0.30             | < LOD    | 0.07     | 0.43     | 0.68   |
|                                                                                     |             |                  | 102        | 221             |                        |             | 0.79             | < LOD    | 0.09     | 1.01     | 1.61   |
|                                                                                     |             |                  | 102        | 221             |                        | 14          | 0.19             | < LOD    | 0.04     | 0.31     | 0.45   |
|                                                                                     |             |                  | 307        |                 |                        |             | 0.35             | < LOD    | 0.07     | 0.59     | 0.84   |
|                                                                                     |             |                  |            |                 |                        | 21          | 0.74             | < LOD    | 0.14     | 1.11     | 1.69   |
|                                                                                     |             |                  |            |                 |                        |             | 0.36             | < LOD    | 0.07     | 0.48     | 0.78   |
| 2009/7006381<br>RCN R080502<br>USA<br>(Wilbarger, Texas)<br>2008<br>(Tamrun)        | 3           | 14<br>14         | 103        | 206             | Hay<br>(58.7)          | 7           | < LOD            | < LOD    | 0.08     | < LOD    | 0.08   |
|                                                                                     |             |                  | 105        | 210             |                        |             | < LOD            | < LOD    | 0.06     | < LOD    | 0.06   |
|                                                                                     |             |                  | 102        | 204             |                        | 14          | 0.12             | < LOD    | 0.02     | 0.12     | 0.23   |
|                                                                                     |             |                  | 310        |                 |                        |             | 0.10             | < LOD    | 0.02     | 0.08     | 0.18   |
|                                                                                     |             |                  |            |                 |                        | 21          | < LOD            | < LOD    | 0.07     | < LOD    | 0.07   |
|                                                                                     |             |                  |            |                 |                        |             | < LOD            | < LOD    | 0.09     | < LOD    | 0.09   |
| 2009/7006381<br>RCN R080503<br>USA<br>(Collingsworth, Texas)<br>2008<br>(Tamrun)    | 3           | 14<br>14         | 101        | 201             | Hay<br>(68.8)          | 7           | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                     |             |                  | 103        | 205             |                        |             | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                     |             |                  | 102        | 202             |                        | 14          | < 0.01           | < LOD    | < LOD    | < 0.01   | < 0.01 |
|                                                                                     |             |                  | 306        |                 |                        |             | < 0.01           | < LOD    | < LOD    | < 0.01   | < 0.01 |
|                                                                                     |             |                  |            |                 |                        | 21          | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |
|                                                                                     |             |                  |            |                 |                        |             | < LOD            | < LOD    | < LOD    | < LOD    | < 0.01 |

\* All analytes are reported in terms of themselves. Total residues ((Fluxapyroxad + M700F008 + M700F048) are expressed as parent equivalents.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

#A control sample from trial RCN R080494 gave residues of 1.21 mg/kg (fluxapyroxad), < LOD (M700F002), 0.11 mg/kg (M700F008) and 0.52 mg/kg (M700F048). After re-extraction and re-analysis several times, similar results were obtained. A sample mix-up was suspected.

## FATE OF RESIDUES IN STORAGE AND PROCESSING

### *Residues after processing*

Processing studies are necessary according to the uses and the residues of fluxapyroxad on raw agricultural commodities. The fate of fluxapyroxad residues during processing of raw agricultural commodities was investigated in a number of major registered crops (apples, plums, tomatoes, soya bean, potatoes, sugar beet, barley, wheat, corn, sorghum, rice, peanuts, canola, sunflowers and cotton).

As a measure for the transfer of residues into processed products, a processing factor (PF) was used, which is defined as:

$$PF = \frac{\text{Residue in processed products (mg/kg)}}{\text{Residue in raw agricultural commodity (mg/kg)}}$$

The high temperature hydrolysis of residues of fluxapyroxad under varying conditions was studied (Hassink 2009, 2009/1049060). An acetonitrile solution of [ $^{14}\text{C}$ ]-pyrazole labelled fluxapyroxad was added to aqueous buffer solutions and subjected to hydrolysis at pH 4, 5 and 6 at high temperature at concentrations of 0.92, 0.77 and 1.04  $\mu\text{g/mL}$  respectively. The conditions were selected to simulate hydrolysis under processing conditions and included:

The effect of pasteurisation (pH 4 and pasteurised at 90 °C for 20 minutes)

The effect of pasteurisation (pH 5 and baked at 100 °C for 60 minutes)

The effect of sterilisation (pH 6 and autoclaving at 120 °C for 20 minutes)

The pH ranged from 4.1 (beginning of the trial) to 3.6 (end of the trial) for the pH 4 samples, constant at 5.1 for the pH 5 samples and from 6.6 (beginning of the trial) to 6.2 (end of the trial) for the pH 6 samples. No major loss of radioactivity material occurred; pH 4 at 90 °C experiment 97.3% of total applied radioactivity remained after test, pH 5 at 100 °C experiment 101.6% of total applied radioactivity remained after test, pH 6 at 120 °C experiment 96.7% of total applied radioactivity remained after test. The amount of radioactive material in the samples at the end of the test corresponded to parent compound only.

In summary, the data show that fluxapyroxad was not degraded during the simulation of pasteurisation (pH 4, 90 °C, 20 minutes), during the simulation of baking, boiling and brewing (pH 5, 100 °C, 60 minutes) and during sterilisation (pH 6, 120 °C, 20 minutes).

### Apple

The effect of processing (laboratory scale) on residues of fluxapyroxad in apples was investigated in two trials carried out in the 2008 growing season (Jordan and Saha 2009, 2009/7003644). Apples with incurred residues were obtained where trees were sprayed with four foliar sprays at 0.502–0.510 kg ai/ha with a 7-day retreatment interval (total 2.020–2.027 kg ai/season). The first application was made approximately 21 days prior to harvest of mature apples at beginning of ripening (BBCH 81) to fruit ripe for picking (BBCH 87). Applications were made in 608–618 L/ha using ground equipment and an adjuvant was added to the spray mixture for all applications. Apple bulk RAC samples (56–59 kilograms each) were harvested 0 days after the last application.

Bulk apple samples (one control and one treated for each trial) were processed into processed apple commodity samples according to simulated commercial procedures. A representative unwashed whole fruit sample was collected prior to processing each treatment. A portion of the remaining apple fruit were then ground in a hammer mill and the wet mash was collected and pressed on a hydraulic press to produce the unfiltered juice fraction. After pressing, the wet pomace cake was broken up to obtain the wet pomace sample. Another portion of the remaining fruit were peeled, sliced into pieces then cored. The fruit slices were then diced, placed in a kettle with water and heated to ~71 °C for 45 minutes while being mashed into the applesauce fraction. Additional apples were diced, placed in a kettle with water and heated to ~71 °C for 20 minutes to produce the canned apple sample. Finally, a portion of fruit slices were placed one-layer deep on dehydrator trays and dried for 20–24 hours at 66–71 °C to obtain dried apple samples at 10% moisture.

Residues of fluxapyroxad in apple RAC and processed commodities were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for apple commodities were obtained for each analyte.

Table 122 Residues in apple processed fractions from the foliar application of fluxapyroxad to apples in the USA (Jordan and Saha 2009, 2009/7003644)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety) | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          | Processing Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) <sup>a</sup> |
|--------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|------------------|----------|----------|----------|----------------------------------------------------------------------------------|
|                                                        | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                                                                  |
| GAP, USA                                               | 4           |                  | 97-<br>100 |                 |        | 0           |                  |          |          |          |                                                                                  |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                              | Application |                  |            |                 | Matrix       | PHI<br>days | Residues (mg/kg) |          |          |          | Processing Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) <sup>a</sup> |
|-------------------------------------------------------------------------------------|-------------|------------------|------------|-----------------|--------------|-------------|------------------|----------|----------|----------|----------------------------------------------------------------------------------|
|                                                                                     | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |              |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                                                                  |
| 2009/7003644<br>RCN<br>R080180<br>USA<br>(Wayne, New<br>York)<br>2008<br>(Cortland) | 4           | 7                | 505        | 611             | Apple<br>RAC | 0           | (0.50, 0.54)     | < LOD    | < LOD    | < LOD    | -                                                                                |
|                                                                                     |             | 7                | 504        | 611             |              |             | 0.52             | < LOD    | < LOD    | < LOD    | -                                                                                |
|                                                                                     |             | 7                | 503        | 610             |              |             | 0.10             | < LOD    | < LOD    | < LOD    | PF = 0.19                                                                        |
|                                                                                     |             |                  | 508        | 615             |              |             | 2.34             | < LOD    | < LOD    | < LOD    | PF = 4.5                                                                         |
|                                                                                     |             |                  | 2020       |                 |              |             | 0.10             | < LOD    | < LOD    | < LOD    | PF = 0.19                                                                        |
|                                                                                     |             |                  |            |                 |              |             | 0.08             | < LOD    | < 0.01   | < 0.01   | PF = 0.15                                                                        |
|                                                                                     |             |                  |            |                 |              |             | 0.36             | < LOD    | < 0.01   | < LOD    | PF = 0.69                                                                        |
| 2009/7003644<br>RCN<br>R080181<br>USA<br>(Wayne, New<br>York)<br>2008<br>(Rome)     | 4           | 7                | 505        | 612             | Apple<br>RAC | 0           | (0.40, 0.39)     | < LOD    | < LOD    | < LOD    | -                                                                                |
|                                                                                     |             | 7                | 510        | 617             |              |             | 0.39             | < LOD    | < LOD    | < LOD    | -                                                                                |
|                                                                                     |             | 7                | 502        | 608             |              |             | 0.09             | < LOD    | < LOD    | < LOD    | PF = 0.23                                                                        |
|                                                                                     |             |                  | 510        | 618             |              |             | 1.83             | < LOD    | < LOD    | < LOD    | PF = 4.69                                                                        |
|                                                                                     |             |                  | 2027       |                 |              |             | 0.11             | < LOD    | < LOD    | < LOD    | PF = 0.28                                                                        |
|                                                                                     |             |                  |            |                 |              |             | 0.11             | < LOD    | < LOD    | < LOD    | PF = 0.28                                                                        |
|                                                                                     |             |                  |            |                 |              |             | 0.15             | < LOD    | < LOD    | < LOD    | PF = 0.38                                                                        |

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

<sup>a</sup> Processing factor for parent + M700F008 + M700F048 is the same as for parent only

### Plum

The effect of processing (laboratory scale) on residues of fluxapyroxad in plums was investigated in two trials carried out in the 2008 growing season (Jordan 2010, 2009/7006075). Plums with incurred residues were obtained where trees were sprayed with three foliar sprays at 0.432–0.449 kg ai/ha with a 7-day retreatment interval (total 1.319–1.333 kg ai/season). The first application was made at fruit colouring (BBCH 81), approximately 14 days prior to harvest of mature plums. Applications were made in 463–709 L/ha using ground equipment and an adjuvant was added to the spray mixture for all applications. Plum bulk RAC samples (40–43 kilograms) were harvested 0 days after the last application from each of the control and treated plots. In addition, at the same time, a smaller plum sample was taken from each of the control and treated plots.

Bulk plum samples (one control and one treated for each trial) were processed into processed plum commodity samples according to simulated commercial procedures. A representative unwashed whole fruit sample was collected prior to processing. A portion of the remaining plum fruit was then washed. The remaining washed fruit was placed into three drying trays to produce prunes, reserved for jam processing or discarded. The drying trays were placed in a pre-heated dryer at 68–79 °C. Periodically the trays were removed from the dryer and weighed. The positions of the drying trays were rotated periodically to ensure even drying. The fruit were removed when average moisture contents of 28–33% were achieved. The prunes were allowed to cool then placed in frozen storage. The aliquot of washed plums for jam were pitted and pureed in a food processor. Plum puree was then transferred to a kettle, adding water. Lemon juice was added and the mixture was brought to the boil. Sugar was added and the mixture reheated to a boil. Three packages of liquid pectin were added and foam skimmed from the surface. The resultant mixture was added to prepared jars and placed in frozen storage.

Residues of fluxapyroxad in plum RAC and processed commodities were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for plum commodities were obtained for each analyte.

Table 123 Residues in plum processed fractions from the foliar application of fluxapyroxad to plums in the USA (Jordan 2010, 2009/7006075)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                  | Application |                  |                           |                   | Matrix            | PHI<br>days | Residues (mg/kg) |          |          |          | Processing Factor<br>for (Fluxapyroxad<br>+ M700F008<br>+ M700F048) <sup>a</sup> |
|-----------------------------------------------------------------------------------------|-------------|------------------|---------------------------|-------------------|-------------------|-------------|------------------|----------|----------|----------|----------------------------------------------------------------------------------|
|                                                                                         | No          | Interval<br>Days | g<br>ai/ha                | Water<br>(L/ha)   |                   |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                                                                  |
| GAP, USA                                                                                | 3           |                  | 121-<br>123               |                   |                   | 0           |                  |          |          |          |                                                                                  |
| 2009/7006075<br>RCN R080178<br>USA<br>(Fresno,<br>California)<br>2008<br>(French Prune) | 3           | 7<br>7           | 445<br>439<br>449<br>1333 | 470<br>463<br>474 | Plum RAC          | 0           | 1.09             | < LOD    | < LOD    | < LOD    | -                                                                                |
|                                                                                         |             |                  |                           |                   | Washed<br>Plums   |             | 1.01             | < LOD    | < 0.01   | < LOD    | PF = 0.93                                                                        |
|                                                                                         |             |                  |                           |                   | Puree             |             | 0.92             | < LOD    | < LOD    | < LOD    | PF = 0.84                                                                        |
|                                                                                         |             |                  |                           |                   | Jam               |             | 0.48             | < LOD    | < LOD    | < LOD    | PF = 0.44                                                                        |
|                                                                                         |             |                  |                           |                   | Dried<br>Prunes   |             | 3.00             | < LOD    | < 0.01   | < LOD    | PF = 2.75                                                                        |
|                                                                                         |             |                  |                           |                   | Field Plum<br>RAC |             | 1.19             | < LOD    | < 0.01   | < LOD    | -                                                                                |
| 2009/7006075<br>RCN R080179<br>USA<br>(Fresno,<br>California)<br>2008<br>(Howard Sun)   | 3           | 7<br>7           | 448<br>432<br>439<br>1319 | 709<br>683<br>693 | Plum RAC          | 0           | 0.78             | < LOD    | < 0.01   | < LOD    | -                                                                                |
|                                                                                         |             |                  |                           |                   | Washed<br>Plums   |             | 0.47             | < LOD    | < 0.01   | < LOD    | PF = 0.60                                                                        |
|                                                                                         |             |                  |                           |                   | Puree             |             | 0.63             | < LOD    | < 0.01   | < LOD    | PF = 0.81                                                                        |
|                                                                                         |             |                  |                           |                   | Jam               |             | 0.29             | < LOD    | < 0.01   | < LOD    | PF = 0.37                                                                        |
|                                                                                         |             |                  |                           |                   | Dried<br>Prunes   |             | 2.22             | < LOD    | 0.02     | < 0.01   | PF = 2.87<br>(parent only 2.85)                                                  |
|                                                                                         |             |                  |                           |                   | Field Plum<br>RAC |             | 0.69             | < LOD    | < 0.01   | < LOD    | -                                                                                |

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

<sup>a</sup> Processing factor for parent + M700F008 + M700F048 is the same as for parent only except dried prunes in one trial

### Tomato

The effect of processing (laboratory scale) on residues of fluxapyroxad in tomatoes was investigated in four trials carried out during the 2008 growing season (White and Saha 2010, 2009/7006206). Tomatoes with incurred residues were obtained where plants were sprayed with two foliar sprays at 0.485–0.516 kg ai/ha with a 6–7 day retreatment interval (total 0.984–1.018 kg ai/season). Applications were made in 279–431 L/ha using ground equipment and an adjuvant was added to the spray mixture for all applications. Tomato bulk RAC samples were harvested 7 days after the last application.

Bulk tomato samples (one control and one treated for each trial) were processed into processed tomato commodity samples according to simulated commercial procedures. A portion of the tomato fruit was washed. Washed, cut tomatoes were ground in a food strainer/ sauce maker. The puree was collected in a clean container. The remaining puree was placed in a kettle for making paste. The kettle of puree was placed on a two-burner hot plate and heated between 82–93 °C to allow excess moisture to evaporate from the puree, producing tomato paste. Tomatoes were run through the juice processor to produce juice and wet pomace. Tomato fruit was placed into boiling water for about 30–45 seconds, moved to an ice bath for 45–60 seconds and then peeled by hand to produce peeled

tomatoes and tomato peels fractions. Some of the peeled tomatoes were halved if small and quartered if large, placed in a large kettle with water, heated at 82 °C for ~30 minutes, during which the slices were stirred to cook the slices. This produced the canned tomatoes.

Residues of fluxapyroxad in tomato RAC and processed commodities were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for tomato commodities were obtained for each analyte.

Table 124 Residues in tomato processed fractions from the foliar application of fluxapyroxad to tomatoes in the USA (Jordan 2010, 2009/7006206)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                     | Application |                  |                               |                 | Matrix             | PHI<br>days | Residues (mg/kg)     |          |          |          | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) <sup>a</sup> |
|--------------------------------------------------------------------------------------------|-------------|------------------|-------------------------------|-----------------|--------------------|-------------|----------------------|----------|----------|----------|-------------------------------------------------------------------------------------|
|                                                                                            | No          | Interval<br>Days | g<br>ai/ha                    | Water<br>(L/ha) |                    |             | Fluxapyroxad         | M700F002 | M700F008 | M700F048 |                                                                                     |
| GAP, USA                                                                                   | 2           |                  | 97-<br>100                    |                 |                    | 7           |                      |          |          |          |                                                                                     |
| 2009/7006206<br>RCN R090402<br>USA<br>(Fresno,<br>California)<br>2008<br>(2206)            | 2           | 7                | 516<br><del>502</del><br>1018 | 286<br>279      | Tomato RAC         | 7           | (0.21, 0.30)<br>0.25 | < LOD    | < LOD    | < LOD    | -                                                                                   |
|                                                                                            |             |                  |                               |                 | Canned<br>Tomatoes |             | 0.11                 | < LOD    | < LOD    | < LOD    | PF = 0.44                                                                           |
|                                                                                            |             |                  |                               |                 | Paste              |             | 0.23                 | < LOD    | < LOD    | < LOD    | PF = 0.92                                                                           |
|                                                                                            |             |                  |                               |                 | Peeled<br>Tomatoes |             | 0.09                 | < LOD    | < LOD    | < LOD    | PF = 0.36                                                                           |
|                                                                                            |             |                  |                               |                 | Puree              |             | 0.09                 | < LOD    | < LOD    | < LOD    | PF = 0.36                                                                           |
|                                                                                            |             |                  |                               |                 | Raw Juice          |             | 0.08                 | < LOD    | < LOD    | < LOD    | PF = 0.32                                                                           |
|                                                                                            |             |                  |                               |                 | Tomato Peel        |             | 0.58                 | < LOD    | < LOD    | < LOD    | PF = 2.32                                                                           |
|                                                                                            |             |                  |                               |                 | Wash Water         |             | 0.05                 | < LOD    | < LOD    | < LOD    | PF = 0.20                                                                           |
|                                                                                            |             |                  |                               |                 | Washed<br>Tomatoes |             | 0.14                 | < LOD    | < LOD    | < LOD    | PF = 0.56                                                                           |
|                                                                                            |             |                  |                               |                 | Wet Pomace         |             | 1.16                 | < LOD    | < LOD    | < LOD    | PF = 4.64                                                                           |
| 2009/7006206<br>RCN R090403<br>USA<br>(Tulare,<br>California)<br>2008<br>(Processing 9665) | 2           | 7                | 500<br><del>485</del><br>985  | 281<br>431      | Tomato RAC         | 7           | (0.32, 0.40)<br>0.36 | < LOD    | < LOD    | < LOD    | -                                                                                   |
|                                                                                            |             |                  |                               |                 | Canned<br>Tomatoes |             | 0.02                 | < LOD    | < LOD    | < LOD    | PF = 0.06                                                                           |
|                                                                                            |             |                  |                               |                 | Paste              |             | 0.19                 | < LOD    | < LOD    | < LOD    | PF = 0.53                                                                           |
|                                                                                            |             |                  |                               |                 | Peeled<br>Tomatoes |             | 0.01                 | < LOD    | < LOD    | < LOD    | PF = 0.03                                                                           |
|                                                                                            |             |                  |                               |                 | Puree              |             | 0.09                 | < LOD    | < LOD    | < LOD    | PF = 0.25                                                                           |
|                                                                                            |             |                  |                               |                 | Raw Juice          |             | 0.04                 | < LOD    | < LOD    | < LOD    | PF = 0.11                                                                           |
|                                                                                            |             |                  |                               |                 | Tomato Peel        |             | 0.63                 | < LOD    | < LOD    | < LOD    | PF = 1.75                                                                           |
|                                                                                            |             |                  |                               |                 | Wash Water         |             | 0.13                 | < LOD    | < LOD    | < LOD    | PF = 0.36                                                                           |
|                                                                                            |             |                  |                               |                 | Washed<br>Tomatoes |             | 0.26                 | < LOD    | < LOD    | < LOD    | PF = 0.72                                                                           |
|                                                                                            |             |                  |                               |                 | Wet Pomace         |             | 1.16                 | < LOD    | < 0.01   | < LOD    | PF = 3.22                                                                           |
| 2009/7006206<br>RCN R090404<br>USA<br>(Stanislaus,<br>California)<br>2008<br>(Sun 6117)    | 2           | 7                | 504<br><del>503</del><br>1007 | 288<br>287      | Tomato RAC         | 7           | (0.26, 0.21)<br>0.24 | < LOD    | < LOD    | < LOD    | -                                                                                   |
|                                                                                            |             |                  |                               |                 | Canned<br>Tomatoes |             | 0.05                 | < LOD    | < LOD    | < LOD    | PF = 0.21                                                                           |
|                                                                                            |             |                  |                               |                 | Paste              |             | 0.29                 | < LOD    | < LOD    | < LOD    | PF = 1.21                                                                           |
|                                                                                            |             |                  |                               |                 | Peeled<br>Tomatoes |             | 0.02                 | < LOD    | < LOD    | < LOD    | PF = 0.08                                                                           |
|                                                                                            |             |                  |                               |                 | Puree              |             | 0.09                 | < 0.01   | < LOD    | < LOD    | PF = 0.38                                                                           |
|                                                                                            |             |                  |                               |                 | Raw Juice          |             | 0.06                 | < LOD    | < LOD    | < LOD    | PF = 0.25                                                                           |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                        | Application |                  |                   |                 | Matrix             | PHI<br>days | Residues (mg/kg)     |          |          |          | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) <sup>a</sup> |
|-----------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------------------|-------------|----------------------|----------|----------|----------|-------------------------------------------------------------------------------------|
|                                                                                               | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                    |             | Fluxapyroxad         | M700F002 | M700F008 | M700F048 |                                                                                     |
|                                                                                               |             |                  |                   |                 | Tomato Peel        |             | 0.58                 | < LOD    | < LOD    | < LOD    | PF = 2.42                                                                           |
|                                                                                               |             |                  |                   |                 | Wash Water         |             | 0.01                 | < LOD    | < LOD    | < LOD    | PF = 0.04                                                                           |
|                                                                                               |             |                  |                   |                 | Washed<br>Tomatoes |             | 0.18                 | < LOD    | < LOD    | < LOD    | PF = 0.75                                                                           |
|                                                                                               |             |                  |                   |                 | Wet Pomace         |             | 0.86                 | < LOD    | < LOD    | < LOD    | PF = 3.58                                                                           |
| 2009/7006206<br>RCN R090405<br>USA<br>(Kings,<br>California)<br>2008<br>(Nunhems USA<br>6366) | 2           | 6                | 496<br>488<br>984 | 375<br>369      | Tomato RAC         | 7           | (0.13, 0.10)<br>0.12 | < LOD    | < LOD    | < LOD    | -                                                                                   |
|                                                                                               |             |                  |                   |                 | Canned<br>Tomatoes |             | 0.02                 | < LOD    | < LOD    | < LOD    | PF = 0.17                                                                           |
|                                                                                               |             |                  |                   |                 | Paste              |             | 0.02                 | < LOD    | < LOD    | < LOD    | PF = 0.17                                                                           |
|                                                                                               |             |                  |                   |                 | Peeled<br>Tomatoes |             | < 0.01               | < LOD    | < LOD    | < LOD    | PF = 0.08                                                                           |
|                                                                                               |             |                  |                   |                 | Puree              |             | 0.08                 | < LOD    | < LOD    | < LOD    | PF = 0.67                                                                           |
|                                                                                               |             |                  |                   |                 | Raw Juice          |             | 0.01                 | < LOD    | < LOD    | < LOD    | PF = 0.08                                                                           |
|                                                                                               |             |                  |                   |                 | Tomato Peel        |             | 0.81                 | < LOD    | < LOD    | < LOD    | PF = 6.75                                                                           |
|                                                                                               |             |                  |                   |                 | Wash Water         |             | < 0.01               | < LOD    | < LOD    | < LOD    | PF = 0.08                                                                           |
|                                                                                               |             |                  |                   |                 | Washed<br>Tomatoes |             | 0.10                 | < LOD    | < LOD    | < LOD    | PF = 0.83                                                                           |
|                                                                                               |             |                  |                   |                 | Wet Pomace         |             | 0.26                 | < LOD    | < 0.01   | < LOD    | PF = 2.17                                                                           |

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

<sup>a</sup> Processing factor for parent + M700F008 + M700F048 is the same as for parent only

### Soya bean

The effect of processing (laboratory scale) on residues of fluxapyroxad in soya beans was investigated (Johnston and Saha 2010, 2009/7003178). Two field trials were conducted during the 2008 growing season (one untreated and two treated plots at each site). Soya beans with incurred residues were obtained where plants were sprayed with two foliar sprays at 0.495–0.511 kg ai/ha with a 7–8 day retreatment interval (total 1.006–1.010 kg ai/season) or were sprayed with two foliar sprays at 0.097–0.103 kg ai/ha with a 7–8 day retreatment interval (total 0.199–0.202 kg ai/season). The latter treatment regime was used to generate aspirated grain fractions. The first application was made at BBCH 85, 50% of pods ripe (Manitoba) or BBCH 79, all pods final length (North Dakota), approximately 4 weeks (27–29 days) prior to harvest of the mature seed (BBCH 99). Applications were made in 183–241 L/ha using ground equipment and an adjuvant was added to the spray mixture for all applications.

Soya bean bulk RAC samples were harvested 21 days after the last application, at normal maturity, 132 to 144 days after planting. One untreated control bulk soya bean seed sample was collected from each untreated plot and duplicate bulk soya bean seed samples were harvested from each treated plot. Soya bean seed was removed and after drying and aspiration was used to firstly generate aspirated grain fractions and also the following processed commodities of meal, hulls and refined oil, flour, miso, soy milk, soy sauce and tofu. Processing was performed using procedures which simulated commercial processing practices.

Whole soya beans were cleaned by aspiration and screening. A portion of the cleaned soya bean sample was removed for soymilk, tofu and soy sauce production. Whole soya beans were then

mechanically cracked and the hull material was then separated from the kernel. Kernel material was processed into crude oil, soya bean meal and soya bean flakes. The flakes were ground and sifted to produce soy flour. Crude oil was sequentially converted to refined oil and soapstock, and the refined oil to bleached oil, deodorized oil and deodorizer distillates.

Cleaned whole soya bean were soaked, ground, filtered and heated to give soymilk. After heating and mixing with calcium sulphate, tofu and whey were produced.

Cleaned whole soya bean after soaking in a pressure cooker produced soaked soya bean. This was mixed with ground wheat and matured, to produce mature koji, then fermented to produce raw soy sauce and raw soy cake (miso). The raw soy sauce was pasteurised to produce soy sauce.

Residues of fluxapyroxad in soya bean RAC and processed commodities were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for soya bean commodities were obtained for each analyte.

Table 125 Residues in soya bean processed fractions from the foliar application of fluxapyroxad to soya beans in the USA and Canada (Johnston and Saha 2010, 2009/7003178)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                | Application |                  |                    |                 | Matrix                                | PHI<br>days | Residues (mg/kg) |          |          |          | Processing Factor<br>for (Fluxapyroxad<br>+ M700F008<br>+ M700F048) <sup>a</sup> |
|-------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------|-----------------|---------------------------------------|-------------|------------------|----------|----------|----------|----------------------------------------------------------------------------------|
|                                                                                                       | No          | Interval<br>Days | g<br>ai/ha         | Water<br>(L/ha) |                                       |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                                                                  |
| GAP, USA                                                                                              | 2           |                  | 97-<br>101         |                 |                                       | 21          |                  |          |          |          |                                                                                  |
| 2009/7003178<br>RCN R080528<br>Canada<br>(Portage la<br>Prairie,<br>Manitoba)<br>2008<br>(RR Portage) | 2           | 8                | 503<br>507<br>1010 | 191<br>191      | Seed (RAC)                            | 21          | 0.130            | < LOD    | < LOD    | < LOD    | -                                                                                |
|                                                                                                       |             |                  |                    |                 | Flour                                 |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF =0.08                                                                         |
|                                                                                                       |             |                  |                    |                 | Hulls                                 |             | 0.085            | < LOD    | < LOD    | < LOD    | PF =0.65                                                                         |
|                                                                                                       |             |                  |                    |                 | Meal                                  |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF =0.08                                                                         |
|                                                                                                       |             |                  |                    |                 | Miso                                  |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF =0.08                                                                         |
|                                                                                                       |             |                  |                    |                 | Refined Oil                           |             | 0.024            | < LOD    | < LOD    | < LOD    | PF =0.18                                                                         |
|                                                                                                       |             |                  |                    |                 | Soy Milk                              |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF =0.08                                                                         |
|                                                                                                       |             |                  |                    |                 | Soy Sauce                             |             | < LOD            | < LOD    | < LOD    | < LOD    | PF =0.08                                                                         |
|                                                                                                       |             |                  |                    |                 | Tofu                                  |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF =0.08                                                                         |
|                                                                                                       |             |                  |                    |                 | Seed (RAC)                            | 21          | 0.126            | < LOD    | < LOD    | < LOD    | -                                                                                |
|                                                                                                       |             |                  |                    |                 | Flour                                 |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF =0.08                                                                         |
|                                                                                                       |             |                  |                    |                 | Hulls                                 |             | 0.020            | < LOD    | < LOD    | < LOD    | PF =0.16                                                                         |
|                                                                                                       |             |                  |                    |                 | Meal                                  |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF =0.08                                                                         |
|                                                                                                       |             |                  |                    |                 | Miso                                  |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF =0.08                                                                         |
|                                                                                                       |             |                  |                    |                 | Refined Oil                           |             | 0.024            | < LOD    | < LOD    | < LOD    | PF =0.19                                                                         |
|                                                                                                       |             |                  |                    |                 | Soy Milk                              |             | < LOD            | < LOD    | < LOD    | < LOD    | PF =0.08                                                                         |
|                                                                                                       |             |                  |                    |                 | Soy Sauce                             |             | < LOD            | < LOD    | < LOD    | < LOD    | PF =0.08                                                                         |
|                                                                                                       |             |                  |                    |                 | Tofu                                  |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF =0.08                                                                         |
|                                                                                                       | 2           | 8                | 97<br>103<br>200   | 183<br>191      | Seed (RAC)<br>(originating<br>sample) | 21          | 0.01             | < LOD    | < LOD    | < LOD    | -                                                                                |
|                                                                                                       |             |                  |                    |                 | Aspirated<br>Grain<br>Fractions       | 21          | 1.77             | < 0.01   | < 0.01   | < LOD    | PF=177                                                                           |
| 2009/7003178<br>RCN R080529<br>USA                                                                    | 2           | 7                | 495<br>511<br>1006 | 232<br>239      | Seed (RAC)                            | 21          | 0.011            | < LOD    | < LOD    | < LOD    | -                                                                                |
|                                                                                                       |             |                  |                    |                 | Flour                                 |             | < LOD            | < LOD    | < LOD    | < LOD    | PF = 0.91                                                                        |
|                                                                                                       |             |                  |                    |                 | Hulls                                 |             | 0.018            | < LOD    | < LOD    | < LOD    | PF = 1.64                                                                        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety) | Application |                  |                  |                 | Matrix                                | PHI<br>days | Residues (mg/kg) |          |          |          | Processing Factor<br>for (Fluxapyroxad<br>+ M700F008<br>+ M700F048) <sup>a</sup> |
|--------------------------------------------------------|-------------|------------------|------------------|-----------------|---------------------------------------|-------------|------------------|----------|----------|----------|----------------------------------------------------------------------------------|
|                                                        | No          | Interval<br>Days | g<br>ai/ha       | Water<br>(L/ha) |                                       |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                                                                  |
| (Grand Forks,<br>North Dakota)<br>2008<br>(RS037RR)    |             |                  |                  |                 | Meal                                  |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF = 0.91                                                                        |
|                                                        |             |                  |                  |                 | Miso                                  |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF = 0.91                                                                        |
|                                                        |             |                  |                  |                 | Refined Oil                           |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF = 0.91                                                                        |
|                                                        |             |                  |                  |                 | Soy Milk                              |             | < LOD            | < LOD    | < LOD    | < LOD    | PF = 0.91                                                                        |
|                                                        |             |                  |                  |                 | Soy Sauce                             |             | < LOD            | < LOD    | < LOD    | < LOD    | PF = 0.91                                                                        |
|                                                        |             |                  |                  |                 | Tofu                                  |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF = 0.91                                                                        |
|                                                        |             |                  |                  |                 | Seed (RAC)                            | 21          | < 0.01           | < LOD    | < LOD    | < LOD    | -                                                                                |
|                                                        |             |                  |                  |                 | Flour                                 |             | < LOD            | < LOD    | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                        |             |                  |                  |                 | Hulls                                 |             | 0.082            | < LOD    | < LOD    | < LOD    | PF = 8.2                                                                         |
|                                                        |             |                  |                  |                 | Meal                                  |             | < LOD            | < LOD    | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                        |             |                  |                  |                 | Miso                                  |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                        |             |                  |                  |                 | Refined Oil                           |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                        |             |                  |                  |                 | Soy Milk                              |             | < LOD            | < LOD    | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                        |             |                  |                  |                 | Soy Sauce                             |             | < LOD            | < LOD    | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                        |             |                  |                  |                 | Tofu                                  |             | < LOD            | < LOD    | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                        | 2           | 8                | 99<br>103<br>202 | 230<br>241      | Seed (RAC)<br>(originating<br>sample) | 21          | < 0.01           | < LOD    | < LOD    | < LOD    | -                                                                                |
|                                                        |             |                  |                  |                 | Aspirated<br>Grain<br>Fractions       | 21          | 1.39             | < 0.01   | 0.01     | 0.02     | PF=141<br>(parent only 139)                                                      |

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

<sup>a</sup> Processing factor for parent + M700F008 + M700F042 is the same as for parent only (except for aspirated grain fractions in one trial)

### Potato

The effect of processing (laboratory scale) on residues of fluxapyroxad in potatoes was investigated in two trials (Johnston and Saha 2010, 2009/7003454). Potatoes with incurred residues were obtained where plants were sprayed with three foliar sprays at 0.493–0.507 kg ai/ha with a 6–7 day retreatment interval (total 1.493–1.502 kg ai/season). The three applications were made between BBCH 46 and BBCH 93. Applications were made in 185–190 L/ha using ground equipment and an adjuvant was added to the spray mixture for all applications. Potato bulk RAC samples (45–49 kilograms) were harvested 6–7 days after the last application, 98–147 days after planting.

Bulk potato samples (one control and one or two treated for each trial) were processed into processed potato commodity samples according to simulated commercial procedures. A potato sample was taken prior to cleaning. Cleaned potatoes (soaked in water, then brushed and rinsed) were peeled. The removed peel was dewatered in a basket centrifuge. The peeled potatoes were inspected and any green or bruised spots were removed. For granule/flake production, peeled potatoes were sliced and washed to remove starch. Sliced potatoes were cooked in water (71–74 °C for 20 minutes). This water was replaced with < 32 °C water and the potatoes mixed for 20 minutes. The water was then drained and the potatoes steamed for 35–45 minutes at 94–100 °C for final cooking. The cooked potatoes were mashed and flash dried with a drum dryer to give a moisture level < 12.0%. The material size was reduced with a roller mill and then separated with 32 and 62 mesh screens. Material greater than 62 mesh is flakes and less than 32 mesh is granules. For fried chip production, peeled potatoes were sliced and washed. Surface moisture was removed and the slices fried in vegetable oil (350–375 °F)

for 45–75 seconds. Boiled potatoes were produced by boiling at 97–100 °C for 35–45 minutes removing the potatoes from the water and allowing to cool. For baked potatoes, whole clean and dry potatoes were pierced four times, cooked in an oven at 171–182 °C for 40–50 minutes then allowed to cool. For microwave/boiled potatoes, whole clean potatoes were boiled at 97–100 °C for 8–12 minutes and removed from water. They were then microwaved until the internal temperature of the largest potato was equal to or greater than 99 °C, then removed and allowed to cool. For fried potatoes, whole clean potatoes were peeled and trimmed, then cut with a French fry cutter. Cut potatoes were fried at 177–191 °C for 3–5 minutes, removed from oil and allowed to cool. For dried pulp, all wet peel and trim waste collected during all processing of the sample was oven dried at 54–71 °C until moisture was less than or equal to 15%. Trim waste was reduced in size in a Hobart bowl chopper prior to drying.

Residues of fluxapyroxad in potato RAC and processed commodities were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for potato commodities were obtained for each analyte.

Table 126 Residues in potato processed fractions from the foliar application of fluxapyroxad to potatoes in the USA (Johnston and Saha 2010, 2009/7003454)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                    | Application |                  |                           |                   | Matrix                                      | PHI<br>days | Residues (mg/kg) |                              |          |          | Processing Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) <sup>a</sup> |
|-------------------------------------------------------------------------------------------|-------------|------------------|---------------------------|-------------------|---------------------------------------------|-------------|------------------|------------------------------|----------|----------|----------------------------------------------------------------------------------|
|                                                                                           | No          | Interval<br>Days | g<br>ai/ha                | Water<br>(L/ha)   |                                             |             | Fluxapyroxad     | M700F002                     | M700F008 | M700F048 |                                                                                  |
| GAP, USA                                                                                  | 3           |                  | 97-<br>100                |                   |                                             | 7           |                  |                              |          |          |                                                                                  |
| 2009/7003454<br>RCN<br>R080538<br>USA<br>(Power,<br>Idaho)<br>2008<br>(Russet<br>Burbank) | 3           | 8<br>6           | 503<br>493<br>497<br>1493 | 188<br>186<br>185 | Potato Tuber<br>RAC                         | 7           | 0.02             | < LOD                        | < LOD    | < LOD    | -                                                                                |
|                                                                                           |             |                  |                           |                   | Granules/Flakes                             |             | < 0.01           | < 0.01                       | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Chips                                       |             | < 0.01           | < 0.01                       | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Peel, wet                                   |             | 0.04             | < LOD                        | < LOD    | < LOD    | PF = 2.0                                                                         |
|                                                                                           |             |                  |                           |                   | Peeled Potatoes                             |             | < 0.01           | < LOD                        | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Boiled Potatoes                             |             | < 0.01           | < LOD                        | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Microwave/<br>boiled potatoes<br>(unpeeled) |             | < 0.01           | < LOD                        | < 0.01   | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Baked Potato                                |             | < 0.01           | < LOD                        | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Fried Potato                                |             | < 0.01           | (< LOD,<br>< 0.01)<br>< 0.01 | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Process Waste                               |             | < 0.01           | < LOD                        | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Dried pulp                                  |             | 0.14             | < LOD                        | < LOD    | < LOD    | PF = 7.0                                                                         |
|                                                                                           |             |                  |                           |                   | Potato Tuber<br>RAC                         | 7           | 0.01             | < LOD                        | < LOD    | < LOD    | -                                                                                |
|                                                                                           |             |                  |                           |                   | Granules/Flakes                             |             | < 0.01           | < 0.01                       | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                                                           |             |                  |                           |                   | Chips                                       |             | < LOD            | < 0.01                       | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                                                           |             |                  |                           |                   | Peel, wet                                   |             | 0.07             | < LOD                        | < LOD    | < LOD    | PF = 7.0                                                                         |
|                                                                                           |             |                  |                           |                   | Peeled Potatoes                             |             | < LOD            | < LOD                        | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                                                           |             |                  |                           |                   | Boiled Potatoes                             |             | < 0.01           | < LOD                        | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                                                           |             |                  |                           |                   | Microwave/<br>boiled potatoes<br>(unpeeled) |             | < LOD            | < LOD                        | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                                                           |             |                  |                           |                   | Baked Potato                                |             | < 0.01           | < LOD                        | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                                                           |             |                  |                           |                   | Fried Potato                                |             | < LOD            | < LOD *                      | < LOD    | < LOD    | PF = 1.0                                                                         |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                    | Application |                  |                           |                   | Matrix                                      | PHI<br>days | Residues (mg/kg) |          |          |          | Processing Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) <sup>a</sup> |
|-------------------------------------------------------------------------------------------|-------------|------------------|---------------------------|-------------------|---------------------------------------------|-------------|------------------|----------|----------|----------|----------------------------------------------------------------------------------|
|                                                                                           | No          | Interval<br>Days | g<br>ai/ha                | Water<br>(L/ha)   |                                             |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                                                                  |
| 2009/7003454<br>RCN<br>R080539<br>USA<br>(Cass,<br>North<br>Dakota)<br>2008<br>(Goldrush) | 3           | 8<br>6           | 507<br>497<br>498<br>1502 | 190<br>187<br>187 | Process Waste                               | 6           | < LOD            | < LOD    | < LOD    | < LOD    | PF = 1.0                                                                         |
|                                                                                           |             |                  |                           |                   | Dried pulp                                  |             | 0.12             | < 0.01   | < LOD    | < LOD    | PF = 12.0                                                                        |
|                                                                                           |             |                  |                           |                   | Potato Tuber                                |             | 0.02             | < LOD    | < LOD    | < LOD    | -                                                                                |
|                                                                                           |             |                  |                           |                   | RAC                                         |             |                  |          |          |          |                                                                                  |
|                                                                                           |             |                  |                           |                   | Granules/Flakes                             |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Chips                                       |             | < LOD            | < LOD    | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Peel, wet                                   |             | 0.10             | < LOD    | < LOD    | < LOD    | PF = 5.0                                                                         |
|                                                                                           |             |                  |                           |                   | Peeled Potatoes                             |             | < LOD            | < LOD    | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Boiled Potatoes                             |             | < LOD            | < LOD    | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Microwave/<br>boiled potatoes<br>(unpeeled) |             | < LOD            | < LOD    | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Baked Potato                                |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Fried Potato                                |             | < LOD            | < 0.01*  | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Process Waste                               |             | < 0.01           | < LOD    | < LOD    | < LOD    | PF = 0.5                                                                         |
|                                                                                           |             |                  |                           |                   | Dried pulp                                  |             | 0.10             | < 0.01*  | < LOD    | < LOD    | PF = 5.0                                                                         |

\*Mean of multiple analyses of the same sample.

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048

<sup>a</sup> Processing factor for parent + M700F008 + M700F048 is the same as for parent only

### Sugar beet

The effect of processing (laboratory scale) on residues of fluxapyroxad in sugar beet was investigated in two trials (Johnston and Saha 2010, 2009/7003454). Sugar beet with incurred residues were obtained where plants were sprayed with three foliar sprays at 0.479–0.523 kg ai/ha with a 7 day retreatment interval (total 1.498–1.529 kg ai/season). The three applications were made between BBCH 48 and BBCH 49 (harvestable size). Applications were made in 180–195 L/ha using ground equipment and an adjuvant was added to the spray mixture for all applications. Sugar beet bulk RAC samples (90–95 kilograms) were harvested 7 days after the last application.

Bulk sugar beet root samples (one control and one treated for each trial) were processed into processed sugar beet commodity samples according to simulated commercial procedures. Sugar beets were cleaned prior to processing. Cleaned beets were sliced in a Hobart food cutter into “cosettes”. During diffusion, cosettes were first exposed to 88–92 °C water for 30–45 seconds and then diffused in five kettles in 68–74 °C water for a minimum of 9 minutes in each kettle. After diffusion, the raw juice was screened with a 100 mesh standard sieve to remove small pieces of beet. Diffused cosettes were then dewatered and pressed water and pressed pulp fractions were collected. Pressed beet pulp was split for processing into dried beet pulp and ensiled beet pulp. Dried beet pulp was produced by drying the pressed material at 54–71 °C until the moisture content was 15% or less. Juice from pressing was screened with the 100 mesh sieve. Juices from diffusion and pressing were combined. A fraction of the raw juice was collected and the raw juice was purified by two phosphatisation steps. In the first step, raw juice was mixed and the temperature increased to 80–85 °C. A 20% calcium oxide solution was added until the pH of ~10.5 was achieved. A precipitate or mud was formed. Centrifugation separated the mud and juice. In the second phosphatisation step, the juice was mixed and heated to 80–85 °C and the pH reduced to 9.1–9.3 with 3M phosphoric acid. After the pH was

achieved, the juice was centrifuged to separate mud and clear juice (thin juice). This juice was mixed and heated to 80–85 °C and the pH was reduced to 8.8–9.0 with sodium bisulfite. Thin juice was evaporated under vacuum using a laboratory vacuum evaporator. Juice was evaporated (temperatures less than 85 °C) until a brix level of 50–60% solids (thick juice) was achieved. The thick juice was filtered using cotton and a fraction collected. Thick juice was evaporated under vacuum until a 70–80% solids juice (syrup) was achieved. Commercially available white cane sugar was added to the juice and crystallisation began after this “seeding” step. The solution was allowed to cool and a fraction of raw sugar was collected. Sugar and molasses were separated by centrifugation. Steam was added to remove residual molasses from the crystallised sugar. After removing molasses, white sugar was dried (if necessary) in an oven at 54–71 °C for a final moisture of ~1.0%. The resulting fractions were sugar and molasses.

Residues of fluxapyroxad in sugar beet RAC and processed commodities were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for sugar beet commodities were obtained for each analyte. Generally the recoveries of each analyte were within the range 70–120%, with a few isolated exceptions, but mean recoveries were mainly acceptable.

Table 127 Residues in sugar beet processed fractions from the foliar application of fluxapyroxad to sugar beet in the USA (Johnston and Saha 2010, 2009/7003454)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                | Application |                  |                                  |                   | Matrix                 | PHI<br>days | Residues (mg/kg)     |          |                           |          | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) <sup>a</sup> |
|---------------------------------------------------------------------------------------|-------------|------------------|----------------------------------|-------------------|------------------------|-------------|----------------------|----------|---------------------------|----------|-------------------------------------------------------------------------------------|
|                                                                                       | No          | Interval<br>Days | g<br>ai/ha                       | Water<br>(L/ha)   |                        |             | Fluxapyroxad         | M700F002 | M700F008                  | M700F048 |                                                                                     |
| GAP, USA                                                                              | 3           |                  | 97-<br>100                       |                   |                        | 7           |                      |          |                           |          |                                                                                     |
| 2009/7003454<br>RCN R080540<br>USA<br>(Power, Idaho)<br>2008<br>(Hilleshog<br>9026)   | 3           | 7<br>7           | 497<br>509<br><u>523</u><br>1529 | 186<br>190<br>195 | Sugar beet<br>root RAC | 7           | 0.76                 | < LOD    | 0.01* (< 0.01,<br>0.01)   | < LOD    | -                                                                                   |
|                                                                                       |             |                  |                                  |                   | Refined<br>sugar       |             | 0.04                 | < LOD    | < LOD                     | < LOD    | PF = 0.05                                                                           |
|                                                                                       |             |                  |                                  |                   | Dried pulp             |             | 0.37                 | < LOD    | < 0.01*                   | < LOD *  | PF = 0.49                                                                           |
|                                                                                       |             |                  |                                  |                   | Molasses               |             | 0.29                 | < LOD    | < LOD                     | < LOD    | PF = 0.38                                                                           |
|                                                                                       |             |                  |                                  |                   | Raw juice              |             | 0.09                 | < LOD    | < 0.01                    | < LOD    | PF = 0.12                                                                           |
|                                                                                       |             |                  |                                  |                   | Thick juice            |             | 0.21                 | < LOD    | < LOD                     | < LOD    | PF = 0.27                                                                           |
|                                                                                       |             |                  |                                  |                   | Raw sugar              |             | 0.28                 | < LOD    | < LOD                     | < LOD    | PF = 0.37                                                                           |
|                                                                                       |             |                  |                                  |                   | Press water            |             | 0.03                 | < LOD    | < LOD                     | < LOD    | PF = 0.04                                                                           |
|                                                                                       |             |                  |                                  |                   | Pressed pulp           |             | (0.04, 0.07)<br>0.06 | < LOD    | (< LOD,<br>< 0.01) < 0.01 | < LOD    | PF = 0.08                                                                           |
|                                                                                       |             |                  |                                  |                   | Ensiled pulp           |             | (0.09, 0.10)<br>0.10 | < LOD    | < 0.01*                   | < LOD *  | PF = 0.13                                                                           |
| 2009/7003454<br>RCN R080541<br>USA<br>(Cass,<br>North Dakota)<br>2008<br>(BTS 85RR02) | 3           | 7<br>6           | 514<br>479<br><u>505</u><br>1498 | 193<br>180<br>189 | Sugar beet<br>root RAC | 7           | 0.18                 | < LOD    | (< LOD,<br>< 0.01) < 0.01 | < LOD    | -                                                                                   |
|                                                                                       |             |                  |                                  |                   | Refined<br>sugar       |             | 0.05                 | < LOD    | < LOD                     | < LOD    | PF = 0.28                                                                           |
|                                                                                       |             |                  |                                  |                   | Dried pulp             |             | 0.54                 | < LOD    | < 0.01*                   | ND*      | PF = 3.0                                                                            |
|                                                                                       |             |                  |                                  |                   | Molasses               |             | 0.22                 | < LOD    | < LOD                     | < LOD    | PF = 1.22                                                                           |
|                                                                                       |             |                  |                                  |                   | Raw juice              |             | 0.05                 | < LOD    | < LOD                     | < LOD    | PF = 0.28                                                                           |
|                                                                                       |             |                  |                                  |                   | Thick juice            |             | 0.22                 | < LOD    | < LOD                     | < LOD    | PF = 1.22                                                                           |
|                                                                                       |             |                  |                                  |                   | Raw sugar              |             | 0.29                 | < LOD    | < LOD                     | < LOD    | PF = 1.61                                                                           |
|                                                                                       |             |                  |                                  |                   | Press water            |             | 0.03                 | < LOD    | < LOD                     | < LOD    | PF = 0.17                                                                           |
|                                                                                       |             |                  |                                  |                   | Pressed pulp           |             | (0.05, 0.09)<br>0.07 | < LOD    | < LOD *                   | < LOD    | PF = 0.39                                                                           |
|                                                                                       |             |                  |                                  |                   | Ensiled pulp           |             | 0.11                 | < LOD    | (< LOD,<br>< 0.01) < 0.01 | < LOD    | PF = 0.61                                                                           |

\*Mean of multiple analyses of the same sample.

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

<sup>a</sup> Processing factor for parent + M700F008 + M700F048 is the same as for parent only

### Barley

The effect of processing (laboratory scale) on residues of fluxapyroxad in barley was investigated in four trials conducted in the USA in the 2008 growing season (Johnston and Saha 2009, 2009/7003177). Barley with incurred residues was obtained where plants were sprayed with two foliar sprays at 0.499–0.533 kg ai/ha with a 7–8 day retreatment interval (total 1.0–1.033 kg ai/season). The first application was made approximately 4 weeks (28–31 days) prior to harvest of mature grain, at milk (BBCH 75) to late hard dough (BBCH 88). Applications were made in 165–328 L/ha using ground equipment and an adjuvant was added to the spray mixture for all applications. Barley bulk RAC samples were harvested 21–23 days after the last application.

Bulk barley grain samples (one control and two treated for each trial) were processed into processed barley commodity samples according to simulated commercial procedures. Barley was removed from storage and a representative RAC sample taken. Barley was screened to remove foreign material and dried if moisture was > 14%. Thin grain was discarded and the large and medium grain was dehulled. Bran was removed from the dehulled grain and the bran was separated from pearled barley. Pearled barley was milled to give flour.

For beer processing, whole barley was screened and washed to remove foreign material and analysed for moisture content. Thin grain was discarded. Germination of the cleaned grain was completed over a 3-day period through a series of soaking and drying steps, followed by sprouting for a 4–6 day period. A sample of malt sprouts was removed. Germinated barley was kilned in 2 stages to reduce moisture content to less than 5% in the second stage. The malted barley was then milled and a sample of malted barley was removed. The cracked malted barley was mashed by heating in water at 79 °C, resting at 77–85 °C starting temperature then re-heating at 77 °C and resting for 5 minutes. The resultant liquid had become wort. Wort was removed from the used grain (lautering). A sample of the spent grain was taken. After lautering the lautered wort is sparged, which is the process of collecting the recycled and lautered wort and is complete when the wort has a dissolved solids content of 2%. After lautering is complete, the wort is boiled and hops added to the wort. After hop addition the mixture is boiled for 90 minutes then spent hops are removed. The remaining wort is cooled, transferred to a 3–5 gallon glass carboy, then yeast added to start the fermentation process, which takes 5–7 days. It is complete when production of carbon dioxide from breakdown of sugar is finished. After fermentation the beer must be filtered before maturation and bottling. To filter the beer, the first step is to remove the clarified beer from the spent yeast (lees) that settles at the bottom of the carboy. The beer is removed by siphoning using a racking can and deposited into a clean plastic bucket. A representative sample of spent yeast is removed. Racked beer was filtered then placed in a cooler for a week for the required sample fraction.

Residues of fluxapyroxad in barley RAC and processed commodities were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for barley commodities were obtained for all four analytes.

Table 128 Residues in barley processed fractions from the foliar application of fluxapyroxad to barley in the USA (Johnston and Saha 2009, 2009/7003177)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety) | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          | Processing<br>Factor for<br>Parent | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) |
|--------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|------------------|----------|----------|----------|------------------------------------|------------------------------------------------------------------------|
|                                                        | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                    |                                                                        |
| GAP, USA                                               | 2           |                  | 97-<br>100 |                 |        | 21          |                  |          |          |          |                                    |                                                                        |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                     | Application |                  |                    |                 | Matrix                       | PHI<br>days | Residues (mg/kg) |          |          |          | Processing<br>Factor for<br>Parent | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) |
|--------------------------------------------------------------------------------------------|-------------|------------------|--------------------|-----------------|------------------------------|-------------|------------------|----------|----------|----------|------------------------------------|------------------------------------------------------------------------|
|                                                                                            | No          | Interval<br>Days | g<br>ai/ha         | Water<br>(L/ha) |                              |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                    |                                                                        |
| 2009/7003177<br>RCN<br>R080534<br>USA<br>(Grant,<br>Washington)<br>2008<br>(AC<br>Metcalf) | 2           | 7                | 503<br>505<br>1008 | 188<br>189      | Field<br>RAC                 | 21          | 2.48             | < LOD    | < 0.01   | < LOD    | -                                  | -                                                                      |
|                                                                                            |             |                  |                    |                 | Pot<br>Barley                |             | 0.17             | < LOD    | < LOD    | < LOD    | PF = 0.07                          | PF = 0.07                                                              |
|                                                                                            |             |                  |                    |                 | Bran                         |             | 3.25             | < LOD    | < 0.01   | < LOD    | PF = 1.31                          | PF = 1.31                                                              |
|                                                                                            |             |                  |                    |                 | Flour                        |             | 0.20             | < LOD    | < LOD    | < LOD    | PF = 0.08                          | PF = 0.08                                                              |
|                                                                                            |             |                  |                    |                 | Brewing<br>Malt              |             | < 0.01           | < LOD    | < 0.01   | < LOD    | PF =<br>< 0.01                     | PF = < 0.01                                                            |
|                                                                                            |             |                  |                    |                 | Malt<br>culms<br>(sprouts)   |             | 0.50             | < LOD    | < 0.01   | < LOD    | PF = 0.20                          | PF = 0.20                                                              |
|                                                                                            |             |                  |                    |                 | Spent<br>Grain               |             | 0.71             | < LOD    | 0.01     | < LOD    | PF = 0.29                          | PF = 0.29                                                              |
|                                                                                            |             |                  |                    |                 | Spent<br>Hops<br>(Flocs)     |             | 0.25             | < LOD    | < LOD    | < LOD    | PF = 0.10                          | PF = 0.10                                                              |
|                                                                                            |             |                  |                    |                 | Brewer's<br>(spent)<br>yeast |             | 0.41             | < LOD    | < 0.01   | < LOD    | PF = 0.17                          | PF = 0.17                                                              |
|                                                                                            |             |                  |                    |                 | Beer                         |             | 0.04             | < 0.01   | < 0.01   | < 0.01   | PF = 0.02                          | PF = 0.02                                                              |
|                                                                                            |             |                  |                    |                 | Field<br>RAC                 | 21          | 3.13             | < LOD    | < 0.01   | < LOD    | -                                  | -                                                                      |
|                                                                                            |             |                  |                    |                 | Pot<br>Barley                |             | 0.31             | < LOD    | < LOD    | < LOD    | PF = 0.10                          | PF = 0.10                                                              |
|                                                                                            |             |                  |                    |                 | Bran                         |             | 5.18             | < LOD    | < 0.01   | < LOD    | PF = 1.65                          | PF = 1.65                                                              |
|                                                                                            |             |                  |                    |                 | Flour                        |             | 0.33             | < LOD    | < LOD    | < LOD    | PF = 0.11                          | PF = 0.11                                                              |
|                                                                                            |             |                  |                    |                 | Brewing<br>Malt              |             | 0.02             | < LOD    | < 0.01   | < LOD    | PF = 0.01                          | PF = 0.01                                                              |
|                                                                                            |             |                  |                    |                 | Malt<br>culms<br>(sprouts)   |             | 0.33             | < LOD    | < 0.01   | < 0.01   | PF = 0.11                          | PF = 0.11                                                              |
|                                                                                            |             |                  |                    |                 | Spent<br>Grain               |             | 0.67             | < LOD    | < 0.01   | < LOD    | PF = 0.21                          | PF = 0.21                                                              |
|                                                                                            |             |                  |                    |                 | Spent<br>Hops<br>(Flocs)     |             | 0.37             | < LOD    | < LOD    | < LOD    | PF = 0.12                          | PF = 0.12                                                              |
|                                                                                            |             |                  |                    |                 | Brewer's<br>(spent)<br>yeast |             | 0.08             | < LOD    | < LOD    | < LOD    | PF = 0.03                          | PF = 0.03                                                              |
|                                                                                            |             |                  |                    |                 | Beer                         |             | 0.02             | < LOD    | < LOD    | < LOD    | PF = 0.01                          | PF = 0.01                                                              |
| 2009/7003177<br>RCN<br>R080535<br>USA<br>(Power,<br>Idaho)<br>2008<br>(Baroness)           | 2           | 7                | 500<br>503<br>1003 | 184<br>185      | Field<br>RAC                 | 21          | 2.52             | < LOD    | < 0.01   | < LOD    | -                                  | -                                                                      |
|                                                                                            |             |                  |                    |                 | Pot<br>Barley                |             | 0.29             | < LOD    | < LOD    | < LOD    | PF = 0.12                          | PF = 0.12                                                              |
|                                                                                            |             |                  |                    |                 | Bran                         |             | 4.80             | < LOD    | < 0.01   | < LOD    | PF = 1.90                          | PF = 1.90                                                              |
|                                                                                            |             |                  |                    |                 | Flour                        |             | 0.28             | < LOD    | < LOD    | < LOD    | PF = 0.11                          | PF = 0.11                                                              |
|                                                                                            |             |                  |                    |                 | Brewing<br>Malt              |             | 0.02             | < LOD    | 0.04     | < LOD    | PF = 0.01                          | PF = 0.02                                                              |
|                                                                                            |             |                  |                    |                 | Malt<br>culms<br>(sprouts)   |             | 0.75             | < LOD    | < 0.01   | < LOD    | PF = 0.30                          | PF = 0.30                                                              |
|                                                                                            |             |                  |                    |                 | Spent<br>Grain               |             | 0.57             | < LOD    | < 0.01   | < LOD    | PF = 0.23                          | PF = 0.23                                                              |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                        | Application |                  |                    |                 | Matrix                 | PHI<br>days | Residues (mg/kg) |          |                        |          | Processing<br>Factor for<br>Parent | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) |
|-------------------------------------------------------------------------------|-------------|------------------|--------------------|-----------------|------------------------|-------------|------------------|----------|------------------------|----------|------------------------------------|------------------------------------------------------------------------|
|                                                                               | No          | Interval<br>Days | g<br>ai/ha         | Water<br>(L/ha) |                        |             | Fluxapyroxad     | M700F002 | M700F008               | M700F048 |                                    |                                                                        |
|                                                                               |             |                  |                    |                 | Spent Hops (Flocs)     |             | 0.51             | < LOD    | < 0.01                 | < LOD    | PF = 0.20                          | PF = 0.20                                                              |
|                                                                               |             |                  |                    |                 | Brewer's (spent) yeast |             | 1.35             | < LOD    | (0.02, 0.02)<br>0.02   | < LOD    | PF = 0.54                          | PF = 0.54                                                              |
|                                                                               |             |                  |                    |                 | Beer                   |             | 0.05             | < LOD    | < LOD                  | < LOD    | PF = 0.02                          | PF = 0.02                                                              |
|                                                                               |             |                  |                    |                 |                        |             |                  |          |                        |          |                                    |                                                                        |
|                                                                               |             |                  |                    |                 | Field RAC              | 21          | 4.24             | < LOD    | < 0.01                 | < LOD    | -                                  | -                                                                      |
|                                                                               |             |                  |                    |                 | Pot Barley             |             | 0.36             | < LOD    | < LOD                  | < LOD    | PF = 0.08                          | PF = 0.08                                                              |
|                                                                               |             |                  |                    |                 | Bran                   |             | 6.56             | < LOD    | 0.01                   | < LOD    | PF = 1.55                          | PF = 1.55                                                              |
|                                                                               |             |                  |                    |                 | Flour                  |             | 0.34             | < LOD    | < LOD                  | < LOD    | PF = 0.08                          | PF = 0.08                                                              |
|                                                                               |             |                  |                    |                 | Brewing Malt           |             | 0.01             | < LOD    | 0.03                   | < LOD    | PF = < 0.01                        | PF = < 0.01                                                            |
|                                                                               |             |                  |                    |                 | Malt culms (sprouts)   |             | 0.91             | < 0.01   | (0.09, < 0.01)<br>0.05 | < LOD    | PF = 0.21                          | PF = 0.23                                                              |
|                                                                               |             |                  |                    |                 | Spent Grain            |             | 0.65             | < LOD    | < 0.01                 | < LOD    | PF = 0.15                          | PF = 0.15                                                              |
|                                                                               |             |                  |                    |                 | Spent Hops (Flocs)     |             | 0.50             | < LOD    | (0.01, 0.01)<br>0.01   | < LOD    | PF = 0.12                          | PF = 0.12                                                              |
|                                                                               |             |                  |                    |                 | Brewer's (spent) yeast |             | 1.05             | < LOD    | (0.02, 0.02)<br>0.02   | < LOD    | PF = 0.25                          | PF = 0.25                                                              |
|                                                                               |             |                  |                    |                 | Beer                   |             | 0.05             | < LOD    | < LOD                  | < LOD    | PF = 0.01                          | PF = 0.01                                                              |
|                                                                               |             |                  |                    |                 |                        |             |                  |          |                        |          |                                    |                                                                        |
|                                                                               |             |                  |                    |                 |                        |             |                  |          |                        |          |                                    |                                                                        |
|                                                                               |             |                  |                    |                 |                        |             |                  |          |                        |          |                                    |                                                                        |
|                                                                               |             |                  |                    |                 |                        |             |                  |          |                        |          |                                    |                                                                        |
|                                                                               |             |                  |                    |                 |                        |             |                  |          |                        |          |                                    |                                                                        |
|                                                                               |             |                  |                    |                 |                        |             |                  |          |                        |          |                                    |                                                                        |
|                                                                               |             |                  |                    |                 |                        |             |                  |          |                        |          |                                    |                                                                        |
|                                                                               |             |                  |                    |                 |                        |             |                  |          |                        |          |                                    |                                                                        |
| 2009/7003177<br>RCN<br>R080600<br>USA<br>(Bingham, Idaho)<br>2008<br>(Conrad) | 2           | 7                | 533<br>500<br>1033 | 165<br>184      | Field RAC              | 22          | 3.49             | < LOD    | 0.02                   | < LOD    | -                                  |                                                                        |
|                                                                               |             |                  |                    |                 | Pot Barley             |             | 0.66             | < LOD    | < 0.01                 | < LOD    | PF = 0.19                          | PF = 0.19                                                              |
|                                                                               |             |                  |                    |                 | Bran                   |             | 6.52             | < LOD    | 0.04                   | < LOD    | PF = 1.87                          | PF = 1.87                                                              |
|                                                                               |             |                  |                    |                 | Flour                  |             | 0.68             | < LOD    | < 0.01                 | < LOD    | PF = 0.19                          | PF = 0.19                                                              |
|                                                                               |             |                  |                    |                 | Brewing Malt           |             | 0.02             | < LOD    | 0.02                   | < LOD    | PF = 0.01                          | PF = 0.01                                                              |
|                                                                               |             |                  |                    |                 | Malt culms (sprouts)   |             | 0.81             | < LOD    | (< 0.01, 0.01)<br>0.01 | < LOD    | PF = 0.23                          | PF = 0.23                                                              |
|                                                                               |             |                  |                    |                 | Spent Grain            |             | 0.80             | < LOD    | < 0.01                 | < LOD    | PF = 0.23                          | PF = 0.23                                                              |
|                                                                               |             |                  |                    |                 | Spent Hops (Flocs)     |             | 0.58<br>(c 0.01) | < LOD    | 0.01<br>(0.01, < 0.01) | < LOD    | PF = 0.17                          | PF = 0.17                                                              |
|                                                                               |             |                  |                    |                 | Brewer's (spent) yeast |             | 1.16<br>(c 0.78) | < LOD    | 0.01                   | < LOD    | -                                  | -                                                                      |
|                                                                               |             |                  |                    |                 | Beer                   |             | 0.04             | < LOD    | < LOD                  | < LOD    | PF = 0.01                          | PF = 0.01                                                              |
|                                                                               |             |                  |                    |                 | Field RAC              | 22          | 2.98             | < LOD    | 0.02                   | < LOD    | -                                  |                                                                        |
|                                                                               |             |                  |                    |                 | Pot Barley             |             | 0.67             | < LOD    | < 0.01                 | < LOD    | PF = 0.22                          | PF = 0.22                                                              |
|                                                                               |             |                  |                    |                 | Bran                   |             | 6.64             | < LOD    | 0.04                   | < LOD    | PF = 2.23                          | PF = 2.23                                                              |
|                                                                               |             |                  |                    |                 | Flour                  |             | 0.83             | < LOD    | < 0.01                 | < LOD    | PF = 0.28                          | PF = 0.28                                                              |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                            | Application |                  |                    |                 | Matrix                 | PHI<br>days | Residues (mg/kg) |          |                      |          | Processing<br>Factor for<br>Parent | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) |
|---------------------------------------------------------------------------------------------------|-------------|------------------|--------------------|-----------------|------------------------|-------------|------------------|----------|----------------------|----------|------------------------------------|------------------------------------------------------------------------|
|                                                                                                   | No          | Interval<br>Days | g<br>ai/ha         | Water<br>(L/ha) |                        |             | Fluxapyroxad     | M700F002 | M700F008             | M700F048 |                                    |                                                                        |
|                                                                                                   |             |                  |                    |                 | Brewing Malt           |             | 0.02             | < LOD    | 0.02                 | < LOD    | PF = 0.01                          | PF = 0.01                                                              |
|                                                                                                   |             |                  |                    |                 | Malt culms (sprouts)   |             | 1.06             | < LOD    | < 0.01               | < LOD    | PF = 0.36                          | PF = 0.35                                                              |
|                                                                                                   |             |                  |                    |                 | Spent Grain            |             | 0.79             | < LOD    | < 0.01               | < LOD    | PF = 0.27                          | PF = 0.26                                                              |
|                                                                                                   |             |                  |                    |                 | Spent Hops (Flocs)     |             | 0.46<br>(c 0.01) | < LOD    | < 0.01               | < LOD    | PF = 0.15                          | PF = 0.15                                                              |
|                                                                                                   |             |                  |                    |                 | Brewer's (spent) yeast |             | 0.91<br>(c 0.78) | < LOD    | < 0.01               | < LOD    | -                                  | -                                                                      |
|                                                                                                   |             |                  |                    |                 | Beer                   |             | 0.05             | < LOD    | < LOD                | < LOD    | PF = 0.02                          | PF = 0.02                                                              |
| 2009/7003177<br>RCN<br>R080601<br>USA<br>(Grand Forks,<br>North<br>Dakota)<br>2008<br>(Tradition) | 2           | 8                | 499<br>501<br>1000 | 327<br>328      | Field RAC              | 23          | 2.18             | < LOD    | 0.05                 | < LOD    | -                                  |                                                                        |
|                                                                                                   |             |                  |                    |                 | Pot Barley             |             | 0.91             | < LOD    | 0.02                 | < LOD    | PF = 0.42                          | PF = 0.42                                                              |
|                                                                                                   |             |                  |                    |                 | Bran                   |             | 5.50             | < LOD    | 0.11                 | < LOD    | PF = 2.52                          | PF = 2.52                                                              |
|                                                                                                   |             |                  |                    |                 | Flour                  |             | 1.02             | < LOD    | 0.02                 | < LOD    | PF = 0.47                          | PF = 0.47                                                              |
|                                                                                                   |             |                  |                    |                 | Brewing Malt           |             | 0.03             | < LOD    | 0.05                 | < LOD    | PF = 0.01                          | PF = 0.04                                                              |
|                                                                                                   |             |                  |                    |                 | Malt culms (sprouts)   |             | 1.17             | < LOD    | (0.03, 0.03)<br>0.03 | < LOD    | PF = 0.54                          | PF = 0.54                                                              |
|                                                                                                   |             |                  |                    |                 | Spent Grain            |             | 0.88             | < LOD    | 0.02                 | < LOD    | PF = 0.40                          | PF = 0.40                                                              |
|                                                                                                   |             |                  |                    |                 | Spent Hops (Flocs)     |             | 1.00             | < LOD    | (0.02, 0.03)<br>0.03 | < LOD    | PF = 0.46                          | PF = 0.46                                                              |
|                                                                                                   |             |                  |                    |                 | Brewer's (spent) yeast |             | 0.71             | < LOD    | 0.02                 | < LOD    | PF = 0.33                          | PF = 0.33                                                              |
|                                                                                                   |             |                  |                    |                 | Beer                   |             | 0.05             | < LOD    | < LOD                | < LOD    | PF = 0.02                          | PF = 0.02                                                              |
|                                                                                                   |             |                  |                    |                 | Field RAC              | 23          | 2.23             | < LOD    | 0.05                 | < LOD    | -                                  |                                                                        |
|                                                                                                   |             |                  |                    |                 | Pot Barley             |             | 0.79             | < LOD    | 0.02                 | < LOD    | PF = 0.35                          | PF = 0.36                                                              |
|                                                                                                   |             |                  |                    |                 | Bran                   |             | 5.05             | < LOD    | 0.10                 | < LOD    | PF = 2.26                          | PF = 2.26                                                              |
|                                                                                                   |             |                  |                    |                 | Flour                  |             | 0.95             | < LOD    | 0.02                 | < LOD    | PF = 0.43                          | PF = 0.43                                                              |
|                                                                                                   |             |                  |                    |                 | Brewing Malt           |             | 0.02             | < LOD    | 0.05                 | < LOD    | PF = 0.01                          | PF = 0.03                                                              |
|                                                                                                   |             |                  |                    |                 | Malt culms (sprouts)   |             | 1.15             | < LOD    | (0.02, 0.02)<br>0.02 | < LOD    | PF = 0.52                          | PF = 0.51                                                              |
|                                                                                                   |             |                  |                    |                 | Spent Grain            |             | 0.73             | < LOD    | 0.01                 | < LOD    | PF = 0.33                          | PF = 0.32                                                              |
|                                                                                                   |             |                  |                    |                 | Spent Hops (Flocs)     |             | 0.49             | < LOD    | 0.01<br>(0.01, 0.01) | < LOD    | PF = 0.22                          | PF = 0.22                                                              |
|                                                                                                   |             |                  |                    |                 | Brewer's (spent) yeast |             | 0.79             | < LOD    | 0.02                 | < LOD    | PF = 0.35                          | PF = 0.36                                                              |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety) | Application |                  |            |                 | Matrix | PHI<br>days | Residues (mg/kg) |          |          |          | Processing<br>Factor for<br>Parent | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) |
|--------------------------------------------------------|-------------|------------------|------------|-----------------|--------|-------------|------------------|----------|----------|----------|------------------------------------|------------------------------------------------------------------------|
|                                                        | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                    |                                                                        |
|                                                        |             |                  |            |                 |        |             |                  |          |          |          |                                    |                                                                        |
|                                                        |             |                  |            |                 | Beer   |             | 0.04             | < LOD    | < LOD    | < LOD    | PF = 0.02                          | PF = 0.02                                                              |

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

### *Wheat*

The effect of processing (laboratory scale) on residues of fluxapyroxad in wheat was investigated in four trials conducted in the USA in the 2008 growing season (Johnston and Saha 2009, 2009/7003065). Spring wheat with incurred residues was obtained where plants were sprayed with two foliar sprays at 0.499–0.508 kg ai/ha with a 6–7 day retreatment interval (total 1.001–1.015 kg ai/season). In addition at the Washington site a separate plot was treated with two applications of fluxapyroxad at 0.100 kg ai/ha with a 7 day retreatment interval (total 0.200 kg ai/season) in order to generate aspirated grain fractions RAC samples. The first application was made 27–28 days prior to the harvest of the mature grain at late milk (BBCH 77) to late hard dough (BBCH 88). Applications were made in 152–355 L/ha using ground equipment and an adjuvant was added to the spray mixture for all applications with one exception (the first application at site R080602). Wheat bulk RAC samples were harvested 21–22 days after the last application.

Bulk wheat grain samples (four control and ten treated) were processed according to simulated commercial procedures into the following samples: Aspirated grain fractions, germ, bran, middlings, straight flour (combination of break and reduction flour), shorts or low grade meal, whole meal flour, whole meal bread and white bread.

Unprocessed grain samples were taken prior to processing. Drying and aspiration was used to generate aspirated grain fractions. Light impurities were separated by aspiration, then screening removed large and small particles (screenings) from the wheat. For wheat germ recovery, the cleaned wheat was moisture adjusted to 16%, passed through a disc mill, sifted and then aspirated to remove bran from the germ fraction. The germ (with endosperm) was passed through a reduction mill and sifted to separate the germ from the reduced endosperm. The germ material was aspirated to remove additional bran and milled/sieved to remove additional endosperm. For flour milling the cleaned wheat grain was moisture conditioned to 16.5–17.5% (24–48 hours) and tempered before milling. Breaking of the wheat was accomplished with three break rolls. After passing through the break rolls, the material was fed onto the break sifter screen (consisting of 140 $\mu$  and 800 $\mu$  screens) through which the break flour and middlings passed. Material not passing through was conveyed to the end of the sifter as coarse bran. After sampling the middlings, the remaining material was fed into the feed hopper of the reduction system. Reduction was achieved through two reduction rolls. After passing through the reduction rolls, the material was fed onto the reduction sifter screen (160  $\mu$ ) through which passed reduction flour. Material not passing through and conveyed to the end of the sifter was shorts (low grade meal). Break and reduction flours were mixed to produce “straight flour”. Bran exiting the break sieve was placed in the reduction side of the mill, but is not reduced with the rollers. The coarse bran was conveyed by the beater bars over a 128  $\mu$  screen. Material passing through the screen is “shorts” and was combined with the shorts from the reduction mill. Material passing over the screen and exiting the end was “bran”. Cleaned wheat was ground to produce the whole meal flour sample. The remainder was combined with brown sugar, salt, margarine, water and dry yeast to produce whole meal bread. Similarly white bread was baked with mill run flour, sugar, dry milk, salt, margarine, water and dry yeast.

Residues of fluxapyroxad in wheat RAC and processed commodities were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for wheat commodities were obtained for all four analytes.

Table 129 Residues in wheat processed fractions from the foliar application of fluxapyroxad to wheat in the USA (Johnston and Saha 2009, 2009/7003065)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                  | Application |                  |                    |                 | Matrix                          | PHI<br>days | Residues (mg/kg)     |          |          |          | Processing<br>Factor for<br>Parent | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) |
|---------------------------------------------------------------------------------------------------------|-------------|------------------|--------------------|-----------------|---------------------------------|-------------|----------------------|----------|----------|----------|------------------------------------|------------------------------------------------------------------------|
|                                                                                                         | No          | Interval<br>Days | g<br>ai/ha         | Water<br>(L/ha) |                                 |             | Fluxapyroxad         | M700F002 | M700F008 | M700F048 |                                    |                                                                        |
| GAP, USA                                                                                                | 2           |                  | 97-<br>100         |                 |                                 | 21          |                      |          |          |          |                                    |                                                                        |
| 2009/7003065<br>RCN<br>R080536<br>USA<br>(Grant,<br>Washington)<br>2008<br>(Dark<br>Northern<br>Spring) | 2           | 7                | 499<br>502<br>1001 | 187<br>188      | Grain RAC                       | 21          | 0.22                 | < LOD    | < 0.01   | < LOD    | -                                  | -                                                                      |
|                                                                                                         |             |                  |                    |                 | Bran                            |             | 0.72                 | < LOD    | < 0.01   | < LOD    | PF =<br>3.27                       | PF = 3.27                                                              |
|                                                                                                         |             |                  |                    |                 | Flour                           |             | 0.05                 | < LOD    | < LOD    | < LOD    | PF =<br>0.23                       | PF = 0.23                                                              |
|                                                                                                         |             |                  |                    |                 | Middlings                       |             | 0.04                 | < LOD    | < LOD    | < LOD    | PF =<br>0.18                       | PF = 0.18                                                              |
|                                                                                                         |             |                  |                    |                 | Shorts                          |             | 0.05                 | < LOD    | < LOD    | < LOD    | PF =<br>0.23                       | PF = 0.23                                                              |
|                                                                                                         |             |                  |                    |                 | Germ                            |             | 0.22                 | < LOD    | < 0.01   | < LOD    | PF = 1.0                           | PF = 1.0                                                               |
|                                                                                                         |             |                  |                    |                 | Bread<br>(White)                |             | 0.03                 | < LOD    | < LOD    | < LOD    | PF =<br>0.14                       | PF = 0.14                                                              |
|                                                                                                         |             |                  |                    |                 | Whole<br>Meal                   |             | 0.23                 | < LOD    | < 0.01   | < LOD    | PF =<br>1.05                       | PF = 1.05                                                              |
|                                                                                                         |             |                  |                    |                 | Bread<br>Whole<br>Meal          |             | 0.16                 | < LOD    | < LOD    | < LOD    | PF =<br>0.73                       | PF = 0.73                                                              |
|                                                                                                         |             |                  |                    |                 | Grain RAC                       | 21          | 0.23                 | < LOD    | < 0.01   | < LOD    | -                                  | -                                                                      |
|                                                                                                         |             |                  |                    |                 | Bran                            |             | 0.66                 | < LOD    | < 0.01   | < LOD    | PF =<br>2.87                       | PF = 2.87                                                              |
|                                                                                                         |             |                  |                    |                 | Flour                           |             | 0.02                 | < LOD    | < LOD    | < LOD    | PF =<br>0.09                       | PF = 0.09                                                              |
|                                                                                                         |             |                  |                    |                 | Middlings                       |             | 0.05                 | < LOD    | < LOD    | < LOD    | PF =<br>0.22                       | PF = 0.22                                                              |
|                                                                                                         |             |                  |                    |                 | Shorts                          |             | 0.08                 | < LOD    | < LOD    | < LOD    | PF =<br>0.35                       | PF = 0.35                                                              |
|                                                                                                         |             |                  |                    |                 | Germ                            |             | 0.29                 | < LOD    | < 0.01   | < LOD    | PF =<br>1.26                       | PF = 1.26                                                              |
|                                                                                                         |             |                  |                    |                 | Bread<br>(White)                |             | 0.02                 | < LOD    | < LOD    | < LOD    | PF =<br>0.09                       | PF = 0.09                                                              |
|                                                                                                         |             |                  |                    |                 | Whole<br>Meal                   |             | 0.23                 | < LOD    | < 0.01   | < LOD    | PF = 1.0                           | PF = 1.0                                                               |
|                                                                                                         |             |                  |                    |                 | Bread<br>Whole<br>Meal          |             | 0.16                 | < LOD    | < LOD    | < LOD    | PF =<br>0.70                       | PF = 0.70                                                              |
| 2009/7003065<br>RCN<br>R080536<br>USA<br>(Grant,<br>Washington)<br>2008<br>(Dark<br>Northern<br>Spring) | 2           | 7                | 100<br>100<br>200  | 187<br>186      | Grain RAC                       | 21          | 0.04                 | < LOD    | < LOD    | < LOD    | -                                  |                                                                        |
|                                                                                                         |             |                  |                    |                 | (originating<br>sample)         |             | 0.04                 | < LOD    | < LOD    | < LOD    | -                                  |                                                                        |
|                                                                                                         |             |                  |                    |                 | Aspirated<br>Grain<br>Fractions | 21          | (5.06, 8.07)<br>6.56 | < LOD    | 0.02     | < LOD    | PF = 164                           | PF = 165                                                               |
|                                                                                                         |             |                  |                    |                 |                                 |             | 11.05                | < LOD    | 0.05     | < 0.01   | PF = 276                           | PF = 278                                                               |
| 2009/7003065<br>RCN<br>R080537<br>USA                                                                   | 2           | 6                | 504<br>505<br>1009 | 186<br>181      | Grain RAC                       | 21          | 0.24                 | < LOD    | < 0.01   | < LOD    | -                                  | -                                                                      |
|                                                                                                         |             |                  |                    |                 | Bran                            |             | 0.72                 | < LOD    | < LOD    | < LOD    | PF = 3.0                           | PF = 3.0                                                               |
|                                                                                                         |             |                  |                    |                 | Flour                           |             | 0.04                 | < LOD    | < LOD    | < LOD    | PF =<br>0.17                       | PF = 0.17                                                              |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                            | Application |                  |                    |                 | Matrix                 | PHI<br>days | Residues (mg/kg) |          |          |          | Processing<br>Factor for<br>Parent | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) |
|-----------------------------------------------------------------------------------|-------------|------------------|--------------------|-----------------|------------------------|-------------|------------------|----------|----------|----------|------------------------------------|------------------------------------------------------------------------|
|                                                                                   | No          | Interval<br>Days | g<br>ai/ha         | Water<br>(L/ha) |                        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                    |                                                                        |
| (Power,<br>Idaho)<br>2008<br>(936)                                                |             |                  |                    |                 | Middlings              |             | 0.09             | < LOD    | < LOD    | < LOD    | PF =<br>0.38                       | PF = 0.38                                                              |
|                                                                                   |             |                  |                    |                 | Shorts                 |             | 0.17             | < LOD    | < LOD    | < LOD    | PF =<br>0.71                       | PF = 0.71                                                              |
|                                                                                   |             |                  |                    |                 | Germ                   |             | 0.22             | < LOD    | < LOD    | < LOD    | PF =<br>0.92                       | PF = 0.92                                                              |
|                                                                                   |             |                  |                    |                 | Bread<br>(White)       |             | 0.03             | < LOD    | < LOD    | < LOD    | PF =<br>0.13                       | PF = 0.13                                                              |
|                                                                                   |             |                  |                    |                 | Whole<br>Meal          |             | 0.22             | < LOD    | < LOD    | < LOD    | PF =<br>0.92                       | PF = 0.92                                                              |
|                                                                                   |             |                  |                    |                 | Bread<br>Whole<br>Meal |             | 0.14             | < LOD    | < LOD    | < LOD    | PF =<br>0.58                       | PF = 0.58                                                              |
|                                                                                   |             |                  |                    |                 | Grain RAC              | 21          | 0.30             | < LOD    | < 0.01   | < LOD    | -                                  | -                                                                      |
|                                                                                   |             |                  |                    |                 | Bran                   |             | 0.73             | < LOD    | < LOD    | < LOD    | PF =<br>2.43                       | PF = 2.43                                                              |
|                                                                                   |             |                  |                    |                 | Flour                  |             | 0.03             | < LOD    | < LOD    | < LOD    | PF =<br>0.10                       | PF = 0.10                                                              |
|                                                                                   |             |                  |                    |                 | Middlings              |             | 0.10             | < LOD    | < LOD    | < LOD    | PF =<br>0.33                       | PF = 0.33                                                              |
|                                                                                   |             |                  |                    |                 | Shorts                 |             | 0.18             | < LOD    | < LOD    | < LOD    | PF =<br>0.60                       | PF = 0.60                                                              |
|                                                                                   |             |                  |                    |                 | Germ                   |             | 0.18             | < LOD    | < LOD    | < LOD    | PF =<br>0.60                       | PF = 0.60                                                              |
|                                                                                   |             |                  |                    |                 | Bread<br>(White)       |             | 0.03             | < LOD    | < LOD    | < LOD    | PF =<br>0.10                       | PF = 0.10                                                              |
|                                                                                   |             |                  |                    |                 | Whole<br>Meal          |             | 0.22             | < LOD    | < LOD    | < LOD    | PF =<br>0.73                       | PF = 0.73                                                              |
|                                                                                   |             |                  |                    |                 | Bread<br>Whole<br>Meal |             | 0.15             | < LOD    | < LOD    | < LOD    | PF =<br>0.50                       | PF = 0.50                                                              |
| 2009/7003065<br>RCN<br>R080602<br>USA<br>(Bingham,<br>Idaho)<br>2008<br>(Alturas) | 2           | 6                | 507<br>508<br>1015 | 157<br>188      | Grain RAC              | 22          | 0.69             | < LOD    | < 0.01   | < LOD    | -                                  | -                                                                      |
|                                                                                   |             |                  |                    |                 | Bran                   |             | 1.93             | < LOD    | 0.01     | < LOD    | PF =<br>2.80                       | PF = 2.81                                                              |
|                                                                                   |             |                  |                    |                 | Flour                  |             | 0.10             | < LOD    | < LOD    | < LOD    | PF =<br>0.14                       | PF = 0.14                                                              |
|                                                                                   |             |                  |                    |                 | Middlings              |             | 0.23             | < LOD    | < 0.01   | < LOD    | PF =<br>0.33                       | PF = 0.33                                                              |
|                                                                                   |             |                  |                    |                 | Shorts                 |             | 0.24             | < LOD    | < 0.01   | < LOD    | PF =<br>0.35                       | PF = 0.35                                                              |
|                                                                                   |             |                  |                    |                 | Germ                   |             | 0.81             | < LOD    | 0.01     | < LOD    | PF =<br>1.17                       | PF = 1.19                                                              |
|                                                                                   |             |                  |                    |                 | Bread<br>(White)       |             | 0.07             | < LOD    | < LOD    | < LOD    | PF =<br>0.10                       | PF = 0.10                                                              |
|                                                                                   |             |                  |                    |                 | Whole<br>Meal          |             | 0.60             | < LOD    | < 0.01   | < LOD    | PF =<br>0.87                       | PF = 0.87                                                              |
|                                                                                   |             |                  |                    |                 | Bread<br>Whole<br>Meal |             | 0.40             | < LOD    | < 0.01   | < LOD    | PF =<br>0.58                       | PF = 0.58                                                              |
|                                                                                   |             |                  |                    |                 | Grain RAC              | 22          | 0.60             | < LOD    | < 0.01   | < LOD    | -                                  | -                                                                      |
|                                                                                   |             |                  |                    |                 | Bran                   |             | 1.75             | < LOD    | < 0.01   | < LOD    | PF =<br>2.92                       | PF = 2.92                                                              |
|                                                                                   |             |                  |                    |                 | Flour                  |             | 0.09             | < LOD    | < LOD    | < LOD    | PF =                               | PF = 0.15                                                              |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                        | Application |                  |                    |                 | Matrix           | PHI<br>days | Residues (mg/kg) |          |          |          | Processing<br>Factor for<br>Parent | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) |
|-----------------------------------------------------------------------------------------------|-------------|------------------|--------------------|-----------------|------------------|-------------|------------------|----------|----------|----------|------------------------------------|------------------------------------------------------------------------|
|                                                                                               | No          | Interval<br>Days | g<br>ai/ha         | Water<br>(L/ha) |                  |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                    |                                                                        |
|                                                                                               |             |                  |                    |                 |                  |             |                  |          |          |          | 0.15                               |                                                                        |
|                                                                                               |             |                  |                    |                 | Middlings        |             | 0.23             | < LOD    | < 0.01   | < LOD    | PF = 0.38                          | PF = 0.38                                                              |
|                                                                                               |             |                  |                    |                 | Shorts           |             | 0.24             | < LOD    | < 0.01   | < LOD    | PF = 0.40                          | PF = 0.40                                                              |
|                                                                                               |             |                  |                    |                 | Germ             |             | 0.96             | < LOD    | 0.01     | < LOD    | PF = 1.60                          | PF = 1.62                                                              |
|                                                                                               |             |                  |                    |                 | Bread (White)    |             | 0.06             | < LOD    | < LOD    | < LOD    | PF = 0.10                          | PF = 0.10                                                              |
|                                                                                               |             |                  |                    |                 | Whole Meal       |             | 0.51             | < LOD    | < 0.01   | < LOD    | PF = 0.85                          | PF = 0.85                                                              |
|                                                                                               |             |                  |                    |                 | Bread Whole Meal |             | 0.35             | < LOD    | < LOD    | < LOD    | PF = 0.58                          | PF = 0.58                                                              |
| 2009/7003065<br>RCN<br>R080603<br>USA<br>(Grand Forks,<br>North<br>Dakota)<br>2008<br>(Glenn) | 2           | 7                | 501<br>500<br>1001 | 152<br>355      | Grain RAC        | 21          | 0.22             | < LOD    | 0.02     | < LOD    | -                                  |                                                                        |
|                                                                                               |             |                  |                    |                 | Bran             |             | 1.03             | < LOD    | 0.06     | < 0.01   | PF = 4.68                          | PF = 4.54                                                              |
|                                                                                               |             |                  |                    |                 | Flour            |             | 0.14             | < LOD    | 0.01     | < LOD    | PF = 0.64                          | PF = 0.63                                                              |
|                                                                                               |             |                  |                    |                 | Middlings        |             | 0.17             | < LOD    | 0.02     | < LOD    | PF = 0.77                          | PF = 0.79                                                              |
|                                                                                               |             |                  |                    |                 | Shorts           |             | 0.23             | < LOD    | 0.02     | < LOD    | PF = 1.05                          | PF = 1.04                                                              |
|                                                                                               |             |                  |                    |                 | Germ             |             | 0.58             | < LOD    | 0.05     | < 0.01   | PF = 2.64                          | PF = 2.63                                                              |
|                                                                                               |             |                  |                    |                 | Bread (White)    |             | 0.10             | < LOD    | < 0.01   | < LOD    | PF = 0.45                          | PF = 0.42                                                              |
|                                                                                               |             |                  |                    |                 | Whole Meal       |             | 0.40             | < LOD    | 0.04     | < LOD    | PF = 1.82                          | PF = 1.83                                                              |
|                                                                                               |             |                  |                    |                 | Bread Whole Meal |             | 0.27             | < LOD    | 0.02     | < LOD    | PF = 1.23                          | PF = 1.21                                                              |
|                                                                                               |             |                  |                    |                 | Grain RAC        | 21          | 0.31             | < LOD    | 0.03     | < LOD    | -                                  | -                                                                      |
|                                                                                               |             |                  |                    |                 | Bran             |             | 0.85             | < LOD    | 0.05     | < 0.01   | PF = 2.74                          | PF = 2.65                                                              |
|                                                                                               |             |                  |                    |                 | Flour            |             | 0.13             | < LOD    | 0.01     | < LOD    | PF = 0.42                          | PF = 0.41                                                              |
|                                                                                               |             |                  |                    |                 | Middlings        |             | 0.17             | < LOD    | 0.02     | < LOD    | PF = 0.55                          | PF = 0.56                                                              |
|                                                                                               |             |                  |                    |                 | Shorts           |             | 0.20             | < LOD    | 0.02     | < LOD    | PF = 0.65                          | PF = 0.65                                                              |
|                                                                                               |             |                  |                    |                 | Germ             |             | 0.78             | < LOD    | 0.06     | < 0.01   | PF = 2.52                          | PF = 2.47                                                              |
|                                                                                               |             |                  |                    |                 | Bread (White)    |             | 0.08             | < LOD    | < 0.01   | < LOD    | PF = 0.26                          | PF = 0.24                                                              |
|                                                                                               |             |                  |                    |                 | Whole Meal       |             | 0.35             | < LOD    | 0.04     | < 0.01   | PF = 1.13                          | PF = 1.15                                                              |
|                                                                                               |             |                  |                    |                 | Bread Whole Meal |             | 0.25             | < LOD    | 0.02     | < LOD    | PF = 0.81                          | PF = 0.79                                                              |

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

### *Maize*

The effect of processing (laboratory scale) on residues of fluxapyroxad in field corn was investigated in two trials conducted in Wisconsin and Oregon, USA in the 2008 growing season (Johnston and Saha 2010, 2010/7003485). Field corn with incurred residues was obtained where plants were sprayed with two foliar sprays at 0.499–0.514 kg ai/ha with a 7–9 day retreatment interval (total 1.006–1.013 kg ai/season). In addition at the Wisconsin site a separate plot was treated with two applications of fluxapyroxad at 0.100–0.101 kg ai/ha with a 7 day retreatment interval (total 0.201 kg ai/season) in order to generate aspirated grain fractions RAC samples. Application timings were BBCH 87, physiological maturity (both applications for R080521) and BBCH 87, physiological maturity and BBCH 89, fully ripe (R080522). Applications were made in 187–336 L/ha using ground equipment and an adjuvant was added to the spray mixture for all applications. Corn grain bulk RAC samples were harvested 21 days after the last application.

Drying and classification of grain using sieves yielded aspirated grain fractions.

For wet and dry milling the corn sample was dried to a moisture content of 10–15%. The samples were cleaned by aspiration and screening.

For dry milling the whole corn was moisture conditioned to 21% and tempered for approximately 2 hours, the kernel was then cracked. Corn stock from the mill was dried then bran, germ and large grits were separated from grits, meal and flour. The bran, germ and large grits were separated. After aspiration and further screening, grits, meal and flour fractions were collected. The germ fractions were dried until moisture was between 8–12%, were then heated and flaked. Flaked kernel material was placed in stainless steel extractors and submerged in hexane. After 30 minutes the miscella (crude oil and hexane) was drained and fresh hexane added to repeat the cycle two times. Residual hexane was removed from the spent flakes. The resultant fractions were miscella and solvent extracted germ meal. Crude oil and hexane in the miscella were separated and the crude oil heated for hexane removal. The crude oil was converted to refined oil and soapstock. The refined oil sequentially gave bleached oil then deodorised oil and distillates.

For wet milling the dried and cleaned corn was steeped in 49–54 °C water containing 0.1–0.2% sulphur dioxide for 22–48 hours. At the end of the steeping period, the whole corn was passed through a disc mill and the majority of the germ and hull removed using a water centrifuge. Germ and hull were dried to give 5–10% moisture. After drying, germ and hull were separated using aspiration and screening. Corn stock (without germ and hull) was ground in the disc mill. Ground material was passed over a screen and material on top of the screen was discarded. Process water (with starch and gluten) passing through the screen was separated into starch and gluten using batch centrifugation. Starch was dried until the moisture was  $\leq$  15%. Starch fractions were collected. The germ fractions were moisture conditioned to 12%, heated, flaked and pressed to liberate part of the crude oil. Resulting fractions are expelled crude oil and press cake, with residual crude oil. Press cake was placed in stainless steel extractors and submerged in 49–60 °C hexane. After 30 minutes, the miscella was drained and fresh hexane was added to repeat the cycle two times. Residual hexane was removed from the spent press cake. The resultant fractions were miscella and solvent extracted press cake (germ cake). Crude oil and hexane in the miscella were separated and the crude oil heated for hexane removal. The crude oil from expelling and solvent extraction were filtered and combined for refining. The crude oil samples from wet milling were refined, bleached and deodorised as for dry milling.

Residues of fluxapyroxad in corn RAC and processed commodities were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for corn commodities were obtained for all four analytes.

Table 130 Residues in corn processed fractions from the foliar application of fluxapyroxad to corn in the USA (Johnston and Saha 2010, 2010/7003485)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                     | Application |                  |                    |                 | Matrix                               | PHI<br>days | Residues (mg/kg)    |          |          |          | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) <sup>a</sup> |
|--------------------------------------------------------------------------------------------|-------------|------------------|--------------------|-----------------|--------------------------------------|-------------|---------------------|----------|----------|----------|-------------------------------------------------------------------------------------|
|                                                                                            | No          | Interval<br>Days | g<br>ai/ha         | Water<br>(L/ha) |                                      |             | Fluxapyroxad        | M700F002 | M700F008 | M700F048 |                                                                                     |
| GAP, USA                                                                                   | 2           |                  | 97-<br>100         |                 |                                      | 21          |                     |          |          |          |                                                                                     |
| 2010/7003485<br>RCN R080521<br>USA<br>(Pepin, Wisconsin)<br>2008<br>(NK<br>N29A/GT/CB/LL)  | 2           | 7                | 499<br>514<br>1013 | 187<br>192      | Grain RAC                            | 21          | < LOD               | < LOD    | < LOD    | < LOD    | -                                                                                   |
|                                                                                            |             |                  |                    |                 | Meal                                 |             | < 0.01              | < LOD    | < LOD    | < LOD    | -                                                                                   |
|                                                                                            |             |                  |                    |                 | RDB Oil<br>(Wet-Milled)              |             | 0.01                | < LOD    | < LOD    | < LOD    | -                                                                                   |
|                                                                                            |             |                  |                    |                 | Flour                                |             | < 0.01              | < LOD    | < LOD    | < LOD    | -                                                                                   |
|                                                                                            |             |                  |                    |                 | Grits                                |             | < LOD               | < LOD    | < LOD    | < LOD    | -                                                                                   |
|                                                                                            |             |                  |                    |                 | Starch                               |             | < LOD               | < LOD    | < LOD    | < LOD    | -                                                                                   |
|                                                                                            |             |                  |                    |                 | RDB Oil<br>(Dry-Milled)              |             | 0.01                | < LOD    | < LOD    | < LOD    | -                                                                                   |
| 2010/7003485<br>RCN R080521<br>USA<br>(Pepin, Wisconsin)<br>2008<br>(NK<br>N29A/GT/CB/LLf) | 2           | 7                | 100<br>101<br>201  | 188<br>190      | Grain RAC<br>(originating<br>sample) | 21          | < LOD               | < LOD    | < LOD    | < LOD    | -                                                                                   |
|                                                                                            |             |                  |                    |                 | Aspirated<br>Grain<br>Fractions      | 21          | 0.07                | < LOD    | < LOD    | < LOD    | -                                                                                   |
| 2010/7003485<br>RCN R080522<br>USA<br>(Jefferson, Oregon)<br>2008<br>(Pioneer 38R49)       | 2           | 9                | 500<br>505<br>1006 | 336<br>331      | Grain RAC                            | 21          | 0.07                | < LOD    | < LOD    | < LOD    | -                                                                                   |
|                                                                                            |             |                  |                    |                 | Meal                                 |             | 0.05                | < LOD    | < LOD    | < LOD    | PF = 0.7                                                                            |
|                                                                                            |             |                  |                    |                 | RDB Oil<br>(Wet-Milled)              |             | (0.28-0.29)<br>0.29 | < LOD    | < LOD    | < LOD    | PF = 4.1                                                                            |
|                                                                                            |             |                  |                    |                 | Flour                                |             | 0.06                | < LOD    | < LOD    | < LOD    | PF = 0.9                                                                            |
|                                                                                            |             |                  |                    |                 | Grits                                |             | 0.02                | < LOD    | < LOD    | < LOD    | PF = 0.3                                                                            |
|                                                                                            |             |                  |                    |                 | Starch                               |             | < LOD               | < LOD    | < LOD    | < LOD    | PF = 0.1                                                                            |
|                                                                                            |             |                  |                    |                 | RDB Oil<br>(Dry-Milled)              |             | 0.03                | < LOD    | < LOD    | < LOD    | PF = 0.4                                                                            |

RBD oil = Deodorised oil

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

<sup>a</sup> Processing factor for parent + M700F008 + M700F048 is the same as for parent only

### Sorghum

The effect of processing (laboratory scale) on residues of fluxapyroxad in sweet sorghum was investigated in two trials conducted in Georgia and Michigan, USA in the 2008 growing season (Johnston and Saha 2010, 2010/7003485). Sorghum with incurred residues was obtained where plants were sprayed with two foliar sprays at 0.497–0.502 kg ai/ha with a 7–8 day retreatment interval (total 0.995–0.999 kg ai/season). In addition at a site in Illinois a separate plot established in grain sorghum was treated with two applications of fluxapyroxad at 0.096–0.099 kg ai/ha with a 7 day retreatment interval (total 0.195 kg ai/season) in order to generate aspirated grain fractions RAC samples. Application timings were BBCH 85, dough stage (both applications, R080523), BBCH 65–73, flowering to milk stage and BBCH 83, early dough (R080524) and BBCH 53–55, tassel emergence and BBCH 65, flowering (R080525). Applications were made in 151–284 L/ha using ground equipment and an adjuvant was added to the spray mixture for all applications. Sorghum grain or

sweet sorghum stalk bulk RAC samples (one untreated control and one treated, 73–89 kilograms), were harvested 19–21 days after the last application.

Bulk sorghum grain samples were processed according to simulated commercial procedures. Drying and classification of grain yielded aspirated grain fractions. Juice expression of the sweet sorghum stalk samples gave pressed juice and bagasse. After juice clarification and filtration, the pressed juice sequentially yielded decanted juice and after juice evaporation and filtration, sweet sorghum syrup.

Residues of fluxapyroxad in sorghum RAC and processed commodities quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data were obtained for all analytes.

Table 131 Residues in sorghum processed fractions from the foliar application of fluxapyroxad to sorghum in the USA (Johnston and Saha 2010, 2010/7003485)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                                   | Application |                  |                   |                 | Matrix                               | PHI<br>days | Residues (mg/kg)     |                         |                         |                           | Processing<br>Factor for<br>Parent | Processing Factor<br>for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048)1 |
|----------------------------------------------------------------------------------------------------------|-------------|------------------|-------------------|-----------------|--------------------------------------|-------------|----------------------|-------------------------|-------------------------|---------------------------|------------------------------------|-------------------------------------------------------------------------|
|                                                                                                          | No          | Interval<br>Days | g<br>ai/ha        | Water<br>(L/ha) |                                      |             | Fluxapyroxad         | M700F002                | M700F008                | M700F048                  |                                    |                                                                         |
| 2010/7003485<br>RCN<br>R080523<br>USA<br>(Clinton,<br>Illinois)<br>2008<br>(Grain<br>sorghum –<br>KS585) | 2           | 7                | 99<br>96<br>195   | 151<br>176      | Grain RAC<br>(originating<br>sample) | 19          | 0.20                 | < LOD                   | 0.02                    | < LOD                     | -                                  | -                                                                       |
|                                                                                                          |             |                  |                   |                 | Aspirated<br>Grain<br>Fractions      | 19          | (2.88, 2.91)<br>2.90 | < LOD                   | (0.14,<br>0.13)<br>0.13 | (0.01,<br>< 0.01)<br>0.01 | 14.5                               | 13.8                                                                    |
| 2010/7003485<br>RCN<br>R080524<br>USA<br>(Tift,<br>Georgia)<br>2008<br>(Sweet<br>sorghum –<br>M81-E)     | 2           | 8                | 498<br>497<br>995 | 170<br>195      | Stalk RAC                            | 21          | (1.70, 1.62)<br>1.66 | (0.05,<br>0.06)<br>0.06 | (0.04,<br>0.04)<br>0.04 | < 1.75                    | -                                  | -                                                                       |
|                                                                                                          |             |                  |                   |                 | Syrup                                |             | (0.17, 0.16)<br>0.17 | < LOD                   | < LOD                   | < 0.17                    | PF = 0.10                          | PF = 0.10                                                               |
| 2010/7003485<br>RCN<br>R080525<br>USA<br>(Ottawa,<br>Michigan)<br>2008<br>(Sweet<br>sorghum –<br>Simon)  | 2           | 7                | 497<br>502<br>999 | 284<br>284      | Stalk RAC                            | 19          | 1.35                 | < LOD                   | 0.06                    | 0.03                      | -                                  | -                                                                       |
|                                                                                                          |             |                  |                   |                 | Syrup                                |             | (0.24, 0.22)<br>0.23 | < 0.01                  | < LOD                   | < LOD                     | PF = 0.17                          | PF = 0.16                                                               |

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

### Rice

The effect of processing (laboratory scale) on residues of fluxapyroxad in rice was investigated in two trials conducted in California and Arkansas, USA in the 2008 growing season (Johnston and Saha 2010, 2010/7003485). Rice with incurred residues was obtained where plants were sprayed with two foliar sprays at 0.495–0.500 kg ai/ha with a 7 day retreatment interval (total 0.991–

1.000 kg ai/season). Application timings were 28 and 21 day PHI (R080526) and BBCH 75, medium milk stage and BBCH 85, soft dough stage (R080527). Applications were made in 166–185 L/ha using ground equipment and an adjuvant was added to the spray mixture for all applications. Rice RAC samples were harvested 21 days after the last application.

Bulk rice grain samples were processed according to simulated commercial procedures. Rice was dried and then screening removed large and small screenings. Aspiration removed light impurities and cleaned rice. Two methods of workup were then employed.

Normal milling of the rice gave brown rice and hull fractions. The brown rice was separated into bran, white milled rice and waste. White milled rice was ground and sieved to rice flour or combined with sugar and water and dried to give glazed rice.

Parboiling of the rice after steeping gave steeped rice which after parboiling and drying gave parboiled rice. Dehulling produced brown rice and hull fractions. Debranning produced bran, white milled rice and waste.

Residues of fluxapyroxad in rice RAC and processed commodities were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for rice commodities were obtained for all four analytes.

Table 132 Residues in rice processed fractions from the foliar application of fluxapyroxad to rice in the USA (Johnston and Saha 2010, 2010/7003485)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                            | Application |                  |            |                 | Matrix                                               | PHI<br>days | Residues (mg/kg)     |          |          |          | Processing<br>Factor for<br>Parent | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) |
|-----------------------------------------------------------------------------------|-------------|------------------|------------|-----------------|------------------------------------------------------|-------------|----------------------|----------|----------|----------|------------------------------------|------------------------------------------------------------------------|
|                                                                                   | No          | Interval<br>Days | g<br>ai/ha | Water<br>(L/ha) |                                                      |             | Fluxapyroxad         | M700F002 | M700F008 | M700F048 |                                    |                                                                        |
| 2010/7003485<br>RCN<br>R080526<br>USA<br>(Glenn,<br>California)<br>2008<br>(M204) | 2           | 7                | 495        | 185             | Whole rice<br>(RAC)                                  | 21          | (2.57, 2.55)<br>2.56 | < LOD    | < 0.01   | < LOD    | -                                  | -                                                                      |
|                                                                                   |             |                  | 496        | 185             | Polished<br>rice/white<br>milled                     |             | 0.02                 | < LOD    | < LOD    | < LOD    | PF =<br>< 0.1                      | PF = < 0.1                                                             |
|                                                                                   |             |                  | 991        |                 | Rice hulls<br>(normal<br>milling)                    |             | (10.1-12.2)<br>10.99 | < LOD    | 0.03     | < LOD    | PF = 4.30                          | PF = 4.30                                                              |
|                                                                                   |             |                  |            |                 | Bran<br>(normal<br>milling)                          |             | 2.40                 | < LOD    | < LOD    | < LOD    | PF = 0.94                          | PF = 0.94                                                              |
|                                                                                   |             |                  |            |                 | Glazed rice<br>(normal<br>milling)                   |             | 0.02                 | < LOD    | < LOD    | < LOD    | PF =<br>< 0.1                      | PF = < 0.1                                                             |
|                                                                                   |             |                  |            |                 | Husked<br>rice /brown<br>rice<br>(normal<br>milling) |             | 0.13                 | < LOD    | < LOD    | < LOD    | PF = 0.05                          | PF = 0.05                                                              |
|                                                                                   |             |                  |            |                 | Cooked<br>rice<br>/parboiled<br>white<br>milled      |             | 0.25                 | < LOD    | < LOD    | < LOD    | PF = 0.10                          | PF = 0.10                                                              |
|                                                                                   |             |                  |            |                 | Flour<br>(polished<br>rice/white<br>milled)          |             | 0.03                 | < LOD    | < LOD    | < LOD    | PF = 0.01                          | PF = 0.01                                                              |
|                                                                                   |             |                  |            |                 | Rice hulls<br>(parboiling)                           |             | (2.65, 1.29)<br>1.97 | < LOD    | < 0.01   | < LOD    | PF = 0.77                          | PF = 0.77                                                              |
|                                                                                   |             |                  |            |                 | Husked<br>rice/brown<br>(parboiling)                 |             | 0.41                 | < LOD    | < LOD    | < LOD    | PF = 0.16                          | PF = 0.16                                                              |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                 | Application |                  |                    |                 | Matrix                                               | PHI<br>days | Residues (mg/kg)     |          |                         |                           | Processing<br>Factor for<br>Parent | Processing<br>Factor for<br>(Fluxapyroxad<br>+ M700F008<br>+ M700F048) |
|----------------------------------------------------------------------------------------|-------------|------------------|--------------------|-----------------|------------------------------------------------------|-------------|----------------------|----------|-------------------------|---------------------------|------------------------------------|------------------------------------------------------------------------|
|                                                                                        | No          | Interval<br>Days | g<br>ai/ha         | Water<br>(L/ha) |                                                      |             | Fluxapyroxad         | M700F002 | M700F008                | M700F048                  |                                    |                                                                        |
|                                                                                        |             |                  |                    |                 | Bran<br>(parboiling)                                 |             | 2.23                 | < LOD    | < 0.01                  | < LOD                     | PF = 0.87                          | PF = 0.87                                                              |
| 2010/7003485<br>RCN<br>R080527<br>USA<br>(Crittenden,<br>Arkansas)<br>2008<br>(Bengal) | 2           | 7                | 500<br>500<br>1000 | 166<br>166      | Whole rice<br>(RAC)                                  | 21          | (4.21, 4.31)<br>4.26 | < LOD    | (0.05,<br>0.05)<br>0.05 | < 0.01                    | -                                  |                                                                        |
|                                                                                        |             |                  |                    |                 | Polished<br>rice/white<br>milled                     |             | 0.30                 | < LOD    | 0.01                    | < LOD                     | PF = 0.07                          | PF = 0.07                                                              |
|                                                                                        |             |                  |                    |                 | Rice hulls<br>(normal<br>milling)                    |             | (15.7-17.3)<br>16.52 | < 0.01   | (0.11-<br>0.13)<br>0.12 | (< 0.01-<br>0.01)<br>0.01 | PF = 3.88                          | PF = 3.86                                                              |
|                                                                                        |             |                  |                    |                 | Bran<br>(normal<br>milling)                          |             | (3.84, 3.89)<br>3.86 | < LOD    | (0.07,<br>0.08)<br>0.08 | 0.02                      | PF = 0.91                          | PF = 0.91                                                              |
|                                                                                        |             |                  |                    |                 | Glazed rice<br>(normal<br>milling)                   |             | < 0.01               | < LOD    | < LOD                   | < LOD                     | PF =<br>< 0.01                     | PF = < 0.01                                                            |
|                                                                                        |             |                  |                    |                 | Husked<br>rice /brown<br>rice<br>(normal<br>milling) |             | 0.87                 | < LOD    | (0.02,<br>0.02)<br>0.02 | < 0.01                    | PF = 0.20                          | PF = 0.21                                                              |
|                                                                                        |             |                  |                    |                 | Cooked<br>rice<br>/parboiled<br>white<br>milled      |             | (1.81-2.06)<br>1.96  | < LOD    | 0.02                    | < 0.01                    | PF = 0.46                          | PF = 0.46                                                              |
|                                                                                        |             |                  |                    |                 | Flour<br>(polished<br>rice/white<br>milled)          |             | 0.34                 | < LOD    | 0.01                    | < 0.01                    | PF = 0.08                          | PF = 0.08                                                              |
|                                                                                        |             |                  |                    |                 | Rice hulls<br>(parboiling)                           |             | 6.76                 | < LOD    | 0.08                    | < 0.01                    | PF = 1.59                          | PF = 1.59                                                              |
|                                                                                        |             |                  |                    |                 | Husked<br>rice/brown<br>(parboiling)                 |             | (2.09-2.79)<br>2.53  | < LOD    | (0.02,<br>0.03)<br>0.03 | < 0.01                    | PF = 0.59                          | PF = 0.59                                                              |
|                                                                                        |             |                  |                    |                 | Bran<br>(parboiling)                                 |             | 16.16                | < LOD    | 0.12                    | < 0.01                    | PF = 3.79                          | PF = 3.78                                                              |

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

### Peanut

The effect of processing (laboratory scale) on residues of fluxapyroxad in peanuts was investigated (Becker 2010, 2009/7006382) in two trials carried out in Georgia, USA during the 2008 growing season. Peanut nutmeat with incurred residues was obtained where plants were sprayed with three foliar sprays at 0.303 kg ai/ha with a 13–14 day retreatment interval (total 0.909 kg ai/season). Applications were made at  $35 \pm 1$ ,  $21 \pm 1$  and 7 days before harvest at maturity. Applications were made in 187–191 L/ha using ground boom equipment and an adjuvant was added to the spray mixture for all applications. Harvest of peanut bulk samples occurred 7 days after the last application and collection of the bulk samples was completed 4 or 6 days after digging. One untreated “from-the-field” nutmeat sample (1.1 kg), one bulk untreated control sample (~27 kg), one treated “from-the-

field” nutmeat sample (1.1 kg) and two bulk treated samples of peanuts (~27 kg each) were collected from each trial. The one bulk “retain” treated sample from each trial was collected and kept as a back-up.

Bulk peanut samples were processed into processed peanut commodity samples according to simulated commercial procedures. The unshelled whole peanuts were dried, screened and cleaned to remove debris. The whole peanuts were shelled to yield the nutmeat kernel and a portion of the kernels was separated to produce the dry roasted whole nutmeat and peanut butter. The nutmeats were roasted and the skins removed to yield the “from the processor” nutmeat sample. Some roasted nutmeat was combined with commercial peanut oil and salt and blended to produce peanut butter.

The remaining kernels were pressed in an expeller to produce the crude oil (expeller crude oil) and press cake. The press cake was further ground and extracted with solvent (hexane) to yield more crude oil (solvent-extracted crude oil) after removal of the solvent. Due to an odour in the solvent-extracted crude oil, the crude oil samples from the extruder and solvent extraction were not combined, which would typically occur. The crude oil samples were further treated with alkali, filtered and bleached to yield refined oil. The press cake after solvent extraction was heated to remove any residual solvent yielding the peanut meal sample.

Residues of fluxapyroxad in peanut nutmeat and processed commodities were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for peanut commodities were obtained for each analyte.

No residues were detected in the peanut nutmeat samples. No processing factors could be estimated from this study.

Table 133 Residues in peanut processed fractions from the foliar application of fluxapyroxad to peanuts in the USA (Becker 2010, 2009/7006382)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                     | Application |                  |                                 |                   | Matrix                 | PHI<br>days | Residues (mg/kg) |          |          |          |
|----------------------------------------------------------------------------|-------------|------------------|---------------------------------|-------------------|------------------------|-------------|------------------|----------|----------|----------|
|                                                                            | No          | Interval<br>Days | g<br>ai/ha                      | Water (L/ha)      |                        |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |
| GAP, USA                                                                   | 3           |                  | 97                              |                   |                        | 7           |                  |          |          |          |
| 2009/7006382<br>RCN R080552<br>USA<br>(Turner, Georgia)<br>2008<br>(GA-02) | 3           | 14<br>14         | 303<br>303<br><u>303</u><br>909 | 188<br>187<br>188 | Unshelled Nut          | 7           | 0.07             | < LOD    | < 0.01   | < 0.01   |
|                                                                            |             |                  |                                 |                   |                        |             | 0.08             | < LOD    | < 0.01   | < 0.01   |
|                                                                            |             |                  |                                 |                   | Nutmeat                |             | < 0.01           | < LOD    | < LOD    | < LOD    |
|                                                                            |             |                  |                                 |                   |                        |             | < 0.01           | < LOD    | < LOD    | < LOD    |
|                                                                            |             |                  |                                 |                   | Meal                   |             | < 0.01           | < LOD    | < LOD    | < 0.01   |
|                                                                            |             |                  |                                 |                   |                        |             | < 0.01           | < LOD    | < LOD    | < 0.01   |
|                                                                            |             |                  |                                 |                   | Peanut butter          |             | < LOD            | < LOD    | < LOD    | < LOD    |
|                                                                            |             |                  |                                 |                   |                        |             | < LOD            | < LOD    | < LOD    | < LOD    |
|                                                                            |             |                  |                                 |                   | Refined Oil - Expeller |             | 0.02             | < LOD    | < LOD    | < LOD    |
|                                                                            |             |                  |                                 |                   |                        |             | 0.02             | < LOD    | < LOD    | < LOD    |
|                                                                            |             |                  |                                 |                   | Crude Oil - Expeller   |             | 0.03             | < LOD    | < LOD    | < LOD    |
|                                                                            |             |                  |                                 |                   |                        |             | 0.02             | < LOD    | < LOD    | < LOD    |
| 2009/7006382<br>RCN R080553<br>USA<br>(Tift, Georgia)<br>2008<br>(03L)     | 3           | 14<br>13         | 303<br>303<br><u>303</u><br>909 | 190<br>188<br>191 | Unshelled Nut          | 7           | 0.09             | < LOD    | < 0.01   | < 0.01   |
|                                                                            |             |                  |                                 |                   |                        |             | 0.09             | < LOD    | < 0.01   | < 0.01   |
|                                                                            |             |                  |                                 |                   | Nutmeat                |             | < 0.01           | < LOD    | < LOD    | < LOD    |
|                                                                            |             |                  |                                 |                   |                        |             | < 0.01           | < LOD    | < LOD    | < LOD    |
|                                                                            |             |                  |                                 |                   | Meal                   |             | < 0.01           | < LOD    | < LOD    | < 0.01   |
|                                                                            |             |                  |                                 |                   |                        |             | < 0.01           | < LOD    | < 0.01   | < 0.01   |

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety) | Application |                  |            | Matrix       | PHI<br>days | Residues (mg/kg) |          |          |          |
|--------------------------------------------------------|-------------|------------------|------------|--------------|-------------|------------------|----------|----------|----------|
|                                                        | No          | Interval<br>Days | g<br>ai/ha | Water (L/ha) |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |
|                                                        |             |                  |            |              |             | < 0.01           | < LOD    | < LOD    | < LOD    |
|                                                        |             |                  |            |              |             | < 0.01           | < LOD    | < LOD    | < LOD    |
|                                                        |             |                  |            |              |             | 0.02             | < LOD    | < LOD    | < LOD    |
|                                                        |             |                  |            |              |             | 0.02             | < LOD    | < LOD    | < LOD    |
|                                                        |             |                  |            |              |             | 0.03             | < LOD    | < 0.01   | < LOD    |
|                                                        |             |                  |            |              |             | 0.03             | < LOD    | < 0.01   | < LOD    |
|                                                        |             |                  |            |              |             | 0.03             | < LOD    | < LOD    | < LOD    |
|                                                        |             |                  |            |              |             | 0.02             | < LOD    | < LOD    | < LOD    |

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

### *Rape seed (Canola) and Sunflower seed*

The effect of processing (laboratory scale) on residues of fluxapyroxad in canola and sunflowers was investigated in four trials carried out in Idaho, USA and Alberta, Canada (canola) and Kansas, USA and Saskatchewan, Canada (sunflowers) during the 2008 growing season (Johnston 2010, 2009/7003097). Canola seed with incurred residues were obtained where plants were sprayed with two foliar sprays at 0.288–0.308 kg ai/ha with a 13–15 day retreatment interval (total 0.577–0.616 kg ai/season). Sunflower seed with incurred residues were obtained where plants were sprayed with two foliar sprays at 0.493–0.516 kg ai/ha with a 14–15 day retreatment interval (total 0.993–1.017 kg ai/season). The first application was made 34–36 days prior to harvest and the second application was made 21 days prior to harvest (BBCH 67–85 for canola and BBCH 69–83 for sunflower). Applications were made in 185–193 L/ha using ground equipment and an adjuvant was added to the spray mixture for all applications. Canola RAC and sunflower RAC samples were harvested 21 days after the last application.

Bulk canola and sunflower samples (four control and eight treated) were processed into processed canola and sunflower commodity samples (meal, crude oil and refined oil) according to simulated commercial procedures. The moisture content of the samples was determined. If the moisture content was greater than 10%, samples were dried in an oven at 54–71 °C to a moisture content of 7–10%. Following drying, samples were cleaned by aspiration and screening. Samples from trials R080211 and R080213 were screened prior to aspiration. Cleaned canola seed was flaked in a flaking roll. Whole, cleaned sunflower seeds were fed into a huller to crack the hull and liberate the kernel material. The moisture of the sunflower kernels were determined and adjusted to 12%. Canola flakes and sunflower seed kernels were heated in a mixer, then expelled/pressed in an expeller to liberate a portion of the crude oil. Products resulting from expelling were crude oil and press cake with residual crude oil. Residual crude oil remaining in the solid material (press cake) exiting the expeller was removed by solvent extraction. Due to limited amount of starting material, samples from trial R080211 were not expelled. Press cake from trial R080213 was ground in a disc mill prior to solvent extraction. Press cake (flakes from R080211) was placed in stainless steel batch extractors and submerged in 49–60 °C hexane. After 30 minutes, the miscella (crude oil and hexane) was drained and fresh hexane added to repeat the cycle two more times. The final two washes were 15–30 min each. After the final draining, the extracted press cake (meal) was desolventised using warm air forced through the extracted press cake or heating to 99–104 °C in the paddle mixer. The crude oil and hexane in the miscella were separated using a laboratory vacuum evaporator. Crude oil was then heated to 88–96 °C for hexane removal. The resulting product was crude oil.

Crude oil samples recovered from the expeller and solvent extraction were filtered and combined. Percent free fatty acid (FFA) for the crude oil was determined for crude canola oil. Crude canola oil was placed in a water bath, pre-treated with 85% phosphoric acid and mixed. Crude sunflower oil was also placed in a water bath and mixed. For both canola and sunflower crude oil, sodium hydroxide was added to the oil after pre-treatment. The neutralised oil was centrifuged to separate the refined oil and soapstock. The refined oil was decanted and filtered and the soapstock was discarded. Refined oil was heated to 40–50 °C, activated bleaching earth added and then placed under vacuum. The temperature was increased to 85–105 °C and held for 10–15 minutes. After reducing the temperature, the bleached oil was filtered. The bleached oil was steam bathed under vacuum at 220–250 °C. During the cooling period, a citric acid solution was added resulting in the refined oil (RDB) and deodorizer distillates.

Residues of fluxapyroxad in canola RAC and sunflower RAC and processed commodities of both were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for canola and sunflower commodities were obtained for each analyte.

Table 134 Residues in rapeseed (canola) processed fractions from the foliar application of fluxapyroxad to rapeseed in the USA and Canada (Johnston 2010, 2009/7003097)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                                  | Application |                  |                          |                   | Matrix         | PHI<br>days | Residues (mg/kg) |          |          |          | Processing<br>Factor for<br>Parent | Processing<br>Factor for<br>(Parent<br>+ M700F008<br>+ M700F048) |
|-----------------------------------------------------------------------------------------|-------------|------------------|--------------------------|-------------------|----------------|-------------|------------------|----------|----------|----------|------------------------------------|------------------------------------------------------------------|
|                                                                                         | No          | Interval<br>Days | g<br>ai/ha               | Water<br>(L/ha)   |                |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                    |                                                                  |
| GAP, USA                                                                                | 2           |                  | 97-<br>101               |                   |                | 21          |                  |          |          |          |                                    |                                                                  |
| 2009/7003097<br>RCN<br>R080211<br>USA<br>(Power,<br>Idaho)<br>2008<br>(V1036)           | 2           | 13               | 308<br><u>308</u><br>616 | 192<br><u>192</u> | Seed<br>RAC    | 21          | 0.33             | < LOD    | 0.11     | 0.13     | -                                  |                                                                  |
|                                                                                         |             |                  |                          |                   | Meal           |             | 0.22             | < LOD    | 0.09     | 0.05     | PF = 0.67                          | PF = 0.66                                                        |
|                                                                                         |             |                  |                          |                   | Crude<br>Oil   |             | 0.37             | < LOD    | 0.02     | < LOD    | PF = 1.12                          | PF = 0.70                                                        |
|                                                                                         |             |                  |                          |                   | Refined<br>Oil |             | 0.13             | < LOD    | < 0.01   | < LOD    | PF = 0.39                          | PF = 0.25                                                        |
|                                                                                         |             |                  |                          |                   | Seed<br>RAC    | 21          | 1.22             | < LOD    | 0.39     | 1.15     | -                                  | -                                                                |
|                                                                                         |             |                  |                          |                   | Meal           |             | 0.42             | < LOD    | 0.16     | 0.22     | PF = 0.34                          | PF = 0.30                                                        |
|                                                                                         |             |                  |                          |                   | Crude<br>Oil   |             | 1.07             | < LOD    | 0.05     | < 0.01   | PF = 0.88                          | PF = 0.46                                                        |
|                                                                                         |             |                  |                          |                   | Refined<br>Oil |             | 0.10             | < LOD    | < 0.01   | < LOD    | PF = 0.08                          | PF = 0.04                                                        |
| 2009/7003097<br>RCN<br>R080212<br>Canada<br>(Strathcona,<br>Alberta)<br>2008<br>(45H73) | 2           | 15               | 289<br><u>288</u><br>577 | 188<br><u>187</u> | Seed<br>RAC    | 21          | 0.50             | < LOD    | 0.04     | 0.02     | -                                  | -                                                                |
|                                                                                         |             |                  |                          |                   | Meal           |             | 0.20             | < LOD    | 0.03     | 0.02     | PF = 0.40                          | PF = 0.45                                                        |
|                                                                                         |             |                  |                          |                   | Crude<br>Oil   |             | 0.35             | < LOD    | < 0.01   | < LOD    | PF = 0.70                          | PF = 0.63                                                        |
|                                                                                         |             |                  |                          |                   | Refined<br>Oil |             | 0.11             | < LOD    | < LOD    | < LOD    | PF = 0.22                          | PF = 0.20                                                        |
|                                                                                         |             |                  |                          |                   | Seed<br>RAC    | 21          | 0.62             | < LOD    | 0.04     | 0.03     | -                                  | -                                                                |
|                                                                                         |             |                  |                          |                   | Meal           |             | 0.21             | < LOD    | 0.03     | 0.02     | PF = 0.34                          | PF = 0.38                                                        |
|                                                                                         |             |                  |                          |                   | Crude<br>Oil   |             | 0.33             | < LOD    | < 0.01   | < LOD    | PF = 0.53                          | PF = 0.48                                                        |
|                                                                                         |             |                  |                          |                   | Refined<br>Oil |             | 0.27             | < LOD    | < LOD    | < LOD    | PF = 0.44                          | PF = 0.39                                                        |

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

Table 135 Residues in sunflower seed processed fractions from the foliar application of fluxapyroxad to sunflowers in the USA and Canada (Johnston 2010, 2009/7003097)

| Study No.<br>Trial No.<br>Country<br>Year<br>(Variety)                               | Application |                  |                    |                 | Matrix         | PHI<br>days | Residues (mg/kg) |          |          |          | Processing Factor<br>for (Parent<br>+ M700F008<br>+ M700F048) <sup>a</sup> |
|--------------------------------------------------------------------------------------|-------------|------------------|--------------------|-----------------|----------------|-------------|------------------|----------|----------|----------|----------------------------------------------------------------------------|
|                                                                                      | No          | Interval<br>Days | g<br>ai/ha         | Water<br>(L/ha) |                |             | Fluxapyroxad     | M700F002 | M700F008 | M700F048 |                                                                            |
| GAP, USA                                                                             | 2           |                  | 97-<br>101         |                 |                | 21          |                  |          |          |          |                                                                            |
| 2009/7003097<br>RCN R080213<br>Canada<br>(RM314,<br>Saskatchewan)<br>2008<br>(Viper) | 2           | 14               | 500<br>493<br>993  | 188<br>185      | Seed<br>RAC    | 21          | 0.32             | < LOD    | < 0.01   | < LOD    | -                                                                          |
|                                                                                      |             |                  |                    |                 | Meal           |             | 0.09             | < LOD    | < 0.01   | < LOD    | PF = 0.28                                                                  |
|                                                                                      |             |                  |                    |                 | Crude<br>Oil   |             | 0.12             | < LOD    | < 0.01   | < LOD    | PF = 0.38                                                                  |
|                                                                                      |             |                  |                    |                 | Refined<br>Oil |             | 0.06             | < LOD    | < LOD    | < LOD    | PF = 0.19                                                                  |
|                                                                                      |             |                  |                    |                 | Seed<br>RAC    | 21          | 0.32             | < LOD    | < 0.01   | < LOD    | -                                                                          |
|                                                                                      |             |                  |                    |                 | Meal           |             | 0.05             | < LOD    | < 0.01   | < LOD    | PF = 0.16                                                                  |
|                                                                                      |             |                  |                    |                 | Crude<br>Oil   |             | 0.08             | < LOD    | < 0.01   | < LOD    | PF = 0.25                                                                  |
|                                                                                      |             |                  |                    |                 | Refined<br>Oil |             | 0.03             | < LOD    | < LOD    | < LOD    | PF = 0.09                                                                  |
| 2009/7003097<br>RCN R080214<br>USA<br>(Edwards,<br>Kansas)<br>2008<br>(63M91)        | 2           | 15               | 516<br>501<br>1017 | 193<br>188      | Seed<br>RAC    | 21          | 0.70             | < 0.01   | < 0.01   | < LOD    | -                                                                          |
|                                                                                      |             |                  |                    |                 | Meal           |             | 0.05             | < 0.01   | < LOD    | < LOD    | PF = 0.07                                                                  |
|                                                                                      |             |                  |                    |                 | Crude<br>Oil   |             | 0.09             | < LOD    | < LOD    | < LOD    | PF = 0.13                                                                  |
|                                                                                      |             |                  |                    |                 | Refined<br>Oil |             | 0.03             | < LOD    | < LOD    | < LOD    | PF = 0.05                                                                  |
|                                                                                      |             |                  |                    |                 | Seed<br>RAC    | 21          | 0.73             | < 0.01   | < 0.01   | < LOD    | -                                                                          |
|                                                                                      |             |                  |                    |                 | Meal           |             | 0.04             | < 0.01   | < LOD    | < LOD    | PF = 0.05                                                                  |
|                                                                                      |             |                  |                    |                 | Crude<br>Oil   |             | 0.11             | < LOD    | < LOD    | < LOD    | PF = 0.15                                                                  |
|                                                                                      |             |                  |                    |                 | Refined<br>Oil |             | 0.05             | < LOD    | < LOD    | < LOD    | PF = 0.07                                                                  |

All analytes are reported in terms of themselves.

LOQ is 0.01 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

LOD is 0.002 mg/kg for each of parent fluxapyroxad and metabolites M700F008, M700F002 and M700F048.

<sup>a</sup> Processing factor for parent + M700F008 + M700F048 is the same as for parent only

### Cotton

The effect of processing (laboratory scale) on residues of fluxapyroxad in cotton was investigated in two trials (Jordan and Gordon 2010, 2010/7003260). Cotton with incurred residues was obtained following seed treatment applications of fluxapyroxad to cotton plants at 100 g ai/100 kg seed (approximately 5× the maximum seasonal rate). Cotton RAC samples were harvested at maturity (156 or 190 days after planting).

Undelinted cottonseed raw agricultural commodity (RAC) was used to generate meal, hulls and oil (refined, bleached and deodorised). Processing was performed using procedures which simulated commercial processing practices. Undelinted cottonseed (ginned) samples were delinted to remove of the most remaining lint and produce delinted cottonseed with approximately 3% lint

remaining on the seed. Delinting produced delinted cottonseed, linters and linter motes. The delinted seed was mechanically cracked and the hull material was then separated from the kernel. Kernel material was processed into meal and crude oil. Crude oil was sequentially converted to refined oil, bleached oil, deodorised oil and deodoriser distillates.

Residues of fluxapyroxad in cotton RAC and processed commodities were quantitated by LC/MS/MS using Method L0137/01. Acceptable concurrent recovery data for cotton commodities were obtained for each analyte.

No residues were detected in the cotton seed or processed commodities. No processing factors could be estimated from this study.

The results of the processing factors are summarized in the table below:

Table 136 Summary of processing factors for fluxapyroxad residues

| Raw Agricultural Commodity (RAC) | Processed Commodity                   | Calculated Processing factors | PF (Mean, median or best estimate) |
|----------------------------------|---------------------------------------|-------------------------------|------------------------------------|
| Apple                            | Juice                                 | 0.19, 0.23                    | 0.21                               |
|                                  | Pomace, wet                           | 4.50, 4.69                    | 4.60                               |
|                                  | Applesauce                            | 0.19, 0.28                    | 0.24                               |
|                                  | Canned apples                         | 0.15, 0.28                    | 0.22                               |
|                                  | Dried apples                          | 0.38, 0.69                    | 0.54                               |
| Plum                             | Washed plums                          | 0.60, 0.93                    | 0.77                               |
|                                  | Puree                                 | 0.81, 0.84                    | 0.83                               |
|                                  | Jam                                   | 0.37, 0.44                    | 0.41                               |
|                                  | Dried Prunes                          | 2.75, 2.87                    | 2.81                               |
| Tomato                           | Canned tomatoes                       | 0.06, 0.17, 0.21, 0.44        | 0.19                               |
|                                  | Paste                                 | 0.17, 0.53, 0.92, 1.21        | 0.73                               |
|                                  | Peeled tomatoes                       | 0.03, 0.08, 0.08, 0.36        | 0.08                               |
|                                  | Puree                                 | 0.25, 0.36, 0.38, 0.67        | 0.37                               |
|                                  | Raw juice                             | 0.08, 0.11, 0.25, 0.32        | 0.18                               |
|                                  | Tomato peel                           | 1.75, 2.32, 2.42, 6.75        | 2.37                               |
|                                  | Wash water                            | 0.04, 0.08, 0.20, 0.36,       | 0.14                               |
|                                  | Washed tomatoes                       | 0.56, 0.72, 0.75, 0.83        | 0.74                               |
|                                  | Pomace, wet                           | 2.17, 3.22, 3.58, 4.64        | 3.40                               |
| Soya bean                        | Flour                                 | 0.08, 0.08, 0.91, 1.0         | 0.50                               |
|                                  | Hulls                                 | 0.16, 0.65, 1.64, 8.2         | 1.15                               |
|                                  | Meal                                  | 0.08, 0.08, 0.91, 1.0         | 0.50                               |
|                                  | Miso                                  | 0.08, 0.08, 0.91, 1.0         | 0.50                               |
|                                  | Refined oil                           | 0.18, 0.19, 0.91, 1.0         | 0.55                               |
|                                  | Soy milk                              | 0.08, 0.08, 0.91, 1.0         | 0.50                               |
|                                  | Soy sauce                             | 0.08, 0.08, 0.91, 1.0         | 0.50                               |
|                                  | Tofu                                  | 0.08, 0.08, 0.91, 1.0         | 0.50                               |
|                                  | Aspirated grain fractions             | 139, 177                      | 158                                |
| Potato                           | Granules /flakes                      | 0.5, 0.5, 1.0                 | 0.5                                |
|                                  | Chips                                 | 0.5, 0.5, 1.0                 | 0.5                                |
|                                  | Peel, wet                             | 2.0, 5.0, 7.0                 | 5.0                                |
|                                  | Peeled potatoes                       | 0.5, 0.5, 1.0                 | 0.5                                |
|                                  | Boiled potatoes (unpeeled)            | 0.5, 0.5, 1.0                 | 0.5                                |
|                                  | Microwave, boiled potatoes (unpeeled) | 0.5, 0.5, 1.0                 | 0.5                                |
|                                  | Baked potato (unpeeled)               | 0.5, 0.5, 1.0                 | 0.5                                |
|                                  | Fried potato (unpeeled)               | 0.5, 0.5, 1.0                 | 0.5                                |
|                                  | Process waste                         | 0.5, 0.5, 1.0                 | 0.5                                |
|                                  | Dried pulp                            | 5.0, 7.0, 12.0                | 7.0                                |
| Sugar Beet                       | Refined sugar                         | 0.05, 0.28                    | 0.17                               |
|                                  | Dried pulp                            | 0.49, 3.0                     | 1.75                               |
|                                  | Molasses                              | 0.38, 1.22                    | 0.80                               |
|                                  | Raw juice                             | 0.12, 0.28                    | 0.20                               |
|                                  | Thick juice                           | 0.28, 1.22                    | 0.75                               |
|                                  | Raw sugar                             | 0.37, 1.61                    | 0.99                               |
|                                  | Press water                           | 0.04, 0.17                    | 0.11                               |

| Raw Agricultural Commodity (RAC) | Processed Commodity                     | Calculated Processing factors                      | PF (Mean, median or best estimate) |
|----------------------------------|-----------------------------------------|----------------------------------------------------|------------------------------------|
| Wheat                            | Pressed pulp                            | 0.08, 0.39                                         | 0.24                               |
|                                  | Ensiled pulp                            | 0.13, 0.61                                         | 0.37                               |
|                                  | Bran                                    | 2.43, 2.65, 2.81, 2.87, 2.92, 3.0, 3.27, 4.54      | 2.90                               |
|                                  | Flour                                   | 0.09, 0.10, 0.14, 0.15, 0.17, 0.23, 0.41, 0.63     | 0.16                               |
|                                  | Middlings                               | 0.18, 0.22, 0.33, 0.33, 0.38, 0.38, 0.56, 0.79     | 0.36                               |
|                                  | Shorts                                  | 0.23, 0.35, 0.35, 0.40, 0.60, 0.65, 0.71, 1.04     | 0.50                               |
|                                  | Germ                                    | 0.60, 0.92, 1.0, 1.19, 1.26, 1.62, 2.47, 2.63      | 1.22                               |
|                                  | Bread (white)                           | 0.09, 0.10, 0.10, 0.10, 0.13, 0.14, 0.24, 0.42     | 0.12                               |
|                                  | Whole meal                              | 0.73, 0.85, 0.87, 0.92, 1.0, 1.05, 1.15, 1.83      | 0.96                               |
|                                  | Bread whole meal                        | 0.50, 0.58, 0.58, 0.58, 0.70, 0.73, 0.79, 1.21     | 0.64                               |
| Rice                             | Aspirated grain fractions               | 165, 278                                           | 220                                |
|                                  | Polished rice/white milled              | 0.01, 0.07                                         | 0.04                               |
|                                  | Rice hulls (normal milling)             | 3.88, 4.29                                         | 4.09                               |
|                                  | Bran (normal milling)                   | 0.91, 0.94                                         | 0.93                               |
|                                  | Glazed rice (normal milling)            | 0.00, 0.01                                         | 0.01                               |
|                                  | Husked rice/brown rice (normal milling) | 0.05, 0.20                                         | 0.13                               |
|                                  | Cooked rice / parboiled white milled    | 0.10, 0.46                                         | 0.28                               |
|                                  | Flour (polished rice/white milled)      | 0.01, 0.08                                         | 0.05                               |
|                                  | Rice hulls (parboiling)                 | 0.77, 1.59                                         | 1.18                               |
|                                  | Husked rice/brown rice (parboiling)     | 0.16, 0.59                                         | 0.38                               |
| Sorghum                          | Bran (parboiling)                       | 0.87, 3.79                                         | 2.33                               |
|                                  | Aspirated grain fractions               | 1.45                                               | 1.45                               |
|                                  | Syrup                                   | 0.10, 0.17                                         | 0.14                               |
| Barley                           | Pot barley                              | 0.07, 0.08, 0.10, 0.12, 0.19, 0.22, 0.36, 0.42     | 0.16                               |
|                                  | Bran                                    | 1.31, 1.55, 1.65, 1.88, 1.90, 2.23, 2.26, 2.52     | 1.89                               |
|                                  | Flour                                   | 0.08, 0.08, 0.11, 0.11, 0.19, 0.28, 0.43, 0.47     | 0.15                               |
|                                  | Brewing malt                            | < 0.01, < 0.01, 0.01, 0.01, 0.01, 0.02, 0.03, 0.04 | 0.01                               |
|                                  | Malt culms (sprouts)                    | 0.11, 0.20, 0.23, 0.23, 0.30, 0.35, 0.51, 0.54     | 0.27                               |
|                                  | Spent grain                             | 0.15, 0.21, 0.23, 0.23, 0.26, 0.29, 0.32, 0.40     | 0.25                               |
|                                  | Spent hops (flocs)                      | 0.10, 0.12, 0.12, 0.15, 0.17, 0.20, 0.22, 0.46     | 0.16                               |
|                                  | Brewer's spent yeast                    | 0.03, 0.17, 0.25, 0.33, 0.36, 0.54                 | 0.29                               |
|                                  | Beer                                    | 0.01, 0.01, 0.01, 0.02, 0.02, 0.02, 0.02, 0.02     | 0.02                               |
| Corn (Maize)                     | Meal                                    | 0.7                                                | 0.7                                |
|                                  | RDB oil (Wet milled)                    | 4.1                                                | 4.1                                |
|                                  | Flour                                   | 0.9                                                | 0.9                                |
|                                  | Grits                                   | 0.3                                                | 0.3                                |
|                                  | Starch                                  | 0.1                                                | 0.1                                |
| Rapeseed (Canola)                | RDB oil (Dry milled)                    | 0.4                                                | 0.4                                |
|                                  | Meal                                    | 0.30, 0.38, 0.45, 0.66                             | 0.42                               |
|                                  | Crude oil                               | 0.46, 0.48, 0.63, 0.70                             | 0.56                               |

| Raw Agricultural Commodity (RAC) | Processed Commodity | Calculated Processing factors | PF (Mean, median or best estimate) |
|----------------------------------|---------------------|-------------------------------|------------------------------------|
|                                  | Refined oil         | 0.04, 0.20, 0.25, 0.39        | 0.23                               |
| Sunflower seed                   | Meal                | 0.05, 0.07, 0.16, 0.28        | 0.12                               |
|                                  | Crude oil           | 0.13, 0.15, 0.25, 0.38        | 0.20                               |
|                                  | Refined oil         | 0.04, 0.07, 0.09, 0.19        | 0.08                               |

## RESIDUES IN ANIMAL COMMODITIES

*Dairy cattle transfer study (Vance 2009, 2009/1074798 and 2010, 2009/1118922)*

A feeding study with fluxapyroxad and metabolite M700F002 was conducted in lactating cows (eighteen *Holstein* and *Holstein Friesian* cross dairy cattle ranging from 2–6 years of age). The target doses of fluxapyroxad were equivalent to 3, 6, 18 and 30 ppm, while the corresponding target doses of M700F02 were equivalent to 0, 0.1, 0.3, and 1 ppm in the feed.

The animals received co-doses of parent compound and M700F002 equivalent to  $3.2 \pm 0$  ppm in the feed respectively,  $6.1 \pm 0.1$  ppm,  $18.2 \pm 0.3$  ppm and  $60.3 \pm 1.0$  ppm. The doses were administered orally *via* gelatine capsules, for a period of 28 days followed by a depuration period of 7 days. When expressed on a mg/kg bw basis the doses were  $0.086 \pm 0.0$ ,  $0.171 \pm 0.003$ ,  $0.512 \pm 0.008$  and  $1.556 \pm 0.025$  mg/kg bw respectively.

Milk samples from each animal were collected twice daily, at approximately 8 am and 4 pm, and combined as one pooled sample. On Study Day 21, milk was also separated into cream and skimmed milk. Animals were sacrificed within 22–24 hours after the final dosing, except for three cows in the highest dose group, which were sacrificed two, five and seven days after the final dose to determine decline of residue levels post-dosing.

Milk, skimmed milk, cream and tissues samples were analysed for residues of fluxapyroxad, M700F002 and M700F008 using Method L0140/01. Concurrent recoveries from control samples fortified with fluxapyroxad, M700F002 and M700F008 were acceptable.

Table 137 Mean concurrent recovery data for Method L0140/01 in dairy cattle feeding study

| Matrix       | Spiking level (mg/kg) | Recoveries for fluxapyroxad |                     |                | Recoveries for M700F008 |                     |                | Recoveries for M700F002 |           |                |
|--------------|-----------------------|-----------------------------|---------------------|----------------|-------------------------|---------------------|----------------|-------------------------|-----------|----------------|
|              |                       | n                           | Range [%]           | Mean (RSD) [%] | n                       | Range [%]           | Mean (RSD) [%] | n                       | Range [%] | Mean (RSD) [%] |
| Milk         | 0.001                 | 40                          | 80–133 <sup>a</sup> | 101 (13.3)     | 40                      | 95–126 <sup>b</sup> | 107 (7.40)     | 40                      | 75–116    | 92 (10.2)      |
|              | 0.01                  | 40                          | 73–117              | 101 (7.98)     | 40                      | 88–118              | 104 (6.77)     | 40                      | 67–105    | 91 (9.33)      |
| Cream        | 0.001                 | 2                           | 82–106              | 94             | 2                       | 98–110              | 104            | 2                       | 73–78     | 76             |
|              | 0.01                  | 2                           | 88–96               | 92             | 2                       | 89–98               | 94             | 2                       | 73–86     | 80             |
| Skimmed milk | 0.001                 | 2                           | 72–85               | 79             | 2                       | 93–96               | 94             | 2                       | 57–72     | 65             |
|              | 0.01                  | 2                           | 93–98               | 95             | 2                       | 83–86               | 85             | 2                       | 66–72     | 69             |
| Muscle       | 0.01                  | 3                           | 97–99               | 98 (1.02)      | 3                       | 93–119              | 106 (12.3)     | 3                       | 67–70     | 68 (2.79)      |
|              | 0.1                   | 3                           | 101–106             | 103 (2.81)     | 3                       | 97–105              | 102 (4.16)     | 3                       | 72–75     | 73 (2.52)      |
| Liver        | 0.01                  | 5                           | 78–114              | 99 (13.3)      | 5                       | 83–108              | 98 (11.2)      | 3                       | 56–62     | 56 (5.74)      |
|              | 0.1                   | 5                           | 95–115              | 104 (7.16)     | 5                       | 90–106              | 98 (6.55)      | 3                       | 69–71     | 70 (1.22)      |
| Kidney       | 0.01                  | 3                           | 101–109             | 104 (3.99)     | 3                       | 93–110              | 101 (8.36)     | 3                       | 54–67     | 60 (11.1)      |
|              | 0.1                   | 3                           | 110–119             | 113 (4.60)     | 3                       | 107–115             | 111 (3.65)     | 3                       | 63–72     | 68 (7.48)      |
| Fat          | 0.01                  | 5                           | 86–107              | 99 (8.34)      | 5                       | 89–124              | 105 (11.9)     | 3                       | 82–89     | 86 (4.15)      |
|              | 0.1                   | 5                           | 96–109              | 101 (5.44)     | 5                       | 98–105              | 103 (2.47)     | 3                       | 84–89     | 87 (2.68)      |

RSD = relative standard deviation

<sup>a</sup> outliers 38% and 191% excluded from mean calculation

<sup>b</sup> outliers 21% and 168% excluded from mean calculation

For M700F002, the concurrent recoveries observed with Method L0140/01 were mostly outside the acceptable range of 70–120% for muscle, liver and kidney. For this reason, a second method (L0140/02) was used for the determination of M700F002 in selected tissue and milk samples to confirm the results. The method of analysis involved liquid extraction in acetonitrile: water (80:20,

v/v) with homogenisation. A portion of the extract was then reduced to dryness before being reconstituted with a mixture of methanol: water (50:50, v/v) followed by 2 N HCl and saturated sodium chloride solution. The reconstituted extracts were then partitioned against ethyl acetate before a portion of the ethyl acetate was reduced to dryness. The sample was then reconstituted in methanol:water (40:60, v/v) and quantified by HPLC-MS/MS. Recoveries for M700F002 obtained with Method L0140/02 were in the acceptable range.

Table 138 Concurrent recovery data for M700F002 obtained with Method L0140/02 in dairy cattle feeding study

| Matrix | Fortification level [mg/kg] | Recoveries [%] | Mean Recovery $\pm$ SD [%] |
|--------|-----------------------------|----------------|----------------------------|
| Milk   | 0.001                       | 87, 87, 86     | 87 $\pm$ 0.6               |
| Muscle | 0.01                        | 78, 90, 79     | 82 $\pm$ 6.7               |
| Liver  | 0.01                        | 96, 87, 90     | 91 $\pm$ 4.6               |
| Kidney | 0.01                        | 115, 110, 109  | 111 $\pm$ 3.2              |
| Fat    | 0.01                        | 102, 95, 101   | 99 $\pm$ 3.8               |

SD = standard deviation

The residues of fluxapyroxad, M700F008 and M700F002 found in milk during the treatment and depuration periods are summarized in Tables 139–141. Occasionally trace levels of fluxapyroxad and metabolites were detected in milk of control animals but these were all < LOQ.

Table 139 Residues of fluxapyroxad in milk

| Study day      | Group mean (and maximum individual) residues of fluxapyroxad (mg/kg) |                 |                 |                 |
|----------------|----------------------------------------------------------------------|-----------------|-----------------|-----------------|
|                | 3.2 + 0 ppm                                                          | 6.1 + 0.1 ppm   | 18.2 + 0.3 ppm  | 60.3 + 1.0 ppm  |
| -1             | < LOD                                                                | < LOD           | < LOD           | < LOD           |
| 1              | < 0.001 (< 0.001)                                                    | 0.0011 (0.0014) | 0.0028 (0.0030) | 0.010 (0.022)   |
| 3              | < 0.001 (< 0.001)                                                    | 0.0017 (0.0028) | 0.0038 (0.0043) | 0.014 (0.025)   |
| 5              | 0.0010 (0.0010)                                                      | 0.0018 (0.0029) | 0.0041 (0.0048) | 0.013 (0.028)   |
| 7              | < 0.001 (< 0.001)                                                    | 0.0017 (0.0028) | 0.0052 (0.0063) | 0.015 (0.027)   |
| 10             | < 0.001 (< 0.001)                                                    | 0.0019 (0.0030) | 0.0045 (0.0046) | 0.015 (0.037)   |
| 14             | 0.0011 (0.0013)                                                      | 0.0015 (0.0025) | 0.0036 (0.0046) | 0.012 (0.030)   |
| 17             | < 0.001 (< 0.001)                                                    | 0.0015 (0.0026) | 0.0039 (0.0044) | 0.013 (0.027)   |
| 21             | 0.0011 (0.0013)                                                      | 0.0014 (0.0021) | 0.0045 (0.0060) | 0.013 (0.028)   |
| 24             | 0.0010 (0.0011)                                                      | 0.0016 (0.0026) | 0.0047 (0.0049) | 0.015 (0.025)   |
| 28             | 0.0011 (0.0013)                                                      | 0.0018 (0.0032) | 0.0041 (0.0045) | 0.015 (0.023)   |
| 29 (2 animals) | -                                                                    | -               | -               | 0.0041 (0.0057) |
| 30 (2 animals) | -                                                                    | -               | -               | 0.0011 (0.0012) |
| 32 (2 animals) | -                                                                    | -               | -               | < LOD           |
| 34 (1 animal)  | -                                                                    | -               | -               | < LOD           |
| 35 (1 animal)  | -                                                                    | -               | -               | < LOD           |

< 0.001 denotes less than the LOQ

LOD = 0.000153 mg/kg

Table 140 Residues of M700F008 in milk

| Study day | Group mean (and maximum individual) residues of M700F008 (mg/kg) |                 |                 |                |
|-----------|------------------------------------------------------------------|-----------------|-----------------|----------------|
|           | 3.2 + 0 ppm                                                      | 6.1 + 0.1 ppm   | 18.2 + 0.3 ppm  | 60.3 + 1.0 ppm |
| -1        | < LOD                                                            | < LOD           | < LOD           | < LOD          |
| 1         | 0.0011 (0.0012)                                                  | 0.0012 (0.0016) | 0.0030 (0.0035) | 0.011 (0.015)  |
| 3         | 0.0012 (0.0013)                                                  | 0.0015 (0.0025) | 0.0034 (0.0040) | 0.014 (0.023)  |
| 5         | 0.0012 (0.0014)                                                  | 0.0018 (0.0026) | 0.0039 (0.0045) | 0.013 (0.023)  |
| 7         | 0.0012 (0.0014)                                                  | 0.0016 (0.0027) | 0.0046 (0.0053) | 0.016 (0.026)  |
| 10        | 0.0011 (0.0012)                                                  | 0.0016 (0.0023) | 0.0040 (0.0053) | 0.013 (0.023)  |
| 14        | 0.0010 (0.0011)                                                  | 0.0013 (0.0018) | 0.0025 (0.0035) | 0.0097 (0.011) |
| 17        | 0.0010 (0.0011)                                                  | 0.0013 (0.0020) | 0.0032 (0.0044) | 0.012 (0.017)  |
| 21        | 0.0010 (0.0011)                                                  | 0.0012 (0.0017) | 0.0035 (0.0041) | 0.011 (0.017)  |
| 24        | 0.0014 (0.0017)                                                  | 0.0016 (0.0025) | 0.0040 (0.0049) | 0.015 (0.026)  |
| 28        | 0.0015 (0.0017)                                                  | 0.0016 (0.0025) | 0.0033 (0.0044) | 0.016 (0.029)  |

| Study day               | Group mean (and maximum individual) residues of M700F008 (mg/kg) |               |                |                 |
|-------------------------|------------------------------------------------------------------|---------------|----------------|-----------------|
|                         | 3.2 + 0 ppm                                                      | 6.1 + 0.1 ppm | 18.2 + 0.3 ppm | 60.3 + 1.0 ppm  |
| 29 (animals 16-18 only) | -                                                                | -             | -              | 0.0049 (0.0091) |
| 30 (animals 16-18 only) | -                                                                | -             | -              | 0.0013 (0.0020) |
| 32 (animals 17-18 only) | -                                                                | -             | -              | < LOD           |
| 34 (animal 18 only)     | -                                                                | -             | -              | < LOD           |
| 35 (animal 18 only)     | -                                                                | -             | -              | < LOD           |

LOD = 0.000153 mg/kg

Table 141 Residues of M700F002 in milk

| Study day               | Group mean (and maximum individual) residues of M700F002 (mg/kg) |                   |                   |                   |
|-------------------------|------------------------------------------------------------------|-------------------|-------------------|-------------------|
|                         | 3.2 + 0 ppm                                                      | 6.1 + 0.1 ppm     | 18.2 + 0.3 ppm    | 60.3 + 1.0 ppm    |
| -1                      | < LOD                                                            | < LOD             | < LOD             | ND                |
| 1                       | < LOD                                                            | < LOD             | < 0.001 (< 0.001) | < 0.001 (< 0.001) |
| 3                       | < 0.001 (< 0.001)                                                | < LOD             | < LOD             | < 0.001 (< 0.001) |
| 5                       | < LOD                                                            | < LOD             | < LOD             | < 0.001 (< 0.001) |
| 7                       | < LOD                                                            | < LOD             | < 0.001 (< 0.001) | < 0.001 (< 0.001) |
| 10                      | < LOD                                                            | < LOD             | < LOD             | < 0.001 (< 0.001) |
| 14                      | < LOD                                                            | < LOD             | < LOD             | < 0.001 (< 0.001) |
| 17                      | < LOD                                                            | < LOD             | < LOD             | < 0.001 (< 0.001) |
| 21                      | < LOD                                                            | < LOD             | < LOD             | < 0.001 (< 0.001) |
| 24                      | < 0.001 (< 0.001)                                                | < 0.001 (< 0.001) | < 0.001 (< 0.001) | < 0.001 (< 0.001) |
| 28                      | < LOD                                                            | < 0.001 (< 0.001) | < 0.001 (< 0.001) | < 0.001 (< 0.001) |
| 29 (animals 16-18 only) | -                                                                | -                 | -                 | < 0.001 (< 0.001) |
| 30 (animals 16-18 only) | -                                                                | -                 | -                 | < LOD             |
| 32 (animals 17-18 only) | -                                                                | -                 | -                 | < LOD             |
| 34 (animal 18 only)     | -                                                                | -                 | -                 | < LOD             |
| 35 (animal 18 only)     | -                                                                | -                 | -                 | < LOD             |

< 0.001 denotes less than the LOQ

LOD = 0.000153 mg/kg

*Fluxapyroxad*: In the lowest dose group, the majority of the milk samples showed residues below LOQ. In the (6.1 + 0.1 ppm) dose group, low residues were detected (highest individual value of 0.0032 mg/kg). A plateau was reached after five days. Residues in the (18.2 + 0.3 ppm) dose group reached a plateau after seven days at levels around 0.005 mg/kg, with the highest individual residue of 0.0063 mg/kg. In the highest dose group, residue levels around 0.015 mg/kg were detected with the plateau also being reached very quickly around seven days. Analysis of milk samples from the depuration animals (cows 16–18) from Group 5 showed that no residues above LOQ were detectable after four days of withdrawal.

*M700F008*: Generally, residue levels of M700F008 were similar to the fluxapyroxad residue levels. In the lowest dose group, mean residues were slightly above LOQ (maximum individual value of 0.0017 mg/kg). In the (6.1 + 0.1 ppm) dose group, low residues were detected with the highest individual value of 0.0027 mg/kg. A plateau was reached after five days. Residues in the (18.2 + 0.3 ppm) dose group reached a plateau after five to seven days at levels around 0.005 mg/kg, with the highest individual residue of 0.0053 mg/kg. In the highest dose group, mean residue levels around 0.016 mg/kg were detected with the plateau also being reached within five to seven days. Analysis of the depuration milk samples showed that after four days of withdrawal, no residues of M700F008 above LOQ were detectable.

*M700F002*: No M700F002 residues above LOQ (0.001 mg/kg) were found in any milk samples from any treatment groups.

The residues of fluxapyroxad, M700F008 and M700F002 found in cream and skimmed milk samples are summarized in Table 142. Analysis of cream samples generated from milk of day 21 showed that residues of fluxapyroxad and to a lesser extent of M700F008, concentrate in the milk fat, whereas the concentration in skimmed milk was lower than in the respective whole milk sample. No residues of M700F002 above LOQ were detected in the cream and skim milk samples.

Table 142 Residues in skimmed milk and cream

| Matrix              | Group mean (and maximum individual) residues of fluxapyroxad (mg/kg) |                   |                   |                   |
|---------------------|----------------------------------------------------------------------|-------------------|-------------------|-------------------|
|                     | 3.2 + 0 ppm                                                          | 6.1 +0.1 ppm      | 18.2 + 0.3 ppm    | 60.3 + 1.0 ppm    |
| <b>Fluxapyroxad</b> |                                                                      |                   |                   |                   |
| Skim milk           | < 0.001 (0.001)                                                      | < 0.001 (0.001)   | < 0.001 (0.001)   | 0.0023 (0.0053)   |
| Cream               | 0.0058 (0.0070)                                                      | 0.0043 (0.0054)   | 0.031 (0.056)     | 0.14 (0.33)       |
| <b>M700F008</b>     |                                                                      |                   |                   |                   |
| Skim milk           | < 0.001 (0.001)                                                      | < 0.001 (0.001)   | 0.0013 (0.0018)   | 0.0037 (0.0048)   |
| Cream               | 0.0037 (0.0052)                                                      | 0.0029 (0.0049)   | 0.016 (0.020)     | 0.0072 (0.098)    |
| <b>M700F002</b>     |                                                                      |                   |                   |                   |
| Skim milk           | < 0.001 (< 0.001)                                                    | < 0.001 (< 0.001) | < 0.001 (< 0.001) | < 0.001 (< 0.001) |
| Cream               | < 0.001 (< 0.001)                                                    | < 0.001 (< 0.001) | < 0.001 (< 0.001) | < 0.001 (< 0.001) |

< 0.001 denotes less than the LOQ

Results of tissue analysis are summarized in Tables 143–145. Occasionally trace levels of fluxapyroxad and metabolites were detected in the milk of control animals but these were all < LOQ.

*Fluxapyroxad*: In the lowest dose group, no quantifiable residues were detected in muscle, liver, and kidney although residues slightly above LOQ were observed in fat (mean 0.011 mg/kg). In the mid-range dose groups, no residues were seen in muscle and kidney, while low residues were detected in liver (mean 0.013 mg/kg and 0.031 mg/kg) and fat (mean 0.019 mg/kg and 0.045 mg/kg). In the highest dose group, residues around the LOQ (0.01 mg/kg) were seen in muscle and kidney; residues in liver and fat reached mean values of 0.085 mg/kg and 0.15 mg/kg, respectively. In all matrices, fluxapyroxad residues were < 0.01 mg/kg after two days of withdrawal.

*M700F008*: The lowest dose group showed no quantifiable residues in muscle, kidney and fat, and low residues in liver (mean 0.023 mg/kg). In the (6.1 + 0.1 ppm) dose group, residues in muscle and fat were still < LOQ, while kidney showed low mean residues slightly above LOQ and mean residues in liver were found at 0.038 mg/kg. In the (18.2 + 0.3 ppm) dose group, no quantifiable residues were detected in muscle. Mean residues were 0.017 mg/kg in kidney, 0.025 mg/kg in fat and 0.088 mg/kg in liver. The highest dose group showed mean residues of 0.024 mg/kg in muscle, 0.050 mg/kg in kidney and 0.11 mg/kg in fat. The highest residues were observed in liver (mean 0.26 mg/kg, highest individual value 0.35 mg/kg). Residues of M700F008 in fat were lower than fluxapyroxad residues, while those in liver and kidney were somewhat higher than fluxapyroxad residues. In the depuration samples, no detectable residues of M700F008 were observed after two days of withdrawal.

*M700F002*: No residues of M700F002 above LOQ were detected in any tissues from any of the dose groups. Procedural recoveries for M700F002 in control muscle, liver and kidney spiked at the LOQ were generally outside the acceptance criteria (< 70%). Due to the fact that no significant residue (> LOQ) was detected in any sample, the generated data was considered acceptable. This was confirmed by analysis of selected samples from the highest dose group by Method L0140/02.

Table 143 Residues of fluxapyroxad in tissues

| Treatment Group   | Group mean (and maximum individual) residues in tissue for fluxapyroxad (mg/kg) |                 |                 |                  |
|-------------------|---------------------------------------------------------------------------------|-----------------|-----------------|------------------|
|                   | Muscle <sup>a</sup>                                                             | Liver           | Kidney          | Fat <sup>b</sup> |
| 3.2 + 0 ppm       | < LOD                                                                           | < 0.01 (< 0.01) | < 0.01 (< 0.01) | 0.011 (0.011)    |
| 6.1 + 0.1 ppm     | < 0.01 (< 0.01)                                                                 | 0.013 (0.015)   | < 0.01 (< 0.01) | 0.019 (0.024)    |
| 18.2 + 0.3 ppm    | < 0.01 (< 0.01)                                                                 | 0.031 (0.032)   | < 0.01 (< 0.01) | 0.045 (0.059)    |
| 60.3 + 0.1 ppm    | 0.011 (0.012)                                                                   | 0.085 (0.094)   | 0.014 (0.019)   | 0.15 (0.17)      |
| 2 days withdrawal | < LOD                                                                           | < 0.01          | < 0.01          | < 0.01           |
| 5 days withdrawal | < LOD                                                                           | < LOD           | < 0.01          | < 0.01           |
| 7 days withdrawal | < LOD                                                                           | < LOD           | < 0.01          | < 0.01           |

< 0.01 denotes less than the LOQ

<sup>a</sup> equal portions of loin, hind-leg {round piece} and diaphragm

<sup>b</sup> equal portions of perirenal, mesenterial and subcutaneous fat

Table 144 Residues of M700F008 in tissues

| Treatment Group   | Group mean (and maximum individual) residues in tissue for M700F008 (mg/kg)* |               |                 |                  |
|-------------------|------------------------------------------------------------------------------|---------------|-----------------|------------------|
|                   | Muscle <sup>a</sup>                                                          | Liver         | Kidney          | Fat <sup>b</sup> |
| 3.2 + 0 ppm       | < 0.01 (< 0.01)                                                              | 0.023 (0.032) | < 0.01 (< 0.01) | < 0.01 (< 0.01)  |
| 6.1 + 0.1 ppm     | < 0.01 (< 0.01)                                                              | 0.038 (0.051) | 0.011 (0.011)   | < 0.01 (< 0.01)  |
| 18.2 + 0.3 ppm    | < 0.01 (< 0.01)                                                              | 0.088 (0.11)  | 0.017 (0.021)   | 0.025 (0.032)    |
| 60.3 + 0.1 ppm    | 0.024 (0.031)                                                                | 0.26 (0.35)   | 0.050 (0.076)   | 0.11 (0.13)      |
| 2 days withdrawal | < LOD                                                                        | < 0.01        | < 0.01          | < 0.01           |
| 5 days withdrawal | < LOD                                                                        | < 0.01        | < 0.01          | < 0.01           |
| 7 days withdrawal | < LOD                                                                        | < 0.01        | < 0.01          | < 0.01           |

< 0.01 denotes less than the LOQ

\*values given for M700F008 relate to analyte itself, not parent equivalents

<sup>a</sup> equal portions of loin, hind-leg {round piece} and diaphragm

<sup>b</sup> equal portions of perirenal, mesenterial and subcutaneous fat

Table 145 Residues of M700F002 in tissues (obtained with Method L0140/01 – confirmed by analysis of selected samples from the highest dose group by Method L0140/02)

| Treatment Group   | Group mean (and maximum individual) residues in tissue for M700F002 (mg/kg) |       |                 |                  |
|-------------------|-----------------------------------------------------------------------------|-------|-----------------|------------------|
|                   | Muscle <sup>a</sup>                                                         | Liver | Kidney          | Fat <sup>b</sup> |
| 3.2 + 0 ppm       | < LOD                                                                       | < LOD | < 0.01 (< 0.01) | < 0.01 (< 0.01)  |
| 6.1 + 0.1 ppm     | < LOD                                                                       | < LOD | < 0.01 (< 0.01) | < 0.01 (< 0.01)  |
| 18.2 + 0.3 ppm    | < LOD                                                                       | < LOD | < 0.01 (< 0.01) | < 0.01 (< 0.01)  |
| 60.3 + 0.1 ppm    | < LOD                                                                       | < LOD | < 0.01 (< 0.01) | < 0.01 (< 0.01)  |
| 2 days withdrawal | < LOD                                                                       | < LOD | < 0.01          | < 0.01           |
| 5 days withdrawal | < LOD                                                                       | < LOD | < 0.01          | < 0.01           |
| 7 days withdrawal | < LOD                                                                       | < LOD | < 0.01          | < 0.01           |

< 0.01 denotes less than the LOQ

<sup>a</sup> equal portions of loin, hind-leg {round piece} and diaphragm

<sup>b</sup> equal portions of perirenal, mesenterial and subcutaneous fat

The results of the study are summarized in Table 146.

Table 146 Residues of fluxapyroxad and M700F008 in milk and tissues

| Animal Commodity | Dose Level of Fluxapyroxad (ppm) | Fluxapyroxad Residue (mg/kg) |         | M700F008 Residue (mg/kg) |         | Fluxapyroxad + M700F008 Residue as Parent Equivalents (mg/kg) <sup>a</sup> |                      |
|------------------|----------------------------------|------------------------------|---------|--------------------------|---------|----------------------------------------------------------------------------|----------------------|
|                  |                                  | Mean                         | Highest | Mean                     | Highest | Mean                                                                       | Highest <sup>b</sup> |
| Muscle           | 3.2                              | < LOD                        | -       | < 0.01                   | < 0.01  | < 0.01                                                                     | < 0.01               |
|                  | 6.1                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 18.2                             | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 60.3                             | 0.011                        | 0.012   | 0.024                    | 0.031   | 0.036                                                                      | 0.045                |
| Kidney           | 3.2                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 6.1                              | < 0.01                       | < 0.01  | 0.011                    | 0.011   | 0.021                                                                      | 0.022                |
|                  | 18.2                             | < 0.01                       | < 0.01  | 0.017                    | 0.021   | 0.027                                                                      | 0.032                |
|                  | 60.3                             | 0.014                        | 0.019   | 0.050                    | 0.076   | 0.067                                                                      | 0.098                |
| Liver            | 3.2                              | < 0.01                       | < 0.01  | 0.023                    | 0.032   | 0.034                                                                      | 0.043                |
|                  | 6.1                              | 0.013                        | 0.015   | 0.038                    | 0.051   | 0.052                                                                      | 0.067                |
|                  | 18.2                             | 0.031                        | 0.032   | 0.088                    | 0.11    | 0.12                                                                       | 0.15                 |
|                  | 60.3                             | 0.085                        | 0.094   | 0.26                     | 0.35    | 0.35                                                                       | 0.45                 |
| Fat              | 3.2                              | 0.011                        | 0.011   | < 0.01                   | < 0.01  | 0.021                                                                      | 0.021                |
|                  | 6.1                              | 0.019                        | 0.024   | < 0.01                   | < 0.01  | 0.029                                                                      | 0.034                |
|                  | 18.2                             | 0.045                        | 0.059   | 0.025                    | 0.032   | 0.070                                                                      | 0.077                |
|                  | 60.3                             | 0.147                        | 0.171   | 0.108                    | 0.125   | 0.260                                                                      | 0.264                |
| Milk             | 3.2                              | Day -1                       | < LOD   | -                        | < LOD   | -                                                                          | -                    |
|                  |                                  | Day 1                        | < 0.001 | < 0.001                  | 0.0011  | 0.0012                                                                     | 0.0021               |
|                  |                                  | Day 3                        | < 0.001 | < 0.001                  | 0.0012  | 0.0013                                                                     | 0.0022               |

## Fluxapyroxad

| Animal Commodity | Dose Level of Fluxapyroxad (ppm) |        | Fluxapyroxad Residue (mg/kg) |         | M700F008 Residue (mg/kg) |         | Fluxapyroxad + M700F008 Residue as Parent Equivalents (mg/kg) <sup>a</sup> |                      |
|------------------|----------------------------------|--------|------------------------------|---------|--------------------------|---------|----------------------------------------------------------------------------|----------------------|
|                  |                                  |        | Mean                         | Highest | Mean                     | Highest | Mean                                                                       | Highest <sup>b</sup> |
|                  |                                  | Day 5  | 0.0010                       | 0.0010  | 0.0012                   | 0.0014  | 0.0023                                                                     | 0.0025               |
|                  |                                  | Day 7  | < 0.001                      | < 0.001 | 0.0012                   | 0.0014  | 0.0023                                                                     | 0.0025               |
|                  |                                  | Day 10 | < 0.001                      | < 0.001 | 0.0011                   | 0.0012  | 0.0021                                                                     | 0.0023               |
|                  |                                  | Day 14 | 0.0011                       | 0.0013  | 0.0010                   | 0.0011  | 0.0021                                                                     | 0.0023               |
|                  |                                  | Day 17 | < 0.001                      | < 0.001 | 0.0010                   | 0.0011  | 0.0021                                                                     | 0.0022               |
|                  |                                  | Day 21 | 0.0011                       | 0.0013  | 0.0010                   | 0.0011  | 0.0022                                                                     | 0.0023               |
|                  |                                  | Day 24 | 0.0010                       | 0.0011  | 0.0014                   | 0.0017  | 0.0025                                                                     | 0.0028               |
|                  |                                  | Day 28 | 0.0011                       | 0.0013  | 0.0015                   | 0.0017  | 0.0026                                                                     | 0.0031               |
|                  | 6.1                              | Day -1 | < LOD                        | -       | < LOD                    | -       | -                                                                          | -                    |
|                  |                                  | Day 1  | 0.0011                       | 0.0014  | 0.0012                   | 0.0016  | 0.0024                                                                     | 0.0031               |
|                  |                                  | Day 3  | 0.0017                       | 0.0028  | 0.0015                   | 0.0025  | 0.0032                                                                     | 0.0053               |
|                  |                                  | Day 5  | 0.0018                       | 0.0029  | 0.0018                   | 0.0026  | 0.0036                                                                     | 0.0056               |
|                  |                                  | Day 7  | 0.0017                       | 0.0028  | 0.0016                   | 0.0027  | 0.0037                                                                     | 0.0056               |
|                  |                                  | Day 10 | 0.0019                       | 0.0030  | 0.0016                   | 0.0023  | 0.0035                                                                     | 0.0053               |
|                  |                                  | Day 14 | 0.0015                       | 0.0025  | 0.0013                   | 0.0018  | 0.0029                                                                     | 0.0043               |
|                  |                                  | Day 17 | 0.0015                       | 0.0026  | 0.0013                   | 0.0020  | 0.0029                                                                     | 0.0047               |
|                  |                                  | Day 21 | 0.0014                       | 0.0021  | 0.0012                   | 0.0017  | 0.0027                                                                     | 0.0039               |
|                  |                                  | Day 24 | 0.0016                       | 0.0026  | 0.0016                   | 0.0025  | 0.0033                                                                     | 0.0052               |
|                  |                                  | Day 28 | 0.0018                       | 0.0032  | 0.0016                   | 0.0025  | 0.0035                                                                     | 0.0058               |
|                  | 18.2                             | Day -1 | < LOD                        | -       | < LOD                    | -       | -                                                                          | -                    |
|                  |                                  | Day 1  | 0.0028                       | 0.0030  | 0.0030                   | 0.0035  | 0.0059                                                                     | 0.0065               |
|                  |                                  | Day 3  | 0.0038                       | 0.0043  | 0.0034                   | 0.0040  | 0.0073                                                                     | 0.0077               |
|                  |                                  | Day 5  | 0.0041                       | 0.0048  | 0.0039                   | 0.0045  | 0.0081                                                                     | 0.0084               |
|                  |                                  | Day 7  | 0.0052                       | 0.0063  | 0.0046                   | 0.0053  | 0.0099                                                                     | 0.011                |
|                  |                                  | Day 10 | 0.0045                       | 0.0046  | 0.0040                   | 0.0053  | 0.0086                                                                     | 0.010                |
|                  |                                  | Day 14 | 0.0036                       | 0.0046  | 0.0025                   | 0.0035  | 0.0062                                                                     | 0.0070               |
|                  |                                  | Day 17 | 0.0039                       | 0.0044  | 0.0032                   | 0.0044  | 0.0072                                                                     | 0.0089               |
|                  |                                  | Day 21 | 0.0045                       | 0.0060  | 0.0035                   | 0.0041  | 0.0081                                                                     | 0.0088               |
|                  |                                  | Day 24 | 0.0047                       | 0.0049  | 0.0040                   | 0.0049  | 0.0088                                                                     | 0.0096               |
|                  |                                  | Day 28 | 0.0041                       | 0.0045  | 0.0033                   | 0.0044  | 0.0075                                                                     | 0.0082               |
|                  | 60.3                             | Day -1 | < LOD                        | -       | < LOD                    | -       | -                                                                          | -                    |
|                  |                                  | Day 1  | 0.010                        | 0.022   | 0.011                    | 0.015   | 0.022                                                                      | 0.034                |
|                  |                                  | Day 3  | 0.014                        | 0.025   | 0.014                    | 0.023   | 0.029                                                                      | 0.042                |
|                  |                                  | Day 5  | 0.013                        | 0.028   | 0.013                    | 0.023   | 0.027                                                                      | 0.042                |
|                  |                                  | Day 7  | 0.015                        | 0.027   | 0.016                    | 0.026   | 0.031                                                                      | 0.045                |
|                  |                                  | Day 10 | 0.015                        | 0.037   | 0.013                    | 0.023   | 0.029                                                                      | 0.051                |
|                  |                                  | Day 14 | 0.012                        | 0.030   | 0.0097                   | 0.011   | 0.022                                                                      | 0.040                |
|                  |                                  | Day 17 | 0.013                        | 0.027   | 0.012                    | 0.017   | 0.025                                                                      | 0.040                |

| Animal Commodity   | Dose Level of Fluxapyroxad (ppm) | Fluxapyroxad Residue (mg/kg) |         | M700F008 Residue (mg/kg) |         | Fluxapyroxad + M700F008 Residue as Parent Equivalents (mg/kg) <sup>a</sup> |                      |
|--------------------|----------------------------------|------------------------------|---------|--------------------------|---------|----------------------------------------------------------------------------|----------------------|
|                    |                                  | Mean                         | Highest | Mean                     | Highest | Mean                                                                       | Highest <sup>b</sup> |
|                    | Day 21                           | 0.013                        | 0.028   | 0.011                    | 0.017   | 0.024                                                                      | 0.036                |
|                    | Day 24                           | 0.015                        | 0.025   | 0.015                    | 0.026   | 0.031                                                                      | 0.049                |
| Skim milk (Day 21) | Day 28                           | 0.015                        | 0.023   | 0.016                    | 0.029   | 0.031                                                                      | 0.054                |
|                    | 3.2                              | < 0.001                      | < 0.001 | < 0.001                  | < 0.001 | < 0.002                                                                    | < 0.002              |
|                    | 6.1                              | < 0.001                      | 0.001   | < 0.001                  | < 0.001 | < 0.002                                                                    | < 0.002              |
|                    | 18.2                             | < 0.001                      | < 0.001 | 0.0013                   | 0.0018  | 0.0024                                                                     | 0.0029               |
| Cream (Day 21)     | 60.3                             | 0.0023                       | 0.0053  | 0.0037                   | 0.0048  | 0.0062                                                                     | 0.0080               |
|                    | 3.2                              | 0.0058                       | 0.0070  | 0.0037                   | 0.0052  | 0.0096                                                                     | 0.012                |
|                    | 6.1                              | 0.0043                       | 0.0054  | 0.0029                   | 0.0049  | 0.0073                                                                     | 0.011                |
|                    | 18.2                             | 0.031                        | 0.056   | 0.016                    | 0.020   | 0.048                                                                      | 0.077                |
|                    | 60.3                             | 0.135                        | 0.334   | 0.072                    | 0.098   | 0.209                                                                      | 0.399                |

<sup>a</sup> Conversion factor from M700F008 to parent equivalents = 1.038

<sup>b</sup> The highest total residues is from one animal, not from the addition of highest fluxapyroxad + M700F008 from more than one animal

#### *Laying hen transfer study (MacDougall 2010, 2010/7003614)*

A feeding study with fluxapyroxad and the metabolite M700F002 was conducted in laying hens (*ISA Warren*, approximately 23 weeks old upon arrival). The target doses of fluxapyroxad were equivalent to 0.3, 0.6, 1.8 and 6.0 ppm, while the corresponding target doses of M700F02 were equivalent to 0, 0.05, 0.15, and 0.50 ppm in the feed.

The animals received co-doses of parent compound and M700F002 equivalent to 0.30 + 0.025 (indicated dose level in M700F002 due to a mixed stock solution used for dosing) ppm, 0.61 + 0.05 ppm, 1.8 + 0.15 ppm and 6.0 + 0.50 ppm in the feed respectively. The doses were administered orally *via* gelatine capsules, for a period of 28 days followed by a depuration period of 14 days. When expressed on a mg/kg bw basis the doses were 0.022 + 0.002, 0.047 + 0.004, 0.133 + 0.011 and 0.443 + 0.037 mg/kg bw respectively.

10 animals were allocated per dose group divided into 3 subgroups of 3–4 birds. Eggs from each animal were collected twice daily and combined as one pooled sample per subgroup. Eggs collected in the afternoon of the study day were refrigerated overnight until samples were pooled and homogenised the following morning. The animals were sacrificed 4–6 hours after the last administration of the test substances with the exception of four birds from the control group. An additional dose group was treated at the highest dose level to determine the decline of residue levels post-dosing. Animals of this group were sacrificed 3, 7 and 14 days after the final dose. The additional four birds from the control group were sacrificed along with the 14-day post final dose animals. Tissues collected were liver (entire organ with gall bladder), muscle (composite of leg and breast muscle, in equal portions; ~200 g composite sample), all available skin with fat attached (~20 g), and fat (composite of abdominal and peritoneal fat; ~20 g or all available).

Liver, muscle, skin with fat and fat (abdominal and peritoneal) were analysed for residues of fluxapyroxad, M700F002 and M700F008 using Method L0140/01 with some modifications. Following extraction in acetonitrile with homogenisation, a portion of the extract was reduced to dryness before being reconstituted with water. The extract was partitioned with ethyl acetate and a portion evaporated. The sample was redissolved in methanol/water before quantification by HPLC-MS/MS. For analysis of M700F002 in eggs, samples were extracted with acetonitrile/water with homogenisation. A portion of the extract was reduced to dryness and reconstituted in methanol/water before analysis by HPLC-MS/MS. The LOQ was 0.01 mg/kg for tissues and 0.001 mg/kg for eggs.

Concurrent recoveries were obtained for control samples fortified with fluxapyroxad, M700F008 and M700F002.

Table 147 Mean concurrent recovery data for Method L0140/01 from laying hen feeding study

| Matrix        | Fortification level (mg/kg) | Mean Recovery for fluxapyroxad [%] | Fluxapyroxad RSD [%] | Mean Recovery for M700F008 [%] | M700F008 RSD [%] | Mean Recovery for M700F002 [%] | M700F002 RSD [%] |
|---------------|-----------------------------|------------------------------------|----------------------|--------------------------------|------------------|--------------------------------|------------------|
| Egg           | 0.001                       | 98                                 | 13.0 (n=37)          | 96                             | 22.4 (n=38)      | 103                            | 8.70 (n=18)      |
|               | 0.01                        | 95                                 | 12.8 (n=38)          | 94                             | 12.4 (n=38)      | 104                            | 6.36 (n=18)      |
| Muscle        | 0.01                        | 93                                 | 4.24 (n=3)           | 100                            | 4.95 (n=3)       | 53                             | 4.04 (n=3)       |
|               | 0.1                         | 105                                | 1.46 (n=3)           | 110                            | 1.05 (n=3)       | 63                             | 3.09 (n=3)       |
| Liver         | 0.01                        | 104                                | 4.96 (n=3)           | 98                             | 4.06 (n=3)       | 54                             | 7.26 (n=3)       |
|               | 0.1                         | 111                                | 2.89 (n=3)           | 104                            | 4.51 (n=3)       | 67                             | 7.03 (n=3)       |
| Skin with fat | 0.01                        | 97                                 | 6.83 (n=4)           | 100                            | 2.80 (n=3)       | 62                             | 7.36 (n=3)       |
|               | 0.1                         | 103                                | 2.75 (n=4)           | 108                            | 6.07 (n=3)       | 74                             | 12.3 (n=3)       |
| Fat           | 0.01                        | 105                                | 10.7 (n=4)           | 110                            | 9.40 (n=5)       | 54                             | 12.4 (n=3)       |
|               | 0.1                         | 110                                | 5.94 (n=4)           | 111                            | 4.28 (n=5)       | 62                             | 4.09 (n=3)       |

RSD = relative standard deviation

As mean recoveries for M700F002 at the LOQ with Method L0140/01 were low for muscle, liver, fat and skin with fat, samples were also analysed for M700F002 with Method L0140/02. Analysis involved liquid extraction in acetonitrile/water with homogenisation. A portion of the extract was reduced to dryness before being reconstituted with a mixture of methanol/water followed by 2 N HCl and saturated sodium chloride solution. The reconstituted extracts were then partitioned against ethyl acetate, and a portion was reduced to dryness. The sample was reconstituted in methanol/water and quantified by HPLC-MS/MS. Concurrent recoveries for M700F002 obtained with Method L0140/2 are shown in Table 148.

Table 148 Mean concurrent recovery data for M700F002 obtained with Method L0140/2 in laying hen feeding study

| Matrix        | Spiking level [mg/kg] | Mean Recovery for M700F002 [%] | RSD for M700F002 [%] |
|---------------|-----------------------|--------------------------------|----------------------|
| Muscle        | 0.01                  | 75.0                           | 2.59 (n= 3)          |
| Liver         | 0.01                  | 90.1                           | 9.08 (n=3)           |
| Skin with fat | 0.01                  | 103                            | 4.17 (n=3)           |
| Fat           | 0.01                  | 95.4                           | 4.82 (n=3)           |

RSD = relative standard deviation

Residues of fluxapyroxad, M700F008 and M700F002 found in eggs during the treatment and depuration period are summarized in Tables 149-151. Occasionally trace levels of fluxapyroxad and metabolites were detected in eggs of control animals but these were all < LOQ.

Table 149 Residues of fluxapyroxad in eggs

| Study day | Group mean (and maximum individual) residues of fluxapyroxad (mg/kg) |                   |                   |                  |
|-----------|----------------------------------------------------------------------|-------------------|-------------------|------------------|
|           | 0.3 + 0.025 ppm                                                      | 0.61 + 0.05 ppm   | 1.8 + 0.15 ppm    | 6.0 + 0.50 ppm   |
| -1        | < LOD                                                                | < 0.001 (< 0.001) | < LOD             | < 0.001 (0.0017) |
| 1         | < LOD                                                                | < 0.001 (< 0.001) | < 0.001 (< 0.001) | 0.0025 (0.0033)  |
| 3         | < LOD                                                                | < 0.001 (< 0.001) | 0.0014 (0.0018)   | 0.0029 (0.0038)  |
| 5         | < 0.001 (< 0.001)                                                    | < 0.001 (< 0.001) | 0.0014 (0.0016)   | 0.0065 (0.012)   |
| 7         | < 0.001 (< 0.001)                                                    | < 0.001 (< 0.001) | 0.0013 (0.0015)   | 0.0053 (0.0054)  |
| 9         | < 0.001 (< 0.001)                                                    | < 0.001 (< 0.001) | 0.0014 (0.0018)   | 0.0043 (0.0059)  |
| 13        | < 0.001 (< 0.001)                                                    | < 0.001 (0.0017)  | 0.0012 (0.0013)   | 0.0030 (0.0035)  |
| 16        | < 0.001 (< 0.001)                                                    | < 0.001 (< 0.001) | 0.0011 (0.0013)   | 0.0041 (0.0047)  |
| 20        | < LOD                                                                | < 0.001 (< 0.001) | 0.0017 (0.0021)   | 0.0040 (0.0054)  |
| 23        | 0.0014 (0.0021)                                                      | 0.0017 (0.0031)   | 0.0020 (0.0027)   | 0.0045 (0.0064)  |

| Study day | Group mean (and maximum individual) residues of fluxapyroxad (mg/kg) |                   |                 |                   |
|-----------|----------------------------------------------------------------------|-------------------|-----------------|-------------------|
|           | 0.3 + 0.025 ppm                                                      | 0.61 + 0.05 ppm   | 1.8 + 0.15 ppm  | 6.0 + 0.50 ppm    |
| 27        | < 0.001 (< 0.001)                                                    | < 0.001 (< 0.001) | 0.0028 (0.0045) | 0.0043 (0.0059)   |
| 27        | -                                                                    | -                 | -               | 0.0041 (0.0059)   |
| 28        | -                                                                    | -                 | -               | 0.0036 (0.0044)   |
| 30        | -                                                                    | -                 | -               | 0.0016 (0.0017)   |
| 32        | -                                                                    | -                 | -               | < 0.001 (< 0.001) |
| 34        | -                                                                    | -                 | -               | < 0.001 (< 0.001) |
| 36        | -                                                                    | -                 | -               | < LOD             |
| 38        | -                                                                    | -                 | -               | < LOD             |
| 40        | -                                                                    | -                 | -               | < LOD             |
| 41        | -                                                                    | -                 | -               | < LOD             |

< 0.001 denotes less than the LOQ

Table 150 Residues of M700F008 in eggs

| Study day | Group mean (and maximum individual) residues of M700F008* (mg/kg) |                   |                 |                   |
|-----------|-------------------------------------------------------------------|-------------------|-----------------|-------------------|
|           | 0.3 + 0.025 ppm                                                   | 0.61 + 0.05 ppm   | 1.8 + 0.15 ppm  | 6.0 + 0.50 ppm    |
| -1        | < LOD                                                             | < LOD             | < LOD           | < LOD             |
| 1         | < LOD                                                             | < 0.001 (< 0.001) | 0.0010 (0.0010) | 0.0034 (0.0063)   |
| 3         | < 0.001 (< 0.001)                                                 | < 0.001 (< 0.001) | 0.0025 (0.0031) | 0.0059 (0.0090)   |
| 5         | < 0.001 (< 0.001)                                                 | 0.0012 (0.0013)   | 0.0043 (0.0049) | 0.013 (0.018)     |
| 7         | < 0.001 (< 0.001)                                                 | 0.0014 (0.0017)   | 0.0041 (0.0044) | 0.012 (0.014)     |
| 9         | < 0.001 (< 0.001)                                                 | < 0.001 (< 0.001) | 0.0044 (0.0052) | 0.012 (0.013)     |
| 13        | < 0.001 (< 0.001)                                                 | 0.0013 (0.0015)   | 0.0039 (0.0040) | 0.0090 (0.014)    |
| 16        | < 0.001 (< 0.001)                                                 | 0.0017 (0.0021)   | 0.0032 (0.0038) | 0.011 (0.012)     |
| 20        | < 0.001 (< 0.001)                                                 | 0.0013 (0.0015)   | 0.0050 (0.0055) | 0.0085 (0.014)    |
| 23        | < 0.001 (< 0.001)                                                 | 0.0011 (0.0011)   | 0.0045 (0.0049) | 0.0086 (0.0012)   |
| 27        | < 0.001 (< 0.001)                                                 | 0.0011 (0.0012)   | 0.0043 (0.0052) | 0.012 (0.013)     |
| 27        | -                                                                 | -                 | -               | 0.011 (0.015)     |
| 28        | -                                                                 | -                 | -               | 0.011 (0.013)     |
| 30        | -                                                                 | -                 | -               | 0.0072 (0.0081)   |
| 32        | -                                                                 | -                 | -               | 0.0045 (0.0052)   |
| 34        | -                                                                 | -                 | -               | 0.0012 (0.0013)   |
| 36        | -                                                                 | -                 | -               | < 0.001 (< 0.001) |
| 38        | -                                                                 | -                 | -               | < LOD             |
| 40        | -                                                                 | -                 | -               | < LOD             |
| 41        | -                                                                 | -                 | -               | < LOD             |

\*values given for M700F008 relate to analyte itself, not parent equivalents

< 0.001 denotes less than the LOQ

Table 151 Residues of M700F002 in eggs

| Study day | Group mean (and maximum individual) residues of M700F002 (mg/kg) |                   |                   |                   |
|-----------|------------------------------------------------------------------|-------------------|-------------------|-------------------|
|           | 0.3 + 0.025 ppm                                                  | 0.61 + 0.05 ppm   | 1.8 + 0.15 ppm    | 6.0 + 0.50 ppm    |
| -1        | < 0.001 (< 0.001)                                                | < 0.001 (0.00100) | < LOD             | < 0.001 (< 0.001) |
| 1         | < LOD                                                            | < LOD             | < LOD             | < LOD             |
| 3         | < LOD                                                            | < LOD             | < LOD             | < LOD             |
| 5         | < LOD                                                            | < 0.001 (< 0.001) | < LOD             | < LOD             |
| 7         | < LOD                                                            | < 0.001 (< 0.001) | < LOD             | < 0.001 (< 0.001) |
| 9         | < LOD                                                            | < LOD             | < LOD             | < 0.001 (< 0.001) |
| 13        | < 0.001 (< 0.001)                                                | < LOD             | < LOD             | < 0.001 (< 0.001) |
| 16        | < LOD                                                            | < 0.001 (< 0.001) | < LOD             | < 0.001 (< 0.001) |
| 20        | < 0.001 (< 0.001)                                                | < LOD             | < LOD             | < 0.001 (< 0.001) |
| 23        | < 0.001 (< 0.001)                                                | < LOD             | < LOD             | < 0.001 (< 0.001) |
| 27        | < LOD                                                            | < LOD             | < 0.001 (< 0.001) | < LOD< LOD        |
| 27        | -                                                                | -                 | -                 | < 0.001 (< 0.001) |
| 28        | -                                                                | -                 | -                 | < LOD             |

| Study day | Group mean (and maximum individual) residues of M700F002 (mg/kg) |                 |                |                   |
|-----------|------------------------------------------------------------------|-----------------|----------------|-------------------|
|           | 0.3 + 0.025 ppm                                                  | 0.61 + 0.05 ppm | 1.8 + 0.15 ppm | 6.0 + 0.50 ppm    |
| 30        | -                                                                | -               | -              | < LOD             |
| 32        | -                                                                | -               | -              | < LOD             |
| 34        | -                                                                | -               | -              | < 0.001 (< 0.001) |
| 36        | -                                                                | -               | -              | < LOD             |
| 38        | -                                                                | -               | -              | < LOD             |
| 40        | -                                                                | -               | -              | < LOD             |
| 41        | -                                                                | -               | -              | < LOD             |

< 0.001 denotes less than the LOQ

*Fluxapyroxad*: In the two low dose groups, no residues were detected with the exceptions of the lowest dose group at day 23 and the (0.61 + 0.05 ppm) dose group at days 13 and 23. The residues observed at these time points were  $\leq 0.0031$  mg/kg. In the (1.8 + 0.15 ppm) dose group, mean residues of up to 0.0028 mg/kg were detected (maximum concentration of 0.0045 mg/kg on day 27). In the highest dose group, mean residues reached a plateau after five days at levels of up to 0.0065 mg/kg with maximum residues of 0.012 mg/kg. In the samples of the depuration group, residues were below LOQ after 4 days of depuration and not detectable after 8 days of depuration.

*M700F008*: In the lowest dose group, no residues above LOQ were found. In the three higher dose groups, a plateau was reached after day 5 with maximum concentrations of 0.0021 mg/kg (day 16), 0.0055 mg/kg (day 20) and 0.018 mg/kg (day 5), in order of increasing dose. In the depuration samples, residues were below LOQ after 8 days of depuration and not detectable after 10 days of depuration.

*M700F002*: No M700F002 residues above LOQ (0.001 mg/kg) were found in any egg samples from any treatment groups.

Residues of fluxapyroxad, M700F008 and M700F002 in tissues are summarized below in Tables 152–154. Residues in control samples were all < LOQ.

Table 152 Residues of fluxapyroxad in tissues

| Treatment Group    | Group mean (and maximum individual) residues in tissue for fluxapyroxad (mg/kg) |                 |                 |                 |
|--------------------|---------------------------------------------------------------------------------|-----------------|-----------------|-----------------|
|                    | Liver                                                                           | Fat             | Muscle          | Skin with fat   |
| 0.3 + 0.025 ppm    | < 0.01 (< 0.01)                                                                 | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 0.61 + 0.05 ppm    | < 0.01 (< 0.01)                                                                 | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 1.8 + 0.15 ppm     | < 0.01 (< 0.01)                                                                 | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 6.0 + 0.50 ppm     | < 0.01 (< 0.01)                                                                 | 0.025 (0.028)   | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 3 days withdrawal  | < 0.01 (< 0.01)                                                                 | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 7 days withdrawal  | < 0.01 (< 0.01)                                                                 | < 0.01 (< 0.01) | < 0.01 (< 0.01) | 0.01 (0.01)     |
| 14 days withdrawal | < 0.01 (< 0.01)                                                                 | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |

< 0.01 denotes less than the LOQ

Table 153 Residues of M700F008 in tissues

| Treatment Group    | Group mean (and maximum individual) residues in tissue for M700F008* (mg/kg) |                 |                 |                 |
|--------------------|------------------------------------------------------------------------------|-----------------|-----------------|-----------------|
|                    | Liver                                                                        | Fat             | Muscle          | Skin with fat   |
| 0.3 + 0.025 ppm    | < 0.01 (< 0.01)                                                              | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 0.61 + 0.05 ppm    | < 0.01 (< 0.01)                                                              | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 1.8 + 0.15 ppm     | 0.010 (0.011)                                                                | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 6.0 + 0.50 ppm     | 0.014 (0.018)                                                                | 0.014 (0.016)   | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 3 days withdrawal  | < 0.01 (< 0.01)                                                              | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 7 days withdrawal  | < 0.01 (< 0.01)                                                              | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 14 days withdrawal | < 0.01 (< 0.01)                                                              | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |

< 0.01 denotes less than the LOQ

\*values given for M700F008 relate to analyte itself, not parent equivalents

Table 154 Residues of M700F002 in tissues (obtained with method L0140/01 - confirmed by analysis of selected samples from the highest dose group by method L0140/02)

| Treatment Group    | Group mean (and maximum individual) residues in tissue for M700F002 (mg/kg) |                 |                 |                 |
|--------------------|-----------------------------------------------------------------------------|-----------------|-----------------|-----------------|
|                    | Liver                                                                       | Fat             | Muscle          | Skin with fat   |
| 0.3 + 0.025 ppm    | < 0.01 (< 0.01)                                                             | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 0.61 + 0.05 ppm    | < 0.01 (< 0.01)                                                             | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 1.8 + 0.15 ppm     | < 0.01 (< 0.01)                                                             | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 6.0 + 0.50 ppm     | < 0.01 (< 0.01)                                                             | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 3 days withdrawal  | < 0.01 (< 0.01)                                                             | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 7 days withdrawal  | < 0.01 (< 0.01)                                                             | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |
| 14 days withdrawal | < 0.01 (< 0.01)                                                             | < 0.01 (< 0.01) | < 0.01 (< 0.01) | < 0.01 (< 0.01) |

< 0.01 denotes less than the LOQ

*Fluxapyroxad*: No residues of fluxapyroxad above LOQ (0.01 mg/kg) were detected in any tissue from any treatment group except for fat of the highest dose group (mean residues of 0.025 mg/kg). After three days of withdrawal, no residues of fluxapyroxad were detectable.

*M700F008*: No residues of M700F008 above LOQ (0.01 mg/kg) were detected in tissues from the two lowest dose groups. In the (1.8 + 0.15 ppm) dose group, no residues above LOQ were detected in muscle, fat and skin with fat. Mean residues at the LOQ were observed in the liver (maximum individual residue of 0.011 mg/kg). In the highest dose group, mean residues of 0.014 mg/kg were seen both in liver and fat. As observed for fluxapyroxad, after three days of depuration no residues of M700F008 were detectable.

*M700F002*: No residues of M700F002 were detected in any tissues from any dose groups. Since the procedural recoveries for M700F002 analysis with Method L0140/01 were mainly outside the acceptable range of 70–110%, a second method was used to confirm results for M700F002 in tissues. For this purpose, tissue samples of the high dose group were used. Procedural recoveries with this method were acceptable. The results confirmed that the residues of M700F002 in liver, skin with fat, fat and muscle were below the LOQ.

The results of the study are summarized in Table 155.

Table 155 Residues of fluxapyroxad and M700F008 in eggs and tissues

| Animal Commodity | Dose Level of Fluxapyroxad (ppm) |        | Fluxapyroxad Residue (mg/kg) |         | M700F008 Residue (mg/kg) |         | Fluxapyroxad + M700F008 Residue as Parent Equivalents (mg/kg) <sup>a</sup> |                      |
|------------------|----------------------------------|--------|------------------------------|---------|--------------------------|---------|----------------------------------------------------------------------------|----------------------|
|                  |                                  |        | Mean                         | Highest | Mean                     | Highest | Mean                                                                       | Highest <sup>b</sup> |
| Egg              | 0.3                              | Day -1 | ND                           | -       | ND                       | -       | -                                                                          | -                    |
|                  |                                  | Day 1  | ND                           | -       | ND                       | -       | -                                                                          | -                    |
|                  |                                  | Day 3  | ND                           | -       | < 0.001                  | < 0.001 | < 0.001                                                                    | < 0.001              |
|                  |                                  | Day 5  | < 0.001                      | < 0.001 | < 0.001                  | < 0.001 | < 0.002                                                                    | < 0.002              |
|                  |                                  | Day 7  | < 0.001                      | < 0.001 | < 0.001                  | < 0.001 | < 0.002                                                                    | < 0.002              |
|                  |                                  | Day 9  | < 0.001                      | < 0.001 | < 0.001                  | < 0.001 | < 0.002                                                                    | < 0.002              |
|                  |                                  | Day 13 | < 0.001                      | < 0.001 | < 0.001                  | < 0.001 | < 0.002                                                                    | < 0.002              |
|                  |                                  | Day 16 | < 0.001                      | < 0.001 | < 0.001                  | < 0.001 | < 0.002                                                                    | < 0.002              |
|                  |                                  | Day 20 | ND                           | ND      | < 0.001                  | < 0.001 | < 0.001                                                                    | < 0.001              |
|                  |                                  | Day 23 | 0.0014                       | 0.0021  | < 0.001                  | < 0.001 | 0.0025                                                                     | 0.0031               |
|                  |                                  | Day 27 | < 0.001                      | < 0.001 | < 0.001                  | < 0.001 | < 0.002                                                                    | < 0.002              |
|                  | 0.6                              | Day -1 | < 0.001                      | < 0.001 | ND                       | -       | < 0.001                                                                    | < 0.001              |
|                  |                                  | Day 1  | < 0.001                      | < 0.001 | < 0.001                  | < 0.001 | < 0.002                                                                    | < 0.002              |
|                  |                                  | Day 3  | < 0.001                      | < 0.001 | < 0.001                  | < 0.001 | < 0.002                                                                    | < 0.002              |
|                  |                                  | Day 5  | < 0.001                      | < 0.001 | 0.0012                   | 0.0013  | 0.0023                                                                     | 0.0023               |
|                  |                                  | Day 7  | < 0.001                      | < 0.001 | 0.0014                   | 0.0017  | 0.0025                                                                     | 0.0027               |
|                  |                                  | Day 9  | < 0.001                      | < 0.001 | < 0.001                  | < 0.001 | < 0.002                                                                    | < 0.002              |
|                  |                                  | Day 13 | < 0.001                      | < 0.001 | 0.0013                   | 0.0015  | 0.0025                                                                     | 0.0032               |
|                  |                                  | Day 16 | < 0.001                      | < 0.001 | 0.0017                   | 0.0021  | 0.0027                                                                     | 0.0032               |

| Animal Commodity | Dose Level of Fluxapyroxad (ppm) | Fluxapyroxad Residue (mg/kg) |         | M700F008 Residue (mg/kg) |         | Fluxapyroxad + M700F008 Residue as Parent Equivalents (mg/kg) <sup>a</sup> |                      |
|------------------|----------------------------------|------------------------------|---------|--------------------------|---------|----------------------------------------------------------------------------|----------------------|
|                  |                                  | Mean                         | Highest | Mean                     | Highest | Mean                                                                       | Highest <sup>b</sup> |
|                  | Day 20                           | < 0.001                      | < 0.001 | 0.0013                   | 0.0015  | 0.0023                                                                     | 0.0026               |
|                  | Day 23                           | 0.0017                       | 0.0031  | 0.0011                   | 0.0011  | 0.0028                                                                     | 0.0042               |
|                  | Day 27                           | < 0.001                      | < 0.001 | 0.0011                   | 0.0012  | 0.0021                                                                     | 0.0022               |
|                  | 1.8                              | Day -1                       | ND      | -                        | ND      | -                                                                          | -                    |
|                  |                                  | Day 1                        | < 0.001 | < 0.001                  | 0.0010  | 0.0010                                                                     | 0.0020               |
|                  |                                  | Day 3                        | 0.0014  | 0.0018                   | 0.0025  | 0.0031                                                                     | 0.0040               |
|                  |                                  | Day 5                        | 0.0014  | 0.0016                   | 0.0043  | 0.0049                                                                     | 0.0058               |
|                  |                                  | Day 7                        | 0.0013  | 0.0015                   | 0.0041  | 0.0044                                                                     | 0.0055               |
|                  |                                  | Day 9                        | 0.0014  | 0.0018                   | 0.0044  | 0.0052                                                                     | 0.0058               |
|                  |                                  | Day 13                       | 0.0012  | 0.0013                   | 0.0039  | 0.0040                                                                     | 0.0052               |
|                  |                                  | Day 16                       | 0.0011  | 0.0013                   | 0.0032  | 0.0038                                                                     | 0.0043               |
|                  |                                  | Day 20                       | 0.0017  | 0.0021                   | 0.0050  | 0.0055                                                                     | 0.0066               |
|                  |                                  | Day 23                       | 0.0020  | 0.0027                   | 0.0045  | 0.0049                                                                     | 0.0065               |
|                  |                                  | Day 27                       | 0.0028  | 0.0045                   | 0.0043  | 0.0052                                                                     | 0.0071               |
|                  | 6.0                              | Day -1                       | < 0.001 | 0.0017                   | ND      | ND                                                                         | < 0.001              |
|                  |                                  | Day 1                        | 0.0025  | 0.0033                   | 0.0034  | 0.0063                                                                     | 0.0060               |
|                  |                                  | Day 3                        | 0.0029  | 0.0038                   | 0.0059  | 0.0090                                                                     | 0.0091               |
|                  |                                  | Day 5                        | 0.0065  | 0.012                    | 0.013   | 0.018                                                                      | 0.020                |
|                  |                                  | Day 7                        | 0.0053  | 0.0054                   | 0.012   | 0.014                                                                      | 0.017                |
|                  |                                  | Day 9                        | 0.0043  | 0.0059                   | 0.012   | 0.013                                                                      | 0.017                |
|                  |                                  | Day 13                       | 0.0030  | 0.0035                   | 0.0090  | 0.014                                                                      | 0.012                |
|                  |                                  | Day 16                       | 0.0041  | 0.0047                   | 0.011   | 0.012                                                                      | 0.015                |
|                  |                                  | Day 20                       | 0.0040  | 0.0054                   | 0.0085  | 0.014                                                                      | 0.013                |
|                  |                                  | Day 23                       | 0.0045  | 0.0064                   | 0.0086  | 0.012                                                                      | 0.014                |
|                  |                                  | Day 27                       | 0.0043  | 0.0059                   | 0.012   | 0.013                                                                      | 0.017                |
| Liver            | 0.3                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 0.6                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 1.8                              | < 0.01                       | < 0.01  | 0.010                    | 0.011   | 0.021                                                                      | 0.022                |
|                  | 6.0                              | < 0.01                       | < 0.01  | 0.014                    | 0.018   | 0.025                                                                      | 0.029                |
| Fat              | 0.3                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 0.6                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 1.8                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 6.0                              | 0.025                        | 0.028   | 0.014                    | 0.016   | 0.040                                                                      | 0.042                |
| Muscle           | 0.3                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 0.6                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 1.8                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 6.0                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
| Skin with Fat    | 0.3                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 0.6                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 1.8                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |
|                  | 6.0                              | < 0.01                       | < 0.01  | < 0.01                   | < 0.01  | < 0.02                                                                     | < 0.02               |

<sup>a</sup> Conversion factor from M700F008 to parent equivalents = 1.038

<sup>b</sup> The highest total residues is from one animal, not from the addition of highest fluxapyroxad + M700F008 from more than one animal

## APPRAISAL

Residue and toxicological aspects of fluxapyroxad were considered for the first time by the present Meeting. The toxicological and residue evaluation was scheduled by the Forty-second Session of the CCPR<sup>2</sup>.

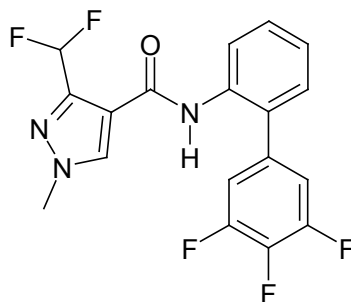
Fluxapyroxad is a new active ingredient developed to control a broad spectrum of fungal diseases. It belongs to the carboxamide class of chemicals and its mode of action is inhibition of

<sup>2</sup> ALINORM 10/33/24

succinate dehydrogenase in complex II of the mitochondrial respiratory chain, which results in inhibition of spore germination, germ tubes and mycelial growth within the fungus target species.

The manufacturer supplied information on identity, metabolism and environmental fate, methods of residue analysis, freezer storage stability, registered use patterns, supervised residue trials, fate of residues in processing and farm animal feeding studies.

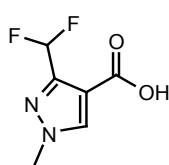
The IUPAC name is 3-(difluoromethyl)-1-methyl-N- (3',4',5'-trifluoro [1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide.



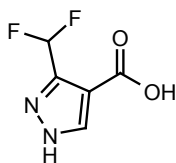
Fluxapyroxad

The 2012 JMPR established an ADI for fluxapyroxad of 0–0.02 mg/kg bw and an ARfD of 0.3 mg/kg bw.

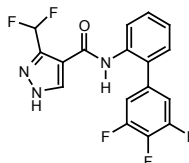
The structures of key metabolites discussed are listed below:



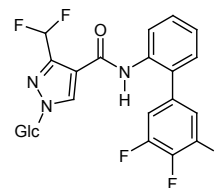
M700F001



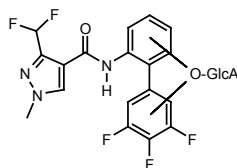
M700F002



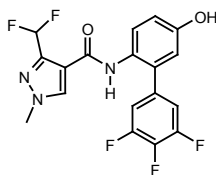
M700F008



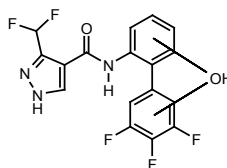
M700F048



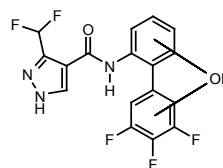
M700F004



M700F005



M700F009



M700F010

### Animal metabolism

The Meeting received animal metabolism studies with fluxapyroxad in rats, hens and goats.

#### Rats

Evaluation of the metabolism studies in rats, which was carried out by the WHO Core Assessment Group, showed that <sup>14</sup>C-labelled fluxapyroxad was rapidly and moderately well absorbed from the gastrointestinal tract of rats following oral dosing. The extent of absorption was approximately 65–80% of the administered dose, independent of dose and sex. Very little fluxapyroxad was retained in the tissues. There were no major sex-related differences in the pattern of excretion. Faecal excretion was the primary route of elimination, and excretion was rapid, with the majority excreted by all routes

48 hours after dosing (61–83%). Fluxapyroxad in rats is metabolised mainly by hydroxylation at the biphenyl moiety (sometimes repeated), loss of a fluorine atom at the biphenyl ring, N-demethylation at the pyrazole moiety, conjugation of the hydroxyl-groups with glucuronic acid or with sulfate and conjugation with glutathione derivatives.

#### *Goats - Fluxapyroxad*

Fluxapyroxad labelled in the aniline or pyrazole ring was orally administered by gavage to lactating goats at 11.33–11.75 ppm in the feed or 0.39–0.44 mg/kg bw/day for 8 consecutive days. Milk was sampled twice daily (in the morning before administration of the test substance and in the afternoon). Animals were sacrificed approximately 24 hours after the last dose.

Overall,  $\geq 80\%$  of the total administered dose was eliminated in excreta. In milk, 0.09–0.10% of the administered dose was detected. A plateau was reached within 24 hours after administration. Tissues and organs retained  $< 0.4\%$  of the administered dose. TRRs were 0.007–0.009 mg/kg equiv. in muscle, 0.021–0.025 mg/kg equiv. in fat, 0.036–0.078 mg/kg equiv. in kidney and 0.35–0.56 mg/kg equiv. in liver. The extractability of the radioactive residues in methanol or acetonitrile was  $\geq 79\%$  for all tissues other than liver. In liver, extractability was 30–34%. A major proportion of the residual radioactive residues (polar components, probably bound to proteins) was released from extracted liver tissue after incubation with protease.

Fluxapyroxad represented one of the major residues in milk (13–20% of the TRRs, 0.0015–0.0033 mg/kg equiv.), muscle (12%, 0.0009 mg/kg equiv., aniline label only) and fat (34–44% of the TRRs, 0.0084–0.0092 mg/kg equiv.), while accounting for minor proportions in liver and kidney (3–7% of the TRRs, 0.0025–0.020 mg/kg equiv.). The other predominant compound was the desmethyl metabolite M700F008, representing a main proportion in milk (24–25% of the TRRs, 0.0027–0.0043 mg/kg equiv.), muscle (55–83% of the TRRs, 0.0041–0.0078 mg/kg equiv.), fat (26% of the TRRs, 0.0054–0.0064 mg/kg equiv.), liver (13–17% of the TRRs, 0.058–0.071 mg/kg equiv.) and kidney (23–26% of the TRRs, 0.0093–0.017 mg/kg equiv.).

Further metabolites at  $> 10\%$  of the TRRs were detected in milk, kidney and fat. In milk, the metabolite M700F010 was found at levels of 12–15% of the TRRs ( $\leq 0.0025$  mg/kg). The metabolite M700F005 was present in fat at 14% of the TRRs (0.0034 mg/kg equiv.) and in kidney at 19% of the TRRs (0.015 mg/kg equiv.), with pyrazole label only. The metabolite M700F004 was present in kidney at levels of 12–13% of the TRRs ( $\leq 0.010$  mg/kg equiv.).

With both labels, comparable metabolic pathways were observed. Hydrolytic cleavage of fluxapyroxad at the carboxamide bond was not seen. Fluxapyroxad was metabolised *via* two main transformation reactions, N-demethylation of the pyrazole moiety and hydroxylation of the biphenyl moiety. These reactions, occurring also in combination, followed by conjugation with glucuronic acid, led to the main metabolites. Several minor metabolic routes, i.e., hydroxylation at the pyrazole ring, conversion of the pyrazole CHF<sub>2</sub> group into a carboxy group, N-glucuronidation of the desmethyl metabolite and removal of an aromatic fluorine substituent, led to a range of minor components.

#### *Goats - M700F002*

Since the metabolite M700F002 was observed in soya bean seed and in confined rotational crop matrices at levels  $> 10\%$  of the TRRs, livestock metabolism studies were conducted with this compound.

The test item <sup>14</sup>C-labelled on the carbon of the pyrazole ring bearing the carboxyl group, was fed to two lactating goats for eight consecutive days at 11.0–12.5 ppm in the feed, 0.38–0.42 mg/kg bw/day. Milk was collected in the morning before administration of the test item and in the afternoon. Animals were sacrificed approximately 4 hours after the final dose. Of the applied dose, 32% was found in urine and 54% in faeces. Milk contained 0.05% of the applied dose. Residues remaining in whole organs accounted for  $< 0.04\%$  of the administered dose. Residues were 0.006 mg/kg equiv. in fat, 0.012 mg/kg equiv. in muscle, 0.023 mg/kg equiv. in liver and 0.146 mg/kg equiv. in kidney. In total, 98% of the applied dose could be recovered. In goat, the test item M700F002 was the only

radioactive component detected in the matrices analysed, indicating that M700F002 is not significantly transformed in the goat.

#### *Goats - M700F048*

Metabolism studies were also conducted on lactating goats with M700F048, a plant metabolite of fluxapyroxad which was not observed in animals.  $^{14}\text{C}$ -M700F048, labelled in the aniline moiety was fed to two lactating goats at doses of 12.94 and 12.80 ppm in the feed, 0.39 and 0.40 mg/kg bw/day, for ten consecutive days. Milk was collected in the morning before administration of the test item and in the afternoon. Animals were sacrificed within 20 hours after the last dose. Excreta accounted for 92.4% of the M700F048 administered. The pooled milk sample (Day 4–10) contained 0.045% of the applied dose. Overall, < 0.5% of the total administered dose was found in tissues and organs. The TRRs in organs and tissues amounted to 0.575 mg/kg equiv. for liver, 0.075 mg/kg equiv. for kidney, 0.033 mg/kg equiv. for fat and 0.011 mg/kg equiv. for muscle.

M700F048 was found at  $\leq 3\%$  of the TRRs in milk and tissues. In muscle and liver, no M700F048 was detected. One of the main components identified in all matrices was the deglycosylated metabolite M700F008, accounting for 14–54% of the TRRs. Further biotransformation products were the biphenyl-hydroxylated metabolites M700F009 and M700F010. M700F010 was the main metabolite identified in milk (32% of the TRRs) and was also detected in higher portions in kidney (14% of the TRRs).

The main biotransformation reactions were deglycosylation of M700F048 and hydroxylation at the biphenyl moiety. Further biotransformation reactions observed were hydroxylation at the pyrazole ring, replacement of an aromatic fluorine atom, presumably by a hydroxy group and oxidation and hydrolysis of the  $\text{CHF}_2$  group (forming a carboxy group) with subsequent protein conjugation.

#### *Hens - Fluxapyroxad*

Fluxapyroxad labelled in the aniline ring was orally administered by gavage to 12 laying hens at 11.5 ppm in the feed or 0.76 mg/kg bw (1.59 mg/animal/day) for 12 consecutive days. Eggs were collected twice daily (in the afternoon after administration of the test substance and the morning before subsequent administration). Animals were sacrificed approximately 23 hours after the last dose.

Overall,  $\geq 86\%$  of the total administered dose was eliminated in excreta. In eggs, 0.18% of the administered dose was detected. A plateau was reached at Day 9 of the dosing period. Tissues and organs (with the exception of the GI tract) retained < 0.5% of the administered dose. TRRs were 0.010 mg/kg equiv. in leg muscle, 0.059 mg/kg equiv. in fat and 0.210 mg/kg equiv. in liver. The extractability of the radioactive residues was  $\geq 79\%$  for all tissues other than liver. In liver, extractability was 68%. A significant proportion of the residual radioactive residue, probably bound to proteins, was released from extracted liver tissue after incubation with protease.

Fluxapyroxad was one of the major residues in egg (14% of the TRRs, 0.009 mg/kg equiv.), leg muscle (18% of the TRRs, 0.0011 mg/kg equiv.), fat (63% of the TRRs, 0.023 mg/kg equiv.) and was observed in minor amounts in liver (1% of the TRRs, 0.002 mg/kg equiv.). The other predominant compound was the desmethyl metabolite M700F008, being a large proportion in egg (50% of the TRRs, 0.033 mg/kg equiv.), leg muscle (together with M700F016 amounting to 26% of the TRRs, 0.0016 mg/kg equiv.), and fat (25% of the TRRs, 0.009 mg/kg equiv.). M700F008 was detected in minor amounts in liver.

The metabolism of fluxapyroxad in laying hens mainly proceeds *via* hydroxylation at the biphenyl moiety, loss of a fluorine atom at the biphenyl ring (presumably by substitution with a hydroxyl-group), conjugation of the hydroxyl groups with glucuronic acid, and demethylation at the pyrazole ring. Additionally, conjugates with glutathione derivatives were identified.

*Hens - M700F002*

Labelled  $^{14}\text{C}$ -M700F002 was fed to 10 laying hens at 13.1 ppm in the feed, 0.84 mg/kg bw/day or 1.66 mg/animal/day for ten consecutive days. Eggs were sampled in the morning before administration of the test substance and in the afternoon. Animals were sacrificed approximately 23 hours after the last dose. In excreta, 82% of the applied dose was found. Eggs contained 0.009% of the applied dose. Residues were 0.0041 mg/kg in liver, 0.0022 mg/kg in breast muscle, 0.0030 mg/kg in leg muscle, 0.0023 mg/kg for abdominal fat and 0.0058 mg/kg for body fat. In total, 84% of the applied dose was recovered in excreta, eggs, blood, tissues, GI tract and cage wash. The unchanged test item M700F002 was the only component identified in the extracts of egg, tissues and excreta and the only component detected in the methanol extracts of liver, leg muscle, body fat and excreta. It was concluded that the test item M700F002 is not considerably metabolised in laying hens.

*Hens - M700F048*

$^{14}\text{C}$ -M700F048, labelled in the aniline moiety was fed to 12 laying hens at 12.9 ppm feed or 0.78 mg/kg bw/day for 11 consecutive days. Eggs were collected in the afternoon after administration of the test item and in the morning before the subsequent administration. Animals were sacrificed 18–22 hours after the last dose.

Overall, excreta contained 91.8% of the M700F048 administered, and excreta and cage wash together amounted to 94.1% of the total administered dose. In eggs, 0.15% of the total radioactivity administered was found. Total radioactive residues in eggs increased until day 8 and thereafter remained unchanged until day 11. At sacrifice, 18–22 hours after the last administration, organ and tissues were pooled from all animals. In total, < 0.5% of the total administered dose could be found in the tissues and organs. The residue levels in edible tissues and organs were 0.187 mg/kg equiv. for liver, 0.0079 mg/kg equiv. for breast muscle, 0.0091 mg/kg equiv. for leg muscle, 0.033 mg/kg equiv. for abdominal fat, and 0.032 mg/kg equiv. for body fat.

The unchanged test item M700F048 was present in only minor amounts in eggs and tissues (< 4% of the TRRs). The main metabolite in eggs and all tissues was the deglycosylated component M700F008, accounting for  $\geq$  67% of the TRRs (except in liver, where it accounted for 23% of the TRRs).

The results show that M700F048 is metabolised in hens mainly by the splitting-off of the sugar moiety. All metabolites identified in edible matrices (M700F008, M700F047, M700F009 and M700F010) were also found upon administration of M700F048 to rats.

*Summary of animal metabolism*

The metabolic pathways of fluxapyroxad in rats, goats and poultry were similar. The metabolism of fluxapyroxad mainly proceeds *via* hydroxylation at the biphenyl moiety, loss of a fluorine atom at the biphenyl ring, conjugation of the hydroxyl groups with glucuronic acid and demethylation at the pyrazole ring. Additionally, conjugates with glutathione derivatives were identified in rat and hen metabolism. The metabolism of rats was more complex than the metabolism of goats and hens, with a much larger number of metabolites observed.

***Plant metabolism***

The metabolism of fluxapyroxad was investigated in soya beans, tomato and wheat.

Aniline or pyrazole labelled fluxapyroxad was applied by foliar methods to tomatoes at a rate of 100 g ai/ha. Three applications took place 17, 10 and 3 days before harvest (55, 62 and 69 days after planting). Ripe tomato fruit were sampled 3 days after the last treatment. Other green parts of the plants (stem, panicles and leaves – referred to as tomato leaves) were also sampled.

Aniline or pyrazole labelled fluxapyroxad was applied by foliar methods to soya beans at a rate of 60 g ai/ha. Three applications were made at BBCH 16/17, 51–59 and 71–75. Samples of soya bean forage were taken after the first application (0 days after treatment; DAT) and immediately before the third application (21 days after the first treatment; 14 days after the second treatment). Soya

bean hay, straw, hulls and seed were harvested at BBCH 89, approximately a month after the third application.

Aniline or pyrazole labelled fluxapyroxad was applied by foliar methods to spring wheat at a rate of 125 g ai/ha. Two applications were made at BBCH 30/35 and 69. Wheat forage samples were collected 36 days after the first application at BBCH 59. Wheat hay was sampled at 4 DALA (BBCH 73–75); straw, chaff and grain samples were collected at 34 and 35 DALA for the aniline and pyrazole label, respectively (BBCH 89).

Aniline or pyrazole labelled fluxapyroxad was applied as a seed treatment to spring wheat at a rate of 75 g ai/100 kg seed (equivalent to an application rate of 135 g ai/ha). Wheat forage samples were collected at BBCH 59, wheat hay was sampled at BBCH 73–75 while straw, chaff and grain samples were collected at BBCH 89.

Parent compound was generally the main component of the TRR. In the tomato and foliar wheat studies, parent was the only component observed at > 10% of the TRR. In tomatoes parent accounted for > 94% of the TRR in fruit (0.156 mg/kg equiv.) and > 90% TRR (6.039 mg/kg equiv.) in leaves. In wheat parent accounted for 60–91% of the TRR after foliar treatment and 58–79% TRR for forage, hay, straw and chaff after seed treatment, but only 7–17% TRR in grain after seed treatment. The group of metabolites M700F008, M700F043, M700F041 and M700F006 was found to occur in all wheat matrices after foliar treatment as the second most predominant component of radioactivity, representing 2–7% of the TRRs. After seed treatment, M700F008 was observed in all wheat matrices for both labels as the second most predominant component, representing 2–11% of the TRRs.

In the soya bean studies, parent accounted for 54–98% of the TRR in all matrices except seed, where it accounted for 7–21% of the TRR. The major metabolite in soya bean seed was M700F002 at 33% of the TRR (0.087 mg/kg equiv.) which is specific for the pyrazole label only. The corresponding cleavage product was not observed for the aniline label. An additional metabolite, M700F048 accounted for 9–20% (0.023 mg/kg equiv.) of the TRR in soya bean seed.

Two plant metabolites which were not observed in the animal metabolism studies with fluxapyroxad were M700F002 and M700F048. For M700F048, separate goat and hen metabolism studies have confirmed that M700F048 follows the same route of metabolism as fluxapyroxad. Both fluxapyroxad and M700F048 are degraded to the common metabolite M700F008, followed by hydroxylation of the biphenyl moiety and conjugation steps. Separate goat and hen metabolism studies for M700F002 have shown that M700F002 is not significantly transformed in the goat or the hen.

### ***Confined rotational crop studies***

Studies of residues in confined rotational crops have been submitted in which soil was treated at 250 g ai/ha, followed by soil aging at 30, 120/149 and 365 days (aniline and pyrazole <sup>14</sup>C labels respectively). Representative succeeding crops of spinach (leafy vegetable), radish (root vegetable) and wheat (cereal grain) were planted at the above intervals to determine whether fluxapyroxad residues or degradates appear in follow crops. At all three plant-back intervals significant translocation of radioactivity from soil to plant was observed with radioactive residues in wheat straw up to 2.65 mg/kg and spinach up to 0.18 mg/kg. Lower residues were observed in radish roots (maximum of 0.015 mg/kg) and wheat grain (maximum of 0.043 mg/kg).

The metabolite pattern was similar to that observed for primary crops. No metabolites specific to rotational crops were observed. As observed in foliar treated plants, fluxapyroxad was the main component of the residue in both studies. It was the major residue observed in almost every matrix and every plant back interval. Major metabolites observed include M700F008 and M700F048 and in the pyrazole label only, M700F001 and M700F002. The latter two metabolites were observed in soil metabolism studies with fluxapyroxad.

### ***Environmental fate in soil***

The Meeting received information on soil photolysis, aerobic and anaerobic soil metabolism, field dissipation and adsorption/ desorption behaviour in different soils. Only those studies relevant to the current evaluation were considered.

Light was found to have little influence on the behaviour and degradation of fluxapyroxad in soils. Fluxapyroxad was found to be stable in aqueous solution at pH 4, 5, 7 and 9 (50 °C) for five days.

Under aerobic laboratory conditions at 20–27 °C fluxapyroxad degrades at a moderate to slow rate with DT<sub>50</sub> values ranging from 69 to 689 days and DT<sub>90</sub> values from > 120 to > 1000 days. There was no apparent correlation between half-lives and soil characteristics of pH and organic carbon. Cleavage of the carboxamide bridge produced M700F001, followed by demethylation to form M700F002. Both metabolites were observed at levels greater than 10% applied radioactivity in some soils and both declined over time. Laboratory aerobic soil degradation studies were conducted on both metabolites. Metabolite M700F001 degraded rapidly with DT<sub>50</sub> values ranging from 2–9 days while DT<sub>50</sub> values for M700F002 ranged from 77–197 days.

Field dissipation studies were carried out at six European sites, five sites in the USA and one in Canada. In general the field behaviour of fluxapyroxad was consistent with the model developed from the laboratory studies. Fluxapyroxad dissipated by aerobic soil processes and formed M700F001 and M700F002. These metabolites also dissipated, presumably metabolised to CO<sub>2</sub> and/or incorporated into soil organic fractions as observed in radiolabelled laboratory studies.

Fluxapyroxad dissipated with DT<sub>50</sub> values of 9.9 to 370 days in the field studies. European field dissipation studies carried out on M700F002 at four sites showed DT<sub>50</sub> values ranging from 26–39 days.

Generally the DT<sub>50</sub> and DT<sub>90</sub> values and residues at the end of study periods indicated that fluxapyroxad has a potential for residue carry over to the following cropping season if application is performed annually.

### ***Methods of analysis***

The Meeting received information on analytical methods for the determination of residues of the active substance, fluxapyroxad and the metabolites M700F002, M700F008 and M700F048 in plant matrices and animal matrices.

The methods used are based on HPLC/MS-MS and UPLC/MS-MS for plant matrices and HPLC/MS-MS for animal matrices. All methods involve extraction with either methanol/water (plant matrices) or acetonitrile/water (animal matrices). All methods have been adequately validated with LOQs of 0.01 mg/kg for fluxapyroxad, M700F002, M700F008 and M700F048 in plant matrices and LOQs of 0.01 mg/kg for bovine muscle, liver, kidney and fat or 0.001 mg/kg for milk, milk products and egg in animal matrices.

Radio-validation of the plant matrices method was carried out during the soya bean, tomato and wheat metabolism studies and the animal matrices method during the laying goat and hen metabolism studies. No multi-residue method was submitted for evaluation.

### ***Stability of pesticide residues in stored analytical samples***

The Meeting received information on the freezer storage stability of fluxapyroxad and the metabolites M700F002, M700F008 and M700F048 in plant and animal commodities.

Freezer storage stability studies showed that fluxapyroxad, M700F002 and M700F048 were stable for up to 24, 27 and 24 months in a variety of matrices. M700F008 was found to be stable for up to 24 months in wheat straw and dried pea seed. A decrease in stability was observed after 3 months for the other four matrices tested, i.e., wheat whole plant, wheat grain, lemon fruit and soya bean seed. The recoveries observed for storage intervals between 4–24 months did not show any subsequent significant decrease.

Samples from the fluxapyroxad wheat and soya bean metabolism studies were re-analysed after a storage interval of approximately 37 months to investigate the stability of incurred residues of M700F008 in wheat forage (pyrazole label), wheat straw (aniline label), wheat grain (pyrazole label) and soya bean seed (aniline label). Recoveries of M700F008 in these matrices after approximately 37–39 months were shown to be similar to those obtained in the original study.

Fluxapyroxad and the metabolites M700F002, M700F008 and M700F048 were demonstrated to be stable in extracts of animal matrices under refrigerator conditions for 7 days at the time of the validation of Method L01040/02. In the hen metabolism study for fluxapyroxad a comparison of the extractabilities and metabolite patterns (HPLC chromatograms) showed no relevant changes in the nature of the radioactive residues during sample storage over approximately 16 months.

In the goat metabolism study for fluxapyroxad the stability of the residues in acetonitrile and methanol extracts was demonstrated for the whole period of metabolite investigation. Extracts which were obtained after storage of the matrices for about 18 months (milk, kidney and muscle) or 10–23 months (fat) showed concentrations and metabolite patterns comparable to data generated during earlier workups.

For the study of the metabolism of metabolite M700F002 in goat, the radiochemical stability of the test item over the 8 day dosing period was confirmed. Extractions were performed several times during the course of the study. No differences in the extraction characteristics at approximately 2–5 months after sampling were observed. The stability of radioactivity in extracts stored in a refrigerator was also proven for up to 83 days of storage by comparison of the HPLC chromatograms.

### ***Residue definition***

#### ***Animals***

In the goat metabolism studies, fluxapyroxad represented one of the major residues in milk, muscle and fat (12–44% of the TRRs), while accounting for minor proportions in liver and kidney (3–7% of the TRRs). The other predominant compound was the desmethyl metabolite M700F008, representing a main proportion in milk, muscle, fat, liver and kidney (13–83% of the TRRs). The dairy cow feeding study showed that levels of M700F008 in milk were generally of the same order as fluxapyroxad. Residues in fat were lower than fluxapyroxad residues, while those in liver and kidney were somewhat higher than fluxapyroxad residues.

In the hen metabolism study, fluxapyroxad represented one of the major residues in egg (14% leg muscle and fat (14–63% of the TRRs) and was observed in minor amounts in liver (1% of the TRRs). The other predominant compound was the desmethyl metabolite M700F008, representing a main proportion in egg, leg muscle and fat (25–50% of the TRRs). M700F008 was detected at minor amounts (4% of the TRRs) in liver (0.009 mg/kg). The laying hen feeding study showed that levels of M700F008 in egg were higher than fluxapyroxad. Residues of M700F008 were observed in liver at the two highest feeding levels (1.8 and 6.0 ppm), but fluxapyroxad residues were not observed. Residues in fat were lower than fluxapyroxad residues (both only observed at 6.0 ppm).

Two plant metabolites which were not observed in the animal metabolism studies with fluxapyroxad were M700F002 and M700F048. For M700F048 separate goat and hen metabolism studies have confirmed that M700F048 follows the same route of metabolism as fluxapyroxad. Both fluxapyroxad and M700F048 are degraded to the common metabolite M700F008 followed by hydroxylation of the biphenyl moiety and conjugation steps.

In residue field trials M700F048 was usually only found in minor proportions compared to parent or was found at low absolute levels. It is therefore not necessary to include M700F048 in the residue definition for animal commodities. Similarly the metabolite M700F002 was not detected in most residues trials provided (maximum observation across all trials was 0.02 mg/kg). In the animal feeding studies M700F002 was not seen above the LOQ in any animal matrix at any dose level. It is therefore not necessary to include M700F002 in the residue definition for animal commodities.

It is considered that a residue definition of parent is appropriate for commodities of animal origin for compliance with MRLs (enforcement). Parent fluxapyroxad and M700F008 are of comparable toxicity and because M700F008 is detected as a predominant compound in a number of animal matrices, a residue definition of parent plus M700F008 (expressed as parent equivalents) is appropriate for commodities of animal origin for risk assessment.

### *Plants*

In the plant metabolism studies parent was generally the main component of the TRR. In the tomato and foliar wheat studies, parent was the only component observed at > 10% of the TRR (58 to > 94% TRR in tomato fruit and leaves and all wheat matrices). After wheat seed treatment parent accounted for 58–79% TRR in forage, hay, straw and chaff but only 7–17% TRR in grain. A group of metabolites that includes M700F008 was found to occur in all wheat matrices after foliar treatment as the second most predominant component of radioactivity, representing 2–7% of the TRRs. After seed treatment, M700F008 was observed in all wheat matrices for both labels as the second most predominant component, representing 2–11% of the TRRs.

In the soya bean studies, parent accounted for 54–98% of the TRR in all matrices except seed, where it accounted for 7–21% of the TRR. The major metabolite in soya bean seed was M700F002 at 33% of the TRR (0.087 mg/kg equiv.) which is specific for the pyrazole label only. An additional metabolite, M700F048 accounted for 9–20% (0.023 mg/kg equiv.) of the TRR in soya bean seed.

No metabolites specific to rotational crops were observed. As observed in foliar treated plants, fluxapyroxad was the main component of the residue. Major metabolites observed include M700F008 and M700F048 and in the pyrazole label only, the soil metabolites M700F001 and M700F002.

Residues trials over a wide variety of crops (pome fruit, stone fruit, fruiting vegetables other than cucurbits, legume vegetables, pulses, root and tuber vegetables, cereal grains, oilseeds and various animal feeds) as well as rotational crop studies were submitted in which the residues of parent fluxapyroxad, M700F002, M700F008, M700F048 were determined. In general detectable residues of M700F002 were very rarely observed and then at very low levels. It is considered unnecessary to include M700F002 in the residue definition for plant commodities.

M700F008 and M700F048 were observed more frequently than M700F002 in plants but parent fluxapyroxad was almost always present when detectable residues were observed in either M700F008 or M700F048 and was, in the vast majority of cases, the significantly dominant residue. However in stone fruit (particularly cherries) and in canola, M700F008 and M700F048 were significant residues while M700F008 was also a significant residue in peppers and soya beans.

It is considered that a residue definition of parent only is appropriate for fluxapyroxad in plant commodities for compliance against MRLs as parent is present in most plant matrices. Fluxapyroxad and the metabolites M700F008 and M700F048 are of comparable toxicity and as the metabolites are present in significant amounts in some plant matrices, it is considered that a residue definition of fluxapyroxad + M700F008 + M700F048 (fluxapyroxad total residues expressed as parent equivalents) is appropriate for risk assessment.

The log  $K_{ow}$  of fluxapyroxad (log  $K_{ow}$  3.13, pH 7) suggests that fluxapyroxad might be moderately fat soluble.

The ratio of fluxapyroxad residues in muscle and fat observed in the livestock metabolism and feeding studies (e.g., in the lactating dairy cow feeding study: up to 14× higher in fat based on mean residues) support the conclusion that fluxapyroxad is fat soluble.

Definition of the residue (for compliance with the MRL for plant and animal commodities):  
*Fluxapyroxad*

Definition of the residue (for estimation of dietary intake for plant commodities): *Sum of fluxapyroxad and 3-(difluoromethyl)- N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-*

carboxamide (M700F008) and 3-(difluoromethyl)-1-( $\beta$ -D-glucopyranosyl)-N-(3',4',5'-trifluorobipheny-2-yl)-1H-pyrazole-4-carboxamide (M700F048) and expressed as parent equivalents

Definition of the residue (for estimation of dietary intake for animal commodities): *Sum of fluxapyroxad and 3-(difluoromethyl)-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide (M700F008) and expressed as parent equivalents*

The residue is fat-soluble.

### **Results of supervised residue trials on crops**

Supervised trials were available for the use of fluxapyroxad on numerous crops: apples, pears, cherries, peaches, plums, tomatoes, bell and non-bell peppers, sweet corn, peas, beans, soya beans, potatoes, sugar beet, barley, field corn, oats, rice, sorghum, triticale, wheat, canola, sunflowers, cotton and peanuts.

After sampling, if a higher residue level was observed at a longer PHI than the GAP, the higher value has been used in MAXIMUM RESIDUE LEVEL setting.

In trials where duplicate field samples from replicated or unreplicated plots were taken at each sampling time and analysed separately, the mean was taken as the best estimate of the residue. Where residues have been reported as < LOD (less than the limit of detection) the values have been considered as < LOQ (< 0.01 mg/kg) for the purposes of maximum residue level estimation.

The OECD calculator was used as a tool to assist in the estimation of maximum residue levels from the selected residue data set obtained from the supervised residue trials. As a first step, the Meeting reviewed all relevant factors related to each data set in arriving at a best estimate of the maximum residue using expert judgement. Then the OECD calculator was employed. If the statistical calculation spreadsheet suggested a different value from that recommended by the Meeting, a brief estimation of the deviation was supplied.

For dietary intake assessment the residues are expressed as the sum of fluxapyroxad + M700F008 + M700F048 expressed as fluxapyroxad (referred to as "total"). In most cases the metabolites were tabulated as mg/kg of specific analyte, so the M700F008 and M700F048 amounts were converted to fluxapyroxad by multiplying by 1.038 and 0.72 respectively. The treatment of values at < LOQ is illustrated below. Residues data for most crops show that the metabolites M700F008 and M700F048 are commonly < LOD. Although this is expressed as < LOQ for the purposes of maximum residue level estimation, it is considered appropriate that when one component is above the LOQ and the others are below the LOQ, that the combined residue is assumed to be equal to the main component.

| Fluxapyroxad | M700F008 | M700F048 | Total Residues (mg/kg)<br>(Sum of fluxapyroxad + M700F008 + M700F048) |
|--------------|----------|----------|-----------------------------------------------------------------------|
| 0.10         | < 0.01   | < 0.01   | 0.10                                                                  |
| < 0.01       | < 0.01   | < 0.01   | < 0.01                                                                |
| < 0.01       | 0.03     | < 0.01   | 0.03                                                                  |

Product labels were available from Australia, Brazil, France, Germany, United Kingdom and the United States of America.

### **Pome fruits**

Residue trials were conducted in apples according to the GAP in the USA for pome fruit (4 applications at 97–100 g ai/ha, 0 day PHI). Applications were made using either concentrate or dilute spray volumes.

Residues of fluxapyroxad in apples from supervised trials matching US GAP, in ranked order, were: 0.14, 0.15, 0.21, 0.24, 0.25, 0.26, 0.28, 0.31, 0.35, 0.36 and 0.37 mg/kg.

The ranked order of total residues in apples from supervised trials according to GAP were: 0.14, 0.15, 0.21, 0.24, 0.25, 0.26, 0.31, 0.35, 0.36, 0.36 and 0.37 mg/kg.

Residue trials were conducted in pears in the USA and Canada according to GAP in the USA (4 applications at 97–100 g ai/ha, 0 day PHI). Applications were made using either concentrate or dilute spray volumes.

Residues of fluxapyroxad in pears from supervised trials according to US GAP, in ranked order, were: 0.18, 0.20, 0.23, 0.29, 0.34, 0.38, 0.45 and 0.47 mg/kg.

The ranked order of total residues in pears from supervised trials according to GAP were: 0.18, 0.20, 0.23, 0.30, 0.34, 0.38, 0.46 and 0.47 mg/kg.

The use pattern in the USA is for pome fruit. The Meeting noted that the USA and Canadian datasets matching US GAP for apples and pears resulted in similar residues (Mann-Whitney U-Test). The Meeting decided to combine the data for apples and pears to increase the data set for the purposes of estimating a maximum residue level, STMR, HR and to make a recommendation for pome fruit.

The ranked order of residues of fluxapyroxad in apples and pears from supervised trials according to GAP were: 0.14, 0.15, 0.18, 0.20, 0.21, 0.23, 0.24, 0.25, 0.26, 0.28, 0.29, 0.31, 0.34, 0.35, 0.36, 0.37, 0.38, 0.45 and 0.47 mg/kg.

The ranked order of total residues in apples and pears from supervised trials according to GAP were: 0.14, 0.15, 0.18, 0.20, 0.21, 0.23, 0.24, 0.25, 0.26, 0.30, 0.31, 0.34, 0.35, 0.36, 0.36, 0.37, 0.38, 0.46 and 0.47 mg/kg.

The Meeting estimated maximum residue level, STMR and HR values for fluxapyroxad in pome fruit of 0.9, 0.30 and 0.47 mg/kg respectively.

#### *Stone fruits*

Residue trials were conducted in cherries in the USA and Canada matching the GAP in the USA for stone fruit (3 applications at 121–123 g ai/ha, 0 day PHI). Applications were made using either concentrate or dilute spray volumes.

The ranked order of fluxapyroxad residues in cherries from supervised trials according to GAP were: 0.26, 0.31, 0.55, 0.56, 0.59, 0.82, 1.10 and 1.87 mg/kg.

The ranked order of total residues in cherries from supervised trials according to US GAP were: 0.37, 0.50, 0.72, 0.73, 0.78, 1.13, 1.38 and 2.32 mg/kg.

Residue trials were conducted in peaches in the USA and Canada matching to the GAP in the USA for stone fruit (3 applications at 121–123 g ai/ha, 0 day PHI).

The ranked order of fluxapyroxad residues in peaches from supervised trials according to GAP were: 0.28, 0.30, 0.32, 0.33, 0.34, 0.43, 0.45, 0.55, 0.57, 0.58, 0.59 and 0.63 mg/kg.

The total residues in peaches from supervised trials according to GAP, in ranked order were: 0.30, 0.31, 0.33, 0.34, 0.35, 0.45, 0.48, 0.58, 0.62, 0.63, 0.66 and 0.66 mg/kg.

Residue trials were conducted in plums in the USA and Canada matching the GAP in the USA for stone fruit (3 applications at 121–123 g ai/ha, 0 day PHI).

The ranked order of fluxapyroxad residues in plums from supervised trials according to GAP were: 0.23, 0.24, 0.27, 0.37, 0.38, 0.49, 0.55, 0.56, 0.64 and 0.95 mg/kg.

The total residues in plums from supervised trials according to GAP, in ranked order were: 0.23, 0.24, 0.27, 0.38, 0.39, 0.49, 0.55, 0.56, 0.64 and 0.95 mg/kg.

The use pattern in the USA is for stone fruit. The Meeting noted that the USA and Canadian datasets matching GAP for cherries, peaches and plums resulted in similar residues. The Meeting

decided to combine the data for cherries, peaches and plums to increase the database for the purposes of estimating a maximum residue level and STMR and to make a recommendation for stone fruit.

The ranked order of residues of fluxapyroxad in cherries, peaches and plums from supervised trials according to GAP were: 0.23, 0.24, 0.26, 0.27, 0.28, 0.30, 0.31, 0.32, 0.33, 0.34, 0.37, 0.38, 0.43, 0.45, 0.49, 0.55, 0.55, 0.55, 0.56, 0.56, 0.57, 0.58, 0.59, 0.59, 0.63, 0.64, 0.82, 0.95, 1.10 and 1.87 mg/kg.

The ranked order of total residues in cherries, peaches and plums from supervised trials according to GAP were: 0.23, 0.24, 0.27, 0.30, 0.31, 0.33, 0.34, 0.35, 0.37, 0.38, 0.39, 0.45, 0.48, 0.49, 0.50, 0.55, 0.56, 0.58, 0.62, 0.63, 0.64, 0.66, 0.66, 0.72, 0.73, 0.78, 0.95, 1.13, 1.38 and 2.32 mg/kg.

The Meeting estimated maximum residue level, STMR and HR values for fluxapyroxad in stone fruits of 2, 0.525 and 2.3 mg/kg, respectively.

#### *Fruiting vegetables, other than Cucurbits*

Residue trials were conducted in tomatoes in the USA and Canada matching to the GAP of the USA for fruiting vegetables other than cucurbits (3 applications at 97–101 g ai/ha with a 7 day PHI). In addition two trials were carried out in cherry tomatoes in California according to the same USA GAP. Each trial was also carried out with 2 applications of fluxapyroxad to tomatoes. The highest residue observations, regardless of whether 2 or 3 applications of fluxapyroxad were made, will be considered for the purpose of estimating a maximum residue level.

The ranked order of fluxapyroxad residues in tomatoes from supervised trials according to the GAP were: 0.03, 0.04, 0.04, 0.05, 0.06, 0.07, 0.07, 0.07, 0.07, 0.08, 0.09, 0.11, 0.13, 0.27 and 0.44 mg/kg.

The total residues in tomatoes from supervised trials according to GAP, in ranked order were: 0.03, 0.04, 0.04, 0.05, 0.06, 0.07, 0.07, 0.07, 0.07, 0.08, 0.09, 0.11, 0.13, 0.27 and 0.44 mg/kg.

Residue trials were conducted in bell peppers in the USA and Canada according to the GAP of the USA for fruiting vegetables other than cucurbits (3 applications at 97–101 g ai/ha, 7 day PHI).

The ranked order of fluxapyroxad residues in bell peppers from supervised trials according to the GAP were: < 0.01, 0.01, 0.01, 0.02, 0.04, 0.09, 0.09 and 0.24 mg/kg.

The total residues in bell peppers from supervised trials according to GAP, in ranked order were: < 0.01, 0.01, 0.03, 0.03, 0.06, 0.15, 0.16 and 0.37 mg/kg.

Residue trials were conducted in chili peppers at two locations in the USA matching the critical GAP of the USA for fruiting vegetables other than cucurbits (3 applications at 97–101 g ai/ha, 7 day PHI).

The ranked order of fluxapyroxad residues in non-bell chili peppers from supervised trials according to the GAP were 0.02 and 0.30 mg/kg.

The total residues in non-bell chili peppers from supervised trials according to GAP, in ranked order were: 0.03 and 0.32 mg/kg.

The use pattern in the USA is for Fruiting vegetables (egg plant, ground cherry, pepino, pepper (all varieties), tomatillo and tomato). The Meeting noted that the USA and Canadian datasets matching GAP for tomatoes and peppers resulted in similar residues (Mann-Whitney U-Test). The Meeting decided to combine the data in estimating a maximum residue level and STMR for fruiting vegetables other than cucurbits (except mushrooms and sweet corn).

Residues of fluxapyroxad in tomatoes and peppers from supervised trials according to the GAP were: < 0.01, 0.01, 0.01, 0.02, 0.02, 0.03, 0.04, 0.04, 0.04, 0.05, 0.06, 0.07, 0.07, 0.07, 0.07, 0.08, 0.09, 0.09, 0.09, 0.11, 0.13, 0.24, 0.27, 0.30 and 0.44 mg/kg.

The total residues in tomatoes and peppers from supervised trials according to GAP, in ranked order were: < 0.01, 0.01, 0.03, 0.03, 0.03, 0.03, 0.04, 0.04, 0.05, 0.06, 0.06, 0.07, 0.07, 0.07, 0.07, 0.08, 0.09, 0.11, 0.13, 0.15, 0.16, 0.27, 0.32, 0.37 and 0.44 mg/kg.

The Meeting estimated maximum residue level, STMR and HR values for fluxapyroxad in fruiting vegetables other than cucurbits (except mushrooms and sweet corn) of 0.6, 0.07 and 0.44 mg/kg, respectively.

On the basis of the STMR and HR for fruiting vegetables other than cucurbits and the dehydration factor of 10, an STMR and HR were calculated as 0.70 and 4.4 mg/kg respectively for chilli peppers. Based on the estimated maximum residue level for fruiting vegetables other than cucurbits, the Meeting recommended a maximum residue level of 6 mg/kg for chili peppers (dry).

#### *Sweet corn (corn-on-the-cob)*

Residue trials were conducted in field corn (four trials) and sweet corn (five trials) at various locations in the USA and Canada matching the GAP in the USA (2 applications at 97–100 g ai/ha, 7 day for sweet corn). Samples were taken to measure residues in kernels + cobs with husks removed samples.

The ranked order of highest residues of fluxapyroxad (and total residues) in kernels + cobs with husks removed samples from supervised trials collected 5–7 days after the last application was < 0.01 (8) and 0.08 mg/kg.

The Meeting estimated maximum residue level, STMR and HR values for fluxapyroxad in sweet corn (corn-on-the-cob) of 0.15, 0.01 and 0.08 mg/kg respectively.

#### *Edible podded peas and beans*

Registered use patterns in legumes exist for edible podded legume vegetables and succulent shelled peas and beans.

Residue trials were conducted in peas generally according to the critical GAP in the USA for edible podded legumes (2 applications at 97–101 g ai/ha, 7 day PHI).

The ranked order of residues of fluxapyroxad in pea succulent seed with pods from supervised trials according to GAP were: 0.22, 0.23, 0.39, 0.65, 0.66, 0.73 and 0.74 mg/kg.

The ranked order of total residues in pea succulent seed with pods from supervised trials according to GAP were: 0.24, 0.24, 0.40, 0.65, 0.68, 0.73 and 0.74 mg/kg.

The Meeting estimated maximum residue level, STMR and HR values for fluxapyroxad in pea succulent seed with pods of 2, 0.65 and 0.74 mg/kg respectively.

The Meeting decided to extrapolate the maximum residue level and STMR and HR value for pea succulent seed with pods to Beans, except broad bean and soya bean.

Residue trials were conducted in soya beans generally according to the GAP in the USA for edible podded legumes (2 applications at 97–100 g ai/ha, 7 day PHI).

The ranked order of residues of fluxapyroxad in soya bean succulent seed with pods from supervised trials according to GAP was 0.10, 0.10, 0.11, 0.11, 0.18, 0.20, 0.21, 0.27, 0.29, 0.29, 0.46, 0.69 and 0.69 mg/kg.

The ranked order of total residues in soya bean succulent seed with pods from supervised trials according to GAP was 0.11, 0.12, 0.12, 0.13, 0.20, 0.21, 0.24, 0.28, 0.31, 0.34, 0.52, 0.71 and 0.74 mg/kg.

The Meeting estimated maximum residue level, STMR and HR values for fluxapyroxad in soya bean (young pods) of 1.5, 0.24 and 0.74 mg/kg, respectively.

*Legume vegetables – Edible peas and beans without pods*

Residue trials were conducted in peas at 8 locations in the USA and Canada (9 trials) generally according to the critical GAP in USA for succulent shelled peas and beans (2 applications at 97–101 g ai/ha, 7 day PHI).

Residues of fluxapyroxad in pea succulent seed without pods from supervised trials according to GAP were: < 0.01, 0.03, 0.03, 0.03, 0.03, 0.04 and 0.04 mg/kg.

The total residues in pea succulent seed without pods from supervised trials according to GAP, in ranked order, were: < 0.01, 0.03, 0.03, 0.03, 0.03, 0.04 and 0.04 mg/kg.

The Meeting estimated maximum residue level, STMR and HR values for fluxapyroxad in pea, shelled (succulent seed) of 0.09, 0.03 and 0.04 mg/kg, respectively.

The Meeting decided to extrapolate the maximum residue level and STMR and HR value for pea, shelled (succulent seed) to Beans, shelled.

Residue trials were conducted in soya beans in the USA and Canada matching the GAP in the USA for succulent shelled peas and beans (2 applications at 97–100 g ai/ha, 7 day PHI).

The ranked order of residues of fluxapyroxad in soya bean succulent seed without pods from supervised trials according to GAP were: < 0.01 (5), 0.01, 0.01, 0.02, 0.03, 0.04, 0.04, 0.11 and 0.37 mg/kg.

The total residues in soya bean succulent seed without pods from supervised trials according to GAP, in ranked order, were: < 0.01 (5), 0.01, 0.01, 0.03, 0.04, 0.04, 0.04, 0.12 and 0.37 mg/kg.

The Meeting estimated maximum residue level and STMR values for fluxapyroxad in soya beans (immature seeds) of 0.5, 0.01 and 0.37 mg/kg respectively.

*Pulses**Soya bean, dry*

Residue trials were conducted in soya bean in Brazil, in which four applications were made at 50 g ai/ha at 15 day intervals. Sampling was performed at a 14 day PHI in two trials and 0, 7, 14, 21 and 30 day PHI in two decline trials. The GAP in Brazil is up to 4 applications at 60 g ai/ha, 14 day PHI, 10–20 day interval between applications).

The residues of fluxapyroxad (and total residues) in soya bean seeds from supervised trials collected 14 days after the last application were: < 0.01 (4) and 0.03 mg/kg.

Residue trials were conducted in soya bean in the USA and Canada according to the GAP in the USA (2 applications at 97–101 g ai/ha, 21 day PHI).

The ranked order of residues of fluxapyroxad in dried soya bean seed from supervised trials collected 20–22 days after the last application were: < 0.01 (10), 0.01, 0.03, 0.04 and 0.10 mg/kg.

The ranked order of total residues in dried soya bean seed from supervised trials collected 20–22 days after the last application were: < 0.01 (10), 0.01, 0.03, 0.04 and 0.11 mg/kg.

Based on the USA and Canadian residues data the Meeting estimated maximum residue level and STMR values for fluxapyroxad in soya bean (dry) of 0.15 and 0.01 mg/kg, respectively.

*Dried shelled peas and beans*

Residue trials were conducted in peas (dry) in the USA and Canada according to the GAP in the USA (2 applications at 97–101 g ai/ha, 21 day PHI).

The ranked order of residues of fluxapyroxad (and total residues) in dried pea seed from supervised trials collected 21–22 days after the last application were: < 0.01, < 0.01, 0.02, 0.02, 0.04, 0.09, 0.11, 0.15 and 0.16 mg/kg.

The Meeting estimated maximum residue level and STMR values for fluxapyroxad in peas (dry) of 0.4 and 0.04 mg/kg respectively.

The Meeting decided to extrapolate the maximum residue level and STMR value for peas (dry) to lentils and chickpeas.

Residue trials were conducted in beans in the USA matching the GAP in the USA (2 applications at 195–200 g ai/ha, 21 day PHI).

The ranked order of residues of fluxapyroxad in bean seed from supervised trials approximating GAP were: 0.01, 0.01, 0.02, 0.03, 0.03, 0.04, 0.04, 0.05, 0.05, 0.07 and 0.21 mg/kg.

The ranked order of total residues in bean seed from supervised trials approximating GAP were: 0.01, 0.01, 0.02, 0.03, 0.03, 0.04, 0.05, 0.05, 0.06, 0.07 and 0.25 mg/kg.

The Meeting estimated maximum residue level and STMR values for fluxapyroxad in beans (dry) of 0.3 and 0.04 mg/kg, respectively.

#### *Potato*

Residue trials were conducted in potatoes in the USA and Canada according to the critical GAP in the USA (3 applications at 97–101 g ai/ha, 7 day PHI).

The ranked order of residues of fluxapyroxad (and total residues) in potatoes from supervised trials collected 7 days after the last application were: < 0.01 (17), 0.02 and 0.02 mg/kg.

The Meeting estimated maximum residue level, STMR and HR values for fluxapyroxad in potatoes of 0.03, 0.01 and 0.02 mg/kg respectively.

#### *Sugar beet*

Residue trials were conducted in sugar beet in the USA and Canada according to the critical GAP in USA (3 applications at 97–101 g ai/ha, 7 day PHI).

The ranked order of residues of fluxapyroxad (and total residues) in sugar beet roots from supervised trials collected 7 days after the last application were: 0.01, 0.01, 0.03, 0.03, 0.03, 0.04, 0.04, 0.04, 0.05, 0.05, 0.06 and 0.06 mg/kg.

The Meeting estimated maximum residue level, STMR and HR values for fluxapyroxad in sugar beet of 0.15, 0.04 and 0.06 mg/kg respectively.

#### *Oilseeds*

##### *Cotton seed*

Residue trials were conducted in cotton in the USA according to the critical GAP in USA (seed treatment application at 20 g ai/100 kg seed).

No detectable residues of fluxapyroxad or any metabolite were observed from supervised trials collected 155–193 days after the seed treatment application. In addition, two trials were carried out at 5× the GAP application rate in which no residues were detectable.

The Meeting estimated maximum residue level and STMR values for fluxapyroxad in cotton seed of 0.01\* and 0 mg/kg.

##### *Peanuts*

Residue trials were conducted in peanuts in the USA according to the critical GAP in USA (3 applications at 97 g ai/ha, 7 day PHI).

No residues of fluxapyroxad were observed in peanut nutmeat from supervised trials collected 7 days (3 days in one trial) after application. One decline trial in which residues observations were

taken at 0, 4, 7, 14 and 21 days PHI gave fluxapyroxad residues at < 0.01 mg/kg at all sampling intervals. Finite residues of metabolite M700F008 were observed at all sampling times in one trial.

Residues of fluxapyroxad in peanut nutmeat from supervised trials according to GAP were < 0.01 (12) mg/kg.

Total residues in peanut nutmeat from supervised trials according to GAP were: < 0.01 (11) and 0.08 mg/kg.

The Meeting estimated maximum residue level and STMR values for fluxapyroxad in peanut nutmeat of 0.01 and 0.01 mg/kg.

#### *Rape seed and sunflower seed*

Residues observed in oilseed rape and sunflowers were higher than those observed in cotton seed and peanuts and were therefore considered separately.

Residue trials were conducted in oilseed rape (canola) in the USA and Canada matching the GAP in the USA (2 applications at 97–101 g ai/ha, 21 day PHI).

The ranked order of residues of fluxapyroxad in rape seed from supervised trials according to GAP were: 0.02, 0.02, 0.04, 0.05, 0.09, 0.09, 0.12, 0.16, 0.19, 0.22 and 0.73 mg/kg.

The total residues in rape seed from supervised trials according to GAP were: 0.02, 0.02, 0.04, 0.05, 0.11, 0.11, 0.15, 0.18, 0.25, 0.27 and 0.83 mg/kg.

Residue trials were conducted in sunflower in the USA and Canada according to the GAP in the USA (2 applications at 97–101 g ai/ha, 21 day PHI).

The residues of fluxapyroxad (and total residues) in sunflower seed from supervised trials according to GAP, in ranked order, were: 0.02, 0.02, 0.05, 0.06, 0.09 and 0.11 mg/kg.

The use pattern in the USA is for oilseeds. The Meeting noted that the USA and Canadian datasets, matching GAP for rape seed and sunflower seed, resulted in similar residues (Mann-Whitney U-Test). The Meeting decided to combine the data for rape seed and sunflower seed to increase the dataset for the purposes of estimating a maximum residue level, STMR, HR and to make a recommendation for oilseeds.

The ranked order of residues of fluxapyroxad in rape seed and sunflower seed from supervised trials according to GAP were: 0.02, 0.02, 0.02, 0.02, 0.04, 0.05, 0.05, 0.06, 0.09, 0.09, 0.09, 0.11, 0.12, 0.16, 0.19, 0.22 and 0.73 mg/kg.

The ranked order of total residues in rape seed and sunflower seed from supervised trials according to GAP were: 0.02, 0.02, 0.02, 0.02, 0.04, 0.05, 0.05, 0.06, 0.09, 0.11, 0.11, 0.11, 0.15, 0.18, 0.25, 0.27 and 0.83 mg/kg.

The Meeting estimated maximum residue level and STMR values for fluxapyroxad in oilseeds (except peanuts and cotton) of 1.5 and 0.09 mg/kg, respectively.

#### *Cereals*

##### *Barley*

Residue trials were conducted in barley in Brazil matching the GAP in Brazil (2 applications at 60 g ai/ha, 30 day PHI, 15–20 day interval between applications).

The residues of fluxapyroxad in barley grain from supervised trials according to the GAP in Brazil were: 0.09, 0.14, 0.15 and 0.28 mg/kg.

The ranked order of total fluxapyroxad residues in barley grain from supervised trials according to the GAP of Brazil were: 0.09, 0.14, 0.15 and 0.30 mg/kg.

Residue trials were conducted in barley in various European countries (Germany, the Netherlands, France, the UK, Greece, Spain and Italy) in each of two growing seasons, according to

the GAP in Europe. (GAP in European countries is 2 applications at 125 g ai/ha, 35 day PHI (France) or in the United Kingdom not required if application is at or before GS 69). Trials were also run at a lower rate of application (77–90 g ai/ha). Residues data were collected at PHIs ranging from 29–63 days.

The ranked order of residues of fluxapyroxad in barley grain, from supervised trials in Europe collected 35–63 days after the last application, were: 0.02, 0.05, 0.08, 0.09, 0.09, 0.10, 0.10, 0.13, 0.15, 0.17, 0.18, 0.19, 0.23, 0.23, 0.24 and 0.41 mg/kg.

The ranked order of total residues in barley grain, from supervised trials in Europe collected 29–63 days after the last application, were: 0.02, 0.05, 0.08, 0.09, 0.09, 0.10, 0.10, 0.13, 0.16, 0.17, 0.18, 0.19, 0.23, 0.23, 0.24 and 0.45 mg/kg.

Residue trials were conducted in barley in Australia according to the GAP in Australia (2 applications at 62.5 g ai/ha).

The residues of fluxapyroxad (and total residues) in barley grain from supervised trials collected at harvest were 0.03 and 0.05 mg/kg.

Residue trials were conducted in barley in the USA and Canada according to the critical GAP in the USA (2 applications at 97–100 g ai/ha, 21 day PHI).

The residues of fluxapyroxad in barley grain from supervised trials approximating GAP, in ranked order, were: < 0.01, 0.39, 0.39, 0.41, 0.50, 0.52, 0.52, 0.54, 0.82, 0.87, 1.02 and 1.22 mg/kg.

The total residues in barley grain from supervised trials approximating US GAP were: < 0.01, 0.39, 0.41, 0.44, 0.51, 0.53, 0.54, 0.54, 0.84, 0.87, 1.02 and 1.26 mg/kg.

The data from the USA and Canada were used to estimate a maximum residue level and STMR for barley grain.

The Meeting estimated maximum residue level and STMR values for fluxapyroxad in barley grain of 2 and 0.535 mg/kg respectively.

### *Oats*

Residue trials were conducted in oats in Brazil according to the GAP in Brazil (2 applications at 60 g ai/ha, 30 day PHI, 15–20 day interval between applications).

The residues of fluxapyroxad and (total residues) in oat grain from supervised trials collected 30 days after the last application were < 0.01, < 0.01, 0.05 and 0.28 mg/kg.

The Meeting considered that there were insufficient data reflecting the GAP for fluxapyroxad on oats in Brazil to estimate an appropriate maximum residue level. In addition the GAP in Brazil is less critical than the GAP in the USA (2 applications at 97–100 g ai/ha, 21 day PHI).

The Meeting recognised that barley and oats share an identical GAP and normally show comparable residues. It was therefore decided to apply the maximum residue level and STMR recommended for fluxapyroxad on barley to oats (2 and 0.535 mg/kg respectively).

### *Maize*

Residue trials were conducted in maize in Brazil according to the GAP in Brazil (2 applications at 60 g ai/ha, 45 day PHI, 15–20 days between applications).

No detectable residues of fluxapyroxad or metabolites in corn grain were observed in samples from supervised trials collected 45 days after the last application.

Residue trials were conducted in maize in the USA and Canada according to the critical GAP in USA (2 applications at 97–100 g ai/ha, 21 day PHI).

No residues of fluxapyroxad or the metabolites M700F008 or M700F048 were detected in corn grain (maize) from supervised trials approximating GAP.

The Meeting estimated maximum residue level and STMR values for fluxapyroxad in maize (corn grain) of 0.01\* and 0.01 mg/kg respectively.

#### *Rice*

Residue trials were provided for rice but none of the submitted labels had a use pattern. As no GAP is available it was not possible to estimate a maximum residue level for the use of fluxapyroxad on rice.

#### *Sorghum*

Residue trials were conducted in sorghum in the USA in which two applications were made at 97–104 g ai/ha (6–7 day retreatment interval) with a 20–23 day PHI. It was not possible to establish a maximum residue level based on any label use of fluxapyroxad on sorghum as the submitted residue trial data did not correspond to any label GAP.

#### *Wheat and triticale*

Residue trials were conducted in wheat in Brazil, in which three applications were made at 60 g ai/ha at 15 day intervals. Sampling was performed at a 30 day PHI in two trials and 0, 7, 15, 30 and 45 day PHI in two decline trials. The GAP in Brazil is 3 or 4 applications at 60 g ai/ha, 30 day PHI, 15–20 day interval between applications).

The ranked order of residues of fluxapyroxad (and total residues) in wheat grain from supervised trials collected 30 days after the last application were: 0.02, 0.03, 0.04 and 0.08 mg/kg.

Residue trials were conducted in wheat or triticale in various countries in Europe (Germany, the UK, France, Spain and Italy) in each of two growing seasons, matching a GAP in Europe. (GAP in various European countries is 2 applications at 125 g ai/ha, 35 day PHI (France) or in the United Kingdom no PHI required if application is at or before GS 69). Residues data were collected at PHIs ranging from 34–60 days.

The ranked order of residues of fluxapyroxad (and total residues) in wheat or triticale (t) grain, from supervised trials in Europe collected 34–60 days after the last application, were: < 0.01 (t), 0.01, 0.01, 0.01, 0.01, 0.02 (t), 0.02 (t), 0.02, 0.02, 0.03 (t), 0.03, 0.03, 0.04, 0.04, 0.05 and 0.06 mg/kg.

Residue trials were conducted in wheat at four locations in Australia in which 2 applications were made at 61–62 g ai/ha or 122–124 g ai/ha. There is no corresponding GAP.

Residue trials were conducted in wheat in the USA and Canada according to the GAP in the USA (2 applications at 97–100 g ai/ha, 21 day PHI). The residues of fluxapyroxad in wheat grain from supervised trials corresponding to GAP, in ranked order, were: 0.03, 0.03, 0.05, 0.05, 0.05, 0.05, 0.06, 0.06, 0.06, 0.07, 0.08, 0.09, 0.10, 0.11, 0.11, 0.12, 0.12, 0.13, 0.19 and 0.21 mg/kg.

The ranked order of total residues in wheat grain from supervised trials corresponding to GAP were: 0.03, 0.03, 0.05, 0.05, 0.05, 0.06, 0.06, 0.06, 0.07, 0.08, 0.09, 0.09, 0.11, 0.11, 0.12, 0.13, 0.13, 0.15, 0.19 and 0.21 mg/kg.

The data from the USA and Canada were used to estimate a maximum residue level and STMR for wheat grain.

The Meeting estimated maximum residue level and STMR values for fluxapyroxad in wheat grain of 0.3 and 0.085 mg/kg respectively.

The Meeting recognised that wheat, rye and triticale share an identical GAP and normally show comparable residues. The Meeting agreed to apply the maximum residue level and STMR recommended for fluxapyroxad from wheat to rye and triticale.

#### *Animal feeds*

The Meeting received supervised trials data for a variety of animal feeds (pea vines and hay, soya bean forage and hay, sugar beet tops, barley forage, straw, hay, whole plant without roots, ears and

rest of plant without roots, corn forage and stover, rice straw, sorghum forage and stover, wheat forage, straw, hay, whole plant without roots, ears and rest of plant without roots, cotton gin by-products and peanut hay).

Moisture content percentages for animal feeds have been determined for selected samples (usually control samples). Where available these values have been used to calculate dry weight residues values from residues observations from the same trials, which were then used in calculation of suitable maximum residue levels of the animal feeds. Where these values were not determined, the values from the FAO Manual on the Submission and Evaluation of Pesticides Residues Data for the feeds, has been used to convert wet weight residues values to dry weight residues values.

#### *Pea vines*

Residue trials were conducted in peas in the USA and Canada according to the GAP in USA (2 applications at 97–101 g ai/ha, 7 day PHI and a 7 day PHI for pea vines).

The ranked order of total residues in pea vines (wet weight) from supervised trials collected 6–8 days after the last application were: 0.83, 1.62, 1.76, 2.85, 2.90, 3.23 and 3.35 mg/kg.

The ranked order of total residues in pea vines (dry weight) from supervised trials collected 6–8 days after the last application were: 4.69, 6.78, 11, 11.6, 12.9, 14.8, 22.9 mg/kg.

The Meeting did not estimate a maximum residue level for pea vines as it is understood the commodity is not normally traded internationally. The Meeting estimated median and highest residues values for fluxapyroxad in pea vines of 12 and 23 mg/kg respectively.

#### *Pea hay*

Residue trials were conducted in peas in the USA and Canada according to the GAP in the USA (2 applications at 97–101 g ai/ha, 7 day PHI and a 7 day PHI for pea hay).

The residues of fluxapyroxad in pea hay (fresh weight) from supervised trials collected 6–8 days after the last application, ranked order were: 4.53, 6.01, 7.20, 9.18, 9.49, 10.8 and 12.1 mg/kg.

The residues of fluxapyroxad in pea hay (dry weight) from supervised trials collected 6–8 days after the last application, ranked order were: 5.21, 6.87, 10.8, 11.1, 11.3, 16.0 and 17.4 mg/kg.

The total residues in pea hay (fresh weight) from supervised trials collected 6–8 days after the last application, in ranked order were: 4.61, 6.12, 7.22, 9.38, 9.56, 10.8 and 12.2 mg/kg.

The total residues in pea hay (dry weight) from supervised trials collected 6–8 days after the last application, ranked order were: 5.30, 6.99, 11.0, 11.2, 11.3, 16.2 and 17.4 mg/kg.

The Meeting estimated maximum residue level, median and highest residues values for fluxapyroxad in pea hay of 40, 11 and 17 mg/kg respectively.

#### *Soya bean forage*

Residue trials were conducted in soya beans in the USA and Canada according to the GAP in the USA (2 applications at 97–101 g ai/ha, 7 day PHI and a 7 day PHI for bean forage).

The ranked order of total residues in soya bean forage (fresh weight) from supervised trials collected 6–8 days after the last application were: 0.87, 0.96, 1.18, 1.20, 1.70, 1.98, 2.24, 2.25, 2.31, 2.43, 2.95, 3.31 and 6.56 mg/kg.

The ranked order of total residues in soya bean forage (dry weight) from supervised trials collected 6–8 days after the last application were: 3.88, 4.90, 5.31, 5.39, 6.42, 7.70, 7.71, 7.86, 8.01, 8.78, 11.0, 12.4 and 25.9 mg/kg.

Meeting did not estimate a maximum residue level for soya bean forage as it is understood the commodity is not traded internationally. The Meeting estimated median and highest residues values for fluxapyroxad in soya bean forage of 7.7 and 26 mg/kg.

*Soya bean hay*

Residue trials were conducted in soya beans at 14 locations in the USA and Canada (15 trials) according to the critical GAP in USA (2 applications at 97–101 g ai/ha, 7 day PHI and a 7 day PHI for bean hay).

The ranked order of residues of fluxapyroxad in soya bean hay (fresh weight) from supervised trials collected 6–8 days after the last application were: 0.54, 1.79, 2.33, 3.60, 3.64, 4.39, 4.60, 4.79, 5.20, 5.87, 6.32, 6.44 and 16.25 mg/kg.

The ranked order of residues of fluxapyroxad in soya bean hay (dry weight) from supervised trials collected 6–8 days after the last application were: 1.36, 3.94, 4.57, 5.21, 5.91, 7.27, 7.38, 7.39, 7.63, 8.58, 9.09, 9.77 and 19.6 mg/kg.

The ranked order of total residues in soya bean hay (fresh weight) from supervised trials collected 6–8 days after the last application were: 0.56, 1.87, 2.38, 3.73, 3.79, 4.49, 4.67, 4.83, 5.30, 5.99, 6.51, 6.60 and 16.45 mg/kg.

The ranked order of total residues in soya bean hay (dry weight) from supervised trials collected 6–8 days after the last application were: 1.41, 4.77, 4.15, 5.32, 5.96, 7.43, 7.58, 7.61, 7.79, 8.80, 9.27, 9.92 and 19.9 mg/kg.

The Meeting estimated maximum residue level, median and highest residues values for fluxapyroxad in soya bean fodder of 30, 7.6 and 20 mg/kg respectively.

*Sugar beet tops*

Residue trials were conducted in sugar beet in the USA and Canada according to the critical GAP in USA (3 applications at 97–101 g ai/ha, 7 day PHI for leaves, roots and tops).

The ranked order of total residues in sugar beet tops (fresh weight) from supervised trials collected 7–8 days after the last application were: 0.76, 0.84, 1.18, 1.84, 2.11, 2.17, 2.59, 3.01, 3.43, 3.84, 3.88 mg/kg.

The ranked order of total residues of fluxapyroxad in sugar beet tops (dry weight) from supervised trials collected 7–8 days after the last application were: 3.30, 3.65, 5.13, 8.00, 9.17, 9.43, 11.3, 13.1, 14.9, 16.7 and 16.9 mg/kg.

Meeting did not estimate a maximum residue level for the commodity as it is not traded internationally. The Meeting estimated median and highest residues values for fluxapyroxad in sugar beet tops of 9.4 and 17 mg/kg respectively.

*Maize forage and stover*

Residue trials were conducted in maize (corn) in the USA and Canada according to the critical GAP in USA (2 applications at 97–100 g ai/ha, harvest 21 day PHI, forage 7 days).

The ranked order of total residues of fluxapyroxad in maize forage (fresh weight) from supervised trials collected 6–8 days after the last application were: 0.23, 0.36, 0.42, 0.48, 0.68, 0.69, 0.73, 0.81, 0.88, 0.88, 0.95, 1.07 and 1.38 mg/kg.

The ranked order of total residues of fluxapyroxad in maize forage (dry weight) from supervised trials collected 6–8 days after the last application were: 0.84, 1.42, 1.62, 1.80, 2.10, 2.74, 2.82, 3.02, 3.08, 3.23, 3.45, 3.59 and 3.62 mg/kg.

Meeting did not estimate a maximum residue level for the commodity as it is not traded internationally. The Meeting estimated median and highest residues values for fluxapyroxad in maize forage of 2.8 and 3.6 mg/kg respectively.

The residues of fluxapyroxad in maize stover (fresh weight) from supervised trials collected 20–22 days after the last application, in ranked order, were: 0.23, 0.39, 0.59, 0.60, 0.93, 0.96, 1.43, 1.45, 2.12, 2.13, 2.21, 2.22 and 3.57 mg/kg.

The residues of fluxapyroxad in maize stover (dry weight) from supervised trials collected 20–22 days after the last application, in ranked order, were: 0.80, 0.96, 1.12, 1.70, 2.30, 2.65, 3.57, 4.37, 4.45, 4.64, 5.04, 5.89 and 6.44 mg/kg.

The ranked order of total residues of fluxapyroxad in maize stover (wet weight) from supervised trials collected 20–22 days after the last application were: 0.25, 0.39, 0.62, 0.63, 0.98, 1.01, 1.45, 1.48, 2.17, 2.19, 2.25, 2.25 and 3.64 mg/kg.

The ranked order of total residues of fluxapyroxad in maize stover (dry weight) from supervised trials collected 20–22 days after the last application were: 0.87, 0.96, 1.18, 1.81, 2.42, 2.74, 3.62, 4.50, 4.54, 4.71, 5.15, 6.00 and 6.57 mg/kg.

The Meeting estimated maximum residue level, median and highest residues values for fluxapyroxad in maize fodder of 15, 3.6 and 6.6 mg/kg respectively.

#### *Rice straw*

Residue trials were provided for rice but none of the submitted labels have a use pattern.

#### *Sorghum forage and hay*

Residue trials were conducted in sorghum at 9 locations in the USA in which two applications were made at 97–104 g ai/ha (6–7 day retreatment interval). Forage data was collected at a 7 day PHI and stover data at a 20 to 23 day PHI.

It is not possible to estimate a maximum residue level for sorghum as the submitted data did not correspond to any label GAP.

#### *Barley and wheat forage, hay and straw*

Barley animal feed data (whole plant no roots, straw, ears, rest of plants without roots) were collected in the trials carried out in various European countries (Germany, the Netherlands, France, the UK, Greece, Spain and Italy) in the 2008 and 2009 growing seasons (2 applications at either 77–90 g ai/ha or 121–135 g ai/ha) which approximates the UK GAP (2 applications at 125 g ai/ha – used up to and including flowering GS 69 with no restrictions on animal feeding).

The ranked order of total residues in barley rest of plant no roots (forage) samples collected 27–48 days after the second application (fresh weight) at the GAP application rate were: 0.11, 0.13, 0.17, 0.22, 0.24, 0.25, 0.27, 0.50, 0.70, 0.78, 0.97 and 1.33 mg/kg.

The ranked order of total residues in barley rest of plant no roots (forage) dry weight samples after applications at the higher (GAP) rate were: 0.37, 0.43, 0.57, 0.73, 0.80, 0.83, 0.90, 1.67, 2.33, 2.6, 3.23 and 4.43 mg/kg.

Residue trials were conducted in barley at two locations in Australia in which 2 applications were made at 61–62 g ai/ha or 122–123 g ai/ha. There is a 14 day restriction on grazing or using for stock feed. Forage data was nominally collected at 0, 7 and 14 days after the first application and immediately before the second application. In one trial forage was collected at 14 days after the first application and at -0, 0, 8 and 15 days after the second application.

The ranked order of total residues in barley forage (dry weight) from supervised trials collected at 14/15 days only in each trial was 2.46 (after 1<sup>st</sup> application) and 3.39 (after 1<sup>st</sup> application) mg/kg for the trials at the lower rate.

The residues of fluxapyroxad in barley straw (dry weight) from supervised trials collected at harvest were 1.07 and 2.57 mg/kg for the trials at the lower rate.

The total residues in barley straw (dry weight) from supervised trials collected at harvest were 1.13 and 2.67 mg/kg for the trials at the lower rate.

Residue trials were conducted in barley in the USA and Canada matching the critical GAP in the USA (2 applications at 97–100 g ai/ha, harvest 21 day PHI, barley hay or green chopped wheat 7 days). Barley hay and straw samples were obtained at six of the trial sites.

Barley hay was obtained for samples collected at a 20–26 day PHI except for one trial (RCN R080746) at which sampling occurred at 20, 21, 25, 27 and 31 day PHIs. As the GAP for hay is a 7 day PHI, these data could be utilised to estimate an appropriate maximum residue level for fluxapyroxad in barley hay.

Barley straw was obtained for samples collected at a 20–26 day PHI except for one trial (RCN R080746) at which sampling occurred at 20, 21, 25, 27 and 31 day PHIs.

The residues of fluxapyroxad in barley straw (fresh weight) from supervised trials collected 20–22 days after the last application, in ranked order were: 0.72, 3.17, 3.45, 3.89, 5.43 and 9.52 mg/kg.

The residues of fluxapyroxad in barley straw (dry weight) from supervised trials collected 20–22 days after the last application, in ranked order were: 1.61, 5.78, 6.73, 7.79, 9.92 and 14.1 mg/kg.

The total residues in barley straw (fresh weight) from supervised trials collected 20–22 days after the last application, in ranked order were: 0.84, 3.48, 3.60, 3.96, 5.49 and 9.82 mg/kg.

The total residues in barley straw (dry weight) from supervised trials collected 20–22 days after the last application, ranked order were: 1.88, 5.88, 7.02, 8.55, 10.0 and 14.6 mg/kg.

Wheat animal feed data (whole plant no roots, straw, ears, rest of plants without roots) were collected in the trials carried out in Europe (Germany, the UK, France, Spain and Italy) in the 2008 and 2009 growing seasons (2 applications at 116–135 g ai/ha) which approximated the UK GAP (2 applications at 125 g ai/ha and use up to GS 67). The labels for European GAP have no restrictions on animal feeding.

The ranked order of total residues in wheat rest of plant no roots (forage) samples collected 34–49 days after the second application (wet weight) at the GAP application rate were: 0.22, 0.25, 0.33, 0.39, 0.53, 0.61, 0.64, 0.77, 1.23, 2.56 and 5.05 mg/kg.

The total residues in wheat rest of plant no roots (forage) dry weight samples after applications at the higher (GAP) rate, in ranked order were: 0.88, 1.00, 1.32, 1.56, 2.12, 2.44, 2.56, 3.08, 4.92, 10.2 and 20.2 mg/kg.

The ranked order of residues of fluxapyroxad in wheat straw samples collected 34–60 days PHI (wet weight - highest value taken in each trial when readings at various PHIs) were: 0.32, 0.44, 0.46, 0.49, 0.55, 0.55, 0.64, 1.00, 1.00, 1.02, 1.19, 1.55, 1.80, 2.58, 2.78 and 6.05 mg/kg.

The ranked order of residues of fluxapyroxad in wheat straw samples collected 34–60 days PHI (dry weight - highest value taken in each trial when readings at various PHI) were: 0.36, 0.50, 0.52, 0.56, 0.63, 0.63, 0.73, 1.14, 1.14, 1.16, 1.35, 1.76, 2.05, 2.93, 3.16 and 6.88 mg/kg.

The ranked order of total residues in wheat straw samples collected 34–60 days PHI (fresh weight – highest value taken in each trial when readings at various PHIs) were: 0.35, 0.51, 0.53, 0.56, 0.58, 0.61, 0.68, 1.08, 1.08, 1.12, 1.31, 1.62, 1.96, 2.85, 2.92 and 6.24 mg/kg.

The ranked order of total residues of wheat straw samples collected 34–49 days PHI (dry weight - highest value taken in each trial when readings at various PHIs) were: 0.39, 0.58, 0.59, 0.64, 0.66, 0.69, 0.77, 1.23, 1.23, 1.27, 1.49, 1.8, 2.23, 3.24, 3.32 and 7.09 mg/kg.

Residue trials were conducted in wheat at four locations in Australia in which 2 applications were made at 61–62 g ai/ha or 122–124 g ai/ha. There is no corresponding GAP.

Residue trials were conducted in wheat at 22 locations in the USA and Canada (25 trials) generally according to the GAP in USA (2 applications at 97–100 g ai/ha, harvest 21 day PHI, wheat hay or green chopped wheat 7 days). Observations from trials, in which, sampling took place at 25 and 27 days PHI, were not considered for the purposes of estimating a maximum residue level for straw.

The ranked order of total residues of fluxapyroxad in wheat forage (fresh weight) from supervised trials collected 6–8 days after the last application were: 0.10, 0.19, 0.21, 0.25, 0.32, 0.36, 0.57, 0.60, 0.64, 0.81, 0.85, 0.89, 0.95, 0.99, 1.19, 1.23, 1.40, 3.45, 3.60, 3.71, 4.80 and 9.27 mg/kg.

The ranked order of total residues of fluxapyroxad in wheat forage (dry weight) from supervised trials collected 6–8 days after the last application were: 0.64, 0.99, 1.09, 1.25, 1.84, 2.37, 3.33, 3.37, 3.39, 3.64, 3.73, 3.90, 4.52, 4.76, 5.34, 5.65, 6.26, 9.28, 12.1, 17.9, 19.4 and 40.66 mg/kg.

There is no necessity to estimate a maximum residue level for forage as it is not traded. Although the UK GAP is the critical GAP (application rates higher and no restrictions on animal feeding), on the basis that the residues are substantially higher in the USA trials, the highest and median residues will be taken from the USA trials. The Meeting estimated median and highest residues values for fluxapyroxad in wheat forage of 3.8 and 41 mg/kg.

The ranked order of fluxapyroxad in wheat straw (wet weight) from supervised trials collected 20–22 days after the last application were: 0.75, 0.78, 0.80, 0.85, 0.97, 0.99, 1.07, 1.08, 1.24, 1.92, 2.29, 2.56, 3.08, 3.40, 4.61, 5.14, 6.39, 6.53, 7.16 and 7.29 mg/kg.

The ranked order of fluxapyroxad in wheat straw (dry weight) from supervised trials collected 20–22 days after the last application were: 1.24, 1.40, 1.46, 1.57, 1.61, 1.66, 1.72, 1.90, 2.07, 3.40, 4.01, 4.12, 4.28, 4.36, 5.26, 5.60, 7.33, 8.35, 8.47 and 10.1 mg/kg.

The ranked order of total residues of fluxapyroxad in wheat straw (wet weight) from supervised trials collected 20–22 days after the last application were: 0.91, 0.97, 1.00, 1.05, 1.09, 1.21, 1.25, 1.29, 1.65, 2.09, 2.79, 2.87, 3.59, 4.13, 4.79, 5.40, 6.41, 7.03, 7.61 and 8.00 mg/kg.

The ranked order of total residues of fluxapyroxad in wheat straw (dry weight) from supervised trials collected 20–22 days after the last application were: 1.25, 1.80, 1.83, 1.86, 1.89, 1.90, 2.31, 2.40, 2.75, 3.70, 4.37, 4.52, 5.16, 5.47, 5.85, 5.89, 7.35, 8.88, 9.29 and 10.8 mg/kg.

The ranked order of residues of fluxapyroxad in wheat hay (wet weight) from supervised trials collected 6–8 days after the last application were: 0.33, 0.37, 0.51, 0.51, 1.38, 1.42, 2.09, 2.12, 2.24, 2.58, 2.64, 2.72, 2.74, 2.86, 2.87, 3.29, 4.80, 5.75, 6.68, 5.97, 7.46 and 9.60 mg/kg.

The ranked order of residues of fluxapyroxad in wheat hay (dry weight) from supervised trials collected 6–8 days after the last application were: 0.65, 0.69, 0.76, 0.90, 2.58, 2.66, 3.00, 3.03, 3.33, 3.53, 3.73, 4.18, 4.61, 4.79, 7.21, 8.48, 8.59, 9.42, 9.83, 13.8, 15.7 and 17.6 mg/kg.

The ranked order of total residues of fluxapyroxad in wheat hay (wet weight) from supervised trials collected 6–8 days after the last application were: 0.35, 0.42, 0.54, 0.56, 1.42, 1.53, 2.19, 2.34, 2.35, 2.74, 2.74, 2.88, 2.97, 2.98, 3.13, 3.41, 4.99, 5.91, 6.17, 7.01, 7.56 and 9.93 mg/kg.

The ranked order of total residues of fluxapyroxad in wheat hay (dry weight) from supervised trials collected 6–8 days after the last application were: 0.68, 0.78, 0.81, 0.99, 2.78, 2.95, 3.12, 3.14, 3.48, 3.75, 3.86, 4.34, 4.84, 4.98, 7.49, 8.59, 9.01, 9.73, 10.1, 15.1, 17.2 and 18.3 mg/kg.

The Meeting used the wheat hay data to estimate maximum residue level, median and highest residues values for fluxapyroxad in wheat straw and fodder (dry) of 30, 4.1 and 18 mg/kg.

In practical conditions it is difficult to distinguish between forage and fodder of various cereal grains. The Meeting decided to use the wheat forage data to establish dietary parameters for barley. The Meeting estimated median and highest residues values for fluxapyroxad in wheat forage of 3.8 and 41 mg/kg and will extrapolate these values to barley forage. Similarly the wheat straw and fodder (dry) maximum residue level, STMR and HR will be extrapolated to barley.

The wheat and barley straw and fodder (dry) maximum residue level, median and highest residues and wheat and barley forage median and highest residues are also recommended for oats, rye and triticale as residues in these crops are not expected to significantly differ.

*Cotton gin by-products (gin trash)*

Residue trials were conducted in cotton at seven locations in the USA according to the critical GAP in USA (seed treatment application at 20 g ai/100 kg seed). No residues were detected in any sample. In addition two trials were carried out at 5× the GAP application rate in which no residues were detectable.

The Meeting estimated a maximum residue level for fluxapyroxad on cotton gin by-products of 0.01\* mg/kg. The median residues are 0 mg/kg.

*Peanut hay*

Residue trials were conducted at 12 different sites in the USA, matching the US GAP (3 applications at 97 g ai/ha – maximum of 2 consecutive with a 7 day PHI). However the following restraint applies, “DO NOT graze or harvest for forage use”.

Although residues data for peanut hay were submitted (sampling at 7, 14 and 21 days in 10 trials and sampling at either 3, 10 and 17 days or 0, 4, 7, 14 and 21 days in the other two trials, these data were not used to estimate a maximum residue level, as there is no GAP on which to base a recommendation.

***Rotational crops***

Residues of fluxapyroxad are persistent in soil and may be taken up by following crops. In the USA the total seasonal application rate for crops apart from pome fruit, stone fruit and fruiting vegetables other than cucurbits is 200 g ai/ha. In Europe the total seasonal rate for cereals is 250 g ai/ha. In Australia the total seasonal rate for barley is 125 g ai/ha and in Brazil the total seasonal rate for cereals is up to 240 g ai/ha.

Field rotational crop studies conducted in the USA (one study) and Europe (four studies) have been made available to this Meeting.

Plots received either 2 applications to bare soil at 99–101 g ai/ha (198 g ai/season) or 1 application at 250 g ai/ha. Carrot/radish, potato and sugar beet, cauliflower/broccoli and lettuce, corn and wheat and canola and sunflower, were planted at various plant back intervals from 29–30 to 365 DALA). Another study was conducted in Germany and the UK where applications was made twice to barley (Germany) or wheat (UK) at a single rate equivalent to 125 g ai/ha. After harvest of the cereals, the rotational crops lettuce, radish and carrots were cultivated as secondary crops.

In general, residues of fluxapyroxad were observed more frequently than M700F008, while residues of M700F048 were rarely observed.

If the highest field rate is considered (250 g ai/ha) and a DT<sub>50</sub> of 370 days (the highest in the field), then a plateau of residues in the soil will be reached after approximately 5 years. If it is considered that 50% of this residue is captured by plants, then the rotational crop studies can be considered to be reflective of practical conditions.

The Meeting considered that residues of fluxapyroxad may occur in succeeding crops but at insignificant levels in most crops, apart for cereal straw. Therefore, the Meeting considered it unnecessary to change or estimate new maximum residue levels to account for any uptake of residues of fluxapyroxad *via* the roots. For cereal straw, for which there is the possibility of an additional uptake of up to 0.6 mg/kg, it is considered that this is not significant in comparison with the residues in cereal straw from direct foliar treatment.

***Fate of residues during processing***

The Meeting received processing studies for apples, plums, tomatoes, soya bean, potatoes, sugar beet, barley, wheat, corn, sorghum, rice, peanuts, rape seed, sunflower seed and cotton seed. The table summarizes STMR-P and HR-P values calculated on the determined processing factors. In addition the following maximum residue levels were proposed.

Plums - Based on the processing factor of 2.81 for dried prunes and the plum HR of 0.95 mg/kg the Meeting estimated a maximum residue level for fluxapyroxad in prunes of 5 mg/kg.

Soya beans - based on the processing factor of 1.15 for soya bean hulls and the soya bean (dry) maximum residue level estimate of 0.15, the Meeting recommended a maximum residue level for fluxapyroxad in soya bean hulls of 0.3 mg/kg.

Wheat - Based on the processing factor of 2.90 for wheat bran and the wheat grain maximum residue level estimate of 0.3 mg/kg the Meeting recommended a maximum residue level for fluxapyroxad in wheat bran of 1 mg/kg.

Barley - Based on the processing factor of 1.89 for barley bran and the barley grain maximum residue level estimate of 2 mg/kg, the calculated expected highest residues in barley bran are 3.78 mg/kg. The Meeting recommended a maximum residue level for fluxapyroxad in barley bran of 4 mg/kg.

The processing (or transfer) factors derived from the processing studies and the resulting recommendations for STMR-Ps, HR-Ps, and/or maximum residue levels are summarized in the table below.

Processing (Transfer) Factors from the Processing of Raw Agricultural Commodities (RACs) with Field-incurred residues from foliar treatment with fluxapyroxad

| RAC            | Processed Commodity       | Processing Factor | RAC Maximum residue level | Processed Commodity Maximum residue level | RAC STMR | Processed Commodity STMR-P | RAC HR | Processed Commodity HR-P |
|----------------|---------------------------|-------------------|---------------------------|-------------------------------------------|----------|----------------------------|--------|--------------------------|
| Apple          | Juice                     | 0.21              | 0.9                       | –                                         | 0.26     | 0.05                       | 0.37   | 0.08                     |
|                | Pomace, wet               | <b>4.60</b>       |                           | –                                         |          | 1.20                       |        | 1.70                     |
|                | Apple sauce               | 0.24              |                           | –                                         |          | 0.06                       |        | 0.09                     |
|                | Canned apples             | 0.22              |                           | –                                         |          | 0.06                       |        | 0.08                     |
|                | Dried apples              | 0.54              |                           | –                                         |          | 0.14                       |        | 0.20                     |
| Plum           | Washed plums              | 0.77              | 2                         | –                                         | 0.44     | 0.34                       | 0.95   | 0.73                     |
|                | Puree                     | 0.83              |                           | –                                         |          | 0.37                       |        | 0.79                     |
|                | Jam                       | 0.41              |                           | –                                         |          | 0.18                       |        | 0.39                     |
|                | Dried Prunes              | <b>2.81</b>       |                           | <b>5</b>                                  |          | 1.23                       |        | 2.66                     |
| Tomatoes       | Canned tomatoes           | 0.19              | 0.6                       | –                                         | 0.07     | 0.013                      | 0.44   | 0.08                     |
|                | Paste                     | 0.73              |                           | –                                         |          | 0.051                      |        | 0.32                     |
|                | Puree                     | 0.37              |                           | –                                         |          | 0.026                      |        | 0.16                     |
|                | Raw juice                 | 0.18              |                           | –                                         |          | 0.013                      |        | 0.08                     |
|                | Tomato peel               | <b>2.37</b>       |                           | –                                         |          | 0.17                       |        | 1.04                     |
|                | Pomace, wet               | <b>3.40</b>       |                           | –                                         |          | 0.24                       |        | 1.50                     |
| Soya bean seed | Flour                     | 0.50              | 0.15                      | <b>0.3</b>                                | 0.01     | 0.005                      | 0.11   | 0.055                    |
|                | Hulls                     | 1.15              |                           | –                                         |          | 0.012                      |        | 0.13                     |
|                | Meal                      | 0.50              |                           | –                                         |          | 0.005                      |        | 0.055                    |
|                | Miso                      | 0.50              |                           | –                                         |          | 0.005                      |        | 0.055                    |
|                | Refined oil               | 0.55              |                           | –                                         |          | 0.055                      |        | 0.061                    |
|                | Soy milk                  | 0.50              |                           | –                                         |          | 0.005                      |        | 0.055                    |
|                | Soy sauce                 | 0.50              |                           | –                                         |          | 0.005                      |        | 0.055                    |
|                | Tofu                      | 0.50              |                           | –                                         |          | 0.005                      |        | 0.055                    |
|                | Aspirated grain fractions | <b>158</b>        |                           |                                           |          | 1.58                       |        | 17.38                    |

| RAC         | Processed Commodity                   | Processing Factor | RAC Maximum residue level | Processed Commodity Maximum residue level | RAC STMR | Processed Commodity STMR-P | RAC HR | Processed Commodity HR-P |
|-------------|---------------------------------------|-------------------|---------------------------|-------------------------------------------|----------|----------------------------|--------|--------------------------|
| Potato      | Granules/flakes                       | 0.5               | 0.03                      | —                                         | 0.01     | 0.005                      | 0.02   | 0.01                     |
|             | Chips                                 | 0.5               |                           | —                                         |          | 0.005                      |        | 0.01                     |
|             | Peel, wet                             | <b>5.0</b>        |                           | —                                         |          | 0.05                       |        | 0.1                      |
|             | Peeled potatoes                       | 0.5               |                           | —                                         |          | 0.005                      |        | 0.01                     |
|             | Boiled potatoes (unpeeled)            | 0.5               |                           | —                                         |          | 0.005                      |        | 0.01                     |
|             | Microwave, boiled potatoes (unpeeled) | 0.5               |                           | —                                         |          | 0.005                      |        | 0.01                     |
|             | Baked potato (unpeeled)               | 0.5               |                           | —                                         |          | 0.005                      |        | 0.01                     |
|             | Fried potato (unpeeled)               | 0.5               |                           | —                                         |          | 0.005                      |        | 0.01                     |
|             | Process waste                         | 0.5               |                           | —                                         |          | 0.005                      |        | 0.01                     |
|             | Dried pulp                            | <b>7.0</b>        |                           | —                                         |          | 0.07                       |        | 0.14                     |
| Sugar beet  | Refined sugar                         | 0.17              | 0.15                      | —                                         | 0.04     | 0.007                      | 0.06   | 0.010                    |
|             | Dried pulp                            | <b>1.75</b>       |                           | —                                         |          | 0.07                       |        | 0.11                     |
|             | Molasses                              | 0.80              |                           | —                                         |          | 0.032                      |        | 0.048                    |
|             | Thick juice                           | 0.75              |                           | —                                         |          | 0.03                       |        | 0.045                    |
|             | Ensiled pulp                          | 0.37              |                           | —                                         |          | 0.015                      |        | 0.022                    |
| Wheat       | Bran                                  | <b>2.90</b>       | 0.3                       | <b>1</b>                                  | 0.085    | 0.25                       | 0.21   | 0.61                     |
|             | Flour                                 | 0.16              |                           | —                                         |          | 0.014                      |        | 0.03                     |
|             | Middlings                             | 0.36              |                           | —                                         |          | 0.031                      |        | 0.076                    |
|             | Shorts                                | 0.50              |                           | —                                         |          | 0.043                      |        | 0.11                     |
|             | Germ                                  | 1.22              |                           | —                                         |          | 0.10                       |        | 0.26                     |
|             | Bread (white)                         | 0.12              |                           | —                                         |          | 0.010                      |        | 0.03                     |
|             | Whole meal                            | 0.96              |                           | —                                         |          | 0.082                      |        | 0.20                     |
|             | Bread whole meal                      | 0.64              |                           | —                                         |          | 0.054                      |        | 0.13                     |
|             | Aspirated grain fractions             | 220               |                           | —                                         |          | 18.7                       |        | 46.2                     |
| Barley      | Pot barley                            | 0.16              | 2                         | —                                         | 0.535    | 0.086                      | 1.26   | 0.20                     |
|             | Bran                                  | <b>1.89</b>       |                           | <b>4</b>                                  |          | 1.01                       |        | 2.38                     |
|             | Flour                                 | 0.15              |                           | —                                         |          | 0.080                      |        | 0.19                     |
|             | Brewing malt                          | 0.01              |                           | —                                         |          | 0.0054                     |        | 0.013                    |
|             | Spent grain                           | 0.25              |                           | —                                         |          | 0.13                       |        | 0.32                     |
|             | Beer                                  | 0.02              |                           | —                                         |          | 0.011                      |        | 0.025                    |
| Maize       | Meal                                  | 0.7               | 0.01                      | —                                         | 0.01     | 0.007                      | 0.01   | 0.007                    |
|             | Flour                                 | 0.9               |                           | —                                         |          | 0.009                      |        | 0.009                    |
|             | Grits                                 | 0.3               |                           | —                                         |          | 0.003                      |        | 0.003                    |
|             | Starch                                | 0.1               |                           | —                                         |          | 0.001                      |        | 0.001                    |
| Canola seed | Meal                                  | 0.42              | 1.5                       | —                                         | 0.11     | 0.046                      | 0.83   | 0.35                     |
|             | Refined oil                           | 0.23              |                           | —                                         |          | 0.025                      |        | 0.19                     |
| Sunflower   | Meal                                  | 0.12              | 1.5                       | —                                         | 0.055    | 0.006                      | 0.11   | 0.013                    |

| RAC  | Processed Commodity | Processing Factor | RAC Maximum residue level | Processed Commodity Maximum residue level | RAC STMR | Processed Commodity STMR-P | RAC HR | Processed Commodity HR-P |
|------|---------------------|-------------------|---------------------------|-------------------------------------------|----------|----------------------------|--------|--------------------------|
| seed | Refined oil         | 0.08              |                           | –                                         |          | 0.004                      |        | 0.008                    |

Processed commodity STMR-Ps and HR-Ps were calculated on the basis of the total residues (fluxapyroxad + M700F008 + M700F048) process factor.

### *Residues in animal commodities*

#### *Estimated maximum and mean dietary burdens of farm animals*

Dietary burden calculations for beef cattle and dairy cattle and poultry are provided below. The dietary burdens were estimated using the OECD diets listed in Appendix IX of the 2009 edition of the FAO Manual.

Potential cattle feed items include: apple pomace, tomato pomace, oat grain, sugar beet tops, sugar beet dried pulp, sugar beet ensiled pulp, sugar beet molasses, barley grain, forage, hay and straw, brewer's grain, wheat grain, forage, hay and straw, wheat milled by-products, wheat aspirated grain fractions, maize grain fodder and forage, maize meal, maize milled by-products, potato culls and dried pulp (potato process waste), sunflower meal, barley bran, sugar beet tops, cotton seed, cotton seed meal and hulls, cotton gin by-products, soya bean forage and fodder (hay), soya beans, soya bean meal and hulls, soya bean aspirated grain fractions, bean and pea seed, bean vines and pea vines and hay/ fodder and canola meal.

#### Summary of livestock dietary burden for fluxapyroxad (ppm of dry matter diet)

|              | US–Canada |      | EU   |      | Australia               |                         | Japan |      |
|--------------|-----------|------|------|------|-------------------------|-------------------------|-------|------|
|              | max       | mean | max  | mean | max                     | mean                    | max   | mean |
| Beef cattle  | 4.61      | 2.25 | 19.3 | 5.51 | <u>40.7<sup>a</sup></u> | <u>11.4<sup>c</sup></u> | 0.60  | 0.60 |
| Dairy cattle | 18.4      | 4.17 | 18.8 | 5.78 | <u>39.2<sup>b</sup></u> | <u>9.37<sup>d</sup></u> | 3.93  | 1.77 |

<sup>a</sup> Highest maximum beef or dairy cattle dietary burden suitable for HR and maximum residue level estimates for mammalian meat

<sup>b</sup> Highest maximum dairy cattle dietary burden suitable for HR and maximum residue level estimates for mammalian milk

<sup>c</sup> Highest mean beef or dairy cattle dietary burden suitable for STMR estimates for mammalian meat

<sup>d</sup> Highest mean dairy cattle dietary burden suitable for STMR estimates for mammalian milk

Potential poultry feed items include: apple pomace, tomato pomace, oat grain, sugar beet tops, sugar beet dried pulp, sugar beet ensiled pulp, sugar beet molasses, barley grain, forage, hay and straw, brewer's grain, wheat grain, forage, hay and straw, wheat milled by-products, maize grain fodder and forage, maize meal, maize milled by-products, potato culls and dried pulp (potato process waste), sunflower meal, barley bran, sugar beet tops, cotton seed, cotton seed meal and hulls, cotton gin by-products, soya bean forage and fodder (hay), soya beans, soya bean meal and hulls, soya bean aspirated grain fractions, bean and pea seed, bean vines and pea vines and hay/ fodder and canola meal.

#### Summary of poultry dietary burden for fluxapyroxad (ppm of dry matter diet)

|                 | US–Canada |      | EU                      |                         | Australia |      | Japan |       |
|-----------------|-----------|------|-------------------------|-------------------------|-----------|------|-------|-------|
|                 | max       | mean | max                     | mean                    | max       | mean | max   | mean  |
| Poultry Broiler | 0.53      | 0.53 | 0.50                    | 0.50                    | 0.18      | 0.18 | 0.079 | 0.079 |
| Poultry Layer   | 0.53      | 0.53 | <u>7.14<sup>a</sup></u> | <u>2.10<sup>b</sup></u> | 0.18      | 0.18 | 0.14  | 0.14  |

<sup>a</sup> Highest maximum poultry dietary burden suitable for HR and maximum residue level estimates for poultry meat and eggs

<sup>b</sup> Highest maximum poultry dietary burden suitable for STMR estimates for poultry meat and eggs

### ***Farm Animal Dietary Burden***

The Meeting received a lactating dairy cow feeding study which provided information on residues of fluxapyroxad, M700F002 and M700F048 arising in tissues and milk when dairy cows were dosed with fluxapyroxad and metabolite M700F002 for 28 days, at target feeding levels equivalent to 3, 6, 18 and 60 ppm (fluxapyroxad) and 0, 0.1, 0.3 and 1 ppm (M700F002) in the diet. A depuration period of 7 days followed.

Residues of fluxapyroxad and M700F008 were observed in milk at all feeding levels although in the lowest dose group most milk samples showed fluxapyroxad residues below LOQ. Residues of fluxapyroxad and M700F008 in the higher dose groups reached a plateau after five to seven days. Analysis of milk samples from depuration animals showed no fluxapyroxad or M700F008 residues above LOQ were detectable after four days of withdrawal. Generally residue levels of M700F008 in milk were similar to the fluxapyroxad residue levels. The highest total residues (fluxapyroxad + M700F008) in milk at the highest dosing regime were 0.054 mg/kg (mean 0.031 mg/kg). Residues were demonstrated to concentrate into cream. The highest total residues (mean in brackets) in liver, kidney, fat and muscle were 0.45 (0.35), 0.098 (0.067), 0.264 (0.260) and 0.045 (0.036) mg/kg respectively. Analysis of the depuration tissue samples showed no residues of fluxapyroxad or M700F008 above LOQ after two days of withdrawal.

No residues of M700F002 above LOQ (0.001 mg/kg) were detected in any milk or tissue samples from any dose group.

The Meeting also received information on the residue levels arising in tissues and eggs when laying hens were dosed with fluxapyroxad and metabolite M700F002 for 28 days, at target feeding levels equivalent to 0.3, 0.6, 1.8 and 6 ppm (fluxapyroxad) and 0.025, 0.05, 0.15 and 0.5 ppm (M700F002) in the diet. A depuration period of 14 days followed.

Residues of fluxapyroxad were observed in egg at all feeding levels although in the lowest dose group all but one mean egg samples showed fluxapyroxad residues below LOQ and all egg samples showed M700F008 residues below LOQ. In the highest dose group fluxapyroxad and M700F008 residues reached a plateau at five days. No residues of either fluxapyroxad or M700F008 were detected at the highest feeding level in muscle and skin with fat. The highest total residues (mean in brackets) in liver and fat were 0.029 (0.025) and 0.042 (0.040) mg/kg respectively.

No residues of M700F002 above LOQ (0.001 mg/kg) were detected in any egg or tissue samples from any dose group.

Analysis of the depuration egg samples showed that residues of fluxapyroxad and M700F008 were < LOQ after four and eight days of withdrawal respectively and not detectable after eight and ten days of withdrawal respectively. Analysis of the depuration tissue samples showed that residues of fluxapyroxad and M700F008 were < LOQ after three days of withdrawal.

### ***Animal commodity maximum residue levels***

#### ***Cattle STMR and HR***

For highest residue level estimation, the high residues in the cattle tissues were calculated by interpolating the maximum dietary burden for beef cattle (40.7 ppm) between the relevant feeding levels (18.2 and 60.3) in the dairy cow feeding study and using the highest tissue concentrations (fluxapyroxad + M700F008) from individual animals within those feeding groups. For highest residue level estimation, the high residues in the cattle milk were calculated by interpolating the maximum dietary burden for dairy cattle (39.2 ppm) between the relevant feeding levels (18.2 and 60.3) in the dairy cow feeding study and using the highest mean milk concentrations (fluxapyroxad + M700F008) from those feeding groups.

The STMR values for the tissues were calculated by interpolating the mean dietary burden for beef cattle (11.4 ppm) between the relevant feeding levels (6.1 and 18.2 ppm) from the dairy cow feeding study and using the mean tissue concentrations (fluxapyroxad + M700F008) from those feeding groups. The STMR values for the milk were calculated by interpolating the mean dietary

burden for dairy cattle (9.37 ppm) between the relevant feeding levels (6.1 and 18.2 ppm) from the dairy cow feeding study and using the mean milk concentrations (fluxapyroxad + M700F008) from those feeding groups.

| Fluxapyroxad Feeding Study                     | Feed Level (ppm) for milk residues | Residues (mg/kg) in milk | Feed Level (ppm) for tissue residues | Residues (mg/kg) |       |        |       |
|------------------------------------------------|------------------------------------|--------------------------|--------------------------------------|------------------|-------|--------|-------|
|                                                |                                    |                          |                                      | Muscle           | Liver | Kidney | Fat   |
| HR Determination (beef or dairy cattle)        |                                    |                          |                                      |                  |       |        |       |
| Feeding Study                                  | 18.2                               | 0.0099                   | 18.2                                 | < 0.02           | 0.15  | 0.032  | 0.077 |
|                                                | 60.3                               | 0.031                    | 60.3                                 | 0.045            | 0.45  | 0.098  | 0.264 |
| Dietary burden and estimate of highest residue | 39.2                               | 0.020                    | 40.7                                 | 0.033            | 0.31  | 0.067  | 0.176 |
| STMR Determination (beef or dairy cattle)      |                                    |                          |                                      |                  |       |        |       |
| Feeding Study                                  | 6.1                                | 0.0032                   | 6.1                                  | < 0.02           | 0.052 | 0.021  | 0.029 |
|                                                | 18.2                               | 0.0078                   | 18.2                                 | < 0.02           | 0.12  | 0.027  | 0.070 |
| Dietary burden and estimate of highest residue | 9.37                               | 0.004                    | 11.4                                 | < 0.02           | 0.081 | 0.024  | 0.047 |

The Meeting estimated the following STMR values: milk 0.004 mg/kg; muscle < 0.02 mg/kg; edible offal (based on liver) 0.081 mg/kg and fat 0.047 mg/kg.

The Meeting estimated the following HR values: milk 0.020 mg/kg; muscle 0.033 mg/kg; edible offal (based on liver) 0.31 mg/kg and fat 0.18 mg/kg.

At various dosing levels (day 21) the mean residues observed in cream were up to 9× the mean residues in milk. It is therefore calculated that maximum residues in cream will be 0.18 mg/kg and STMR is 0.036.

It is assumed that cream is 40% fat, therefore the estimated highest residue and STMR for milk fats for dietary purposes are 0.45 and 0.09 mg/kg.

#### *Cattle - maximum residue level*

For maximum residue level estimation, the high residues in the cattle tissues were calculated by interpolating the maximum dietary burden (40.7 ppm) between the relevant feeding levels (18.2 and 60.3) in the dairy cow feeding study and using the highest tissue concentrations (fluxapyroxad) from individual animals within those feeding groups. For maximum residue level estimation, the high residues in the milk were calculated by interpolating the maximum dietary burden (39.2 ppm) between the relevant feeding levels (18.2 and 60.3) in the dairy cow feeding study and using the highest mean milk concentrations (fluxapyroxad) from those feeding groups.

| Fluxapyroxad Feeding Study                                 | Feed Level (ppm) for milk residues | Residues (mg/kg) in milk | Feed Level (ppm) for tissue residues | Residues (mg/kg) |       |        |       |
|------------------------------------------------------------|------------------------------------|--------------------------|--------------------------------------|------------------|-------|--------|-------|
|                                                            |                                    |                          |                                      | Muscle           | Liver | Kidney | Fat   |
| Maximum residue level determination (beef or dairy cattle) |                                    |                          |                                      |                  |       |        |       |
| Feeding Study                                              | 18.2                               | 0.0052                   | 18.2                                 | < 0.01           | 0.032 | < 0.01 | 0.059 |
|                                                            | 60.3                               | 0.015                    | 60.3                                 | 0.012            | 0.094 | 0.019  | 0.171 |
| Dietary burden and estimate of highest residue             | 39.2                               | 0.010                    | 40.7                                 | 0.011            | 0.065 | 0.015  | 0.119 |

The Meeting estimated the following highest residues for the purposes of maximum residue level estimation: milk 0.010 mg/kg; muscle 0.011 mg/kg; edible offal (based on liver) 0.065 mg/kg and fat 0.12 mg/kg.

At various dosing levels (day 21) the mean residues observed in cream were up to 10.5× the mean residues in milk. It is therefore calculated that maximum residues in cream will be 0.11 mg/kg.

It is assumed that cream is 40% fat, therefore the estimated highest residue for milk fats is 0.26 mg/kg.

The Meeting estimated the following maximum residue level values: milk 0.02 mg/kg; milk fats 0.5 mg/kg; meat (mammalian except marine) (fat) 0.2 mg/kg and edible offal (mammalian) 0.1 mg/kg.

#### *Poultry STMR and HR*

For highest residue level estimation, the high residues in the hen tissues and eggs were calculated by extrapolating the maximum dietary burden (7.1 ppm) with the highest feeding level (6.0 ppm) in the laying hen feeding study and using the highest tissue concentrations (fluxapyroxad + M700F008) from individual animals within that feeding group and using the highest mean egg concentration (fluxapyroxad + M700F008) from that feeding group.

The STMR values for the tissues and eggs were calculated by interpolating the mean dietary burden (2.1 ppm) between the relevant feeding levels (1.8 and 6.0 ppm) from the poultry feeding study and using the mean tissue and egg concentrations (fluxapyroxad + M700F008) from those feeding groups.

| Fluxapyroxad Feeding Study                     | Feed Level (ppm) for egg residues | Residues (mg/kg) in egg | Feed Level (ppm) for tissue residues | Residues (mg/kg) |       |               |        |
|------------------------------------------------|-----------------------------------|-------------------------|--------------------------------------|------------------|-------|---------------|--------|
|                                                |                                   |                         |                                      | Muscle           | Liver | Skin with Fat | Fat    |
| HR Determination (poultry broiler or layer)    |                                   |                         |                                      |                  |       |               |        |
| Feeding Study                                  | 6.0                               | 0.020                   | 6.0                                  | < 0.02           | 0.029 | < 0.02        | 0.042  |
| Dietary burden and estimate of highest residue | 7.1                               | 0.023                   | 7.1                                  | < 0.024          | 0.034 | < 0.024       | 0.050  |
| STMR Determination (poultry broiler or layer)  |                                   |                         |                                      |                  |       |               |        |
| Feeding Study                                  | 1.8                               | 0.0053                  | 1.8                                  | < 0.02           | 0.021 | < 0.02        | < 0.02 |
|                                                | 6.0                               | 0.014                   | 6.0                                  | < 0.02           | 0.025 | < 0.02        | 0.040  |
| Dietary burden and estimate of highest residue | 2.1                               | 0.006                   | 2.1                                  | < 0.02           | 0.021 | < 0.02        | 0.021  |

The Meeting estimated the following STMR values: egg 0.006 mg/kg; muscle 0.02 mg/kg; edible offal (based on liver) 0.021 mg/kg and fat 0.021 mg/kg.

The Meeting estimated the following HR values: egg 0.023 mg/kg; muscle 0.024 mg/kg; edible offal (based on liver) 0.034 mg/kg and fat 0.050 mg/kg.

#### *Poultry maximum residue level*

For maximum residue level estimation, the high residues in the hen tissues and eggs were calculated by extrapolating the maximum dietary burden (7.1 ppm) with the highest feeding level (6.0 ppm) in the laying hen feeding study and using the highest tissue concentrations (fluxapyroxad) from individual animals within that feeding group and using the highest mean egg concentration (fluxapyroxad) from that feeding group.

| Fluxapyroxad Feeding Study                                     | Feed Level (ppm) for egg residues | Residues (mg/kg) in egg | Feed Level (ppm) for tissue residues | Residues (mg/kg) |         |               |       |
|----------------------------------------------------------------|-----------------------------------|-------------------------|--------------------------------------|------------------|---------|---------------|-------|
|                                                                |                                   |                         |                                      | Muscle           | Liver   | Skin with Fat | Fat   |
| Maximum residue level determination (poultry broiler or layer) |                                   |                         |                                      |                  |         |               |       |
| Feeding Study                                                  | 6.0                               | 0.0065                  | 6.0                                  | < 0.01           | < 0.01  | < 0.01        | 0.028 |
| Dietary burden and estimate of highest residue                 | 7.1                               | 0.0077                  | 7.1                                  | < 0.012          | < 0.012 | < 0.012       | 0.033 |

The Meeting estimated the following highest residue values for the purpose of maximum residue level estimation: egg 0.0077 mg/kg; muscle 0.012 mg/kg; liver 0.012 mg/kg, skin with fat 0.012 mg/kg and fat 0.033 mg/kg.

The Meeting estimated the following maximum residue levels: poultry meat 0.02 mg/kg; poultry fats 0.05 mg/kg, poultry edible offal 0.02 mg/kg and eggs 0.02 mg/kg.

## RECOMMENDATIONS

Definition of the residue (for compliance with the MRL for plant and animal commodities): *Fluxapyroxad*

Definition of the residue (for estimation of dietary intake for plant commodities): *Sum of fluxapyroxad and 3-(difluoromethyl)-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide (M700F008) and 3-(difluoromethyl)-1-(β-D-glucopyranosyl)-N-(3',4',5'-trifluorobiphenyl-2-yl)-1H-pyrazole-4-carboxamide (M700F048) and expressed as parent equivalents.*

Definition of the residue (for estimation of dietary intake for animal commodities): *Sum of fluxapyroxad and 3-(difluoromethyl)-N-(3',4',5'-trifluoro[1,1'-biphenyl]-2-yl)-1H-pyrazole-4-carboxamide (M700F008) and expressed as parent equivalents.*

The Meeting estimated the maximum residue levels and STMR values shown below.

| Commodity<br>CCN | Name                                                                             | MRL, mg/kg | STMR or<br>STMR-P, mg/kg     | HR or<br>HR-P, mg/kg       |
|------------------|----------------------------------------------------------------------------------|------------|------------------------------|----------------------------|
| AB 1230          | Apple Pomace (wet)                                                               |            | 1.2                          |                            |
|                  | Apple Juice                                                                      |            | 0.05                         |                            |
| GC 0640          | Barley                                                                           | 2          | 0.535                        |                            |
|                  | Barley bran                                                                      | 4          | 1.0                          |                            |
|                  | Barley forage<br>(dry weight)                                                    |            | 3.8                          | 41                         |
| AS 0640          | Barley straw and fodder, dry<br>(dry weight)                                     | 30         | 4.1                          | 18                         |
| VD 0071          | Beans (dry)                                                                      | 0.3        | 0.04                         |                            |
| VP 0061          | Beans, except broad bean and<br>soya bean                                        | 2          | 0.65                         | 0.74                       |
| VP 0062          | Beans, shelled                                                                   | 0.09       | 0.03                         | 0.04                       |
|                  | Brewer's grain (spent grain)                                                     |            | 0.13                         |                            |
|                  | Canola (rape seed) meal                                                          |            | 0.041                        |                            |
| VD 0524          | Chick-pea (dry)                                                                  | 0.4        | 0.04                         |                            |
|                  | Cotton gin by-products                                                           | 0.01(*)    | 0                            |                            |
| SO 0691          | Cotton seed                                                                      | 0.01(*)    | 0                            |                            |
| MO 0105          | Edible offal (mammalian)                                                         | 0.1        | 0.081                        | 0.31                       |
| PE 0112          | Eggs                                                                             | 0.02       | 0.006                        | 0.023                      |
| VO 0050          | Fruiting vegetables other than<br>cucurbits (except sweet corn and<br>mushrooms) | 0.6        | 0.07                         | 0.44                       |
| VD 0533          | Lentil (dry)                                                                     | 0.4        | 0.04                         |                            |
| GC 0645          | Maize                                                                            | 0.01(*)    | 0.01                         |                            |
| AF 0645          | Maize forage<br>(dry weight)                                                     |            | 2.8                          | 3.6                        |
| AS 0645          | Maize fodder (dry)<br>(dry weight)                                               | 15         | 3.6                          | 6.6                        |
| CF 0645          | Maize meal                                                                       |            | 0.007                        |                            |
|                  | Maize meal by-products (grits)                                                   |            | 0.003                        |                            |
| MM 0095          | Meat (from mammals other than<br>marine mammals) (fat)                           | 0.2 (fat)  | < 0.02 (meat)<br>0.047 (fat) | 0.033 (meat)<br>0.18 (fat) |
| ML 0106          | Milks                                                                            | 0.02       | 0.004                        | 0.020                      |
| FM 0183          | Milk fats                                                                        | 0.5        | 0.09                         | 0.45                       |
| GC 0647          | Oats                                                                             | 2          | 0.535                        |                            |

| Commodity<br>CCN | Name                                            | MRL, mg/kg | STMR or<br>STMR-P, mg/kg | HR or<br>HR-P, mg/kg |
|------------------|-------------------------------------------------|------------|--------------------------|----------------------|
| AF 0647          | Oat forage (green)<br>(dry weight)              |            | 3.8                      | 41                   |
| AS 0647          | Oat straw and fodder, dry<br>(dry weight)       | 30         | 4.1                      | 18                   |
|                  | Oilseeds (except peanut and<br>cotton)          | 1.5        | 0.09                     |                      |
| AL 0072          | Pea hay or Pea fodder (dry)<br>(dry weight)     | 40         | 11                       | 17                   |
| VP 0063          | Peas (pods and succulent =<br>immature seeds)   | 2          | 0.65                     | 0.74                 |
| VP 0064          | Peas, shelled (succulent seed)                  | 0.09       | 0.03                     | 0.04                 |
| AL 0528          | Pea vines (green)<br>(dry weight)               |            | 12                       | 23                   |
| SO 0697          | Peanut                                          | 0.01       | 0.01                     |                      |
| VD 0072          | Peas (dry)                                      | 0.4        | 0.04                     |                      |
| HS 0444          | Peppers, chili dried                            | 6          | 0.70                     | 4.4                  |
| FP 0009          | Pome fruit                                      | 0.9        | 0.30                     | 0.47                 |
| VR 0589          | Potatoes                                        | 0.03       | 0.01                     | 0.02                 |
|                  | Potato process waste                            |            | 0.005                    |                      |
| PM 0110          | Poultry meat                                    | 0.02       | 0.02 (meat)              | 0.024 (meat)         |
| PM 0111          | Poultry fats                                    | 0.05       | 0.021 (fat)              | 0.050 (fat)          |
| PO 0111          | Poultry, edible offal of                        | 0.02       | 0.021                    | 0.034                |
| DF 0014          | Prunes                                          | 5          | 1.2                      | 2.7                  |
| GC 0650          | Rye                                             | 0.3        | 0.085                    |                      |
| AF 0650          | Rye forage (green)<br>(dry weight)              |            | 3.8                      | 41                   |
| AS 0650          | Rye straw and fodder, dry<br>(dry weight)       | 30         | 4.1                      | 18                   |
| VD 0541          | Soya bean (dry)                                 | 0.15       | 0.01                     |                      |
| AB 0541          | Soya bean hulls                                 | 0.3        | 0.012                    | 0.15                 |
| VP 0541          | Soya bean (immature seeds)                      | 0.5        | 0.01                     | 0.37                 |
| AB 1265          | Soya bean meal                                  |            | 0.005                    |                      |
|                  | Soya bean aspirated grain<br>fractions          |            | 1.6                      |                      |
| AL 1265          | Soya bean forage (green)<br>(dry weight)        |            | 7.7                      | 26                   |
| AL 0541          | Soya bean fodder<br>(dry weight)                | 30         | 7.6                      | 20                   |
| VP 0546          | Soya bean (young pod)                           | 1.5        | 0.24                     | 0.74                 |
| FS 0012          | Stone fruit                                     | 2          | 0.525                    | 2.3                  |
| VR 0596          | Sugar beet                                      | 0.15       | 0.04                     | 0.06                 |
| AB 0596          | Sugar beet pulp, Dry                            |            | 0.07                     |                      |
|                  | Sugar beet ensiled pulp                         |            | 0.015                    |                      |
|                  | Sugar beet molasses                             |            | 0.032                    |                      |
| AV 0596          | Sugar beet tops<br>(dry weight)                 |            | 9.4                      | 17                   |
|                  | Sunflower meal                                  |            | 0.006                    |                      |
| VO 0447          | Sweet corn (corn-on-the-cob)                    | 0.15       | 0.01                     | 0.08                 |
|                  | Tomato pomace, wet                              |            | 0.24                     |                      |
| GC 0653          | Triticale                                       | 0.3        | 0.085                    |                      |
|                  | Triticale forage<br>(dry weight)                |            | 3.8                      | 41                   |
| AS 0653          | Triticale straw and fodder, dry<br>(dry weight) | 30         | 4.1                      | 18                   |
| GC 0654          | Wheat                                           | 0.3        | 0.085                    |                      |
| CM 0654          | Wheat bran                                      | 1          | 0.25                     | 0.61                 |
|                  | Wheat forage<br>(dry weight)                    |            | 3.8                      | 41                   |
| CF 1210          | Wheat germ                                      |            | 0.10                     |                      |
| AS 0654          | Wheat straw and fodder, dry<br>(dry weight)     | 30         | 4.1                      | 18                   |

## DIETARY RISK ASSESSMENT

### *Long-term intake*

The evaluation of fluxapyroxad has resulted in recommendations for maximum residue levels and STMRs for raw and processed commodities. Consumption data were available for 36 food commodities and were used in the dietary intake calculation. The results are shown in Annex 3 of the 2012 JMPR Report. The International Estimated Daily Intakes for the 13 GEMS/Food regional diets, based on estimated STMRs were in the range 1–10% of the maximum ADI of 0.02 mg/kg bw (Annex 3 of the 2012 JMPR Report).

The Meeting concluded that the long-term intake of residues of fluxapyroxad from uses that have been considered by the JMPR is unlikely to present a public health concern.

### *Short-term intake*

The International Estimated Short-term Intake (IESTI) for fluxapyroxad was calculated for the food commodities (and their processing fractions) for which maximum residue levels and HRs were estimated and for which consumption data were available. The results are shown in Annex 4 of the 2012 JMPR Report. The IESTI of fluxapyroxad varied from 0–20% of the ARfD (0.3 mg/kg bw).

The Meeting concluded that the short-term intake of residues of fluxapyroxad from uses that have been considered by the JMPR is unlikely to present a public health concern.

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