FLUXAPYROXAD (256)

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EXPLANATION

Fluxapyroxad is a fungicide belonging to the carboxamide group of chemicals. It acts through inhibition of the enzyme succinate dehydrogenase, which is also known as complex II, in the mitochondrial electron transport chain. It is used as a foliar and seed treatment fungicide for control of a range of fungal diseases in cereals, fruit and vegetables.

Fluxapyroxad was evaluated by JMPR for the first time in 2012, when an ADI of 0–0.02 mg/kg bw/day and an ARfD of 0.3 mg/kg bw were established. A residue definition of *fluxapyroxad* was recommended for plant and animal commodities, for compliance with MRLs. For estimation of dietary intake in plant commodities, a definition of *sum of fluxapyroxad, 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'-trifluoro-1,1'-biphenyl-2-yl)-1H-pyrazole-4-carboxamide (M700F048), expressed as fluxapyroxad,* was recommended. For estimation of dietary intake in animal commodities, a definition of *sum of fluxapyroxad and 3-(difluoromethyl)-N-(3',4',5'-trifluoro-1,1'-biphenyl-2-yl)-1H-pyrazole-4-carboxamide (M700F008), expressed as fluxapyroxad,* was recommended. The residue is fat soluble.

At the 46th Session of the CCPR (2014), fluxapyroxad was scheduled for evaluation of additional use patterns by the 2015 JMPR.

The Meeting received residue data for citrus fruits, cherries, grapes, strawberries, caneberries, blueberries, mangoes, bananas, papaya, bulb vegetables, Brassica vegetables, cucurbits, leafy vegetables, root and tuber vegetables, celery, rice, sugar cane, almonds, pecans, and cotton (foliar application). Processing data for oranges, grapes, sugar cane and cotton were received. Product labels and information on MRLs established by national regulatory authorities were also provided.

Analytical methods

No new analytical methods were submitted to the Meeting. Residues of fluxapyroxad and its metabolites were determined using LC-MS/MS method number L0137/01 for all trials submitted to the Meeting. This method was reviewed by the 2012 Meeting. Appropriate concurrent recovery data was provided for all trials.

Stability of pesticide residues in stored analytical samples

Plant matrices

No new storage stability studies were submitted to the current Meeting. The 2012 Meeting evaluated the stability of residues of fluxapyroxad and the metabolites M700F002, M700F008, and M700F048 in a range of plant matrices. In the residue trials submitted to the Meeting, samples were analysed within 24 months of collection, within the period for which stability was verified by the studies submitted to the 2012 Meeting.

USE PATTERNS

Fluxapyroxad is a fungicide. It is registered for foliar and seed treatment use in a wide variety of fruits, vegetables, nuts, oilseeds, and cereals against a wide variety of diseases.

Table 1 Registered uses of fluxapyroxad on crops relevant to this submission

Crop	Country	Application						
		Formulation	Type	Rate, g ai/ha	Conc. (g ai/hL)	Spray volume (L/ha)	No. (RTI, days)	PHI, days
Citrus fruit								
Citrus	Brazil	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	–	0.84–2.5	2000	3 (7)	14
Grapefruit	Mexico	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–67	–	460–560	2 (20)	14
	Argentina	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	–	3.3	2000–5000	3	7
Lemon	Mexico	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–67	–	460–560	2 (20)	14
	Argentina	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	–	3.3	2000–5000	3	7
Lime	Mexico	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–67	–	460–560	2 (20)	14
Mandarin	Mexico	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–67	–	460–560	2 (20)	14
	Argentina	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	–	3.3	2000–5000	3	7
Orange	Mexico	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–67	–	460–560	2 (20)	14
Stone fruit								
Stone fruit	Canada	EC 62.5 g/L	Foliar	100	–		3 (7)	0
		SC 300 g/L	Foliar	100	–		3 (7)	0
	USA	EC 62.5 g/L	Foliar	123	–		3 (7)	0
		SC 300 g/L	Foliar	123	–		3 (7)	0
		SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	73–123	–		3 (7)	0
Berries and other small fruits								
Bushberries	USA	EC 62.5 g/L	Foliar	75–200	–		3 (7)	0
	USA	SC 300 g/L	Foliar	75–200	–		3(7)	0
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	73–107	–		3 (7)	0
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	73–200	–		3 (7)	0
Caneberries	USA	EC 62.5 g/L	Foliar	75–200	–		3 (7)	0
	USA	SC 300 g/L	Foliar	75–200	–		3 (7)	0
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	73–107	–		3 (7)	0
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	73–200	–		3 (7)	0
Low growing berries	USA	EC 62.5 g/L	Foliar	75–200	–		3 (7)	0
	USA	SC 300 g/L	Foliar	100–200	–		3 (7)	0

Crop	Country	Application						
		Formulation	Type	Rate, g ai/ha	Conc. (g ai/hL)	Spray volume (L/ha)	No. (RTI, days)	PHI, days
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	73–107	–		3 (7)	0
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	146–200	–		3 (7)	0
Small climbing vine fruit	USA	EC 62.5 g/L	Foliar	75–200	–		3 (7)	14
	USA	SC 300 g/L	Foliar	100–200	–		3 (7)	14
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	73–107	–		3(7)	14
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	146–200	–		3 (7)	14
Grapes	USA	EC 62.5 g/L	Foliar	46–100	–		6 (10)	14
	USA	EC 62.5 g/L	Foliar	100–200	–		3 (10)	14
	USA	SC 300 g/L	Foliar	44–99	–		6 (10)	14
	USA	SC 300 g/L	Foliar	99–199	–		3 (10)	14
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	49–84	–		3 (10)	14
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	73–100	–		6 (10)	14
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	100–200	–		3 (10)	14
	Chile	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	75	–	800–1500	2 (14), do not apply after flowering	–
Strawberries	USA	EC 62.5 g/L	Foliar	75–200	–		3 (7)	0
	USA	SC 300 g/L	Foliar	75–199	–		3 (7)	0
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	73–107	–		3 (7)	0
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	73–200	–		3 (7)	0
	Mexico	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	75–125	–	400–500	3 (7)	1
	Mexico	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–84	–	400–500	3 (7)	1
Assorted tropical and subtropical Fruits—inedible peel								
Banana	Belize	SC 300 g/L	Foliar (ground or aerial)	90–150 + 7–9 L/ha agricultural oil			4 (8)	0
	Colombia	SC 300 g/L	Foliar (ground or aerial)	150 + 7–9 L/ha agricultural oil		18–23 (aerial), 50–60 (ground)	3 (12)	0
	Costa Rica	SC 300 g/L	Foliar (ground or	90–150 + 7–9 L/ha			4 (8)	0

Crop	Country	Application						
		Formulation	Type	Rate, g ai/ha	Conc. (g ai/hL)	Spray volume (L/ha)	No. (RTI, days)	PHI, days
			aerial)	agricultural oil				
	Dominican Republic	SC 300 g/L	Foliar (ground or aerial)	90–150 + 7–9 L/ha agricultural oil			4 (8)	0
	Ecuador	SC 300 g/L	Foliar (ground or aerial)	150		18–23		1
	El Salvador	SC 300 g/L	Foliar (ground or aerial)	90–150 + 7–9 L/ha agricultural oil			4 (8)	0
	Guatemala	SC 300 g/L	Foliar (ground or aerial)	90–150 + 7–9 L/ha agricultural oil			4 (8)	0
	Honduras	SC 300 g/L	Foliar (ground or aerial)	90–150 + 7–9 L/ha agricultural oil			4 (8)	0
	Panama	SC 300 g/L	Foliar (ground or aerial)	90–150 + 7–9 L/ha agricultural oil			4 (8)	0
Mango	Brazil	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar		4.2–6.7	500–1000	4 (7)	7
Papaya	Mexico	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	75–100		400	2 (14)	7
Bulb vegetables								
Bulb vegetables	USA	SC 62.5 g/L	Foliar	75–200			3 (7)	7
	USA	SC 300 g/L	Foliar	75–200			3 (7)	7
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	73–90			3 (7)	7
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	73–200			3 (7)	7
Garlic	USA	FS 333 g/L	Seed treatment	20–40 g ai/100 kg seed			1	–
	USA	FS 333 g/L	Seed treatment	125–250 g ai/100 kg seed			1	–
	USA	FS 250 g/L (pyraclostrobin 250 g/L)	Seed treatment	33–40 g ai/100 kg seed			1	–
Leek	USA	FS 333 g/L	Seed treatment	20–40 g ai/100 kg seed			1	–
	USA	FS 333 g/L	Seed treatment	125–250 g ai/100 kg seed			1	–
	USA	FS 250 g/L (pyraclostrobin 250 g/L)	Seed treatment	33–40 g ai/100 kg seed			1	–
Onions (all)	USA	FS 333 g/L	Seed treatment	20–40 g ai/100 kg seed			1	–
	USA	FS 333 g/L	Seed treatment	125–250 g ai/100 kg seed			1	–
	USA	FS 250 g/L	Seed	33–			1	–

Crop	Country	Application						
		Formulation	Type	Rate, g ai/ha	Conc. (g ai/hL)	Spray volume (L/ha)	No. (RTI, days)	PHI, days
		(pyraclostrobin 250 g/L)	treatment	40 g ai/100 kg seed				
Onion	Brazil	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58		200–1000	4 (7)	7
	Dominican Republic	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
	El Salvador	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–58			3 (7)	7
	Guatemala	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
Shallots	USA	FS 333 g/L	Seed treatment	20–40 g ai/100 kg seed			1	–
	USA	FS 333 g/L	Seed treatment	125–250 g ai/100 kg seed			1	–
	USA	FS 250 g/L (pyraclostrobin 250 g/L)	Seed treatment	33–40 g ai/100 kg seed			1	–
Brassica vegetables								
Brassica vegetables	USA	EC 62.5 g/L	Foliar	75–100			3 (7)	3
	USA	SC 300 g/L	Foliar	75–100			3 (7)	3
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	73–100			3 (7)	3
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	73–100			3 (7)	3
	USA	FS 333 g/L	Seed treatment	20–40 g ai/100 kg seed			1	–
	USA	FS 250 g/L (pyraclostrobin 250 g/L)	Seed treatment	33–40 g ai/100 kg seed			1	–
Fruiting vegetables, Cucurbits								
Cucurbits	USA	EC 62.5 g/L	Foliar	75–100			3 (7)	0
	USA	SC 300 g/L	Foliar	75–100			3 (7)	0
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	73–100			3 (7)	0
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	73–100			3 (7)	0
	USA	FS 333 g/L	Seed treatment	20–40 g ai/100 kg seed			1	–
	USA		Seed treatment	30 g ai/100 kg seed			1	–
Cucumbers	Brazil	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58		400–1000	4 (7)	7
	Mexico	SC 250 g/L (pyraclostrobin	Foliar	62.5–100			4 (4)	1

Crop	Country	Application						
		Formulation	Type	Rate, g ai/ha	Conc. (g ai/hL)	Spray volume (L/ha)	No. (RTI, days)	PHI, days
		250 g/L)						
Melons	Brazil	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58		400–1000	4 (7)	7
	Mexico	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	62.5–100			4 (4)	1
	Dominican Republic	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
	Guatemala	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
	Honduras	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
	Trinidad and Tobago	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
Pumpkins	Mexico	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	62.5–100			4 (4)	1
Watermelons	Mexico	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	62.5–100			4 (4)	1
	Dominican Republic	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
	Guatemala	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
	Honduras	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
Zucchini	Mexico	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	62.5–100			4 (4)	1
Leafy vegetables								
Brassica leafy vegetables	USA	EC 62.5 g/L	Foliar	75–100			3 (7)	3
	USA	SC 300 g/L	Foliar	75–100			3 (7)	3
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	75–100			3 (7)	3
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	75–100			3 (7)	3
	USA	FS 333 g/L	Seed treatment	20–40 g ai/100 kg seed			1	–
	USA	FS 250 g/L (pyraclostrobin 250 g/L)	Seed treatment	33–40 g ai/100 kg seed			1	–
Leafy vegetables (except Brassica leafy vegetables)	USA	EC 62.5 g/L	Foliar	75–200			3 (7)	1

Crop	Country	Application						
		Formulation	Type	Rate, g ai/ha	Conc. (g ai/hL)	Spray volume (L/ha)	No. (RTI, days)	PHI, days
	USA	SC 300 g/L	Foliar	75–200			3 (7)	1
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	73–112			3 (7)	1
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	73–200			3 (7)	1
	USA	FS 333 g/L	Seed treatment	20–40 g ai/100 kg seed			1	–
	USA	FS 333 g/L	Seed treatment	100–200 g ai/100 kg seed			1	–
	USA	FS 250 g/L (pyraclostrobin 250 g/L)	Seed treatment	30 g ai/100 kg seed			1	–
Root and tuber vegetables								
Potatoes	Brazil	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	33–58		400–500	4 (7)	3
Potatoes	Canada	EC 62.5 g/L	Foliar	50–100			3 (7)	7
	Canada	SC 300 g/L	Foliar	50–100			3 (7)	7
Potatoes	Canada	EC 62.5 g/L	In-furrow	100			1	–
	Canada	SC 300 g/L	In-furrow	100			1	–
	USA	EC 62.5 g/L	In-furrow	100			1	–
	USA	SC 300 g/L	In-furrow	100			1	–
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	In-furrow	100			1	–
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	In-furrow	100			1	–
Potatoes	Mexico	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	50–150		400–500	2 (7)	7
	Mexico	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	33–50		400–500	2 (7)	7
	Mexico	SC 250 g/L (pyraclostrobin 250 g/L)	In-furrow	425–500		600–700	1	–
	Mexico	SC 167 g/L (pyraclostrobin 333 g/L)	In-furrow	250–330		600–700	1	–
Potatoes	Dominican Republic	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
Potatoes	Guatemala	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
Potatoes	Honduras	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
Potatoes	Trinidad and Tobago	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
Carrots	Brazil	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58		400–700	4 (7)	7

Crop	Country	Application						
		Formulation	Type	Rate, g ai/ha	Conc. (g ai/hL)	Spray volume (L/ha)	No. (RTI, days)	PHI, days
	Dominican Republic	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
	Guatemala	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58			3 (7)	7
Chinese artichokes	Canada	EC 62.5 g/L	Foliar	50–100			3 (7)	7
	Canada	SC 300 g/L	Foliar	50–100			3 (7)	7
Jerusalem artichokes	Canada	EC 62.5 g/L	Foliar	50–100			3 (7)	7
	Canada	SC 300 g/L	Foliar	50–100			3 (7)	7
Chufa	Canada	EC 62.5 g/L	Foliar	50–100			3 (7)	7
	Canada	SC 300 g/L	Foliar	50–100			3 (7)	7
Sweet potatoes	Canada	EC 62.5 g/L	Foliar	50–100			3 (7)	7
	Canada	SC 300 g/L	Foliar	50–100			3 (7)	7
True yams	Canada	EC 62.5 g/L	Foliar	50–100			3 (7)	7
	Canada	SC 300 g/L	Foliar	50–100			3 (7)	7
Sugar beets	Canada	EC 62.5 g/L	Foliar	100			3 (7)	7
	Canada	SC 300 g/L	Foliar	100			3 (7)	7
Sugar beets	Canada	EC 62.5 g/L	In-furrow	100			1	–
	Canada	SC 300 g/L	In-furrow	100			1	–
Root and tuber vegetables (except sugar beets)	USA	EC 62.5 g/L	Foliar	75–100			3 (7)	7
	USA	SC 300 g/L	Foliar	75–100			3 (7)	7
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	73–100			3 (7)	7
	USA	FS 333 g/L	Seed treatment	20–40 g ai/100 kg seed			1	–
Sugar beets	USA	EC 62.5 g/L	Foliar	50–100			3 (7)	7
	USA	SC 300 g/L	Foliar	50–100			3 (7)	7
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	73–100			3 (7), or 4 at the lower rate	7
Ginger	USA	EC 62.5 g/L	Foliar	50–100			3(7)	7
		SC 300 g/L	Foliar	50–100			3 (7)	7
		SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–100			3 (7)	7
		SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	55–100			3 (7)	7
Turmeric	USA	EC 62.5 g/L	Foliar	50–100			3 (7)	7
		SC 300 g/L	Foliar	50–100			3 (7)	7
		SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–100			3 (7)	7
		SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	55–100			3 (7)	7
Stalk and stem vegetables								
Celery	USA	EC 62.5 g/L	Foliar	75–200			3 (7)	1

Crop	Country	Application						
		Formulation	Type	Rate, g ai/ha	Conc. (g ai/hL)	Spray volume (L/ha)	No. (RTI, days)	PHI, days
	USA	SC 300 g/L	Foliar	75–200			3 (7)	1
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	73–112			3 (7)	1
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	73–200			3 (7)	1
	USA	FS 333 g/L	Seed treatment	20–40 g ai/100 kg seed			1	–
	USA	FS 333 g/L	Seed treatment	100–200 g ai/100 kg seed			1	–
	USA	FS 250 g/L (pyraclostrobin 250 g/L)	Seed treatment	30 g ai/100 kg seed			1	–
Cereal grains								
Rice	USA	EC 62.5 g/L	Foliar	75–150			2 (7)	28
	USA	SC 300 g/L	Foliar	100–150			2 (7)	28
	USA	FS 333 g/L	Seed treatment	25–50 g ai/100 kg seed			1	–
	Cuba	EC 62.5 g/L (epoxiconazole 62.5 g/L)	Foliar	47–78			2 (25)	35
	Dominican Republic	EC 62.5 g/L (epoxiconazole 62.5 g/L)	Foliar	62.5–75			2 (25)	35
	El Salvador	EC 62.5 g/L (epoxiconazole 62.5 g/L)	Foliar	62.5–75			2 (25)	35
	Guatemala	EC 62.5 g/L (epoxiconazole 62.5 g/L)	Foliar	62.5–75			2 (25)	35
	Honduras	EC 62.5 g/L (epoxiconazole 62.5 g/L)	Foliar	62.5–75			2 (25)	35
Sorghum	USA	EC 62.5 g/L	Foliar	75–100			2	21
	USA	SC 300 g/L	Foliar	75–100			2	21
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–100			1	21
	USA	FS 333 g/L	Seed treatment	10–20 g ai/100 kg seed			1	–
	USA	FS 327 g/L	Seed treatment	10–20 g ai/100 kg seed			1	–
	Mexico	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	50–100		550–650	2 (14)	10
	Mexico	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–67		200–300	2 (14)	10
	Brazil	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58		150–200	2 (14)	30
Grasses for sugar or syrup production								

Crop	Country	Application						
		Formulation	Type	Rate, g ai/ha	Conc. (g ai/hL)	Spray volume (L/ha)	No. (RTI, days)	PHI, days
Sugar cane	USA	EC 62.5 g/L	Foliar	75–125			2 (14)	14
	USA	SC 300 g/L	Foliar	125			2 (14)	14
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–110			2 (14)	14
	Brazil	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–67		150–200	5 (21)	30
Tree nuts								
Tree nuts	USA	EC 62.5 g/L	Foliar	75–125			3 (7)	14
	USA	SC 300 g/L	Foliar	75–125			3 (7)	14
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	67			3 (7)	14
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	91–119			3 (7)	14
Oilseeds								
Cotton	USA	FS 333 g/L	Seed treatment	10–20 g ai/100 kg seed			1	–
	USA	FS 327 g/L	Seed treatment	10–20 g ai/100 kg seed			1	–
	USA	FS 250 g/L (pyraclostrobin 250 g/L)	Seed treatment	20 g ai/100 kg seed			1	–
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–100			2 (7)	21
	USA	SC 250 g/L (pyraclostrobin 250 g/L)	Foliar	73–100			2 (7)	21
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	In-furrow/soil directed banded spray	0.16–1 g ai/100 row metres			1	–
	USA	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	50–100			3 (7)	30
	USA	SC 300 g/L	Foliar	50–100			3 (7)	30
	USA	EC 62.5 g/L	Foliar	50–100			3 (7)	30
	Brazil	SC 167 g/L (pyraclostrobin 333 g/L)	Foliar	42–58		150–200	4 (12)	14

RESIDUES RESULTING FROM SUPERVISED TRIALS ON CROPS

The Meeting received supervised trials for use of fluxapyroxad on citrus fruit (oranges, lemons and limes), cherries, berries and small fruits (grapes, blueberries, blackberries, raspberries and strawberries), tropical fruit, inedible peel (banana, papaya and mango), bulb vegetables (onion, bulb and green onion), Brassica vegetables (cabbage and broccoli), fruiting vegetables, cucurbits (cucumber, summer squash, melon (cantaloupe), and watermelon), leafy vegetables (head lettuce, leafy lettuce, spinach and mustard greens), root and tuber vegetables (carrots, radish and potato), celery, rice, sugar cane, tree nuts (almonds and pecans), and cotton.

Residue data for stone fruit, potatoes, sugar beet, and sorghum evaluated by the 2012 Meeting are also tabulated below. The data tables have been taken unaltered from the 2012 evaluation. These data were evaluated against registered uses for these crops submitted to the current Meeting.

In all trials, residues were determined using method L0137/01. The method LOQ was 0.01 mg/kg for each analyte as measured, or 0.01, 0.02, 0.01 and 0.01 mg/kg as parent equivalents for parent, M700F002, M700F008, and M700F048 respectively. For replicate samples from the same plot, the mean value was used for maximum residue level estimation, with the individual results being given in brackets. All residues below the LOQ are reported as < the appropriate LOQ value, as parent equivalents. For multiple trials from the same location in the same year, results from the trial yielding the highest residue were used for estimation of maximum residue levels and dietary intake assessment.

For dietary intake assessment, the residues are expressed as the sum of fluxapyroxad, M700F008, and M700F048, expressed as fluxapyroxad (total residues). Residues of the metabolites are reported as parent equivalents.

Group	Commodity	Countries	Table
FC Citrus fruits	Orange	Brazil, Argentina	2, 3
	Lemon	Argentina	4
	Lime	Brazil	5
FS Stone fruits	Cherry	USA, Canada	6
	Peach	USA, Canada	7
	Plum	USA, Canada	8
FB Berries and other small fruits	Blueberries	USA	9
	Caneberries (blackberries, raspberries)	USA	10
	Grapes	USA	11
	Strawberries	USA	12
FI Assorted tropical and sub-tropical fruits—inedible peel	Banana	Brazil, Colombia, Costa Rica, Ecuador	13, 14
	Mango	Brazil	15
	Papaya	Brazil	16
VA Bulb vegetables	Onion, bulb	USA	17
	Onion, green	USA	18
VB Brassica vegetables	Broccoli	USA	19
	Cabbage	USA	20
VC Fruiting vegetables, Cucurbits	Melons	USA, Brazil	21, 22
	Cucumber	USA	23
	Squash, summer	USA	24
	Watermelon	Brazil	25
VL Leafy vegetables	Lettuce, Head	USA	26

Group	Commodity	Countries	Table
	Lettuce, Leaf	USA	27
	Mustard greens	USA	28
	Radish leaves	USA	29
	Spinach	USA	30
VR Root and tuber vegetables	Carrot	USA	31, 32
	Potato	Germany, UK, the Netherlands, Belgium, France, Greece, Italy, Spain, USA, Canada	33, 34, 35
	Radish	USA	36
	Sugar beet	USA, Canada	37
VS Stalk and stem vegetables	Celery	USA	38
GC Cereal grains	Rice	USA	39
	Sorghum	USA	40
GS Grasses for sugar or syrup production	Sugar cane	USA	41
TN Tree nuts	Almonds	USA	42
	Pecans	USA	43
SO Oilseed	Cotton	USA	44
Animal feeds	Rice straw	USA	45
	Sorghum forage and stover	USA	46
	Almond hulls	USA	47
	Cotton gin by-products	USA	48

Citrus fruits

Residue trials in oranges, lemons and limes were conducted in Brazil and Argentina (Dantas *et al.*, 2012 and Guimaraes, 2014-a). Three foliar applications of an SC formulation containing 167 g/L fluxapyroxad and 333 g/L pyraclostrobin were made at each site using an airblast sprayer.

Table 2 Residues of fluxapyroxad and metabolites in oranges (whole fruit)

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
San Antonio de Posse, Sao Paolo, Brazil, 2010 (Pera Coroa)	3 (28, 28)	50, 50, 50	2000, 2000, 2000	0	0.15	< 0.02	< 0.01	< 0.01	0.15
				7	0.14	< 0.02	< 0.01	< 0.01	0.14
				14	0.14	< 0.02	< 0.01	< 0.01	0.14

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
				21	0.16	< 0.02	< 0.01	< 0.01	0.16
				28	0.15	< 0.02	< 0.01	< 0.01	0.15
San Antonio de Posse, Sao Paolo, Brazil, 2010 (Natal)	3 (28, 28)	50, 50, 50	2000, 2000, 2000	0	0.09	< 0.02	< 0.01	< 0.01	0.09
				7	0.12	< 0.02	< 0.01	< 0.01	0.12
				14	0.17	< 0.02	< 0.01	< 0.01	0.17
				21	0.11	< 0.02	< 0.01	< 0.01	0.11
				28	0.10	< 0.02	< 0.01	< 0.01	0.10
Jaboticabal, Sao Paolo, Brazil, 2010 (Pera)	3 (28, 23)	50, 50, 50	2000, 2000, 2000	14	0.14	< 0.02	< 0.01	< 0.01	0.14
Londrina, Parana, Brazil, 2010 (Pera Rio)	3 (28, 28)	50, 50, 50	2000, 2000, 2000	14	0.06	< 0.02	< 0.01	< 0.01	0.06
San Antonio de Posse, Sao Paolo, Brazil, 2013 (Pera Coroa)	3 (29, 27)	50, 50, 50	2000, 2000, 2000	0	0.17	< 0.02	< 0.01	< 0.01	0.17
				7	0.16	< 0.02	< 0.01	< 0.01	0.16
				14	0.12	< 0.02	< 0.01	< 0.01	0.12
				21	0.14	< 0.02	< 0.01	< 0.01	0.14
				28	0.10	< 0.02	< 0.01	< 0.01	0.10
Aguai, Sao Paolo, Brazil, 2013 (Pera Murcha)	3 (28, 28)	50, 50, 50	2000, 2000, 2000	0	0.06	< 0.02	< 0.01	< 0.01	0.06
				7	0.07	< 0.02	< 0.01	< 0.01	0.07
				14	0.04	< 0.02	< 0.01	< 0.01	0.04
				21	0.04	< 0.02	< 0.01	< 0.01	0.04
				28	0.02	< 0.02	< 0.01	< 0.01	0.02
Mogi Mirim, Sao Paolo, Brazil, 2013 (Pera Coroa)	3 (28, 28)	50, 50, 50	2000, 2000, 2000	0	0.07	< 0.02	< 0.01	< 0.01	0.07
				7	0.06	< 0.02	< 0.01	< 0.01	0.06
				14	0.03	< 0.02	< 0.01	< 0.01	0.03
				21	0.05	< 0.02	< 0.01	< 0.01	0.05

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
				28	0.05	< 0.02	< 0.01	< 0.01	0.05
Londrina, Parana, Brazil, 2013 (Pera Rio)	3 (28, 28)	50, 50, 50	2000, 2000, 2000	0	0.06	< 0.02	< 0.01	< 0.01	0.06
				7	0.03	< 0.02	< 0.01	< 0.01	0.03
				14	0.01	< 0.02	< 0.01	< 0.01	0.01
				21	0.02	< 0.02	< 0.01	< 0.01	0.02
				28	0.03	< 0.02	< 0.01	< 0.01	0.03

Method LODs were for 0.002, 0.005, 0.002, and 0.001 mg/kg for fluxapyroxad, M700F002, M700F008 and M700F048 respectively, while the LOQs were 0.01, 0.025, 0.01, and 0.005 mg/kg (all values in parent equivalents)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Table 3 Residues of fluxapyroxad and metabolites in orange whole fruit, peel and pulp [b]

Location, Year (variety)	Application				Fraction	Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA		Fluxapyroxad	M700 F002	M700 F008	M700 F048	Total [a]
Concordia, Entre Rios, Argentina, 2013 (Valencia)	3 (28, 28)	50, 50, 50	2000, 2000, 2000	14	Whole fruit	0.06	< 0.02	< 0.01	< 0.01	0.06
				14	Peel	0.31	< 0.02	< 0.01	< 0.01	0.31
				14	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Federacion, Entre Rios, Argentina, 2013 (Valencia)	3 (28, 28)	50, 50, 50	2000, 2000, 2000	14	Whole fruit	0.16	< 0.02	< 0.01	< 0.01	0.16
				14	Peel	0.17	< 0.02	< 0.01	< 0.01	0.17
				14	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Jaguapita, Sao Paolo, Brazil, 2013 (Parana)	3 (28, 28)	50, 50, 50	2000, 2000, 2000	14	Whole fruit	0.05	< 0.02	< 0.01	< 0.01	0.05
				14	Peel	0.35	< 0.02	< 0.01	< 0.01	0.35
				14	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Cambe, Parana, Brazil, 2013	3 (28, 28)	50, 50, 50	2000, 2000, 2000	14	Whole fruit	0.07	< 0.02	< 0.01	< 0.01	0.07

Location, Year (variety)	Application				Fraction	Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA		Fluxapyroxad	M700 F002	M700 F008	M700 F048	Total [a]
(Valencia)										
				14	Peel	0.11	< 0.02	< 0.01	< 0.01	0.11
				14	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

[b] Residues in whole fruit were determined by analyses of separate sub-samples, not by summing the residues in peel and pulp after adjusting for the mass fraction of each portion. Hence, residues in whole fruit may not correspond with the values expected based on typical proportions of peel and pulp in oranges.

Table 4 Residues of fluxapyroxad and metabolites in lemon whole fruit, peel and pulp [b]

Location, Year (variety)	Application				Fraction	Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA		Fluxapyroxad	M700 F002	M700 F008	M700 F048	Total [a]
Concordia, Entre Rios, Argentina, 2013 (Eureka)	3 (28, 28)	50, 50, 50	2000, 2000, 2000	14	Whole fruit	0.13	< 0.02	< 0.01	< 0.01	0.13
				14	Peel	0.20	< 0.02	< 0.01	< 0.01	0.20
				14	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Federacion, Entre Rios, Argentina, 2013 (Eureka)	3 (28, 28)	50, 50, 50	2000, 2000, 2000	14	Whole fruit	0.09	< 0.02	< 0.01	< 0.01	0.09
				14	Peel	0.32	< 0.02	< 0.01	< 0.01	0.32
				14	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

[b] Residues in whole fruit were determined by analyses of separate sub-samples, not by summing the residues in peel and pulp after adjusting for the mass fraction of each portion. Hence, residues in whole fruit may not correspond with the values expected based on typical proportions of peel and pulp in lemons.

Table 5 Residues of fluxapyroxad and metabolites in limes (whole fruit)

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Estrela do Sul, Minas Gerais, Brazil, 2013 (Tahitian)	3 (29, 27)	50, 50, 50	2000, 2000, 2000	0	0.05	< 0.02	< 0.01	< 0.01	0.05
				7	0.06	< 0.02	< 0.01	< 0.01	0.06
				14	0.04	< 0.02	< 0.01	< 0.01	0.04
				21	0.02	< 0.02	< 0.01	< 0.01	0.02
				28	0.02	< 0.02	< 0.01	< 0.01	0.02
Jaitaizinho, Parana, Brazil, 2013 (Tahitian)	3 (28, 28)	50, 50, 50	2000, 2000, 2000	0	0.10	< 0.02	< 0.01	< 0.01	0.10
				7	0.06	< 0.02	< 0.01	< 0.01	0.06
				14	0.06	< 0.02	< 0.01	< 0.01	0.06
				21	0.05	< 0.02	< 0.01	< 0.01	0.05
				28	0.03	< 0.02	< 0.01	< 0.01	0.03

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Stone fruits

Residue data from trials in cherries, peaches and plums considered by the 2012 Meeting are tabulated below.

Table 6 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. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)				
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
GAP, USA	3		121-123			0					
2009/7003328 RCN R080182 USA (Allegan, Michigan) 2008 (Tart-Montmorency)	3	6 6	121 128 129 378	679 716 712	Fruit	0	1.05	< LOD	0.21	0.05	1.31
						1	1.10	< LOD	0.24	0.04	1.38
						7	0.32	< LOD	0.25	0.07	0.63
						14	0.09	< LOD	0.18	0.07	0.33
	3	6 6	119 128 129 376	1455 1540 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
2009/7003328 RCN R080183 Canada (Niagara,	3	8 6	127 125 126 378	610 599 608	Fruit	0	0.43	< LOD	0.17	< 0.01	0.61
						1	(0.58, 0.52) 0.55	< LOD	0.16	< 0.01	0.72
						7	(0.31, 0.48)	< LOD	0.19	0.01	0.61

Study No. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)				
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Ontario) 2008 (Tart—Montmorency)							0.40				
						14	0.14	< LOD	0.26	< 0.01	0.41
	3	8 6	124 126 124 374	1194 1207 1190	Fruit	0	(0.05, 0.05) 0.05	< LOD	(0.21, 0.15, 0.14) 0.17	(0.04, 0.03, 0.03) 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 RCN R080184 USA (Ottawa, Michigan) 2008 (Sweet—Sams)	3	6 7	125 125 125 375	723 719 708	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	0.59	< LOD	0.18	< 0.01	0.78
	3	7 7	123 125 124 372	1751 1742 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
2009/7003328 RCN R080185 USA (Tulare, California) 2008 (Sweet—Tulare)	3	7 7	123 123 124 370	769 789 796	Fruit	0	0.82	< 0.01	0.30	< 0.01	1.13
						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 7	124 125 124 373	1957 1887 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
2009/7003328 RCN R080186 USA (Grant, Washington) 2008 (Tart—Montmorency)	3	7 7	125 125 125 375	702 703 701	Fruit	0	0.49	< LOD	0.16	0.08	0.72
						1	0.38	< 0.01	0.17	0.07	0.61
						7	0.19	< LOD	0.23	0.08	0.49
						13	0.10	< LOD	0.16	0.11	0.35
	3	7 7	123 123 123 369	1869 1871 1872	Fruit	0	0.56	< LOD	0.13	0.05	0.73
						1	0.49	< LOD	0.15	0.05	0.69
						7	0.33	< LOD	0.19	0.08	0.59
						13	0.30	< LOD	0.15	0.10	0.53
2009/7003328 RCN R080187 USA (Wasco, Oregon) 2008 (Sweet—Lapin)	3	8 6	126 127 125 378	492 640 501	Fruit	0	0.19	< LOD	0.16	< 0.01	0.36
						1	0.19	< LOD	0.18	< LOD	0.38
						7	0.08	< LOD	0.21	< 0.01	0.30
						10	0.06	< LOD	0.26	< 0.01	0.33
						14	0.04	< LOD	0.13	< 0.01	0.18
	3	8 6	128 121 126 375	1554 1595 1623	Fruit	0	0.31	< LOD	0.18	< 0.01	0.50
						1	0.20	< LOD	0.19	< 0.01	0.40
						7	0.18	< LOD	0.22	< 0.01	0.41
						10	0.11	< LOD	0.22	< 0.01	0.34
						14	0.05	< LOD	0.11	< 0.01	0.16
2011/7004953 R110214 USA (Fennville, Michigan)	3	7 7	124 124 124 372	711 686 711	Fruit	0	(0.26, 0.25) 0.26	(< LOQ, < LOQ) < LOQ	(0.10, 0.074) 0.087	(0.028, 0.023) 0.026	0.37
						1	(0.29, 0.20) 0.25	(< LOQ, < LOQ)	(0.098, 0.085)	(0.030, 0.026) 0.028	0.37

Study No. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)				
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
2011 (Tart— Montmorency)								< LOQ	0.092)		
						7	(0.15, 0.18) 0.17	(< LOQ, < LOQ) < LOQ	(0.13, 0.17) 0.15	(0.048, 0.052) 0.050	0.37
2011/7004953 R110229 USA (Hotchkiss, Colorado) 2011 (Tart— Montmorency)	3	7 6	126 123 124 373	699 683 692	Fruit	0	(1.93, 1.80) 1.87	(< LOQ, < LOQ) < LOQ	(0.42, 0.43) 0.43	(0.022, 0.021) 0.022	2.32
						1	(1.03, 1.44) 1.24	(< LOQ, < LOQ) < LOQ	(0.34, 0.38) 0.36	(0.024, 0.027) 0.026	1.63
						7	(0.82, 0.75) 0.79	(< LOQ, < LOQ) < LOQ	(0.52, 0.64) 0.58	(0.045, 0.046) 0.046	1.42

[a] 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 7 Residues from the foliar application of fluxapyroxad to peaches in the USA and Canada (Jordan 2010, 2009/7003328)

Study No. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)				
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
GAP, USA	3		121- 123			0					
2009/7003328 RCN R080188 USA (Wayne, New York) 2008 (Glohaven)	3	8 6	125 125 124 374	747 747 746	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 6	124 125 126 375	1116 1119 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
2009/7003328 RCN R080189 USA (Tift, Georgia) 2008 (Hawthorne)	3	7 7	124 124 124 372	511 504 488	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 7	126 125 126 377	1228 1189 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 RCN R080190 USA (Brooks, Georgia) 2008 (Mid white 9A54- 13)	3	7 7	126 126 124 376	522 523 521	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) 0.11	< LOD	0.09	< 0.01	0.20
	3	7	125	1251	Fruit	0	(0.19, 0.17)	< LOD	0.04	< LOD	0.22

Study No. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)				
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
		7	124 124 373	1257 1265			0.18				
						1	(0.50, 0.44) 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 RCN R080192 USA (Lenawee, Michigan) 2008 (Redhaven)	3	7 7	125 123 126 374	930 919 912	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) 0.15	< LOD	0.03	< 0.01	0.18
						14	0.16, 0.16 (0.16)	< LOD	0.03	< 0.01	0.19
	3	7 7	124 123 128 375	2005 1993 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
2009/7003328 RCN R080193 Canada (Niagara, Ontario) 2008 (Red Star)	3	7 7	129 129 120 378	627 621 578	Fruit	0	0.10	< LOD	< 0.01	< 0.01	0.10
						1	0.19	< 0.01	< 0.01	< LOD	0.19
						6	0.08	< LOD	0.01	< LOD	0.09
						13	0.07	< 0.01	0.02	< 0.01	0.09
	3	7 7	124 125 119 368	1206 1213 1165	Fruit	0	0.26	< 0.01	0.03	< 0.01	0.29
						1	0.28	< LOD	0.02	< 0.01	0.30
						6	0.26	< 0.01	0.03	< 0.01	0.29
						13	0.19	< LOD	0.04	< 0.01	0.23
2009/7003328 RCN R080194 USA (Ottawa, Michigan) 2008 (Bellaire)	3	7 7	124 125 124 373	738 726 711	Fruit	0	0.29	< LOD	0.01	< LOD	0.30
						1	0.28	< LOD	0.01	< 0.01	0.29
						7	0.21	< LOD	0.02	< 0.01	0.23
						14	0.19	< LOD	0.02	< 0.01	0.21
	3	7 7	124 125 124 373	1787 1765 1740	Fruit	0	0.34	< LOD	< 0.01	< 0.01	0.34
						1	0.28	< LOD	0.01	< 0.01	0.29
						7	0.15	< LOD	0.01	< 0.01	0.16
						14	0.17	< LOD	0.02	< 0.01	0.19
2009/7003328 RCN R080195 USA (Marion, Illinois) 2008 (Cresthaven)	3	7 7	126 129 133 388	505 548 555	Fruit	0	0.17	< 0.01	< 0.01	< LOD	0.17
						1	0.24	< LOD	< 0.01	< LOD	0.24
						7	0.08	< 0.01	< 0.01	< LOD	0.08
						14	0.08	< LOD	< 0.01	< LOD	0.08
	3	7 7	126 125 128 379	1857 1961 1971	Fruit	0	0.32	< 0.01	0.01	< LOD	0.33
						1	0.21	< 0.01	0.01	< LOD	0.22
						7	0.15	< LOD	0.01	< LOD	0.16
						14	0.08	< 0.01	0.02	< LOD	0.10
2009/7003328 RCN R080196 USA (Pontotoc, Oklahoma) 2008 (Contender)	3	6 7	119 126 124 369	826 815 870	Fruit	0	0.44	< LOD	0.04	< LOD	0.48
						1	0.50	< LOD	0.04	< LOD	0.54
						7	0.33	< LOD	0.05	< LOD	0.38
						14	0.25	< LOD	0.06	< 0.01	0.31
	3	6 7	118 124 123	1393 1368 1414	Fruit	0	0.58	< LOD	0.08	< LOD	0.66
						1	0.42	< LOD	0.04	< LOD	0.46
						7	0.33	< LOD	0.04	< LOD	0.37

Study No. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)				
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
			365			14	0.26	< LOD	0.06	< 0.01	0.32
2009/7003328 RCN R080197 USA (Kings, California) 2008 (Klamt Cling)	3	6 7	140 141 140 421	894 900 884	Fruit	0	0.59	< LOD	0.02	< LOD	0.61
						1	0.22	< LOD	0.02	< LOD	0.24
						7	0.13	< LOD	0.02	< LOD	0.15
						10	0.26	< LOD	0.02	< LOD	0.28
						14	0.08	< LOD	0.02	< LOD	0.10
	3	6 7	141 141 140 422	1837 1837 1836	Fruit	0	0.63	< LOD	0.03	< LOD	0.66
						1	0.39	< LOD	0.03	< LOD	0.42
						7	0.23	< LOD	0.03	< LOD	0.26
						10	0.13	< LOD	0.03	< LOD	0.16
						14	0.14	< LOD	0.04	< LOD	0.18
2009/7003328 RCN R080198 USA (Stanislaus, California) 2008 (Summerset)	3	7 7	124 123 125 372	617 612 620	Fruit	0	0.30	< LOD	0.01	< LOD	0.31
						1	0.24	< LOD	0.01	< LOD	0.25
						7	(0.20, 0.20) 0.20	< LOD	0.02	< LOD	0.22
						14	0.14	< 0.01	0.02	< 0.01	0.16
	3	7 7	125 124 125 374	1574 1487 1498	Fruit	0	0.24	< LOD	0.01	< LOD	0.25
						1	0.33	< LOD	0.02	< LOD	0.35
						7	0.18	< LOD	0.01	< 0.01	0.19
						14	0.14	< LOD	0.02	< LOD	0.16
2009/7003328 RCN R080199 USA (Madera, California) 2008 (Angelus)	3	7 7	125 125 125 375	704 706 703	Fruit	0	0.30	< LOD	0.01	< 0.01	0.31
						1	0.18	< LOD	0.01	< 0.01	0.19
						7	0.13	< LOD	0.02	< 0.01	0.15
						10	(0.08, 0.08, 0.09) 0.08	< LOD	0.01	0.01	0.10
						14	0.09	< LOD	0.03	< 0.01	0.12
	3	7 7	126 126 125 377	1884 1880 1871	Fruit	0	0.26	< LOD	0.01	< 0.01	0.27
						1	0.24	< LOD	0.01	< 0.01	0.25
						7	0.24	< LOD	0.05	< 0.01	0.29
						10	0.13	< LOD	0.02	< 0.01	0.15
						14	0.12	< LOD	0.02	< 0.01	0.14
2009/7003328 RCN R080200 USA (Grant, Washington) 2008 (Snow King)	3	7 7	125 125 125 375	842 843 840	Fruit	0	0.46	< LOD	0.03	< 0.01	0.49
						1	0.55	< LOD	0.05	< 0.01	0.60
						7	0.29	< LOD	0.03	< 0.01	0.32
						14	0.19	< LOD	0.05	< 0.01	0.24
	3	7 7	124 125 124 373	1870 1890 1880	Fruit	0	0.57	< LOD	0.03	< 0.01	0.60
						1	0.59	< LOD	0.04	< 0.01	0.63
						7	0.34	< LOD	0.05	< 0.01	0.39
						14	0.25	< LOD	0.06	0.01	0.32

[a] 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 8 Residues from the foliar application of fluxapyroxad to plums in the USA and Canada (Jordan 2010, 2009/7003328)

Study No. Trial No. Country Year (Variety)	Application No	Application Interval Days	Application g ai/ha	Application Water (L/ha)	Matrix	PHI days	Residues (mg/kg) Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
GAP, USA	3		121–123			0					
2009/7003328 RCN R080201 USA (Wayne, New York) 2008 (Stanley)	3	7 6	124 124 125 373	558 558 561	Fruit	0	0.95	< LOD	< LOD	< LOD	0.95
						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 6	129 126 126 381	1119 1125 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
2009/7003328 RCN R080202 USA (Allegan, Michigan) 2008 (Early Golden)	3	6 6	121 128 131 380	681 720 720	Fruit	0	0.49	< LOD	< LOD	< LOD	0.49
						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
	3	6 6	120 129 129 378	1469 1543 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
2009/7003328 RCN R080203 Canada (Niagara, Ontario) 2008 (Vanette)	3	7 7	123 121 120 364	592 579 577	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 7	122 121 122 365	1182 1177 1179	Fruit	0	0.24	< LOD	< LOD	< LOD	0.24
						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 RCN R080204 USA (Ottawa, Michigan) 2008 (Stanley)	3	7 7	123 123 124 370	717 718 707	Fruit	0	0.64	< LOD	< LOD	< LOD	0.64
						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 7	124 124 125 373	1741 1749 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 RCN R080205 USA (Tulare, California) 2008 (Prunes)	3	7 7	138 140 140 418	748 755 756	Fruit	0	0.37	< LOD	< LOD	< LOD	0.37
						1	0.38	< LOD	< LOD	< LOD	0.38
						7	0.29	< LOD	< 0.01	< LOD	0.29
						10	0.26	< LOD	< LOD	< LOD	0.26
						14	0.26	< LOD	< LOD	< LOD	0.26
	3	7 7	140 140 140 420	1540 1534 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
						14	0.28	< LOD	< LOD	< LOD	0.28

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

[a] 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

Berries and other small fruits

Blueberries

Residue trials in blueberries (highbush type) were conducted in the USA (Korpalski, 2012-b). Three foliar applications of a 62.5 g/L EC formulation were made at each site using hand-held equipment. A spray adjuvant (non-ionic surfactant or crop oil concentrate) was included with all applications. Duplicate fruit samples were collected on the day of the last application, with additional samples being collected at intervals up to 7 days after the last application at one site in order to generate decline data.

Table 9 Residues of fluxapyroxad and metabolites in blueberries

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
New Tripoli, PA, USA, 2011 (Bluecrop)	3 (7, 7)	200, 200, 200	960, 930, 970	0	1.7 (1.7, 1.7)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.7 (1.7, 1.7)
Oglethorpe, GA, USA, 2011 (Climax)	3 (7, 7)	200, 200, 200	960, 970, 950	0	2.4 (2.2, 2.6)	< 0.02 (< 0.02, < 0.02)	0.02 (0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	2.4 (2.2, 2.6)
Oglethorpe, GA, USA, 2011 (Woodward)	3 (7, 7)	200, 200, 200	970, 960, 950	0	1.6 (1.7, 1.5)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.6 (1.7, 1.5)
				1	1.7 (1.8, 1.6)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.7 (1.8, 1.6)
				3	1.2 (1.0, 1.3)	< 0.02 (< 0.02, < 0.02)	0.01 (< 0.01, 0.01)	< 0.01 (< 0.01, < 0.01)	1.2 (1.0, 1.4)
				5	0.90 (0.80, 1.0)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.90 (0.80, 1.0)
				7	0.61 (0.59, 0.63)	< 0.02 (< 0.02, < 0.02)	0.01 (0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.62 (0.60, 0.63)
White Heath, IL, USA, 2011 (Duke)	3 (7, 7)	200, 200, 210	970, 960, 980	0	3.8 (3.9, 3.6)	< 0.02 (< 0.02, < 0.02)	0.01 (0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	3.8 (3.9, 3.6)
Fremont, MI, USA, 2011 (Bluecrop)	3 (7, 7)	200, 200, 200	960, 960, 960	0	1.3 (1.2, 1.4)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.3 (1.2, 1.4)
Hillsboro, OR, USA, 2011 (Bluecrop)	3 (7, 7)	200, 200, 200	970, 950, 960	0	2.4 (2.5, 2.3)	< 0.02 (< 0.02, < 0.02)	0.02 (0.02, 0.02)	< 0.01 (< 0.01, < 0.01)	2.4 (2.5, 2.3)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Caneberries

Residue trials in raspberries and blackberries were conducted in the USA (Korpalski, 2012-b). Three foliar applications of a 62.5 g/L EC formulation were made at each site using hand-held equipment. A spray adjuvant (crop oil concentrate or non-ionic surfactant) was included with all applications. Duplicate treated fruit samples were collected on the day of the last application, with additional samples being collected at intervals up to 7 days after the last application at one site in order to generate decline data.

Table 10 Residues of fluxapyroxad and metabolites in blackberries and raspberries

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
BLACKBERRIES									
Hillsboro, OR, USA, 2011 (Marion)	3 (7, 7)	200, 200, 200	950, 950, 970	0	<u>1.4</u> (1.2, 1.5)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.001 (< 0.001, < 0.001)	<u>1.4</u> (1.2, 1.5)
RASPBERRIES									
Oglethorpe, GA, USA, 2011 (Nova)	3 (7, 7)	200, 200, 200	940, 960, 950	0	1.1 (1.3, 0.86)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.1 (1.3, 0.86)
Oglethorpe, GA, USA, 2011 (Willamette)	3 (7, 7)	200, 210, 200	960, 990, 960	0	<u>2.0</u> (2.1, 1.9)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>2.0</u> (2.1, 1.9)
				1	1.6 (1.4, 1.8)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.6 (1.4, 1.8)
				3	1.1 (1.1, 1.1)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.1 (1.1, 1.1)
				5	1.1 (1.0, 1.1)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.1 (1.0, 1.1)
				7	0.66 (0.59, 0.73)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.66 (0.59, 0.73)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Grapes

Residue trials in <u>grapes</u> were conducted in the USA (Belcher and Riley, 2012-a). Three applications of a 300 g/L SC formulation of fluxapyroxad were made at target rates of 200 g ai/ha using an airblast or backpack sprayer. An adjuvant (non-ionic surfactant, crop oil concentrate or organosiloxane) was included in all tank mixes. Duplicate treated fruit samples were collected at intervals from 0–21 days after the last application.

Table 11 Residues of fluxapyroxad and metabolites in grape berries

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Lehigh, PA, USA, 2011 (Corot Noir)	3 (10, 10)	200, 200, 200	670, 660, 650	0	0.27 (0.29, 0.24)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.27 (0.29, 0.24)
				1	0.25 (0.21, 0.28)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.25 (0.21, 0.28)

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
				7	0.18 (0.18, 0.17)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.18 (0.18, 0.17)
				14	<u>0.13</u> (0.11, 0.14)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.13</u> (0.11, 0.14)
Yates, NY, USA, 2011 (DeChaunac)	3 (10, 11)	200, 200, 200	940, 940, 940	0	0.87 (0.89, 0.84)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.87 (0.89, 0.84)
				1	0.66 (0.69, 0.62)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.66 (0.69, 0.62)
				7	0.75 (0.80, 0.70)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.75 (0.80, 0.70)
				14	0.60 (0.41, 0.78)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.60 (0.41, 0.78)
				21	<u>0.71</u> (0.81, 0.61)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.71</u> (0.81, 0.61)
Fresno, CA, USA, 2011 (Thompson)	3 (10, 10)	200, 210, 200	470, 480, 460	0	0.20 (0.22, 0.18)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.20 (0.22, 0.18)
				1	0.25 (0.24, 0.26)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.25 (0.24, 0.26)
				7	0.19 (0.19, 0.19)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.19 (0.19, 0.19)
				14	0.27 (0.20, 0.34)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.27 (0.20, 0.34)
				21	0.26 (0.24, 0.28)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.26 (0.24, 0.28)
Fresno, CA, USA, 2011 (Cabernet)	3 (10, 10)	200, 200, 200	1850, 1870, 1860	0	1.5 (1.7, 1.2)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.5 (1.7, 1.2)
				1	1.5 (1.5, 1.5)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.5 (1.5, 1.5)
				7	1.5 (1.7, 1.3)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.5 (1.7, 1.3)
				14	<u>1.4</u> (1.3, 1.4)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>1.4</u> (1.3, 1.4)
Fresno, CA, USA, 2011 (Flame Seedless)	3 (10, 10)	200, 200, 200	1860, 1860, 1870	0	0.82 (0.82, 0.81)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.82 (0.82, 0.81)
				1	0.85 (0.90, 0.80)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.85 (0.90, 0.80)
				7	0.62 (0.64, 0.60)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.62 (0.64, 0.60)

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
				14	0.76 (0.73, 0.78)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.76 (0.73, 0.88)
Madera, CA, USA, 2011 (Ruby Red)	3 (10, 10)	210, 200, 200	480, 470, 470	0	0.21 (0.20, 0.22)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.21 (0.20, 0.22)
				1	0.16 (0.18, 0.14)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.16 (0.18, 0.14)
				7	0.13 (0.12, 0.13)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.13 (0.12, 0.13)
				14	0.11 (0.13, 0.09)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.11 (0.13, 0.09)
San Luis Obispo, CA, USA, 2011 (Marsanne)	3 (11, 10)	200, 210, 200	430, 450, 450	0	0.23 (0.27, 0.18)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.23 (0.27, 0.18)
				1	0.20 (0.19, 0.21)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.20 (0.19, 0.21)
				7	0.17 (0.15, 0.18)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.17 (0.15, 0.18)
				14	0.13 (0.18, 0.08)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.13 (0.18, 0.08)
San Luis Obispo, CA, USA, 2011 (Cabernet Sauvignon)	3 (14, 13)	200, 200, 200	1490, 1440, 1490	0	0.65 (0.66, 0.64)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.65 (0.66, 0.64)
				1	0.71 (0.75, 0.66)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.71 (0.75, 0.66)
				7	0.39 (0.30, 0.48)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.39 (0.30, 0.48)
				14	0.23 (0.34, 0.11)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.23 (0.34, 0.11)
Tulare, CA, USA, 2011 (Crimson)	3 (10, 10)	200, 200, 200	650, 650, 660	0	0.59 (0.63, 0.54)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.59 (0.63, 0.54)
				1	0.53 (0.57, 0.48)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.53 (0.57, 0.48)
				7	0.45 (0.50, 0.39)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.45 (0.50, 0.39)
				14	0.51 (0.43, 0.59)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.51 (0.43, 0.59)
Tulare, CA, USA, 2011	3 (10, 10)	200, 200, 200	2320, 2320,	0	0.45 (0.46, 0.43)	< 0.02 (< 0.02,	< 0.01 (< 0.01,	< 0.01 (< 0.01,	0.45, (0.46,

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
(Globe)			2300			< 0.02)	< 0.01)	< 0.01)	0.43)
				1	0.43 (0.48, 0.38)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.43 (0.48, 0.38)
				7	0.43 (0.42, 0.43)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.43 (0.42, 0.43)
				14	0.27 (0.28, 0.26)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.27 (0.28, 0.26)
Grant, WA, USA, 2011 (White Riesling)	3 (10, 10)	210, 210, 210	1870, 1870, 1860	0	0.57 (0.59, 0.54)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.57 (0.59, 0.54)
				1	0.47 (0.50, 0.44)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.47 (0.50, 0.44)
				7	0.48 (0.56, 0.39)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.48 (0.56, 0.39)
				14	<u>0.43</u> (0.43, 0.42)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.43</u> (0.43, 0.42)
Washington, OR, USA, 2011 (Red Flame)	3 (7, 7)	200, 200, 200	230, 240, 240	0	0.85 (0.79, 0.91)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.85 (0.79, 0.91)
				1	0.86 (0.92, 0.79)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.86 (0.92, 0.79)
				7	0.90 (0.71, 1.1)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.90 (0.71, 1.1)
				14	<u>0.62</u> (0.63, 0.61)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.62</u> (0.63, 0.61)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Strawberries

Residue trials in <u>strawberries</u> were conducted in the USA (Korpalski, 2012-a, and Lange and Korpalski, 2013).

Three foliar applications of a 62.5 g/L EC formulation were made at each site using hand-held equipment. A spray adjuvant (non-ionic surfactant or crop oil concentrate) was included with all applications. Duplicate treated fruit samples were collected on the day of the last application, with additional samples being collected at intervals up to 7 days after the last application at one site in order to generate decline data.

Table 12 Residues of fluxapyroxad and metabolites in strawberries

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				

	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
New Tripoli, PA, USA, 2011 (Earliglow)	3 (7, 7)	200, 200, 210	190, 190, 200	0	<u>0.21</u> (0.23, 0.19)	< 0.01 (< 0.02, < 0.01)	0.01 (< 0.01, 0.01)	< 0.01 (< 0.01, 0.01)	<u>0.22</u> (0.23, 0.21)
Winter Garden, FL, USA, 2011 (Camarosa)	3 (7, 7)	200, 200, 200	190, 190, 190	0	<u>2.3</u> (2.2, 2.5)	< 0.02 (< 0.02, < 0.02)	0.02 (0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	<u>2.4</u> (2.2, 2.5)
Sparta, MI, USA, 2011 (Jewel)	3 (7, 7)	200, 200, 200	190, 190, 190	0	<u>0.26</u> (0.28, 0.24)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.26</u> (0.28, 0.24)
Guadalupe, CA, USA, 2011 (Albion)	3 (7, 7)	210, 210, 210	200, 200, 190	0	<u>0.76</u> (0.80, 0.72)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.76</u> (0.80, 0.72
Fresno, CA, USA, 2011 (Albion)	3 (7, 7)	200, 200, 200	190, 190, 190	0	<u>0.87</u> (0.89, 0.84)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.87</u> (0.89, 0.84)
				1	0.84 (0.80, 0.87)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.84 (0.80, 0.87)
				3	0.81 (0.80, 0.81)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.81 (0.80, 0.80)
				5	0.64 (0.63, 0.65)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.64 (0.63, 0.65)
				7	0.48 (0.34, 0.61)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.48 (0.34, 0.61)
Hillsboro, OR, USA, 2011 (Fern)	3 (7, 7)	200, 200, 200	190, 190, 190	0	<u>0.97</u> (1.0, 0.90)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.97</u> (1.0, 0.90)
Sorrento, FL, USA, 2012 (Radiance)	3 (7, 7)	220, 200, 200	200, 190, 190	0	<u>0.76</u> (0.67, 0.85)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.76</u> (0.67, 0.85)
				1	0.62 (0.64, 0.59)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.62</u> (0.64, 0.59)
Sanger, CA, USA, 2012 (Albion)	3 (7, 7)	200, 200, 200	190, 190, 180	0	0.94 (0.87, 1.0)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.94 (0.87, 1.0)
				1	<u>1.0</u> (0.91, 1.1)	< 0.02 (< 0.02, < 0.02)	0.01 (< 0.01, 0.01)	< 0.01 (< 0.01, < 0.01)	<u>1.0</u> (0.91, 1.1)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Tropical fruit—inedible peel

Banana

A total of 12 trials was conducted in <u>bananas</u> in Brazil (Guimaraes, 2013-a), Costa Rica, Ecuador and Colombia (Guimaraes, 2013-b). Four applications of a 300 g/L SC formulation were made at a target rate of 150 g ai/ha using a pressurised backpack sprayer. A mineral oil and an emulsifier were included in the spray tank for each application. Prior to application, half the fruits in each plot were covered with plastic bags. Bananas (both bagged and unbagged) were sampled at 0, 1, 5 and 10 days after the last application for the decline trials, and at day 0 only for the single point trials. In the single point trials, separate analyses of peel and pulp were conducted.

Table 13 Residues of fluxapyroxad and metabolites in banana (Brazilian trials, Guimaraes, 2013-a)

Location, Year (variety)	Application				Sample	Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ ha	Spray volume (L/ha)	DALA		Parent	M700 F002	M700 F008	M700 F048	Total [a]
Sao Francisco, Sao Paolo, Brazil, 2013 (Maçã)	4 (12, 13, 11)	150, 150, 150, 150	25, 25, 25, 25	0	Unbagged fruit	0.22 (0.22, 0.22, 0.21)	< 0.02	< 0.01	< 0.01	0.22 (0.22, 0.22, 0.21)
				1	Unbagged fruit	0.36 (0.42, 0.31, 0.36)	< 0.02	< 0.01	< 0.01	0.36 (0.42, 0.31, 0.36)
				5	Unbagged fruit	0.30 (0.25, 0.32, 0.32)	< 0.02	< 0.01	< 0.01	0.30 (0.25, 0.32, 0.32)
				10	Unbagged fruit	0.21 (0.22, 0.20, 0.21)	< 0.02	< 0.01	< 0.01	0.21 (0.22, 0.20, 0.21)
				0	Bagged fruit	0.12	< 0.02	< 0.01	< 0.01	0.12
				1	Bagged fruit	0.04	< 0.02	< 0.01	< 0.01	0.04
				5	Bagged fruit	0.03	< 0.02	< 0.01	< 0.01	0.03
				10	Bagged fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Palmeira d'Oeste, Sao Paolo, Brazil, 2013 (Maçã)	4 (12, 13, 11)	150, 150, 150, 150	25, 25, 25, 25	0	Unbagged fruit	0.77 (0.87, 0.69, 0.74)	< 0.02	< 0.01	< 0.01	0.77 (0.87, 0.69, 0.74)
				1	Unbagged fruit	0.56 (0.58, 0.52, 0.59)	< 0.02	< 0.01	< 0.01	0.56 (0.58, 0.52, 0.59)
				5	Unbagged fruit	0.63 (0.71, 0.57, 0.61)	< 0.02	< 0.01	< 0.01	0.63 (0.71, 0.57, 0.61)
				10	Unbagged fruit	0.46 (0.54, 0.43, 0.40)	< 0.02	< 0.01	< 0.01	0.46 (0.54, 0.43, 0.40)
				0	Bagged fruit	0.13	< 0.02	< 0.01	< 0.01	0.13
				1	Bagged fruit	0.06	< 0.02	< 0.01	< 0.01	0.06
				5	Bagged fruit	0.04	< 0.02	< 0.01	< 0.01	0.04
				10	Bagged fruit	0.03	< 0.02	< 0.01	< 0.01	0.03
Londrina, Parana, Brazil, 2013 (Grande	4 (12, 12, 12)	150, 150, 150, 150	25, 25, 25, 25	0	Unbagged fruit	0.04	< 0.02	< 0.01	< 0.01	0.04

Location, Year (variety)	Application				Sample	Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ ha	Spray volume (L/ha)	DALA		Parent	M700 F002	M700 F008	M700 F048	Total [a]
Naine)										
				1	Unbagged fruit	0.06	< 0.02	< 0.01	< 0.01	0.06
				5	Unbagged fruit	0.07	< 0.02	< 0.01	< 0.01	0.07
				10	Unbagged fruit	0.02	< 0.02	< 0.01	< 0.01	0.02
				0	Bagged fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				1	Bagged fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				5	Bagged fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				10	Bagged fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Ibipora, Parana, Brazil, 2013 (Grande Naine)	4 (12, 12, 12)	150, 150, 150, 150	25, 25, 25, 25	0	Unbagged fruit	0.14	< 0.02	< 0.01	< 0.01	0.14
				1	Unbagged fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				5	Unbagged fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				10	Unbagged fruit	0.01	< 0.02	< 0.01	< 0.01	0.01
				0	Bagged fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				1	Bagged fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				5	Bagged fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				10	Bagged fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01

Residues were largely undetected in the untreated control samples, with a few detections at levels < LOQ

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Table 14 Residues of fluxapyroxad and metabolites in bananas (Costa Rica, Ecuador and Colombia, Guimaraes, 2013-b)

Location, Year (variety)	Application				Sample	Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA		Parent	M700 F002	M700 F008	M700 F048	Total [a]
Unbagged fruit										
Cariari, Pococi, Limón, Costa Rica, 2013 (Cavendish)	4 (12, 12, 12)	150, 150, 160, 160	24, 25, 27, 27	0	Whole fruit	0.07	< 0.02	< 0.01	< 0.01	0.07
				1	Whole fruit	0.07	< 0.02	< 0.01	< 0.01	0.07

Location, Year (variety)	Application				Sample	Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA		Parent	M700 F002	M700 F008	M700 F048	Total [a]
				5	Whole fruit	0.08	< 0.02	< 0.01	< 0.01	0.08
				10	Whole fruit	0.05	< 0.02	< 0.01	< 0.01	0.05
Carrandi, Matina, Limón, Costa Rica, 2013 (Cavendish)	4 (12, 12, 12)	160, 150, 140, 150	27, 25, 24, 25	0	Whole fruit	0.10	< 0.02	< 0.01	< 0.01	0.10
				0	Peel	0.85	< 0.02	< 0.01	< 0.01	0.85
				0	Pulp	0.06	< 0.02	< 0.01	< 0.01	0.06
Bataan, Matina, Limón, Costa Rica, 2013 (Cavendish)	4 (12, 12, 12)	160, 160, 150, 150	27, 26, 25, 26	0	Whole fruit	0.06	< 0.02	< 0.01	< 0.01	0.06
				0	Peel	0.10	< 0.02	< 0.01	< 0.01	0.10
				0	Pulp	0.03	< 0.02	< 0.01	< 0.01	0.03
Triunfo, Guayas, Ecuador, 2013 (Williams)	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	1.6	< 0.02	< 0.01	< 0.01	1.6
				0	Peel	1.0	< 0.02	< 0.01	< 0.01	1.0
				0	Pulp	0.09	< 0.02	< 0.01	< 0.01	0.09
Triunfo, Guayas, Ecuador, 2013 (Williams)	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	0.17	< 0.02	< 0.01	< 0.01	0.17
				0	Peel	0.22	< 0.02	< 0.01	< 0.01	0.22
				0	Pulp	0.01	< 0.02	< 0.01	< 0.01	0.01
Setor Rancho Grande, Canar, Ecuador (Williams)	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	0.16	< 0.02	< 0.01	< 0.01	0.16
				0	Peel	0.24	< 0.02	< 0.01	< 0.01	0.24
				0	Pulp	0.03	< 0.02	< 0.01	< 0.01	0.03
Zona Bananera Rio Frio, Zona Bananera Sector Centro, Colombia, 2013 (Gran Enano)	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	0.66	< 0.02	< 0.01	< 0.01	0.66
				0	Peel	1.1 c0.01	< 0.02	< 0.01	< 0.01	1.1
				0	Pulp	0.10	< 0.02	< 0.01	< 0.01	0.10
S.A. Macondo, Zona Bananera, Sector Sur, Colombia, 2013 (Williams)	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	0.15	< 0.02	< 0.01	< 0.01	0.15

Location, Year (variety)	Application				Sample	Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA		Parent	M700 F002	M700 F008	M700 F048	Total [a]
				0	Peel	0.34	< 0.02	< 0.01	< 0.01	0.34
				0	Pulp	0.05	< 0.02	< 0.01	< 0.01	0.05
Bagged fruit										
Cariari, Pococi, Limón, Costa Rica, 2013 (Cavendish)	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				1	Whole fruit	0.01	< 0.02	< 0.01	< 0.01	0.01
				5	Whole fruit	0.02	< 0.02	< 0.01	< 0.01	0.02
				10	Whole fruit	0.01	< 0.02	< 0.01	< 0.01	0.01
Carrandi, Matina, Limón, Costa Rica, 2013 (Cavendish)	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	0.02	< 0.02	< 0.01	< 0.01	0.02
				0	Peel	0.03	< 0.02	< 0.01	< 0.01	0.03
				0	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Bataan, Matina, Limón, Costa Rica, 2013 (Cavendish)	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	0.02	< 0.02	< 0.01	< 0.01	0.02
				0	Peel	0.02	< 0.02	< 0.01	< 0.01	0.02
				0	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Triunfo, Guayas, Ecuador, 2013 (Williams)	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	0.03	< 0.02	< 0.01	< 0.01	0.03
				0	Peel	0.12	< 0.02	< 0.01	< 0.01	0.12
				0	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Triunfo, Guayas, Ecuador, 2013 (Williams)	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				0	Peel	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				0	Pulp	< 0.002	< 0.02	< 0.01	< 0.01	< 0.002
Setor Rancho Grande, Canar, Ecuador (Williams)	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				0	Peel	0.04	< 0.02	< 0.01	< 0.01	0.04
				0	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Zona Bananera Rio Frio, Zona Bananera Sector Centro, Colombia, 2013 (Gran	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01

Location, Year (variety)	Application				Sample	Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA		Parent	M700 F002	M700 F008	M700 F048	Total [a]
Enano)										
				0	Peel	0.02	< 0.02	< 0.01	< 0.01	0.02
				0	Pulp	< 0.002	< 0.02	< 0.01	< 0.01	< 0.002
S.A. Macondo, Zona Bananera, Sector Sur, Colombia, 2013 (Williams)	4	150, 150, 150, 150	25, 25, 25, 25	0	Whole fruit	0.02	< 0.02	< 0.01	< 0.01	0.02
				0	Peel	0.05	< 0.02	< 0.01	< 0.01	0.05
				0	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01

Residues were largely undetected in the untreated control samples, with a few detections at levels < LOQ and a single detection at the LOQ (noted above)

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Mango

Four trials in mangoes were conducted in Brazil (Dantas and Cardoso, 2012). Four applications of an SC formulation containing 333 g/L pyraclostrobin + 167 g/L fluxapyroxad were made a target rate of 0.4 L/ha (0.133 kg ai/ha pyraclostrobin + 0.067 kg ai/ha fluxapyroxad) and a target interval of 7 days. Fruit was sampled 7 days after the last application, with additional samples being collected at intervals from 0–14 days at two sites to generate decline data.

Table 15 Residues of fluxapyroxad and metabolites in mangoes

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
San Antonio de Posse, Sao Paolo, Brazil, 2010 (Palmer)	4 (8, 6, 8)	67, 67, 67, 67	1000, 1000, 1000, 1000	0	0.13	< 0.02	< 0.01	< 0.01	0.13
				3	0.14	< 0.02	< 0.01	< 0.01	0.14
				7	0.14	< 0.02	< 0.01	< 0.01	0.14
				10	0.07	< 0.02	< 0.01	< 0.01	0.07
				14	0.08	< 0.02	< 0.01	< 0.01	0.08
Anapolis, Goiana, Brazil, 2010 (Tommy)	4 (10, 4, 7)	67, 67, 67, 67	1000, 1000, 1000, 1000	0	0.33	< 0.02	< 0.01	< 0.01	0.33
				3	0.31	< 0.02	< 0.01	< 0.01	0.31
				7	0.39	< 0.02	< 0.01	< 0.01	0.39
				10	0.21	< 0.02	< 0.01	< 0.01	0.21
				14	0.23	< 0.02	< 0.01	< 0.01	0.23

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Conchal, Sao Paolo, Brazil, 2010 (Palmer)	4 (7, 7, 7)	67, 67, 67, 67	1000, 1000, 1000, 1000	7	0.21	< 0.02	< 0.01	< 0.01	0.21
Jaboticabal, Sao Paolo, Brazil, 2010 (Tommy)	4 (7, 7, 7)	67, 67, 67, 67	1000, 1000, 1000, 1000	7	0.16	< 0.02	< 0.01	< 0.01	0.16

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad.

Papaya

Four trials in papaya were conducted in Brazil (Jones, 2011). Four applications of an SC formulation containing 333 g/L pyraclostrobin and 167 g/L fluxapyroxad were made at a target rate of 50 g ai/ha fluxapyroxad (and 100 g ai/ha pyraclostrobin) at target intervals of 7 days using backpack sprayers. Spray adjuvants were not used in any of the applications. Fruit samples were collected at 7 days after the last application, with additional samples being collected at 0 and 14 days after the last application at the decline trial sites.

Table 16 Residues of fluxapyroxad and metabolites in papaya

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Linhares, Espirito Santo, Brazil, 2011 (Golden)	4 (7, 7, 7)	50, 50, 50, 50,	1000, 1000, 1000, 1000	0	0.24	< 0.02	< 0.01	< 0.01	0.24
				7	0.23	< 0.02	< 0.01	< 0.01	0.23
				14	0.19	< 0.02	0.01	< 0.01	0.20
Sooretama, Espirito Santo, Brazil, 2011 (Golden)	4 (8, 6, 7)	50, 50, 50, 50	1000, 1000, 1000, 1000	0	0.37	< 0.02	< 0.01	< 0.01	0.37
				7	0.24	< 0.02	< 0.01	< 0.01	0.24
				14	0.23	< 0.02	< 0.01	< 0.01	0.23
Pinheiros, Espirito Santo, Brazil, 2011 (THB)	4 (8, 6, 7)	50, 50, 50, 50	1000, 1000, 1000, 1000	7	0.15	< 0.02	< 0.01	< 0.01	0.15
Bela Vista do Paraiso, Parana, Brazil, 2011 (Formosa)	4 (7, 7, 7)	50, 50, 50, 50	1000, 1000, 1000, 1000	7	0.02	< 0.02	< 0.01	< 0.01	0.02

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Bulb vegetables

Bulb onion

A series of trials in dry bulb onions was conducted in the USA (Csinos, 2012-a). Three foliar broadcast applications of a 62.5 g/L EC formulation were made at a target rate of 200 g ai/ha and a target interval of 7 days using pressurised backpack sprayers. Duplicate treated samples were collected at 7 days after the last application, with additional samples being collected at intervals from 0 to 14 days at one site to generate decline data.

Table 17 Residues of fluxapyroxad and its metabolites in bulb onions

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Germansville, PA. USA, 2011 (Stuttgarter)	3 (7, 6)	210, 210, 210	310, 310, 310	7	0.16 (0.19, 0.13)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.16 (0.19, 0.13)
Lebanon, OK, USA, 2011 (Walla Walla/Sweet Red/Sweet Jumbo/Red Candy Apple)	3 (7, 7)	210, 210, 210	320, 330, 320	0	0.20 (0.18, 0.21)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.20 (0.18, 0.21)
				3	0.16 (0.17, 0.15)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.16 (0.17, 0.15)
				7	0.23 (0.21, 0.25)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.23 (0.21, 0.25)
				10	0.08 (0.09, 0.06) c0.01	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.08 (0.09, 0.06)
				14	0.14 (0.13, 0.14)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.14 (0.13, 0.14)
Claude, TX, USA, 2011 (not specified)	3 (8, 7)	200, 210, 280	340, 340, 380	7	0.03 (0.03, 0.03)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.03 (0.03, 0.03)
Guadalupe, CA, USA, 2011 (Renegade)	3 (7, 7)	200, 200, 200	280, 280, 280	7	0.16 (0.16, 0.16)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.16 (0.16, 0.16)
Guadalupe, CA, USA, 2011 (Candy)	3 (7, 7)	200, 200, 200	280, 280, 280	7	0.23 (0.23, 0.22)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.23 (0.23, 0.22)
Malin, OR, USA, 2011 (Gilroy 550)	3 (7, 7)	200, 200, 210	280, 280, 290	7	0.27 (0.28, 0.26)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.27 (0.28, 0.26)

Residues were mostly undetectable in the untreated control samples, with a few detections below the LOQ, and a single detection of parent compound at the LOQ (noted above)

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Green onion

A series of trials in green onions was conducted in the USA (Csinos, 2012-a). Three foliar broadcast applications of a 62.5 g/L EC formulation were made at a target rate of 200 g ai/ha and a target interval of 7 days using pressurised backpack sprayers. Duplicate treated samples were collected at 7 days after the last application, with additional samples being collected at intervals from 0 to 14 days at one site to generate decline data.

Table 18 Residues of fluxapyroxad and its metabolites in green onions

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Pilot Point, TX, USA, 2011 (Walla Walla/Sweet Red/Sweet Jumbo/Red Candy Apple)	3 (7, 7)	210, 200, 210	320, 310, 330	7	0.24 (0.24, 0.23)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.24 (0.24, 0.23)
Yuba City, CA, USA, 2011 (White Bunching)	3 (6, 7)	200, 200, 200	280, 280, 280	7	0.56 (0.38, 0.73)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.56 (0.38, 0.73)
Yuba City, CA, USA, 2011 (White Bunching)	3 (7, 7)	200, 200, 200	280, 280, 280	0	0.33 (0.33, 0.33)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.33 (0.33, 0.33)
				3	0.33 (0.31, 0.34)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.33 (0.31, 0.34)
				7	0.29 (0.29, 0.29)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.29 (0.29, 0.29)
				10	0.25 (0.21, 0.28)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.25 (0.21, 0.28)
				14	0.36 (0.34, 0.37)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.36 (0.34, 0.37)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Brassica vegetables

Broccoli

A series of trials in broccoli was conducted in the USA during 2011 and 2012 (Schreier, 2013-a). Three foliar broadcast applications of either a 62.5 g/L EC or a 300 g/L SC formulation of fluxapyroxad were made at target rates of 100 or 200 g ai/ha and an interval of 7 days. Duplicate broccoli head samples were collected at 0 and 3 days after the last application, with additional decline samples being collected from one site.

Table 19 Residues of fluxapyroxad and its metabolites in broccoli heads

Location, Year (variety)	Application					Residues, mg/kg parent equivalents				
	Form.	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Lebanon, OK, USA, 2011 (Premium Crop)	62.5 EC	3 (7, 7)	100, 100, 98	320, 310, 300	0	1.5 (1.1, 1.9)	< 0.02 (< 0.02, < 0.02)	0.04 (0.03, 0.05)	0.12 (0.04, 0.19)	1.7 (1.2, 2.1)
					1	1.9 (1.7, 2.1)	< 0.02 (< 0.02, < 0.02)	0.09 (0.09, 0.08)	0.15 (0.15, 0.14)	2.1 (1.9, 2.4)
					3	<u>1.2</u> (1.5, 0.99)	< 0.02 (< 0.02, < 0.02)	0.09 (0.09, 0.08)	0.15 (0.16, 0.14)	<u>1.5</u> (1.7, 1.2)
					5	0.98 (0.86, 1.1)	< 0.02 (< 0.02, < 0.02)	0.06 (0.06, 0.06)	0.16 (0.14, 0.18)	1.2 (1.1, 1.3)
					7	0.86 (0.85, 0.86)	< 0.02 (< 0.02, < 0.02)	0.05 (0.05, 0.05)	0.13 (0.17, 0.09)	1.0 (1.1, 1.0)
Lompoc, CA, USA, 2011 (Concord)	62.5 EC	3 (7, 7)	200, 200, 210	280, 280, 280	0	0.49 (0.53, 0.45)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.49 (0.53, 0.45)
					3	0.28 (0.28, 0.27)	< 0.02 (< 0.02, < 0.02)	0.01 (0.01, 0.01)	0.01 (< 0.01, 0.01)	0.29 (0.29, 0.29)
Lompoc, CA, USA, 2011 (Heritage)	62.5 EC	3 (7, 7)	200, 200, 210	280, 290, 280	0	0.46 (0.53, 0.39)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.46 (0.53, 0.39)
					3	<u>0.57</u> (0.44, 0.70)	< 0.02 (< 0.02, < 0.02)	0.03 (0.02, 0.03)	0.01 (0.01, 0.01)	<u>0.61</u> (0.47, 0.74)
Grants Pass, OR, USA, 2011 (Green Goliath)	62.5 EC	3 (7, 7)	100, 110, 100	280, 290, 280	0	0.45 (0.38, 0.52)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.45 (0.38, 0.52)
					3	<u>0.32</u> (0.37, 0.27)	< 0.02 (< 0.02, < 0.02)	0.02 (0.02, 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.34</u> (0.39, 0.28)
Guadalupe, CA, USA, 2012 (Heritage)	300 SC	3 (7, 7)	100, 100, 100	280, 280, 270	0	0.23 (0.22, 0.23)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.23 (0.22, 0.23)
					3	0.09 (0.12, 0.05)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.09 (0.12, 0.05)
Guadalupe, CA, USA, 2012 (Heritage)	300 SC	3 (7, 7)	100, 100, 100	290, 280, 290	0	0.09 (0.10, 0.08)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.09 (0.10, 0.08)
					3	<u>0.35</u> (0.28, 0.42)	< 0.02 (< 0.02, < 0.02)	0.01 (< 0.01, 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.36</u> (0.280, 0.43)

Location, Year (variety)	Application					Residues, mg/kg parent equivalents				
	Form.	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Santa Maria, CA, USA, 2012 (Patriot)	300 SC	3 (7, 7)	100, 100, 110	280, 280, 270	0	0.37 (0.47, 0.27)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.37 (0.47, 0.27)
					3	0.17 (0.12, 0.21)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.17 (0.12, 0.21)
Santa Maria, CA, USA, 2012 (Heritage)	300 SC	3 (7, 7)	100, 100, 100	280, 280, 280	0	0.49 (0.50, 0.48)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.49 (0.50, 0.48)
					3	0.10 (0.11, 0.09)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.10 (0.11, 0.09)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Cabbage

A series of trials in cabbage was conducted in the USA during 2011 and 2012 (Schreier, 2013-a). Three foliar broadcast applications of either a 62.5 g/L EC (2011 trials) or a 300 g/L SC (2012 trials) formulation of fluxapyroxad were made at target rates of 100 or 200 g ai/ha and an interval of 7 days. Duplicate samples of cabbage heads (with and without wrapper leaves) were collected at 0 and 3 days after the last application, with additional decline samples being collected from one site.

Table 20 Residues of fluxapyroxad and its metabolites in cabbage

Location, Year (variety)	Application				Sample	Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA		Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Germansville, PA, USA, 2011 (Blue Lagoon)	3 (7, 7)	100, 100, 100	310, 310, 300	0	Heads w. wrapper leaves	0.21 (0.20, 0.21)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.21 (0.22, 0.21)
				3	Heads w. wrapper leaves	0.14 (0.14, 0.13)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.14 (0.14, 0.13)
				0	Heads w/o wrapper leaves	0.04 (0.03, 0.04)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.04 (0.03, 0.04)
				3	Heads w/o wrapper leaves	0.04 (0.04, 0.04)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.04 (0.04, 0.04)
Sycamore, GA, USA, 2011 (Bravo)	3 (7, 7)	100, 100, 100	290, 280, 280	0	Heads w. wrapper leaves	0.14 (0.15, 0.13)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.14 (0.15, 0.13)
				1	Heads	0.18 (0.16,	< 0.02	< 0.01	< 0.01	0.18

Location, Year (variety)	Application				Sample	Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA		Fluxapyroxad	M700 F002	M700 F008	M700 F048	Total [a]
					w. wrapper leaves	0.19)	(< 0.02, < 0.02)	(< 0.01, < 0.01)	(< 0.01, < 0.01)	(0.16, 0.19)
				3	Heads w. wrapper leaves	0.11 (0.12, 0.10)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.11 (0.12, 0.10)
				5	Heads w. wrapper leaves	<u>0.13</u> (0.13, 0.13)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	0.01 (0.01, 0.01)	<u>0.14</u> (0.14, 0.14)
				7	Heads w. wrapper leaves	0.12 (0.12, 0.12)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	0.01 (0.01, < 0.01)	0.13 (0.13, 0.12)
				0	Heads w/o wrapper leaves	< 0.01 (< 0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)
				1	Heads w/o wrapper leaves	0.04 (0.05, 0.03)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.04 (0.05, 0.03)
				3	Heads w/o wrapper leaves	0.01 (0.01, 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.01</u> (0.01, 0.01)
				5	Heads w/o wrapper leaves	0.01 (0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.01 (0.01, < 0.01)
				7	Heads w/o wrapper leaves	0.01 (0.01, 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.01 (0.01, 0.01)
Belle Glade, FL, USA, 2011 (Bravo)	3 (6, 7)	100, 100, 100	280, 280, 290	0	Heads w. wrapper leaves	0.15 (0.13, 0.17)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.15 (0.13, 0.17)
				3	Heads w. wrapper leaves	<u>0.07</u> (0.09, 0.05)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.07</u> (0.09, 0.05)
				0	Heads w/o wrapper leaves	0.02 (0.03, 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.02 (0.03, 0.01)
				3	Heads w/o wrapper leaves	< 0.01 (< 0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>< 0.01</u> (< 0.01, < 0.01)
Deerfield, MI, USA, 2011 (Bravo)	3 (6, 7)	100, 100, 100	280, 280, 280	0	Heads w. wrapper leaves	0.39 (0.34, 0.43)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.39 (0.34, 0.43)
				3	Heads w. wrapper leaves	<u>0.11</u> (0.12, 0.09)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.11</u> (0.12, 0.09)
				0	Heads	0.04 (0.04,	< 0.02	< 0.01	< 0.01	0.04

Location, Year (variety)	Application				Sample	Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA		Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
					w/o wrapper leaves	0.04)	(< 0.02, < 0.02)	(< 0.01, < 0.01)	(< 0.01, < 0.01)	(0.04, 0.04)
				3	Heads w/o wrapper leaves	0.05 (0.04, 0.05)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.05</u> (0.04, 0.05)
Lebanon, OK, USA, 2011 (Copenhagen Market)	3 (7, 7)	100, 100, 100	310, 320, 310	0	Heads w. wrapper leaves	1.5 (1.9, 1.1)	< 0.02 (< 0.02, < 0.02)	0.02 (0.02, 0.02)	0.02 (0.02, 0.02)	1.5 (1.9, 1.2)
				3	Heads w. wrapper leaves	<u>1.2</u> (1.2, 1.2)	< 0.02 (< 0.02, < 0.02)	0.02 (0.02, 0.02)	0.02 (0.02, 0.02)	<u>1.3</u> (1.3, 1.3)
				0	Heads w/o wrapper leaves	0.20 (0.18, 0.22)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.20 (0.18, 0.22)
				3	Heads w/o wrapper leaves	0.07 (0.07, 0.07)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.07</u> (0.07, 0.07)
Guadalupe, CA, USA, 2011 (Pennet)	3 (7, 7)	200, 200, 200	290, 280, 280	0	Heads w. wrapper leaves	0.16 (0.13, 0.18)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.16 (0.13, 0.18)
				3	Heads w. wrapper leaves	0.07 (0.07, 0.07)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.07 (0.07, 0.07)
				0	Heads w/o wrapper leaves	0.03 (0.02, 0.03)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.03 (0.02, 0.03)
				3	Heads w/o wrapper leaves	0.01 (0.01, 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.01 (0.01, 0.01)
Guadalupe, CA, USA, 2012 (Red Jewel)	3 (7, 7)	100, 100, 100	280, 280, 270	0	Heads w. wrapper leaves	0.39 (0.35, 0.43)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.39 (0.35, 0.43)
				3	Heads w. wrapper leaves	<u>0.22</u> (0.28, 0.16)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.22</u> (0.28, 0.16)
				0	Heads w/o wrapper leaves	0.03 (0.03, 0.03)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.03 (0.03, 0.03)
				3	Heads w/o wrapper leaves	0.04 (0.04, 0.04)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.04</u> (0.04, 0.04)

Residues were mostly undetectable in the untreated control samples, with the exception of two detections of parent compound below the LOQ

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Fruiting vegetables, Cucurbits

Melons, except watermelon

A series of trials in melons (cantaloupe) was conducted in the USA (Csinos, 2012-b). Three foliar broadcast applications of a 62.5 g/L EC formulation of fluxapyroxad were made using pressurised backpack handheld sprayers at a target rate of 200 g ai/ha and a target interval of 7 days. Duplicated treated samples were collected on the day of the last application, with additional samples being collected at intervals up to 7 days at one site to generate decline data.

Table 21 Residues of fluxapyroxad and its metabolites in cantaloupe (US trials)

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Chula, GA, USA, 2011 (Minerva)	3 (7, 7)	200, 200, 200	280, 280, 280	0	0.08 (0.08, 0.08)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.08 (0.08, 0.08)
Deerfield, MI, USA, 2011 (Edisto)	3 (6, 7)	200, 200, 200	290, 290, 290	0	0.05 (0.05, 0.04)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.05 (0.05, 0.04)
Madill, OK, USA, 2011 (Halona F1)	3 (6, 7)	200, 200, 200	310, 310, 310	0	0.24 (0.25, 0.23)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.24 (0.25, 0.23)
Guadalupe, CA, USA, 2011 (Primo)	3 (7, 7)	200, 200, 200	250, 250, 240	0	0.21 (0.18, 0.24)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.21 (0.18, 0.24)
Yuba City, CA, USA, 2011 (Honey Rock)	3 (7, 7)	200, 200, 200	280, 280, 280	0	0.05 (0.10, < 0.002)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.05 (0.10, < 0.002)
Yuba City, CA, USA, 2011 (Honey Rock)	3 (7, 7)	200, 200, 210	280, 280, 290	0	0.03 (0.03, 0.03)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.03 (0.03, 0.03)
				1	0.03 (0.03, 0.03)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.03 (0.03, 0.03)
				3	0.03 (0.03, 0.02)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.03 (0.03, 0.02)
				6	0.03 (0.02, 0.03)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.03 (0.02, 0.03)
				8	0.03 (0.04, 0.02)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.03 (0.04, 0.02)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

A second series of trials was conducted in melons in Brazil (Guimaraes, 2010-a). Four foliar applications of an SC formulation (167 g/L fluxapyroxad and 333 g/L pyraclostrobin) were made at a target rate of 0.058 kg ai/ha fluxapyroxad + 0.117 kg ai/ha pyraclostrobin and a target interval of 7 days. Three trials were run as single point trials with sampling at 7 days after the last application, and the other two were run to a reverse decline design, generating residues data for intervals of 0–28 days after the last application.

Table 22 Residues of fluxapyroxad and metabolites in melon (Brazilian trials)

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Senador Canedo, Goias, Brazil, 2010 (Gaucho)	4 (7, 7, 7)	58, 58, 58, 58	400, 400, 400, 400	0	0.03	< 0.02	< 0.01	< 0.01	0.03
				7	0.02	< 0.02	< 0.01	< 0.01	0.02
				14	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				21	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				28	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Ibipora, Parana, Brazil, 2010 (Louis)	4 (7, 7, 7)	58, 58, 58, 58	400, 400, 400, 400	0	0.09	< 0.02	< 0.01	< 0.01	0.09
				7	0.02	< 0.02	< 0.01	< 0.01	0.02
				14	0.03	< 0.01	< 0.01	< 0.01	0.03
				21	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				28	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Santo Antonio de Posse, Sao Paolo, Brazil, 2010 (Sunrise)	4 (7, 7, 7)	58, 58, 58, 58	400, 400, 400, 400	7	0.04	< 0.02	< 0.01	< 0.01	0.04
Mossoro, Rio Grande do Norte, Brazil, 2010 (Goldex)	4 (7, 7, 7)	58, 58, 58, 58	400, 400, 400, 400	7	0.04	< 0.02	< 0.01	< 0.01	0.04
Assai, Parana, Brazil, 2010 (Louis)	4 (7, 7, 7)	58, 58, 58, 58	400, 400, 400, 400	7	0.05	< 0.02	< 0.01	< 0.01	0.05

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Cucumber

A series of trials in cucumbers was conducted in the USA (Csinos, 2012-b). Three foliar broadcast applications of a 62.5 g/L EC formulation of fluxapyroxad were made using pressurised backpack handheld sprayers at a target rate of 200 g ai/ha and a target interval of 7 days. Duplicate treated samples were collected on the day of the last application, with additional samples being collected at intervals up to 7 days at one site to generate decline data.

Table 23 Residues of fluxapyroxad and its metabolites in cucumber

Location, Year (variety)	Application				Residues, mg/kg parent equivalents			

	No. (RTI, days)	Rate, g ai/ ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Sycamore, GA, USA, 2011 (Straight Eight)	3 (7, 7)	200, 200, 200	280, 280, 280	0	<u>0.17</u> (0.20, 0.13)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.17</u> (0.20, 0.13)
				1	0.09 (0.10, 0.08)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.09 (0.10, 0.08)
				3	0.09 (0.09, 0.09)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.09 (0.09, 0.09)
				5	0.07 (0.07, 0.07)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.07 (0.07, 0.07)
				7	0.07 (0.09, 0.05)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.07 (0.09, 0.05)
Sycamore, GA, USA, 2011 (Impact)	3 (7, 7)	200, 200, 200	290, 280, 280	0	0.08 (0.10, 0.06)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.08 (0.10, 0.06)
Gainesville, FL, USA, 2011 (Impact)	3 (7, 7)	200, 200, 200	280, 280, 280	0	<u>0.03</u> (0.02, 0.03)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.03</u> (0.02, 0.03)
Deerfield, MI, USA, 2011 (Alibi F1)	3 (7, 6)	200, 200, 200	280, 290, 290	0	0.16 (0.12, 0.19)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.16 (0.12, 0.19)
Deerfield, MI, USA, 2011 (Northern Pickling)	3 (7, 6)	200, 200, 200	280, 290, 290	0	<u>0.17</u> (0.18, 0.16)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.17</u> (0.18, 0.16)
Madill, OK, USA, 2011 (Alibi F1)	3 (6, 7)	210, 210, 210	310, 310, 320	0	<u>0.24</u> (0.25, 0.22)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.24</u> (0.25, 0.22)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Squash, summer

A series of trials in <u>summer squash</u> was conducted in the USA (Csinos, 2012-b). Three foliar broadcast applications of a 62.5 g/L EC formulation of fluxapyroxad were made using pressurised backpack handheld sprayers at a target rate of 200 g ai/ha and a target interval of 7 days. Duplicate treated samples were collected on the day of the last application, with additional samples being collected at intervals up to 7 days at one site to generate decline data.

Table 24 Residues of fluxapyroxad and its metabolites in summer squash

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Germansville, PA, USA, 2011 (Super Pik)	3 (8, 6)	210, 210, 210	310, 310, 300	0	0.14 (0.11, 0.16)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.14 (0.11, 0.16)
Sycamore, GA, USA, 2011 (Gold Star)	3 (7, 7)	200, 200, 200	280, 290, 280	0	0.11 (0.13, 0.09)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.11 (0.13, 0.09)
				1	0.09 (0.08, 0.09)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.09 (0.08, 0.09)
				3	0.07 (0.08, 0.06)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.07 (0.08, 0.06)
				5	0.07 (0.06, 0.07)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.07 (0.06, 0.07)
				7	0.03 (0.03, 0.02)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.03 (0.03, 0.02)
Gainesville, FL, USA, 2011 (Gold Star)	3 (7, 7)	200, 200, 200	280, 280, 280	0	0.05 (0.05, 0.05)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.05 (0.05, 0.05)
Deerfield, MI, USA, 2011 (Gold Star)	3 (7, 6)	200, 200, 200	280, 290, 290	0	0.07 (0.05, 0.08)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.07 (0.05, 0.08)
Yuba City, CA, USA, 2011 (Yellow Summer Crookneck)	3 (7, 7)	220, 220, 220	280, 280, 280	0	0.10 (0.07, 0.12)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.10 (0.07, 0.12)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Watermelon

Trials in watermelon were conducted in Brazil (Guimaraes, 2010-b). Four applications of an SC formulation containing 167 g/L fluxapyroxad and 333 g/L pyraclostrobin were made at a target rate of 0.058 kg ai/ha fluxapyroxad + 0.117 kg ai/ha pyraclostrobin and an interval of days. Two single point residue trials, with scheduled sampling at 7 days after the last application were conducted along with two reverse decline design trials, giving decline data from 0 to 10 days after the last application.

Table 25 Residues of fluxapyroxad and metabolites in watermelon (Brazilian trials)

Location, Year (variety)	Application				Residues, mg/kg parent equivalents					
	No. (RTI, days)	Rate, g ai/ ha	Spray volume (L/ha)	DALA	Sample	Fluxapyroxad	M700 F002	M700 F008	M700 F048	Total [a]

Location, Year (variety)	Application				Residues, mg/kg parent equivalents					
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Sample	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Jaboticabal, Sao Paolo, Brazil, 2011 (Top Gun)	4 (7, 7, 7)	58, 58, 58, 58	400, 400, 400, 400	0	Peel	0.02	< 0.02	< 0.01	< 0.01	0.02
				0	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				0	Whole fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				7	Peel	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				7	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				7	Whole fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				10	Peel	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				10	Pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
				10	Whole fruit	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
San Antonio de Posse, Sao Paolo, Brazil, 2010 (Rapid Fire)	4 (6-8)	58, 58, 58, 58	400, 400, 400, 400	0	Whole fruit	0.10	< 0.02	< 0.01	< 0.01	0.10
				7	Whole fruit	0.06	< 0.02	< 0.01	< 0.01	0.06
				10	Whole fruit	0.07	< 0.02	< 0.01	< 0.01	0.07
Ponta Grossa, Parana, Brazil, 2010 (Kodama)	4 (7, 7, 7)	58, 58, 58, 58	400, 400, 400, 400	7	Whole fruit	0.05	< 0.02	< 0.01	< 0.01	0.05
Senador Canedo, Goias, Brazil, 2010 (H. Elisa)	4 (6, 8, 7)	58, 58, 58, 58	400, 400, 400, 400	7	Whole fruit	0.06	< 0.02	< 0.01	< 0.01	0.06

Residues were mostly undetectable in the untreated control samples, except for one detection of parent compound at < LOQ

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Leafy vegetables

Lettuce, head

A series of trials in head lettuce was conducted in the USA (Schreier, 2013-b). Three foliar broadcast applications of a 62.5 g/L EC or a 300 g/L SC formulation were made at a target rate of 200 g ai/ha and a target interval of 7 days using pressurised backpack sprayers. Duplicate treated samples were collected 0 and 1 day after the last application, with additional decline data samples being collected at one site.

Table 26 Residues of fluxapyroxad and its metabolites in head lettuce (heads with wrapper leaves)

Location, Year (variety)	Application					Residues, mg/kg parent equivalents			
	Formulation	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F008	M700 F048	Total [a]
Sycamore, GA, USA, 2011 (Iceberg)	300 SC	3 (7, 7)	200, 200, 200	280, 290, 280	0	0.45 (0.46, 0.43)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.45 (0.46, 0.43)
					1	<u>0.51</u> (0.56, 0.45)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.51</u> (0.56, 0.45)
Belle Glade, FL, USA, 2011 (Iceberg)	300 SC	3 (6, 7)	200, 200, 200	290, 280, 280	0	0.33 (0.38, 0.28)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.33 (0.38, 0.28)
					1	<u>0.14</u> (0.10, 0.18)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.14</u> (0.10, 0.18)
Guadalupe, CA, USA, 2011 (Escalade)	62.5 EC	3 (7, 7)	200, 200, 200	280, 280, 290	0	1.7 (1.9, 1.5)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.7 (1.9, 1.5)
					1	1.1 (0.74, 1.5)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.1 (0.74, 1.5)
Guadalupe, CA, USA, 2011 (Osoflaco)	62.5 EC	3 (7, 7)	200, 200, 200	280, 280, 290	0	3.5 (3.4, 3.6)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	3.5 (3.4, 3.6)
					1	<u>1.9</u> (2.0, 1.9)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>1.9</u> (2.0, 1.9)
Lompoc, CA, USA, 2011 (Vision)	62.5 EC	3 (7, 7)	200, 200, 200	280, 280, 280	0	0.79 (0.75, 0.82)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.79 (0.75, 0.82)
					1	<u>0.47</u> (0.38, 0.55)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.47</u> (0.38, 0.55)
Orcutt, CA, USA, 2011 (Quest)	62.5 EC	3 (7, 7)	200, 200, 200	280, 280, 280	0	2.6 (2.6, 2.7)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	2.7 (2.6, 2.7)
					1	2.0 (1.9, 2.0)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	2.0 (1.9, 2.0)
					3	0.54 (0.48, 0.60)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.54 (0.48, 0.60)
					5	<u>0.66</u> (0.46, 0.86)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	<u>0.66</u> (0.46, 0.86)
					7	0.28 (0.15, 0.40)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.28 (0.15, 0.40)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Lettuce, leaf

A series of trials in leafy lettuce was conducted in the USA (Schreier, 2013-b). Three foliar broadcast applications of a 300 g/L SC formulation were made using pressurised backpack sprayers at a target rate of 200 g ai/ha and a target interval of 7 days. Duplicate treated samples were collected at 0 and 1 day after the last application with additional decline data samples being collected at a single site.

Table 27 Residues of fluxapyroxad and its metabolites in leafy lettuce

Location, Year (variety)	Application					Residues, mg/kg parent equivalents			
	Formulation	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F008	M700F048	Total [a]
Sycamore, GA, USA, 2011 (Romaine)	300 SC	3 (7, 7)	200, 200, 200	280, 280, 280	0	9.4 (9.2, 9.5)	0.06 (0.05, 0.07)	< 0.01 (< 0.01, < 0.01)	9.4 (9.3, 9.6)
					1	6.2 (6.5, 5.9)	0.04 (0.05, 0.03)	< 0.01 (,0.001, < 0.01)	6.2 (6.5, 5.9)
Belle Glade, FL, USA, 2011 (Romaine)	300 SC	3 (6, 7)	200, 200, 200	290, 280, 280	0	4.0 (3.8, 4.1)	0.11 (0.10, 0.12)	< 0.01 (< 0.01, < 0.01)	4.1 (3.9, 4.3)
					1	3.3 (4.2, 2.4)	0.10 (0.11, 0.08)	< 0.01 (< 0.01, < 0.01)	3.4 (4.3, 2.5)
Santa Maria, CA, USA, 2012 (Red Tide)	300 SC	3 (7, 7)	200, 200,200	280, 280, 270	0	4.3 (4.4, 4.3)	0.04 (0.04, 0.04)	< 0.01 (< 0.01, < 0.01)	4.4 (4.4, 4.4)
					1	3.5 (2.8, 4.2)	0.04 (0.04, 0.04)	< 0.01 (< 0.01, < 0.01)	3.5 (2.8, 4.3)
Santa Maria, CA, USA, 2012 (Greenstar)	300 SC	3 (7, 7)	200, 200, 200	280, 280, 270	0	4.5 (4.1, 4.8)	0.02 (0.02, 0.02)	< 0.01 (< 0.01, < 0.01)	4.5 (4.1, 4.8)
					1	4.4 (4.9, 4.0)	0.02 (0.02, 0.02)	< 0.01 (< 0.01, < 0.01)	4.4 (4.9, 4.0)
Guadalupe, CA, USA, 2012 (Berghams Green)	300 SC	3 (7, 7)	200, 200, 210	270, 280, 300	0	3.2 (3.4, 3.0)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	3.2 (3.4, 3.0)
					1	2.7 (2.7, 2.6)	0.01 (0.01, 0.01)	< 0.01 (< 0.01, < 0.01)	2.7 (2.7, 2.7)
					3	0.44 (0.44, 0.44)	0.02 (0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	0.46 (0.45, 0.46)
					5	0.33 (0.35, 0.31)	0.02 (0.02, 0.01)	< 0.01 (< 0.01, < 0.01)	0.35 (0.37, 0.32)
					7	0.24 (0.26, 0.22)	0.02 (0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	0.26 (0.27, 0.24)
Guadalupe, CA, USA, 2012 (Green Thunder)	300 SC	3 (6, 7)	210, 200, 200	280, 270, 270	0	2.1 (2.2, 2.1)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	2.1 (2.2, 2.1)
					1	2.0 (2.0, 1.9)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	2.0 (2.0, 1.9)

Residues were generally undetectable in the untreated control samples, apart from a single detection of parent compound at a level < LOQ

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Mustard greens

A series of trials in mustard greens was conducted in the USA during 2011 (Schreier, 2013-a). Three foliar broadcast applications of a 62.5 g/L EC formulation of fluxapyroxad were made at target rates of 100 g ai/ha and an interval of 7 days. Duplicate treated leaves samples were collected at 0 and 3 days after the last application, with additional decline samples being collected from one site.

Table 28 Residues of fluxapyroxad and its metabolites in mustard greens leaves

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Sycamore, GA, USA, 2011 (Savanna)	3 (7, 7)	100, 100, 100	280, 290, 280	0	4.5 (4.8, 4.3)	< 0.02 (< 0.02, < 0.02)	0.27 (0.28, 0.26)	0.64 (0.65, 0.63)	5.5 (5.7, 5.3)
				1	2.7 (3.1, 2.4)	< 0.02 (< 0.02, < 0.02)	0.29 (0.28, 0.30)	0.64 (0.75, 0.53)	3.7 (4.1, 3.2)
				3	1.7 (1.8, 1.6)	< 0.02 (< 0.02, < 0.02)	0.42 (0.41, 0.43)	0.96 (0.90, 1.0)	3.1 (3.1, 3.1)
				5	1.0 (1.0, 0.95	< 0.02 (< 0.02, < 0.02)	0.30 (0.33, 0.26)	0.87 (0.86, 0.87)	2.2 (2.2, 2.1)
				7	0.83 (0.80, 0.85)	< 0.02 (< 0.02, < 0.02)	0.23 (0.23, 0.23)	0.89 (0.89, 0.88)	1.9 (1.9, 2.0)
Fisk, MO, USA, 2011 (Southern Giant)	3 (7, 7)	100, 100, 100	280, 280, 280	0	3.9 (4.4, 3.3)	< 0.02 (< 0.02, < 0.02)	0.10 (0.10, 0.10)	0.40 (0.38, 0.41)	4.4 (4.9, 3.9)
				3	1.9 (1.9, 1.9)	< 0.02 (< 0.02, < 0.02)	0.36 (0.34, 0.38)	0.45 (0.44, 0.45)	2.7 (2.7, 2.7)
York, NE, USA, 2011 (Green Wave)	3 (7, 7)	100, 100, 110	290, 290, 290	0	3.7 (3.5, 4.0)	< 0.02 (< 0.02, < 0.02)	0.12 (0.12, 0.12)	0.09 (0.10, 0.07)	3.9 (3.7, 4.2)
				3	0.57 (0.55, 0.58)	< 0.02 (< 0.02, < 0.02)	0.19 (0.19, 0.18)	0.18 (0.19, 0.17)	0.93 (0.93, 0.93)
Pilot Point, TX, USA, 2011 (Green Wave)	3 (7, 7)	110, 100, 110	320, 320, 320	0	6.8 (7.1, 6.5)	< 0.02 (< 0.02, < 0.02)	0.57 (0.54, 0.59)	1.3 (1.5, 1.1)	8.7 (9.1, 8.2)
				3	0.48 (0.51, 0.44)	< 0.02 (< 0.02, < 0.02)	0.25 (0.27, 0.22)	0.97 (0.93, 1.0)	1.7 (1.7, 1.7)
Yuba City, CA, USA, 2011 (India)	3 (7, 8)	100, 100, 100	280, 280, 280	0	2.0 (2.2, 1.8)	< 0.02 (< 0.02, < 0.02)	0.08 (0.09, 0.07)	0.14 (0.14, 0.13)	2.2 (2.4, 2.0)
				3	0.90 (0.84, 0.95)	< 0.02 (< 0.02, < 0.02)	0.23 (0.21, 0.24)	0.22 (0.21, 0.23)	1.3 (1.3, 1.4)

Residues were mostly undetectable in the untreated control samples, apart from a single detection of M700F008 below the LOQ

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Radish leaves

A series of trials in radish was conducted in the USA (Norris, 2012). Three applications of fluxapyroxad as a 62.5 g/L EC formulation were made a target rate of 100 g ai/ha and a target interval of 7 days. Radish roots and tops (duplicate samples) were sampled at 7 days after the last application.

Table 29 Residues of fluxapyroxad and its metabolites in radish tops

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxa pyroxad	M700 F002	M700 F008	M700 F048	Total [a]
Wayne, NY, USA, 2010 (Scarlet Globe)	3 (7, 7)	100, 98, 98	280, 270, 270	7	0.7 (0.7, 0.6)	< 0.02 (< 0.02, < 0.02)	0.3 (0.3, 0.3)	0.2 (0.2, 0.2)	1.2 (1.2, 1.1)
Martin, FL, USA, 2011 (Escala)	3 (7, 7)	99, 100, 100	280, 280, 290	7	0.2 (0.2, 0.2)	< 0.02 (< 0.02, < 0.02)	0.2 (0.2, 0.2)	0.2 (0.2, 0.2)	0.6 (0.6, 0.6)
Palm Beach, FL, USA, 2011 (Escala)	3 (7, 7)	100, 100, 100	290, 280, 290	7	0.2 (0.2, 0.1)	< 0.02 (< 0.02, < 0.02)	0.2 (0.2, 0.1)	0.07 (0.07, 0.07)	0.4 (0.5, 0.3)
Clinton, IL, USA, 2010 (Champion)	3 (6, 7)	100, 100, 100	280, 280, 280	7	4 (4, 4)	< 0.02 (< 0.02, < 0.02)	0.9 (0.8, 0.9)	0.5 (0.5, 0.6)	5 (5, 6)
Tulare, CA, USA, 2010 (Crimson Giant)	3 (7, 7)	100, 100, 100	280, 280, 280	7	1 (1, 1)	< 0.02 (< 0.02, < 0.02)	0.5 (0.5, 0.5)	0.2 (0.2, 0.2)	1.7 (1.7, 1.7)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Spinach

A series of trials in spinach was conducted in the USA (Schreier, 2013-b). Three foliar broadcast applications of a 62.5 g/L EC or a 300 g/L SC formulation were made at a target rate of 200 g ai/ha and a target interval of 7 days using pressurised backpack sprayers. Duplicate treated samples were collected 0 and 1 day after the last application, with additional decline data samples being collected at one site.

Table 30 Residues of fluxapyroxad and its metabolites in spinach

Location, Year (variety)	Application					Residues, mg/kg parent equivalents			
	Formulation	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F008	M700 F048	Total [a]
Guadalupe, CA, USA, 2011 (UniPak 151)	62.5 EC	3 (7, 7)	200, 200, 200	280, 280, 290	0	9.2 (9.6, 8.8)	0.11 (0.11, 0.10)	< 0.01 (< 0.01, < 0.01)	9.3 (9.7, 8.9)
					1	6.0 (6.1, 6.0)	0.23 (0.21,	< 0.01 (< 0.01,	6.3 (6.3,

Location, Year (variety)	Application					Residues, mg/kg parent equivalents			
	Formulation	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F008	M700 F048	Total [a]
							0.25)	< 0.01)	6.3)
Guadalupe, CA, USA, 2011 (Avenger)	300 SC	3 (7, 7)	200, 200, 210	250, 250, 250	0	6.2 (6.0, 6.5)	0.07 (0.08, 0.06)	< 0.01 (< 0.01, < 0.01)	6.3 (6.0, 6.6)
					1	1.9 (1.8, 1.9)	0.07 (0.07, 0.07)	< 0.01 (< 0.01, < 0.01)	1.9 (1.9, 2.0)
Germansville, PA, USA, 2011 (Tyee)	62.5 EC	3 (7, 7)	210, 210, 210	310, 300, 310	0	9.8 (9.4, 10.2)	0.41 (0.39, 0.42)	< 0.01 (< 0.01, < 0.01)	10.2 (9.8, 10.6)
					1	<u>8.3</u> (8.4, 8.2)	0.44 (0.42, 0.46)	< 0.01 (< 0.01, < 0.01)	<u>8.8</u> (8.8, 8.7)
Lebanon, OK, USA, 2011 (Spargo F1, Tyee F1, Bloomsdale)	62.5 EC	3 (7, 7)	200, 210, 210	320, 320, 320	0	18.0 (19.5, 16.5)	0.81 (0.71, 0.91)	0.03 (0.03, 0.02)	18.8 (20.2, 17.4)
					1	<u>11.5</u> (11.9, 11.0)	0.76 (0.74, 0.77)	0.02 (0.02, 0.02)	<u>12.2</u> (12.7, 11.8)
Sycamore, GA, USA, 2011 (Crocodile RZ)	300 SC	3 (7, 7)	200, 200, 200	280, 290, 280	0	6.1 (6.0, 6.3)	0.04 (0.04, 0.04)	< 0.01 (< 0.01, < 0.01)	6.2 (6.0, 6.3)
					1	4.4 (4.1, 4.7)	0.05 (0.05, 0.04)	< 0.01 (< 0.01, < 0.01)	4.4 (4.1, 4.8)
					3	<u>5.2</u> (4.8, 5.6)	0.06 (0.05, 0.06)	< 0.01 (< 0.01, < 0.01)	<u>5.2</u> (4.8, 5.6)
					5	3.7 (3.4, 4.0)	0.06 (0.05, 0.06)	< 0.01 (< 0.01, < 0.01)	3.8 (3.5, 4.1)
					7	3.2 (3.3, 3.2)	0.03 (0.03, 0.03)	< 0.01 (< 0.01, < 0.01)	3.3 (3.3, 3.2)
Monte Vista, CO, USA, 2012 (Regiment)	300 SC	3 (7, 7)	200, 200, 200	280, 280, 280	0	7.9 (7.5, 8.3)	0.05 (0.05, 0.04)	< 0.01 (< 0.01, < 0.01)	8.0 (7.6, 8.4)
					1	<u>6.7</u> (6.6, 6.9)	0.03 (0.03, 0.02)	< 0.01 (< 0.01, < 0.01)	<u>6.8</u> (6.6, 6.9)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Root and tuber vegetables

Carrot

A series of trials in <u>carrots</u> was conducted in the USA (Norris, 2012 and Schreier, 2015). Three applications of fluxapyroxad as a 62.5 g/L EC formulation were made a target rate of 100 g ai/ha and a target interval of 7 days. Carrot roots (duplicate samples) were sampled at 7 days after the last application, with additional samples being collected from 0-14 days at one decline trial site.

Table 31 Residues of fluxapyroxad and its metabolites in carrot roots Norris, 2012)

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Hillsborough, FL, USA, 2010 (Imperator 58)	3 (7, 7)	100, 100, 100	280, 280, 280	7	0.1 (0.1, 0.1)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.1 (0.1, 0.1)
Jefferson, IA, USA, 2010 (Nantes Scarlet)	3 (7, 7)	100, 99, 100	280, 280, 290	7	0.05 (0.04, 0.05)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.05 (0.04, 0.05)
Caddo, OK, USA, 2010 (Nantes Scarlet)	3 (7, 6)	100, 97, 100	290, 280, 270	7	0.06 (0.06, 0.06)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.06 (0.06, 0.06)
Tulare, CA, USA, 2010 (Danvers 126)	3 (7, 7)	100, 100, 100	280, 280, 280	7	0.5 (0.5, 0.5)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.5 (0.5, 0.5)
Tulare, CA, USA, 2010 (Danvers 126)	3 (7, 7)	98, 100, 100	270, 280, 280	7	0.1 (0.1, 0.1)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.1 (0.1, 0.1)
Tulare, CA, USA, 2010 (Danvers 126)	3 (7, 7)	100, 100, 100	280, 290, 290	0	0.2 (0.2, 0.2)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.2 (0.2, 0.2)
				3	0.4 (0.3, 0.4)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.4 (0.3, 0.4)
				7	0.3 (0.3, 0.3)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.3 (0.3, 0.3)
				10	0.4 (0.3, 0.4)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.4 (0.3, 0.4)
				14	0.4 (0.4, 0.3)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.4 (0.4, 0.3)
Grant, WA, USA, 2010 (Danvers 126)	3 (7, 7)	100, 100, 100	280, 280, 280	7	0.04 (0.04, 0.04)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.04 (0.04, 0.04)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Table 32 Residues of fluxapyroxad and its metabolites in carrot roots (Schreier, 2015)

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F002	M700 F008	M700 F048	Total [a]
Madill, OK, USA, 2014 (Danvers)	3 (7, 6)	98, 100, 100	260, 260, 250	0	0.061 (0.054, 0.068) c0.01	< 0.02 (< 0.02, < 0.02)	0.021 (0.022, 0.020) c0.016	< 0.01 (< 0.01, < 0.01)	0.082 (0.076, 0.088)
				3	0.063 (0.065, 0.060)	< 0.02 (< 0.02, < 0.02)	0.022 (0.021, 0.023)	< 0.01 (< 0.01, < 0.01)	0.085 (0.086, 0.083)
				10	0.072 (0.072, 0.071)	< 0.02 (< 0.02, < 0.02)	0.023 (0.023, 0.022)	< 0.01 (< 0.01, < 0.01)	0.094 (0.095, 0.093)
				14	0.066 (0.063, 0.069)	< 0.02 (< 0.02, < 0.02)	0.022 (0.021, 0.022)	< 0.01 (< 0.01, < 0.01)	0.088 (0.084, 0.091)

Except where noted, no residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Potato

A number of residue trials in potatoes were conducted in Europe (Kramm, 2013-a, and Schaufele, 2013). Applications of a 300 g/L SC formulation were made using handheld equipment, at planting. The application was made in two passes, the first in the open furrow prior to sowing the seed potatoes, and the second over the top of the seed potatoes prior to filling in the furrow. The target total rate was 0.25 kg ai/ha. Samples of tubers were collected shortly prior to and at normal harvest maturity (BBCH growth stage 47–49).

Table 33 Residues of fluxapyroxad and its metabolites in potato tubers after in-furrow treatment at planting

Location, Year (variety)	Application			Residues, mg/kg parent equivalents					
	Rate, g ai/ha	Spray volume, L/ha	DALA	Sample	Fluxapyroxad	M700 F002	M700 F008	M700 F048	Total [a]
Waldsee, Germany, 2011 (Berber)	230	140	105	Immature tubers	0.02	< 0.02	< 0.01	< 0.01	0.02
			133	Mature tubers	0.04	< 0.02	< 0.01	< 0.01	0.04
Studernheim, Germany, 2011 (Belana)	260	200	92	Immature tubers	0.02	< 0.02	< 0.01	< 0.01	0.02
			120	Mature tubers	0.01	< 0.02	< 0.01	< 0.01	0.01
Leicestershire, UK, 2011 (Cara)	250	200	88	Immature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
			116	Mature tubers	0.01	< 0.02	< 0.01	< 0.01	0.01
Derbyshire, UK, 2011 (Maris Piper)	260	210	76	Immature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
			104	Mature	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01

Location, Year (variety)	Application			Residues, mg/kg parent equivalents					
	Rate, g ai/ha	Spray volume, L/ha	DALA	Sample	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
				tubers					
Ottersum, the Netherlands, 2011 (Presto)	260	100	91	Immature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
			112	Mature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Siebengeweld, the Netherlands, 2011 (Cilena)	270	110	98	Immature tubers	0.01	< 0.02	< 0.01	< 0.01	0.01
			114	Mature tubers	0.02	< 0.02	< 0.01	< 0.01	0.02
Marbais, Belgium, 2011 (Ramos)	260	160	110	Immature tubers	0.01	< 0.02	< 0.01	< 0.01	0.01
			134	Mature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Sirault, Belgium, 2011 (Bintje)	270	160	108	Immature tubers	0.03	< 0.02	< 0.01	< 0.01	0.03
			133	Mature tubers	0.04	< 0.02	< 0.01	< 0.01	0.04
Duras, France, 2012 (Mona Lisa)	280	160	57	Immature tubers	0.01	< 0.02	< 0.01	< 0.01	0.01
			77	Mature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Bonnieux, France, 2012 (Lisseta)	270	160	68	Immature tubers	0.02	0.02	< 0.01	< 0.01	0.02
			95	Mature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Nea Magnisia, Greece, 2012 (Jaerla)	250	150	70	Immature tubers	0.01	0.02	< 0.01	< 0.01	0.01
			92	Mature tubers	< 0.01	0.02	< 0.01	< 0.01	< 0.01
Platanos, Greece, 2012 (Agria)	260	150	77	Immature tubers	0.01	< 0.02	< 0.01	< 0.01	0.01
			111	Mature tubers	0.02	< 0.02	< 0.01	< 0.01	0.02
Mulazzano, Italy, 2012 (Desiree)	290	180	121	Immature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
			126	Mature tubers	0.04	< 0.02	< 0.01	< 0.01	0.04
Caleppio di Settala, Italy, 2012 (Kennebek)	260	150	106	Immature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
			112	Mature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Paterna, Spain, 2012 (Nicola)	260	160	80	Immature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
			90	Mature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Valencia, Spain, 2012 (Desiree)	250	150	81	Immature tubers	0.02	< 0.02	< 0.01	< 0.01	0.02
			94	Mature	0.03	< 0.02	< 0.01	< 0.01	0.03

Location, Year (variety)	Application			Residues, mg/kg parent equivalents					
	Rate, g ai/ha	Spray volume, L/ha	DALA	Sample	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
				tubers					

No residues were found above the LOQ in the untreated control samples

[a] Sum of parent, M700F008 and M700F048, expressed as parent, as per the residue definition for dietary risk assessment

In another study (Kramm, 2013-b), seed potatoes were treated with a 300 g/L fluxapyroxad SC formulation at a target rate of 0.006 kg ai/100 kg prior to planting. At the planting rate of 2500 kg/ha, this corresponds to a nominal application rate of 150 g ai/ha. Samples of tubers were collected shortly prior to and at normal harvest maturity (BBCH growth stage 47–49).

Table 34 Residues of fluxapyroxad and its metabolites in potato tubers after treatment of seed potatoes prior to sowing

Location, Year (variety)	Application			Residues, mg/kg parent equivalents					
	Rate, g ai/100 kg	Rate, g ai/ha	DALA	Sample	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Sturdenheim, Germany, 2012 (Nicola)	5.6	140	84	Immature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
			125	Mature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Waldsee, Germany, 2012 (Nicola)	5.6	160	89	Immature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
			129	Mature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Meauzac, France, 2012 (Nicola)	5.6	99	87	Immature tubers	0.02	< 0.02	< 0.01	< 0.01	0.02
			128	Mature tubers	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
Paterna, Spain, 2012 (Nicola)	5.6	140	82	Immature tubers	0.01	< 0.02	< 0.01	< 0.01	0.01
			93	Mature tubers	0.04	< 0.02	< 0.01	< 0.01	0.04

No residues were found above the LOQ in the untreated control samples

[a] Sum of parent, M700F008 and M700F048, expressed as parent, as per the residue definition for dietary risk assessment

Residue trials in potatoes conducted in the USA and Canada (3× 100 g ai/ha foliar applications) was considered by the 2012 Meeting and the data is reproduced below.

Table 35 Residues from the foliar application of fluxapyroxad to potatoes in the USA and Canada (Johnston and Saha 2010, 2009/7003643)

Study No. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)						
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad		M700F002	M700F008	M700F048	Total [a]	
							Mean	Individual				Individual	Mean
GAP, USA	3		97-101			7							
2009/7003643	3	6	100	280	Tuber	7	< 0.01	< 0.01	< LOD	< LOD	< LOD	< 0.01	< 0.01

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

Study No. Trial No. Country Year (Variety)	Application No	Interval Days	g ai/ha	Water (L/ha)	Matrix	PHI days	Residues (mg/kg) Fluxapyroxad Mean	Fluxapyroxad Individual	M700F002	M700F008	M700F048	Total [a] Individual	Total [a] Mean
								< 0.01) < 0.01					
						21	< 0.01	< LOD	< LOD	< LOD	< LOD	< 0.01	< 0.01
								< LOD	< LOD	< LOD	< LOD	< 0.01	
2009/7003643 RCN R080458 USA (Freeborn, Minnesota) 2008 (Cascade)	3	6 7	101 102 101 304	189 192 190	Tuber	7	< 0.01	< 0.01	< LOD	< LOD	< LOD	< 0.01	< 0.01
								< 0.01	< LOD	< LOD	< LOD	< 0.01	
						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	
2009/7003643 RCN R080459 USA (Cass, North Dakota) 2009 (Red Lady)	3	6 8	105 104 105 314	196 194 196	Tuber	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	< 0.01	< 0.01	
						21	< 0.01	< LOD	< LOD	< LOD	< LOD	< 0.01	< 0.01
								< LOD	< LOD	< LOD	< LOD	< 0.01	
						28	< 0.01	< LOD	< LOD	< LOD	< LOD	< 0.01	< 0.01
								< LOD	< LOD	< LOD	< LOD	< 0.01	
2009/7003643 RCN R080460 USA (Keokuk, Iowa) 2008 (Kennebec)	3	7 7	101 99 102 302	154 166 192	Tuber	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	< 0.01	< LOD	< 0.01	< 0.01	
2009/7003643 RCN R080461 USA (Dane, Wisconsin) 2008 (Superior)	3	7 7	129 100 94 323	242 262 293	Tuber	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	< 0.01	< 0.01	< 0.01
								< LOD	< LOD	< LOD	< 0.01	< 0.01	
2009/7003643 RCN R080462 USA (Pepin, Wisconsin) 2008 (Russet Burbank)	3	7 29	99 100 99 298	278 281 280	Tuber	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	
2009/7003643 RCN R080463 Canada (Taber, Alberta) 2008 (Russet Burbank)	3	7 7	102 99 102 303	154 149 153	Tuber	7	< 0.01	< LOD	< 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
								< LOD	< 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 RCN R080464 USA	3	7 7	99 102 101	185 191 189	Tuber	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

Study No. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)						
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad		M700F002	M700F008	M700F048	Total [a]	
							Mean	Individual				Individual	Mean
(Cache, Utah) 2008 (Klondike Rose)			302					< 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 RCN R080465 USA (Sacramento, California) 2008 (1533)	3	7 7	99 99 99 297	187 187 187	Tuber	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	
2009/7003643 RCN R080466 USA (Payette, Idaho) 2008 (Norkotah)	3	6 8	100 102 99 301	234 239 233	Tuber	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	
2009/7003643 RCN R080467 USA (Washington, Idaho) 2008 (Ranger Russet)	3	7 7	102 102 101 305	240 238 236	Tuber	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	
2009/7003643 RCN R080468 USA (Bingham, Idaho) 2008 (Ranger Russet)	3	6 7	103 103 103 309	192 192 192	Tuber	7	< 0.01	< LOD	< LOD	< LOD	< LOD	< 0.01	< 0.01
								< LOD	< LOD	< LOD	< LOD	< 0.01	
						10	< 0.01	< LOD	< LOD	< LOD	< LOD	< 0.01	< 0.01
								< LOD	< LOD	< LOD	< LOD	< 0.01	
						15	< 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	
						28	< 0.01	< LOD	< LOD	< LOD	< LOD	< 0.01	< 0.01
								< 0.01	< LOD	< LOD	< LOD	< 0.01	
2009/7003643 RCN R080469 USA (Power, Idaho) 2008 (Russet Burbank)	3	8 6	98 97 99 294	184 182 186	Tuber	7	< 0.01	< 0.01	< 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
								< 0.01	< LOD	< LOD	< LOD	< 0.01	
2009/7003643 RCN R080470 USA (Benton, Oregon) 2008 (Ranger Russet)	3	7 7	98 102 100 300	277 288 283	Tuber	7	< 0.01	< 0.01	< LOD	< LOD	< LOD	< 0.01	< 0.01
								< 0.01	< LOD	< LOD	< LOD	< 0.01	
						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
								< LOD	< LOD	< LOD	< LOD	< 0.01	
2009/7003643 RCN R080471	3	7 7	104 103	192 192	Tuber	7	< 0.01	< LOD	< LOD	< LOD	< LOD	< 0.01	< 0.01
								< 0.01	< LOD	< LOD	< LOD	< 0.01	

Study No. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)						
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad		M700F002	M700F008	M700F048	Total [a]	
							Mean	Individual				Individual	Mean
Canada (Strathcona, Alberta) 2008 (Russet Burbank E3)			101 308	189		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	

[a] 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

Radish

A series of trials in radish was conducted in the USA (Norris, 2012). Three applications of fluxapyroxad as a 62.5 g/L EC formulation were made a target rate of 100 g ai/ha and a target interval of 7 days. Duplicate samples of radish roots and tops were collected at 7 days after the last application.

Table 36 Residues of fluxapyroxad and its metabolites in radish roots

Location, Year (variety)	Application				Residues, mg/kg, parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F002	M700 F008	M700 F048	Total*
Wayne, NY, USA, 2010 (Scarlet Globe)	3 (7, 7)	100, 98, 98	280, 270, 270	7	0.05 (0.04, 0.05)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.05 (0.04, 0.05)
Martin, FL, USA, 2011 (Escala)	3 (7, 7)	99, 100, 100	280, 280, 290	7	0.04 (0.04, 0.04)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.04 (0.04, 0.04)
Palm Beach, FL, USA, 2011 (Escala)	3 (7, 7)	100, 100, 100	290, 280, 290	7	0.03 (0.03, 0.03)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.03 (0.05, 0.05)
Clinton, IL, USA, 2010 (Champion)	3 (6, 7)	100, 100, 100	280, 280, 280	7	0.1 (0.09, 0.1)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.1 (0.09, 0.1)
Tulare, CA, USA, 2010 (Crimson Giant)	3 (7, 7)	100, 100, 100	280, 280, 280	7	0.1 (0.1, 0.1)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.1 (0.1, 0.1)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Sugar beet

Residue trials in sugar beet were considered by the 2012 Meeting and the data is reproduced below.

Table 37 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. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)						
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad		M700F002	M700F008	M700F048	Total [a]	
							Mean	Individual				Individual	Mean
GAP, USA	3		97-101			7							
2009/7003643 RCN R080472 USA (Freeborn, Minnesota) 2008 (Beta 130R)	3	7 7	101 100 100 301	189 188 188	Roots	7	0.06	0.06	< LOD	< LOD	< LOD	0.06	0.06
								0.06	< LOD	< LOD	< LOD	0.06	
					Roots	13	0.04	(0.04, 0.05) 0.05	< LOD	< LOD	< LOD	0.05	0.04
								(0.03, 0.03) 0.03	(< LOD, < 0.01) < 0.01	< LOD	< LOD	0.03	
					Roots	21	0.03	(0.02, 0.04) 0.03	(< LOD, < 0.01) < 0.01	< LOD	< LOD	0.03	0.03
								(0.03, 0.03) 0.03	< LOD	< LOD	< LOD	0.03	
2009/7003643 RCN R080473 USA (Cass, North Dakota) 2008 (539 RR)	3	6 8	99 98 100 297	186 183 187	Roots	7	0.03	0.02	< LOD	< LOD	< LOD	0.02	0.03
								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 RCN R080474 USA (Jetterson, Iowa) 2008 (Crystal 539RR)	3	7 7	104 98 101 303	174 157 177	Roots	7	0.04	0.05	< LOD	< LOD	< LOD	0.05	0.04
								0.03	< LOD	< LOD	< LOD	0.03	
					Roots	14	0.06	(0.05, 0.04) 0.05	< LOD	< LOD	< LOD	0.05	0.06
								(0.06, 0.06) 0.06	(< LOD, < 0.01) < 0.01	< LOD	< LOD	0.06	
					Roots	21	0.05	(0.03, 0.04) 0.04	(< LOD, < 0.01) < 0.01	< LOD	< LOD	0.04	0.05
								(0.07, 0.05) 0.06	(< LOD, < 0.01) < 0.01	< LOD	< LOD	0.06	
2009/7003643 RCN R080475 Canada (Strathcona, Alberta) 2008 (Betaseed Beta 1385)	3	7 7	102 103 102 307	190 192 189	Roots	7	0.01	0.01	< LOD	< LOD	< LOD	0.01	0.01
								(0.01, 0.01) 0.01	< LOD	< LOD	< LOD	0.01	
					Roots	14	0.04	(0.03, 0.03) 0.03	< LOD	< LOD	< LOD	0.03	0.04
								(0.04, 0.04) 0.04	< LOD	< LOD	< LOD	0.04	
					Roots	21	0.04	(0.02, 0.03) 0.03	< LOD	< LOD	< LOD	0.03	0.04
								(0.03, 0.04) 0.04	< LOD	< LOD	< LOD	0.04	
2009/7003643 RCN R080476 USA (LaMoure, North Dakota)	3	7 7	102 101 101 304	190 190 189	Roots	7	0.02	0.02	< LOD	< LOD	< LOD	0.02	0.02
								0.02	< LOD	< LOD	< LOD	0.02	
					Roots	13	0.04	0.06	< LOD	< LOD	< LOD	0.06	0.04
								0.02	< LOD	< LOD	< LOD	0.02	

Study No. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)						
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad		M700F002	M700F008	M700F048	Total [a]	
							Mean	Individual				Individual	Mean
2008 (539 RR)					Roots	21	0.01	< 0.01	< LOD	< LOD	< LOD	< 0.01	0.01
								0.01	< LOD	< LOD	< LOD	0.01	
2009/7003643 RCN R080477 Canada (Taber, Alberta) 2008 (Beta B85-Pro 15)	3	7 10	99 100 99 298	150 151 150	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	< 0.01	< 0.01
								< 0.01	< LOD	< LOD	< LOD	< 0.01	
					Roots	22	0.01	0.01	< LOD	< LOD	< LOD	0.01	0.01
								< 0.01	< LOD	< LOD	< LOD	< 0.01	
2009/7003643 RCN R080478 USA (Hockley, Texas) 2008 (Phoenix)	3	8 6	102 100 99 301	284 280 277	Roots	7	0.02	(0.02, 0.02) 0.02	< LOD	< LOD	< LOD	0.02	0.02
								(0.01, 0.02) 0.02	< LOD	< LOD	< LOD	0.02	
					Roots	14	0.03	(0.03, 0.03) 0.03	< LOD	< LOD	< LOD	0.03	0.03
								(0.02, 0.03) 0.03	< LOD	< LOD	< LOD	0.03	
					Roots	21	0.03	(0.03, 0.02) 0.03	< LOD	< LOD	< LOD	0.03	0.03
								(0.02, 0.02) 0.02	< LOD	< LOD	< LOD	0.02	
2009/7003643 RCN R080479 USA (Cache, Utah) 2008 (4023 R)	3	7 7	103 103 101 307	192 193 188	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	< 0.01	0.01
								(< 0.01, 0.01) 0.01	< LOD	< LOD	< LOD	0.01	
					Roots	21	0.01	(< 0.01, 0.01) 0.01	< LOD	< LOD	< LOD	0.01	0.01
								(< 0.01, 0.01) 0.01	< LOD	< LOD	< LOD	0.01	
2009/7003643 RCN R080480 USA (Tulare, California) 2008 (Phoenix)	3	7 7	91 100 99 290	286 287 286	Roots	7	0.04	0.03	< LOD	< LOD	< LOD	0.03	0.04
								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 RCN R080481 USA (Power, Idaho) 2008 (Hilleshog 9026)	3	7 7	98 101 98 297	185 190 183	Roots	7	0.05	0.07	< LOD	< LOD	< LOD	0.07	0.05
								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	

Study No. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)						
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad		M700F002	M700F008	M700F048	Total [a]	
							Mean	Individual				Individual	Mean
2009/7003643 RCN R080482 USA (Bingham, Idaho) 2008 (BTS 25RR05)	3	7 7	98 103 99 300	183 191 183	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	0.03	0.02	< LOD	< LOD	< LOD	0.02	0.03
								0.03	< LOD	< LOD	< LOD	0.03	
2009/7003643 RCN R080483 Canada (RM of Portage la Prairie, Manitoba) 2008 (Betaseed Beta 1385)	3	9 7	120 101 105 326	223 189 196	Roots	8	0.05	0.05	< LOD	< LOD	< LOD	0.05	0.05
								0.04	< LOD	< LOD	< LOD	0.04	
					Roots	15	0.03	0.02	< LOD	< LOD	< LOD	0.02	0.03
								0.04	< LOD	< LOD	< LOD	0.04	
					Roots	20	0.03	0.02	< LOD	< LOD	< LOD	0.02	0.03
								0.03	< LOD	< LOD	< LOD	0.03	

[a] 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

Celery

A series of trials in celery was conducted in the USA (Schreier, 2013-b). Three applications of a 62.5 g/L EC formulation of fluxapyroxad were made at a target rate of 200 g ai/ha, and an interval of 7 days. Duplicate treated samples were collected at 0 and 1 days after the last application, with additional decline samples being collected at a single site.

Table 38 Residues of fluxapyroxad and its metabolites in celery (untrimmed leaf stalks)

Location, Year (variety)	Application					Residues, mg/kg parent equivalents			
	Formulation	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F008	M700 F048	Total [a]
Gregory, MI, USA, 2011 (Tongo)	62.5 EC	3 (7, 7)	200, 200, 200	280, 280, 280	0	1.2 (1.0, 1.4)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.2 (1.0, 1.4)
					1	1.4 (1.4, 1.5)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.4 (1.4, 1.5)
Belle Glade, FL, USA, 2011 (Walt's Pride)	62.5 EC	3 (6, 7)	200, 200, 200	290, 280, 280	0	2.2 (1.8, 2.6)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	2.2 (1.8, 2.6)
					1	1.3 (1.0, 1.6)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.3 (1.0, 1.6)
Lompoc, CA, USA, 2011 (Conquistador)	62.5 EC	3 (7, 7)	200, 200, 210	280, 290, 280	0	2.5 (1.8, 3.2)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	2.5 (1.8, 3.2)
					1	2.7 (2.7, 2.6)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	2.7 (2.7, 2.6)
Lompoc, CA, USA, 2011 (Mission)	62.5 EC	3 (7, 7)	210, 200,	280, 280, 280	0	5.2 (4.4, 6.1)	< 0.01 (< 0.01,	< 0.01 (< 0.01,	5.2 (4.4, 6.1)

Location, Year (variety)	Application					Residues, mg/kg parent equivalents			
	Formulation	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F008	M700 F048	Total [a]
			200				< 0.01)	< 0.01)	
					1	5.2 (4.8, 5.5)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	5.2 (4.8, 5.5)
Guadalupe, CA, USA, 2011 (Conquistador)	62.5 EC	3 (7, 7)	200, 200, 200	280, 280, 280	0	1.5 (1.7, 1.2)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.5 (1.7, 1.2)
					1	1.5 (1.1, 1.9)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.5 (1.1, 1.9)
Guadalupe, CA, USA, 2011 (Mission)	62.5 EC	3 (7, 7)	200, 200, 210	280, 280, 280	0	2.0 (1.9, 2.1)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	2.0 (1.9, 2.1)
					1	1.8 (1.7, 2.0)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.8 (1.7, 2.0)
					3	1.4 (1.4, 1.4)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.4 (1.4, 1.4)
					5	1.1 (1.1, 1.1)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.1 (1.1, 1.1)
					7	1.0 (1.1, 0.97)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.0 (1.1, 0.97)

Residues were generally undetectable in the untreated control samples, apart from a single detection of parent compound at a level < LOQ

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad

Cereals

Rice

A series of trials in rice was conducted in the USA (Thiel, 2012). Two foliar broadcast applications of a 300 g/L SC formulation of fluxapyroxad were made using backpack boom sprayers at a target rate of 150 g ai/ha, and a target interval of 7 days. An adjuvant (non-ionic surfactant, fatty acid methyl ester, or crop oil concentrate) was included in the tank mix for all applications. Duplicate treated samples of rice grain with husk were collected 28 days after the last application, with additional decline samples being collected from some sites.

Residue data for rice straw is tabulated in Table 39 below.

Table 39 Residues of fluxapyroxad and metabolites in rice (with husk)

Location, Year (variety)	Application				Residues, mg/kg, parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F002	M700 F008	M700 F048	Total [a]
Screeton, AR, USA, 2011 (Jupiter)	2 (7)	150, 150	190, 190	28	0.61 (0.62, 0.59)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.61 (0.62, 0.59)

Location, Year (variety)	Application				Residues, mg/kg, parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F002	M700 F008	M700 F048	Total [a]
Lonoke, AR, USA, 2011 (CL142AR)	2 (7)	160, 150	190, 190	28	0.34 (0.34, 0.34)	< 0.02 (< 0.02, < 0.02)	< 0.01 (0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.35 (0.35, 0.34)
Washington, LA, USA, 2011 (Cocodrie)	2 (7)	160, 150	200, 200	28	1.7 (1.6, 1.7)	< 0.02 (< 0.02, < 0.02)	0.02 (0.02, 0.02)	< 0.01 (< 0.01, < 0.01)	1.7 (1.7, 1.7)
Cheneyville, LA, USA, 2011 (Cheniere)	2 (7)	150, 140	130, 140	28	1.1 (1.3, 0.84)	< 0.02 (< 0.02, < 0.02)	0.03 (0.02, 0.03)	< 0.01 (< 0.01, < 0.01)	1.1 (1.4, 0.87)
Delaplaine, AR, USA, 2011 (CLXL 745)	2 (8)	150, 150	190, 190	28	0.80 (0.80, 0.79)	< 0.02 (< 0.02, < 0.02)	0.03 (0.03, 0.03)	< 0.01 (< 0.01, < 0.01)	0.83 (0.83, 0.82)
Delaplaine, AR, USA, 2011 (CLXL 745)	2 (6)	150, 160	47, 47	28	0.47 (0.48, 0.46)	< 0.02 (< 0.02, < 0.02)	0.02 (0.02, 0.02)	< 0.01 (< 0.01, < 0.01)	0.49 (0.50, 0.48)
Pollard, AR, USA, 2011 (CL 111)	2 (6)	150, 150	190, 190	0	5.3 (5.4, 5.2)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	5.3 (5.4, 5.2)
				14	0.61 (0.56, 0.65)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.61 (0.56, 0.65)
				28	0.59 (0.46, 0.71)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.59 (0.46, 0.71)
				30	0.56 (0.55, 0.56)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.56 (0.55, 0.56)
				36	0.54 (0.61, 0.46)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.54 (0.61, 0.46)
Campbell, MO, USA, 2011 (Wells)	2 (8)	150, 150	190, 190	28	0.37 (0.34, 0.40)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.37 (0.34, 0.40)
Fisk, MO, USA, 2011 (CL 151)	2 (8)	150, 150	190, 190	0	4.1 (4.3, 4.0)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	4.1 (4.3, 4.0)
				14	0.98 (1.0, 0.92)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.98 (1.0, 0.92)
				28	0.86 (0.88, 0.83)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.86 (0.88, 0.83)
				30	0.94 (1.0, 0.88)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.94 (1.0, 0.88)
				35	0.78 (0.81, 0.74)	< 0.02 (< 0.02, < 0.02)	0.01 (< 0.01, 0.01)	< 0.01 (< 0.01, < 0.01)	0.78 (0.81, 0.75)
Qulin, MO, USA, 2011 (CLXL 745)	2 (7)	160, 150	47, 47	29	0.60 (0.62, 0.58)	< 0.02 (< 0.02, < 0.02)	0.02 (0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	0.62 (0.63, 0.60)
Glennonville, MO, USA, 2011 (CL 151)	2 (6)	150, 150	47, 47	28	0.26 (0.29, 0.22)	< 0.02 (< 0.02, < 0.02)	0.01 (0.01, 0.01)	< 0.01 (< 0.01, < 0.01)	0.27 (0.30, 0.23)
Dudley, MO, USA, 2011 (CL 111)	2 (7)	150, 150	190, 190	28	0.92 (0.91, 0.93)	< 0.02 (< 0.02, < 0.02)	0.03 (0.03, 0.03)	< 0.01 (< 0.01, < 0.01)	0.95 (0.94, 0.96)

Location, Year (variety)	Application				Residues, mg/kg, parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F002	M700 F008	M700 F048	Total [a]
Markham, TX, USA, 2011 (Cocodrie)	2 (7)	160, 150	190, 180	28	0.92 (0.93, 0.91)	< 0.02 (< 0.02, < 0.02)	0.04 (0.04, 0.04)	< 0.01 (< 0.01, < 0.01)	0.96 (0.97, 0.95)
El Campo, TX, USA, 2011 (Cocodrie)	2 (7)	150, 150	190, 180	28	1.2 (1.3, 1.0)	< 0.02 (< 0.02, < 0.02)	0.03 (0.03, 0.03)	< 0.01 (< 0.01, < 0.01)	1.2 (1.3, 1.1)
Porterville, CA, USA, 2011 (Koshihikari)	2 (6)	150, 150	190, 190	29	1.2 (1.2, 1.2)	< 0.02 (< 0.02, < 0.02)	0.03 (0.02, 0.03)	< 0.01 (< 0.01, < 0.01)	1.2 (1.2, 1.3)
Yuba City, CA, USA, 2011 (M206)	2 (7)	150, 150	230, 230	29	3.7 (3.8, 3.6)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	3.7 (3.8, 3.6)

No residues of metabolites were detected in the untreated control samples, while residues of fluxapyroxad at levels < LOQ were found at two of the trial sites

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Sorghum

Residue data in sorghum grain evaluated by the 2012 Meeting is tabulated below. Residue data for sorghum forage and stover is included in Table 46.

Table 40 Residues from the foliar application of fluxapyroxad to grain sorghum in the USA (White 2010, 2010/7003693)

Study No. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)						
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad		M700F002	M700F008	M700F048	Total [a]	
							Mean	Individual				Individual	Mean
2010/7003693 RCN R080440 USA (Butler, Missouri) 2008 (LGX-47)	2	7	101 100 201	188 189	Grain	21	0.13	0.13	< LOD	< 0.01	< LOD	0.13	0.13
								0.12	< LOD	0.01	< LOD	0.13	
2010/7003693 RCN R080441 USA (Ottawa, Michigan) 2008 (9135)	2	7	100 99 199	274 270	Grain	20	0.15	0.15	< LOD	< 0.01	< LOD	0.15	0.15
								0.14	< LOD	< 0.01	< LOD	0.14	
2010/7003693 RCN R080442 USA (Cass, North Dakota) 2008 (WGF)	2	7	100 100 200	187 187	Grain	21	0.15	0.13	< LOD	0.04	< 0.01	0.17	0.20
								0.17	< LOD	0.05	< 0.01	0.22	
2010/7003693 RCN R080443 USA (Caddo,	2	6	99 102 201	178 234	Grain	23	0.19	0.18	< LOD	< 0.01	< LOD	0.18	0.19
								0.19	< LOD	< 0.01	< LOD	0.19	

Study No. Trial No. Country Year (Variety)	Application				Matrix	PHI days	Residues (mg/kg)						
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad		M700F002	M700F008	M700F048	Total [a]	
							Mean	Individual				Individual	Mean
Oklahoma) 2008 (753)													
2010/7003693 RCN R080444 USA (Wharton, Texas) 2008 (84G50)	2	7	100 101 201	134 133	Grain	20	0.31	0.19	< LOD	< 0.01	< LOD	0.19	0.32
								0.43	< LOD	0.01	< 0.01	0.44	
2010/7003693 RCN R080445 USA (Clarke, Georgia) 2008 (82G10)	2	7	99 101 200	273 254	Grain	21	0.40	(< LOD, 0.58, 0.64) 0.41	< LOD	< LOQ	< LOD	0.41	0.40
								(0.22, 0.44, 0.47) 0.38	< LOD	< 0.01	< LOD	0.38	
2010/7003693 RCN R080446 USA (York, Nebraska) 2008 (7R34)	2	7	99 100 199	186 187	Grain	22	0.21	0.21	< LOD	0.01	< 0.01	0.22	0.22
								0.20	< LOD	0.01	< 0.01	0.21	
2010/7003693 RCN R080447 USA (Pawnee, Kansas) 2008 (84G62)	2	7	99 100 199	186 187	Grain	21	0.17	0.16	< LOD	< 0.01	< LOD	0.16	0.17
								0.17	< LOD	< 0.01	< LOD	0.17	
2010/7003693 RCN R080448 USA (Stafford, Kansas) 2008 (84G62)	2	7	104 97 201	194 182	Grain	21	0.24	0.30	< LOD	0.08	< 0.01	0.38	0.30
								0.17	< LOD	0.04	< 0.01	0.21	

[a] 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

Sugar cane

A series of trials in sugar cane (Schreier, 2012-b) was conducted in the USA. Two foliar broadcast applications of a 62.5 g/L EC formulation of fluxapyroxad were made at a target rate and interval of 0.125 kg ai/ha and 14 days using pressurised backpack sprayers. At one of the trial sites, a second treated plot was established, with 2× 0.625 kg ai/ha applications being made in order to generate raw sugar cane for processing (see below for further details of the processing phase of this study). Duplicate treated samples of sugar cane were collected by hand at a target interval of 14 days after the last application.

Table 41 Residues of fluxapyroxad and its metabolites in sugar cane

Location, Year (variety)	Application				Residues, mg/kg, parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F002	M700 F008	M700 F048	Total [a]
Washington, LA, USA, (384)	2 (14)	120, 120	190, 190	14	0.05 (0.05, 0.05)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.05 (0.05, 0.05)
Washington, LA, USA, (384)	2 (14)	120, 120	180, 190	14	0.06 (0.03, 0.09)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.06 (0.03, 0.09)
Washington, LA, USA, (384)	2 (14)	120, 120	190, 190	14	0.04 (0.05, 0.03)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.04 (0.05, 0.03)
Raymondville, TX, USA, 2010 (CP873388)	2 (15)	120, 120	190, 190	14	0.26 (0.19, 0.33)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.26 (0.19, 0.33)
Homestead, FL, USA, 2010 (CP801)	2 (14)	120, 120	190, 190	14	0.56 (0.30, 0.82)	< 0.02 (< 0.02, < 0.02)	0.02 (0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	0.58 (0.31, 0.84)
Belle Glade, FL, USA, 2010 (CP-89-2143)	2 (14)	120, 120	190, 190	14	1.3 (2.2, 0.50)	< 0.02 (< 0.02, < 0.02)	0.01 (< 0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	1.4 (2.2, 0.52)
Belle Glade, FL, USA, 2010 (CP-96-1252)	2 (14)	120, 120	190, 190	14	< 0.01 (< 0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)
Belle Glade, FL, USA, 2010 (CP-88-1762)	2 (14)	120, 120	190, 190	14	0.73 (1.1, 0.32)	< 0.02 (< 0.02, < 0.02)	0.03 (0.04, 0.02)	< 0.01 (< 0.01, < 0.01)	0.77 (1.2, 0.34)
	2 (14)	640, 630	190, 190	14	2.1 (1.5, 2.7)	< 0.02 (< 0.02, < 0.02)	0.06 (0.10, < 0.01)	< 0.01 (0.01, < 0.01)	2.1 (1.6, 2.7)

No residues of metabolites were detected in the untreated control samples, while residues of fluxapyroxad at levels < LOQ were found at four of the eight trial sites

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Tree nuts

Five trials each in <u>almonds</u> and <u>pecans</u> were conducted in the USA (Wyatt, 2012). Three foliar applications of a 62.5 g/L EC formulation were made at each site using an airblast sprayer. A spray adjuvant was included for all applications. Duplicate samples of treated kernels were collected a target interval of 14 days after the last application, with samples being collected at additional intervals from some sites to generate decline data.

Table 42 Residues of fluxapyroxad and metabolites in almond kernels

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Strathmore, CA, USA, 2011 (Nonpareil)	3 (7, 8)	130, 120, 120	950, 910, 700	14	0.01 (0.01, 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.01 (0.01, 0.01)
				22	0.015 (0.01, 0.02)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.015 (0.01, 0.02)

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
				27	0.01 (< 0.01, 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.01 (0.01, < 0.01)
				32	0.015 (0.02, 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.015 (0.02, 0.01)
				38	0.02 (0.02, 0.02)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.02 (0.02, 0.02)
Dinuba, CA, USA, 2011 (Carmel)	3 (7, 7)	120, 120, 130	830, 810, 830	14	< 0.01 (< 0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)
Poplar, CA, USA, 2011 (Carmel)	3 (7, 8)	130, 130, 120	670, 620, 660	13	< 0.01 (< 0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)
Wasco, CA, USA, 2011 (Price)	3 (8, 6)	130, 120, 120	760, 740, 740	14	0.01 (0.01, 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.01 (0.01, 0.01)
Buttonwillow, CA, USA, 2011 (Monterey)	3 (7, 7)	130, 130, 120	810, 850, 810	14	< 0.01 (< 0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Table 43 Residues of fluxapyroxad and metabolites in pecan kernels

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, kg ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Bailey, NC, USA, 2011 (Stuart)	3 (7, 6)	130, 130, 120	660, 680, 650	14	< 0.002 (< 0.002, < 0.002)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)
Mystic, GA, USA, 2011 (Sumner)	3 (7, 7)	120, 120, 130	880, 860, 870	14	< 0.002 (< 0.002, < 0.002)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)
Alexandria, LA, USA, 2011 (Creek)	3 (7, 7)	140, 130, 130	780, 760, 730	14	< 0.01 (< 0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)
Pearsall, TX, USA, 2011 (Desirable)	3 (7, 7)	120, 120, 120	620, 650, 780	14	< 0.01 (< 0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)
				20	< 0.01 (< 0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)
				29	< 0.01 (< 0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)
				30	< 0.002 (< 0.002, < 0.002)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)
				37	< 0.01 (< 0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, kg ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Anton, TX, USA, 2011 (Western Schley)	3 (7, 7)	120, 130, 130	740, 760, 760	14	0.03 (0.03, 0.03)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.03 (0.03, 0.03)

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Cotton

A series of residue trials in cotton were conducted in the USA (Schreier, 2014). Three foliar applications of a 62.5 g/L EC formulation of fluxapyroxad were made at a target rate of 0.1 kg ai/ha and a target interval of 7 days using hand held or tractor-mounted equipment. The plots were harvested at maturity by hand or by mechanical picker, then bolls were ginned to generate undelinted seed samples, with additional gin by-products samples from three sites (see below).

Table 44 Residues of fluxapyroxad and its metabolites in cottonseed

Location, Year (variety)	Application				Residues, mg/kg, parent equivalents			
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F008	M700 F048	Total [a]
Sycamore, GA, USA, 2013 (PHY 375)	3 (5, 7)	100, 100, 99	160, 170, 170	30	0.07 (0.05, 0.09)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.07 (0.05, 0.09)
Cheneyville, LA, USA, 2013 (Phytogen 499)	3 (7, 7)	100, 100, 100	170, 160, 150	29	0.11 (0.11, 0.10)	0.01 (0.01, 0.01)	< 0.01 (< 0.01, < 0.01)	0.12 (0.12, 0.11)
Washington, LA, USA, 2013 (PHY 375)	3 (7, 7)	100, 100, 100	150, 150, 140	31	0.01 (< 0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.01 (< 0.01, 0.02)
St Landry, LA, USA, 2013 (Stoneville 5288)	3 (7, 7)	100, 100, 100	150, 150, 140	31	0.01 (< 0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.01 (< 0.01, 0.02)
Lebanon, OK, USA, 2013 (FM 2011 GT)	3 (7, 7)	100, 100, 100	140, 140, 140	28	0.13 (0.14, 0.11)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.13 (0.14, 0.11)
Claude, TX, USA, 2013 (FM 9250)	3 (4, 4)	99, 100, 99	140, 140, 140	32	0.09 (0.10, 0.07)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.09 (0.10, 0.07)
Groom, TX, USA, 2013 (FM 2011 GT)	3 (4, 4)	100, 99, 98	140, 140, 140	32	0.11 (0.12, 0.09)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.11 (0.12, 0.09)
Groom, TX, USA, 2013 (FM 2011 GT)	3 (4, 4)	99. 99, 99	140, 140, 140	35	0.07 (0.10, 0.05)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.002)	0.07 (0.10, 0.05)
Groom, TX, USA, 2013 (FM 9250)	3 (4, 4)	100, 99, 99	140, 140, 140	32	0.02 (0.03, 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.02 (0.03, 0.02)
Sanger, CA, USA, 2013 (Pima)	3 (7, 7)	99, 100, 100	140, 140, 150	39	0.03 (0.03, 0.03)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.03 (0.03, 0.03)
Sanger, CA, USA, 2013 (FM 835 LLB 2)	3 (7, 7)	100, 100, 100	150, 140, 150	30	0.02 (0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.02 (0.01, 0.02)
Fresno, CA, USA, 2013 (Acala)	3 (7, 7)	100, 95, 100	140, 140, 150	31	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Animal feeds

Rice straw

Table 45 Residues of fluxapyroxad and metabolites in rice straw

Location, Year (variety) Dry matter content [%]	Application				Residues, mg/kg, parent equivalents. Residues on a dry weight basis are shown in square brackets for parent compound and total residues only.				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Screeton, AR, USA, 2011 (Jupiter) [27.8]	2 (7)	150, 150	190, 190	28	0.51 (0.36, 0.65 [1.8 (1.3, 2.3)]	< 0.02 (< 0.02, < 0.02)	0.02 (< 0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	0.52 (0.36, 0.67) [1.9 (1.3, 2.4)]
Lonoke, AR, USA, 2011 (CL142AR) [33.8]	2 (7)	160, 150	190, 190	28	2.3 (2.5, 2.1) [6.8 (7.5, 6.1)]	< 0.02 (< 0.02, < 0.02)	0.04 (0.04, 0.04)	0.04 (0.03, 0.04)	2.4 (2.6, 2.1) [7.0 (7.7, 6.3)]
Washington, LA, USA, 2011 (Cocodrie) [32.1]	2 (7)	160, 150	200, 200	28	2.3 (2.7, 2.0) [7.3 (8.4, 6.2)]	< 0.02 (< 0.02, < 0.02)	0.03 (0.03, 0.02)	< 0.01 (0.01, < 0.01)	2.4 (2.7, 2.0) [7.4 (8.5, 6.3)]
Cheneyville, LA, USA, 2011 (Cheniere) [27.5]	2 (7)	150, 140	130, 140	28	2.8 (2.6, 3.0) [10 (9.3, 11)]	< 0.02 (< 0.02, < 0.02)	0.03 (0.02, 0.03)	< 0.01 (< 0.01, < 0.01)	2.8 (2.6, 3.1) [10 (9.4, 11)]
Delaplaine, AR, USA, 2011 (CLXL 745) [68.6]	2 (8)	150, 150	190, 190	28	0.91 (0.85, 0.97) [1.3 (1.2, 1.4)]	< 0.02 (< 0.02, < 0.02)	0.02 (0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	0.93 (0.86, 0.99) [1.4 (1.3, 1.4)]
Delaplaine, AR, USA, 2011 (CLXL 745) [26.7]	2 (6)	150, 160	47, 47	28	0.68 (0.61, 0.74) [2.5 (2.3, 2.8)]	< 0.02 (< 0.02, < 0.02)	0.01 (0.01, 0.01)	< 0.01 (< 0.01, < 0.01)	0.69 (0.62, 0.75) [2.6 (2.3, 2.8)]
Pollard, AR, USA, 2011 (CL 111) [25.8, day 0; 33.1, day 28]	2 (6)	150, 150	190, 190	0	4.7 (4.7, 4.7) [18 (18, 18)]	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	4.7 (4.7, 4.7) [18 (18, 18)]
				14	0.86 (0.93, 0.78) [3.3 (3.6, 3.0)]	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.86 (0.93, 0.78) [3.3 (3.6, 3.0)]
				28	0.95 (0.90, 0.99) [2.9 (2.7, 3.0)]	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.95 (0.90, 0.99) [2.9 (2.7, 3.0)]
				30	0.83 (0.88, 0.77) [2.5 (2.7, 2.3)]	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.83 (0.88, 0.77) [2.5 (2.7, 2.3)]
				36	0.68 (0.68, 0.67) [2.0 (2.1, 2.0)]	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.68 (0.68, 0.67) [2.0 (2.1, 2.0)]
Campbell, MO, USA, 2011 (Wells) [34.6]	2 (8)	150, 150	190, 190	28	0.52 (0.51, 0.52) [1.5 (1.5,	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.52 (0.51, 0.52) [1.5 (1.5,

Location, Year (variety) Dry matter content [%]	Application				Residues, mg/kg, parent equivalents. Residues on a dry weight basis are shown in square brackets for parent compound and total residues only.				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
					1.5)]				1.5)]
Fisk, MO, USA, 2011 (CL 151) [27.2, day 0; 31.5, day 28]	2 (8)	150, 150	190, 190	0	3.6 (3.2, 4.0) [13 (12, 15)]	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	3.6 (3.2, 4.0) [13 (12, 15)]
				14	0.74 (0.82, 0.65) [2.7 (3.0, 2.4)]	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.74 (0.82, 0.65) [2.7 (3.0, 2.4)]
				28	0.56 (0.63, 0.49) [1.8 (2.0, 1.6)]	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.56 (0.63, 0.49) [1.8 (2.0, 1.6)]
				30	0.59 (0.49, 0.69) 1.9 (1.6, 2.2)]	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.59 (0.49, 0.69) [1.9 (1.6, 2.2)]
				35	0.50 (0.47, 0.53) [1.6 (1.5, 1.7)]	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.50 (0.47, 0.53) [1.6 (1.5, 1.7)]
Qulin, MO, USA, 2011 (CLXL 745) [29.5]	2 (7)	160, 150	47, 47	29	2.0 (2.1, 2.0) [6.9 (6.9, 6.8)]	< 0.02 (< 0.02, < 0.02)	0.03 (0.02, 0.03)	< 0.01 (< 0.01, < 0.01)	2.1 (2.1, 2.0) [7.0 (7.1, 6.9)]
Glennonville, MO, USA, 2011 (CL 151) [23.9]	2 (6)	150, 150	47, 47	28	1.0 (1.2, 0.82) [4.2 (5.0, 3.4)]	< 0.02 (< 0.02, < 0.02)	0.02 (0.02, 0.01)	< 0.01 (< 0.01, < 0.01)	1.0 (1.2, 0.82) [4.2 (5.1, 3.4)]
Dudley, MO, USA, 2011 (CL 111) [25.3]	2 (7)	150, 150	190, 190	28	1.0 (1.1, 0.98) [4.0 (4.2, 3.9)]	< 0.02 (< 0.02, < 0.02)	0.02 (0.02, 0.02)	< 0.01 (< 0.01, < 0.01)	1.1 (1.1, 1.0) [4.2 (4.3, 4.0)]
Markham, TX, USA, 2011 (Cocodrie) [80]	2 (7)	160, 150	190, 180	28	2.9 (3.6, 2.2) [3.6 (4.5, 2.7)]	< 0.02 (< 0.02, < 0.02)	0.08 (0.09, 0.06)	0.06 (0.06, 0.05)	3.0 (3.8, 2.3) [3.8 (4.7, 2.9)]
El Campo, TX, USA, 2011 (Cocodrie) [76.9]	2 (7)	150, 150	190, 180	28	2.4 (2.0, 2.8) [3.1 (2.6, 3.6)]	< 0.02 (< 0.02, < 0.02)	0.06 (0.06, 0.05)	0.05 (0.05, 0.05)	2.5 (2.1, 2.9) [3.2 (2.7, 3.7)]
Porterville, CA, USA, 2011 (Koshihikari) [39.1]	2 (6)	150, 150	190, 190	29	2.0 (1.4, 2.7) [5.2 (3.6, 6.8)]	< 0.02 (< 0.02, < 0.02)	0.08 (0.06, 0.10)	< 0.01 (< 0.01, < 0.01)	2.1 (1.5, 2.8) [5.4 (3.8, 7.1)]
Yuba City, CA, USA, 2011 (M206) [34.3]	2 (7)	150, 150	230, 230	29	15 (17, 13) [42 (48, 37)]	< 0.02 (< 0.02, < 0.02)	0.02 (0.02, 0.01)	< 0.01 (< 0.01, < 0.01)	14.6 (16.6, 12.5) [42 (48, 37)]

No residues of metabolites were detected in the untreated control samples, while residues of fluxapyroxad at levels < LOQ were found at one of the trial sites

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents.

Sorghum forage and stover

Table 46 Residues from the foliar application of fluxapyroxad to grain sorghum in the USA (White 2010, 2010/7003693)

Study No. Trial No. Country Year (Variety)	Application				Matrix (% moisture)	PHI days	Residues (mg/kg) Residues on a dry weight basis are shown in square brackets for mean parent compound and total residues only.						
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad [a]		M700F002	M700F008	M700F048	Total (Fluxapyroxad + M700F008 + M700F048)	
							Individual	Mean				Individual	Mean
2010/7003693 RCN R080440 USA (Butler, Missouri) 2008 (LGX-47)	2	7	101 100 201	190 187	Forage (73.8)	7	0.79	0.72 [2.7]	< LOD	0.01	< 0.01	0.80	0.73 [2.8]
							0.65		< LOD	0.01	< 0.01	0.66	
	2	7	100 101 201	188 189	Stover (66.7)	21	0.44	0.42 [1.3]	< LOD	0.02	< 0.01	0.46	0.45 [1.4]
							0.40		< LOD	0.02	0.02	0.43	
2010/7003693 RCN R080441 USA (Ottawa, Michigan) 2008 (9135)	2	7	99 100 199	275 286	Forage (58.7)	7	1.41	1.4 [3.5]	< LOD	0.02	< 0.01	1.43	1.5 [3.5]
							1.46		< LOD	0.02	< 0.01	1.48	
	2	7	100 99 199	274 270	Stover (70.8)	20	0.89	0.83 [2.8]	< LOD	0.02	< LOD	0.91	0.85 [2.9]
							0.77		< LOD	0.01	< LOD	0.78	
2010/7003693 RCN R080442 USA (Cass, North Dakota) 2008 (WGF)	2	8	100 100 200	187 187	Forage (72.8)	6	0.77	0.79 [2.9]	< LOD	0.03	< 0.01	0.80	0.83 [3.1]
							0.81		< LOD	0.04	< 0.01	0.85	
	2	7	100 100 200	187 190	Stover (77.9)	21	0.34	0.35 [1.6]	< LOD	0.03	< 0.01	0.37	0.39 [1.8]
							0.35		< LOD	0.04	0.02	0.40	
2010/7003693 RCN R080443 USA (Caddo, Oklahoma)	2	8	99 98 197	131 175	Forage (66.0)	7	2.22	2.3 [7.0]	< LOD	0.04	0.02	2.27	2.3 [7.1]
2008							2.37		< LOD	0.04	0.02	2.42	
(753)	2	6	99 102 201	178 234	Stover (75.8)	23	0.46	0.40 [1.6]	< LOD	0.02	0.02	0.49	0.43 [1.8]
							0.33		< LOD	0.02	0.02	0.36	
2010/7003693 RCN R080444 USA (Wharton, Texas) 2008 (84G50)	2	6	99 102 201	129 137	Forage (61.6)	7	1.21	1.2 [3.1]	< LOD	0.04	0.04	1.28	1.2 [3.2]
							1.15		< LOD	0.04	0.03	1.21	
	2	7	100 101 201	134 133	Stover (69.4)	20	0.71	0.75 [2.5]	< LOD	0.03	0.04	0.77	0.81 [2.6]
							0.79		< LOD	0.03	0.03	0.84	
2010/7003693 RCN	2	7	97 101 198	184 193	Forage (85.4)	7	0.70	0.94 [6.4]	< LOD	0.04	0.01	0.75	1.0 [6.8]
							1.18		< LOD	0.06	0.03	1.26	

Study No. Trial No. Country Year (Variety)	Application				Matrix (% moisture)	PHI days	Residues (mg/kg) Residues on a dry weight basis are shown in square brackets for mean parent compound and total residues only.						
	No	Interval Days	g ai/ha	Water (L/ha)			Fluxapyroxad [a] Individual	Fluxapyroxad [a] Mean	M700F002	M700F008	M700F048	Total (Fluxapyroxad + M700F008 + M700F048) Individual	Total Mean
R080445 USA (Clarke, Georgia) 2008 (82G10)	2	7	99 101 200	273 254	Stover (59.4)	21	0.89	1.0 [2.5]	< LOD	0.02	0.02	0.92	1.1 [2.6]
							1.17		< LOD	0.03	0.02	1.21	
2010/7003693 RCN R080446 USA (York, Nebraska) 2008 (7R34)	2	7	102 101 203	191 188	Forage (74.7)	6	0.38	0.45 [1.8]	< LOD	0.04	0.01	0.43	0.50 [2.0]
							0.51		< LOD	0.04	0.01	0.56	
	2	7	99 100 199	186 187	Stover (72.1)	22	0.17	0.20 [0.72]	< LOD	< LOD	< LOD	0.17	0.20 [0.72]
							0.23		< LOD	< LOD	< LOD	0.23	
2010/7003693 RCN R080447 USA (Pawnee, Kansas) 2008 (84G62)	2	7	102 100 202	191 188	Forage (68.4)	7	0.43	0.47 [1.5]	< LOD	0.02	< 0.01	0.45	0.49 [1.6]
							0.50		< LOD	0.02	< 0.01	0.52	
	2	7	99 100 199	186 187	Stover (68.7)	21	0.54	0.66 [2.1]	< LOD	0.02	< 0.01	0.56	0.69 [2.2]
							0.77		< LOD	0.03	0.01	0.81	
2010/7003693 RCN R080448 USA (Stafford, Kansas) 2008 (84G62)	2	7	99 101 200	185 189	Forage (75.2)	7	0.54	0.56 [2.3]	< LOD	0.03	< 0.01	0.57	0.59 [2.4]
							0.57		< LOD	0.03	< 0.01	0.60	
	2	7	104 97 201	194 182	Stover (72.6)	21	0.97	0.87 [3.2]	< LOD	0.04	< LOD	1.01	0.91 [3.3]
							0.77		< LOD	0.03	< 0.01	0.80	

[a] 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

Almond hulls

Table 47 Residues of fluxapyroxad and metabolites in almond hulls

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Strathmore, CA, USA, 2011 (Nonpareil)	3 (7, 8)	130, 120, 120	950, 910, 700	14	1.2 (1.2, 1.3)	< 0.02 (< 0.02, < 0.02)	0.01 (< 0.01, 0.01)	< 0.01 (< 0.01, < 0.01)	1.2 (1.2, 1.3)

Location, Year (variety)	Application				Residues, mg/kg parent equivalents				
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
				22	1.3 (1.2, 1.4)	< 0.02 (< 0.02, < 0.02)	0.02 (0.02, 0.02)	< 0.01 (< 0.01, < 0.01)	1.3 (1.2, 1.4)
				27	0.75 (0.78, 0.71)	< 0.02 (< 0.02, < 0.02)	0.02 (0.02, 0.01)	< 0.01 (< 0.01, < 0.01)	0.76 (0.80, 0.72)
				32	0.96 (0.99, 0.92)	< 0.02 (< 0.02, < 0.02)	0.02 (0.01, 0.02)	< 0.01 (< 0.01, < 0.01)	0.97 (1.0, 0.94)
				38	1.4 (1.3, 1.4)	< 0.02 (< 0.02, < 0.02)	0.02 (0.02, 0.02)	0.01 (0.01, < 0.01)	1.4 (1.4, 1.4)
Dinuba, CA, USA, 2011 (Carmel)	3 (7, 7)	120, 120, 130	830, 810, 830	14	1.7 (1.7, 1.7)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.7 (1.7, 1.7)
Poplar, CA, USA, 2011 (Carmel)	3 (7, 8)	130, 130, 120	670, 620, 660	13	0.92 (0.86, 0.98)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.92 (0.86, 0.98)
Wasco, CA, USA, 2011 (Price)	3 (8, 6)	130, 120, 120	760, 740, 740	14	1.1 (1.1, 1.1)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	1.1 (1.1, 1.1)
Buttonwillow, CA, USA, 2011 (Monterey)	3 (7, 7)	130, 130, 120	810, 850, 810	14	0.88 (0.74, 1.0)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.88 (0.74, 1.0)

[a]Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Cotton gin by-products

Table 48 Residues of fluxapyroxad and metabolites in cotton gin trash

Location, Year (variety)	Application				Residues, mg/kg, parent equivalents			
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Fluxapyroxad	M700 F008	M700 F048	Total [a]
Claude, TX, USA, 2013 (FM 9250)	3	99, 100, 99	140, 140, 140	32	6.9 (7.9, 5.9)	0.02 (0.03, 0.02)	< 0.01 (< 0.01, < 0.01)	6.9 (7.9, 5.9)
Groom, TX, USA, 2013 (FM 2011 GT)	3	100, 99, 98	140, 140, 140	32	5.2 (5.0, 5.5)	0.01 (0.01, 0.01)	< 0.01 (< 0.01, < 0.01)	5.3 (5.0, 5.5)
Groom, TX, USA, 2013 (FM 2011 GT)	3	99, 99, 99	140, 140, 140	35	8.0 (7.6, 8.4)	0.03 (0.02, 0.03)	< 0.01 (< 0.01, < 0.01)	8.1 (7.7, 8.5)

No residues were detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Fate of residues in processing

Citrus

A processing study in oranges was conducted in Brazil (Guimaraes, 2014-b). At four field trial sites, three applications of an SC formulation containing 333 g/L pyraclostrobin and 167 g/L fluxapyroxad were made by foliar airblast application at a target rate of 0.5 kg ai/ha pyraclostrobin + 0.25 kg ai/ha fluxapyroxad and a target interval of 28 days. Fruit was collected 14 days after the last application.

Oranges were processed into juice, dried pulp and oil using simulated commercial procedures. Untreated control samples were processed prior to the treated samples. Samples for processing (around 250 kg per sample) were first washed using an industrial water bath equipped with rotary brushes. The cleaned oranges were then juiced using a commercial machine (JBT model HP 391 citrus juice extractor). This juices the oranges by compressing the fruit between two cups with sharpened metal tubes at their bases. A water spray was maintained to separate the oil as an emulsion, with the oil separated from the wash water by centrifuging and decanting. The pulp/juice mixture was separated in a commercial finisher (JBT model UCF 35).

Residues of fluxapyroxad and its metabolites were determined using LC-MS/MS method number L0137/01. Processing was completed within a day of sample collection, and both raw orange and processed commodity samples were frozen within 24 hours of collection. Analyses were completed within 3 months of harvest of the raw oranges.

Table 49 Residues of fluxapyroxad and metabolites in raw oranges and processed fractions

Location, Year (variety)	Application				Residues, mg/kg, parent equivalents					
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Sample	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
San Antonio de Posse, Sao Paolo, Brazil, 2013 (Natal em Swingle)	3 (28, 28)	250, 250, 240	2000, 1980, 1940	14	Raw oranges	0.17	< 0.02	< 0.01	< 0.01	0.17
					Dried pulp	0.02	< 0.02	< 0.01	< 0.01	0.02
					Orange juice	< 0.01	< 0.02	< 0.01 c< 0.01	< 0.01	< 0.01
					Orange oil	9.9 c0.01	< 0.02	0.03	< 0.01	9.9
Aguai, Sao Paolo, Brazil, 2013 (Lima Verde)	3 (28, 28)	240, 230, 240	1890, 1850, 1930	14	Raw oranges	0.23	< 0.02	< 0.01	< 0.01	0.23
					Dried pulp	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
					Orange juice	< 0.01	< 0.02	< 0.01 c< 0.01	< 0.01	< 0.01
					Orange oil	3.2	< 0.02	< 0.01	< 0.01	3.2
Mogi Mirim, Sao Paolo, Brazil, 2013 (Pera Coroa)	3 (28, 28)	250, 250, 250	2000, 1970, 1980	14	Raw oranges	0.40	< 0.02	< 0.01	< 0.01	0.40
					Dried pulp	0.03	< 0.02	< 0.01	< 0.01	0.03
					Orange juice	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01

Location, Year (variety)	Application				Residues, mg/kg, parent equivalents					
	No. (RTI, days)	Rate , g ai/ha	Spray volume (L/ha)	DA LA	Sample	Fluxapyro xad	M700 F002	M700 F008	M700 F048	Total [a]
					Orange oil	8.7 c< 0.01	< 0.02	< 0.01	< 0.01	8.7
Limeira, Sao Paolo, Brazil, 2013 (Pera Coroa)	3 (28, 28)	250, 240, 250	2000, 1920, 2030	14	Raw oranges	0.19	< 0.02	< 0.01	< 0.01	0.19
					Dried pulp	0.02	< 0.02	< 0.01	< 0.01	0.02
					Orange juice	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01
					Orange oil	6.2	< 0.02	< 0.01	< 0.01	6.2

Residues were generally not found in the untreated control samples. Where residues were found in the untreated control samples, these are indicated with a 'c' prefix

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Table 50 Processing factors for fluxapyroxad in oranges

Commodity	Processing factor	
	Parent only	Total residues
Dried pulp	< 0.04, 0.08, 0.11, 0.12 (median = 0.095)	< 0.04, 0.08, 0.11, 0.12 (median = 0.095)
Juice	< 0.03, < 0.04, < 0.05, < 0.06 (median = 0.045)	< 0.03, < 0.04, < 0.05, < 0.06 (median = 0.045)
Oil	14, 22, 33, 58 (median = 27.5)	14, 22, 33, 58 (median = 27.5)

Grape

A processing study in grapes was conducted in the USA (Belcher and Riley, 2012-b).

At two sites, grapevines were treated with three foliar airblast applications of a 300 g/L SC formulation of fluxapyroxad at a target rate of 0.4 kg ai/ha and a target interval of 10 days. Two plots, one each of a red and a white grape variety, were treated at each site using the same application regime. Grape samples were collected 14 days after the last application.

Grapes were processed using methods simulating commercial processes as far as possible. The grapes (40–80 kg per sample for processing) were first crushed using a crusher/de-stemmer, and the stems were separated and for red grapes only, the stems and initial crush were sampled. The crush was then subdivided into portions for juice and wine making.

The crushed grapes (approx. 10–25 kg of crush were reserved for juicing) were transferred to a steam-jacketed kettle and heated to 52–57 °C for 8–12 minutes, and then to 60–66 °C for 8–12 minutes. The grape pulp was then pressed using a hydraulic fruit press, and wet pomace was separated. The fresh juice was filtered and pasteurised (79–85 °C for 15–30 seconds). Pasteurised juice was sampled.

For white/rosé winemaking, was approximately 20–35 kg of grape crush were transferred to a kettle, treated with pectic enzyme and potassium metabisulphite and allowed to stand for 1 hour, prior to pressing with a hydraulic press. Primary fermentation was conducted in a 5-gallon container. Yeast was added, and the container allowed to stand overnight at approximately 21 °C. The wine was racked to separate the lees, and transferred to glass carboys for secondary fermentation at approximately 13 °C until the specific gravity reached approximately 1.03. Once carbon dioxide formation had ceased indicating completion of fermentation, the wine was racked again and gelatin added for fining. The wine was then racked a final time, and filtered through diatomaceous earth before sampling.

For red winemaking, the process was similar to white winemaking, with the addition of a step after the initial crushing and separation of the stems where the juice/pulp mixture was heated to approximately 60 °C to impart colour to the wine, then cooled to approximately 21 °C before addition of the enzyme and sodium metabisulphite. The processing then proceeded as for the white/rosé wine.

For generation of the raisin samples, grapes were harvested and sun dried in the field for 3–13 days before sampling (approx. 1.0–1.3 kg of sun dried grapes per sample). At the processing facility, the raisins were hand sorted to remove loose dirt and debris, stems, panicles and substandard raisins. The cleaned raisins were then spray washed in batches to remove any residual dirt and to raise the water content to $\leq$ 18%. The raisins were drained and dried if necessary to achieve the desired water content.

Residues of fluxapyroxad and its metabolites were determined using LC-MS/MS method number L0137/01. Processing of raw grapes into juice and wine commenced within 1–3 days of harvest, while processing of the sun dried raisins took place around 4–6 weeks after sampling. Raw grape samples for analysis were frozen within 4 hours of collection. Grapes for processing into juice and wine were shipped to the processor at ambient temperature and stored in a cooler pending processing. Raisins were shipped to the processor at ambient temperature, and stored frozen pending further processing. On completion of processing, processed commodity samples were frozen pending analysis. All analyses were completed within 5 months of harvest of the grapes.

Table 51 Residues of fluxapyroxad and metabolites in raw grapes and processed fractions

Location, Year (variety)	Application				Residues, mg/kg, as parent equivalents					
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Sample	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Yates, NY, USA, 2011 (Concord)	3 (10, 11)	400, 400, 400	930, 940, 940	13	Raw grapes (in field)	0.93	< 0.02	< 0.01	< 0.01	0.93
					Raw grapes (pre-processing)	0.53	< 0.02	< 0.01	< 0.01	0.53
					Stalks	2.6	< 0.02	< 0.01	< 0.01	2.6
					Crush	0.41	< 0.02	< 0.01	< 0.01	0.41
					Must	0.09	< 0.02	< 0.01	< 0.01	0.09
					Pomace (wet)	3.8	< 0.02	< 0.01	< 0.01	3.8
					Must deposit	0.42	< 0.02	< 0.01	< 0.01	0.42
					Separated must	0.16	< 0.02	< 0.01	< 0.01	0.16
					Pasteurised juice	0.22	< 0.02	< 0.01	< 0.01	0.22
					Yeast deposit	2.7 (3.7, 1.8)	< 0.02	< 0.01	< 0.01	2.7 (3.7, 1.8)
					Red wine	0.11	< 0.02	< 0.01	< 0.01	0.11
					Raisins	5.4	< 0.02	< 0.01	< 0.01	5.4
Yates, NY, USA, 2011 (Vidal)	3 (10, 9)	400, 400, 400	940, 940, 950	13	Raw grapes (in field)	1.5	< 0.02	< 0.01	< 0.01	1.5
					Raw grapes (pre-processing)	0.81	< 0.02	< 0.01	< 0.01	0.81
					Must	0.24	< 0.02	< 0.01	< 0.01	0.24
					Pomace	4.6	< 0.02	< 0.01	< 0.01	4.6
					Must deposit	1.1	< 0.02	< 0.01	< 0.01	1.1
					Separated must	0.30	< 0.02	< 0.01	< 0.01	0.30
					Pasteurised juice	0.37	< 0.02	< 0.01	< 0.01	0.37
					Yeast deposit	3.4 (3.7, 3.2)	< 0.02	< 0.01	< 0.01	3.4
					Rosé wine	0.18	< 0.02	< 0.01	< 0.01	0.18
					Raisins	4.3	< 0.02	< 0.01	< 0.01	4.3
Madera, CA, USA, 2011 (Ruby Red)	3 (9, 11)	400, 400, 400	470, 470, 470	14	Raw grapes (in	0.60	< 0.02	< 0.01	< 0.01	0.60

Location, Year (variety)	Application				Residues, mg/kg, as parent equivalents					
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Sample	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
					field)					
					Raw grapes (pre-processing)	0.37	< 0.02	< 0.01	< 0.01	0.37
					Stalks	2.6	< 0.02	< 0.01	< 0.01	2.6
					Crush	0.33	< 0.02	< 0.01	< 0.01	0.33
					Must	0.08	< 0.02	< 0.01	< 0.01	0.08
					Pomace (wet)	1.5	< 0.02	< 0.01	< 0.01	1.5
					Must deposit	0.36	< 0.02	< 0.01	< 0.01	0.36
					Separated must	0.07	< 0.02	< 0.01	< 0.01	0.07
					Pasteurised juice	0.10	< 0.02	< 0.01	< 0.01	0.10
					Yeast deposit	0.36	< 0.02	< 0.01	< 0.01	0.36
					Red wine	0.07	< 0.02	< 0.01	< 0.01	0.07
					Raisins	1.2	< 0.02	< 0.01	< 0.01	1.2
Madera, CA, USA, 2011 (Thompson Seedless)	3 (9, 11)	400, 400, 400	460, 470, 470	14	Raw grapes (in field)	0.49	< 0.02	< 0.01	< 0.01	0.49
					Raw grapes (pre-processing)	0.50	< 0.02	< 0.01	< 0.01	0.50
					Must	0.12 (0.12, 0.12)	< 0.02	< 0.01	< 0.01	0.12 (0.12, 0.12)
					Pomace	2.4	< 0.02	< 0.01	< 0.01	2.4
					Must deposit	0.23	< 0.02	< 0.01	< 0.01	0.23
					Separated must	0.11 (0.11, 0.11)	< 0.02	< 0.01	< 0.01	0.11 (0.11, 0.11)
					Pasteurised juice	0.11	< 0.02	< 0.01	< 0.01	0.11
					Yeast deposit	0.65	< 0.02	< 0.01	< 0.01	0.65
					Rosé wine	0.12	< 0.02	< 0.01	< 0.01	0.12
					Raisins	1.4	< 0.02	< 0.01	< 0.01	1.4

Residues were generally not detected in the untreated control samples, except for three detections of parent compound at levels < LOQ

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Table 52 Processing factors for fluxapyroxad in grapes

Commodity	Processing factor	
	Parent compound	Total residues
Stalks	4.9, 7.0 (median = 5.95)	4.9, 7.0 (median = 5.95)
Grape crush	0.77, 0.89 (median = 0.83)	0.77, 0.89 (median = 0.83)
Must	0.17, 0.22, 0.24, 0.30 (median = 0.23)	0.17, 0.22, 0.24, 0.30 (median = 0.23)
Pomace (wet)	4.1, 4.8, 5.7, 7.2 (median = 5.25)	4.1, 4.8, 5.7, 7.2 (median = 5.25)
Must deposit	0.46, 0.79, 0.97, 1.4 (median = 0.88)	0.46, 0.79, 0.97, 1.4 (median = 0.88)
Separated must	0.19, 0.22, 0.30, 0.37 (median = 0.26)	0.19, 0.22, 0.30, 0.37 (median = 0.26)
Pasteurised juice	0.22, 0.27, 0.42, 0.46 (median = 0.345)	0.22, 0.27, 0.42, 0.46 (median = 0.345)
Yeast deposit	0.97, 1.3, 4.2, 5.1 (median = 2.75)	1.0, 1.3, 4.2, 5.1 (median = 2.75)
Red wine	0.19, 0.21 (median = 0.20)	0.19, 0.21 (median = 0.20)
Rosé wine	0.22, 0.24 (median = 0.23)	0.22, 0.24 (median = 0.23)
Raisins	2.8, 3.2, 5.3, 10 (median = 4.25)	2.8, 3.2, 5.3, 10 (median = 4.25)

Sugar cane

A sugar cane processing study was carried out in the USA (Schreier, 2012-b). At a site in Florida, a plot was treated at 2× 0.625 kg ai/ha, with a 14-day re-treatment interval, and sample collection 14 days after the last application.

Sugar cane samples (approximately 40 kg) were processed by expelling the juice by multiple passes through an AUM Enterprise cane crusher. The waste (bagasse) was discarded, while the juice was filtered (100 mesh sieve) and adjusted to pH 7.2–7.4 using calcium oxide solution. After stirring for approximately 15 minutes, the juice was brought to approximately 100 °C and held at that temperature for 3 minutes, then centrifuged to separate the ‘mud’ from ‘thin juice’. The thin juice was concentrated to a solids content of 50–60% using a vacuum evaporator, at a temperature of ≤ 70 °C. Further concentration, to a solids content of 75–80%, was carried out at ≤ 55 °C. The resulting thick juice was seeded with a small amount of pulverised white sugar to commence the crystallisation process, and the batch cooled in a walk-in refrigerator. Molasses and raw sugar were separated by centrifuge, and the raw sugar was washed in the centrifuge to remove molasses by steaming prior to sampling. Refining was carried out by dissolving the raw sugar in an equal amount of water with stirring. The pH was adjusted to 5.5 with phosphoric acid, and the solution rested for 2 minutes prior to addition of calcium oxide under agitation to adjust the pH to 7.2. The batch was heated to 60 °C. Filter aid was added, and the solution was vacuum filtered. Activated charcoal was added to the filtrate, which was heated and then filtered again. The filtrate was seeded with pulverised sugar and evaporated under vacuum at ≤ 55 °C until the boiling slowed. The material was cooled, then dried at 43–55 °C to a moisture content of approximately 3%. Samples of unprocessed cane, molasses, raw sugar and refined sugar were collected and frozen for transport to the laboratory.

The process simulated commercial processing, albeit using a batch rather than a continuous process due to the small amount of material.

Samples of sugar cane and the processed commodities were analysed using LC-MS/MS method number L0137/01. Samples were analysed within 14 months of collection of the raw sugar cane, and within 9 months of finishing the processing phase. Raw sugar cane was stored frozen pending processing, which commenced 4 months after harvest, and was completed within a week (processed samples were frozen after collection).

Table 53 Residues of fluxapyroxad and its metabolites in sugar cane and processed commodities

Location, Year (variety)	Application				Residues, mg/kg, parent equivalents					
	No. (RTI, days)	Rate , g ai/ha	Spray volume (L/ha)	DA LA	Sample	Fluxapyro xad	M700 F002	M700 F008	M700 F048	Total [a]

Location, Year (variety)	Application				Residues, mg/kg, parent equivalents					
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Sample	Fluxapyroxad	M700F002	M700F008	M700F048	Total [a]
Belle Glade, FL, USA, 2010 (CP-88-1762)	2 (14)	640, 630	190, 190	14	Sugar cane	2.1 (1.5, 2.7)	< 0.02 (< 0.02, < 0.02)	0.06 (0.10, < 0.01)	< 0.01 (0.01, < 0.01)	2.1 (1.6, 2.7)
					Sugar cane prior to processing	0.24 (0.27, 0.22)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.24 (0.27, 0.22)
					Molasses	0.04 (0.04, 0.04)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.04 (0.04, 0.04)
					Raw sugar	0.06 (0.06, 0.06)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	0.06 (0.06, 0.06)
					Refined sugar	< 0.01 (< 0.01, < 0.01)	< 0.02 (< 0.02, < 0.02)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)	< 0.01 (< 0.01, < 0.01)

Residues of M700F002, M700F008, and M700F048 were not detected in the untreated control samples, while residues of fluxapyroxad were < LOQ

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

Table 54 Processing factors in sugar cane commodities

Commodity	Processing factor	
	Parent only	Total residues
Molasses	0.17	0.17
Raw sugar	0.25	0.25
Refined sugar	< 0.04	< 0.04

Cotton

A processing study in cotton was conducted in the USA (Woodard and Brungardt, 2014). Field trials were conducted at two sites. Three foliar broadcast applications of an SC formulation (333 g/L pyraclostrobin and 167 g/L fluxapyroxad) were made at a target rate of 3 L/ha and a target interval of 7 days. A spray adjuvant (non-ionic surfactant) was included in the tank mix for all applications. Cottonseed was harvested 30 days after the last application. Sample of treated and control raw cottonseed from each site were ginned within 1 day of harvest, frozen, and transported to the laboratory. Bulk treated and control seed samples were collected and transported to the processor, either frozen (Hinton site) or at ambient temperature (Sanger site). At the processing site, all samples were stored frozen pending processing, which took place around 4–6 weeks after harvest.

Cottonseed samples (approximately 70 kg per sample) were processed using batch methods simulating commercial processes as far as possible. Control samples were processed prior to treated samples to minimise contamination. Defrosted seed samples were tested for moisture, and dried if necessary to reduce the moisture content below 8%. The seed was passed through a stick/burr extractor to remove gin trash, then ginned to separate the cotton seed and lint. Undelinted cottonseed was sampled at this point. Further delinting was then carried out in a delinter to reduce the remaining lint from 11–15% to 3%. Using a roller mill, the delinted seed was cracked, and the kernel and hulls separated using a screen cleaner. Hulls were sampled at this point.

The moisture content of the kernel was checked, and water added to give a moisture level of ≥ 13.5% if necessary. After moisture equilibration, the kernels were heated to approximately 80–90 °C for approximately 30 minutes, then flaked and fed through an extruder with steam injection to produce collets. The collets were ground, dried in an oven at approximately 65–80 °C for 35–40 minutes, then extracted three times with hexane in stainless steel reactors at approximately 50–60 °C. The residual solvent allowed to evaporate from the meal, and the moisture content of the meal adjusted to ≥ 13.5% if necessary. The meal was then screened, and toasted at approximately 105–115 °C for 45–60 minutes, then cooled and sampled. A vacuum evaporator operating at approximately 90–95 °C was used to separate the crude oil from the extraction solvent.

The free fatty acid content of the crude oil was determined, and the required amount of sodium hydroxide solution was added for refining. Refining was carried out by heating with a water bath at approximately 20–25 °C with high rpm stirring for approximately 15 minutes, followed by approximately 12 minutes at low rpm and approximately 65 °C. The refined oil and soapstock were separated by centrifuge and the soapstock was discarded. The refined oil was filtered and bleached by heating at 40–50 °C with diatomaceous earth under vacuum. The temperature was increased to 85–100 °C for 10–15 minutes, then the oil was cooled and filtered. The bleached oil was deodorised by heating to 220–230 °C under vacuum for approximately 30 minutes, and adding 1 mL 0.5% citric acid solution per 100 mL oil. The deodorised oil was sampled.

All processed samples were frozen immediately after collection.

Residues of fluxapyroxad and its metabolites were determined using LC-MS/MS method number L0137/01. All analyses of cottonseed and processed commodities were completed within

3 months of collection of the seed samples and within approximately 1 month of completion of processing.

Table 55 Residues of fluxapyroxad and metabolites in cottonseed and processed fractions

Location, Year (variety)	Applications					Residues, mg/kg, parent equivalents			
	No. (RTI, days)	Rate, g ai/ha	Spray volume (L/ha)	DALA	Sample	Fluxapyroxad	M700 F008	M700 F048	Total*
Hinton, OK, USA, 2013 (FM9160 B2)	3 (6, 7)	510, 510, 510	190, 190, 200	30	Undelinted seed	0.14	<0.01	<0.01	0.14
					Undelinted seed pre-processing	0.64 (0.54, 0.74)	<0.01 (<0.01, <0.01)	<0.01 (<0.01, <0.01)	0.64 (0.54, 0.74)
					Meal	0.025	<0.01	<0.01	0.025
					Hulls	0.11	<0.01	<0.01	0.11
					Refined oil	0.015	<0.01	<0.01	0.015
Sanger, CA, USA, 2013 (FM835LLB2)	3 (7, 6)	500, 500, 500	190, 190, 190	29	Undelinted seed	0.16 (0.093, 0.21, 0.16, 0.16)[#]	<0.01 (<0.01, <0.01, <0.01)	<0.01 (<0.01, <0.01, <0.01)	0.16 (0.093, 0.21, 0.16, 0.16)
					Undelinted seed pre-processing	0.14	<0.01	<0.01	0.14
					Meal	<0.01	<0.01	<0.01	<0.01
					Hulls	0.028	<0.01	<0.01	0.028
					Refined oil	<0.01	<0.01	<0.01	<0.01

Apart from one of the oil samples, where residues of parent < LOQ were detected, residues were generally not detected in the untreated control samples

[a] Sum of fluxapyroxad, M700F008, and M700F048 (the dietary risk assessment residue definition), expressed as fluxapyroxad equivalents

[b] Control and treated samples of undelinted seed obtained directly from the Sanger trial site appear to have been inadvertently swapped, given that the sample labelled as treated did not contain detectable residues of fluxapyroxad, while the sample labelled as the control contained finite fluxapyroxad residues at a level similar to that observed in the unprocessed seed subsampled from the bulk treated sample for processing from the Sanger site. As a result, the finite residue sample will be regarded as the treated sample.

Table 56 Processing factors for fluxapyroxad in cottonseed

Commodity	Processing factor	
	Parent only	Total residues
Meal	0.04, < 0.07 (median = 0.055)	0.04, < 0.07 (median = 0.055)
Hulls	0.17, 0.2 (median = 0.185)	0.17, 0.2 (median = 0.185)
Refined oil	0.02, < 0.07 (median = 0.045)	0.02, < 0.07 (median = 0.045)

Residues in animal commodities

No new animal feeding studies were supplied to the Meeting.

APPRAISAL

Fluxapyroxad was first evaluated for residues and toxicological aspects by the 2012 JMPR. The 2012 Meeting established an ADI of 0–0.02 mg/kg bw and an ARfD of 0.3 mg/kg bw for fluxapyroxad. The 2012 Meeting recommended a number of maximum residue levels for fluxapyroxad.

The residue definition was established as *fluxapyroxad* for compliance with MRLs for both plant and animal commodities. For estimation of dietary intake, the residue definition was established as *sum of fluxapyroxad, 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’-trifluoro-1,1’-biphenyl-2-yl)-1H-pyrazole-4-carboxamide (M700F048), expressed as fluxapyroxad* for plant commodities and *sum of fluxapyroxad and 3-(difluoromethyl)-N-(3’,4’,5’-trifluoro-1,1’-biphenyl-2-yl)-1H-pyrazole-4-carboxamide (M700F008)*, expressed as *fluxapyroxad* for animal commodities.

Fluxapyroxad was scheduled by the Forty-sixth Session of the CCPR in 2014 for evaluation of residue data for additional crops by the 2015 JMPR.

Methods of analysis

No new methods of analysis were submitted to the Meeting.

Stability of residues in stored analytical samples

No new storage stability studies were submitted to the Meeting.

Results of supervised residue trials on crops

The Meeting received supervised trial data for foliar application of fluxapyroxad to citrus fruit, cherries, grapes, strawberries, blueberries, raspberries, bananas, papaya, mango, bulb vegetables, Brassica vegetables, cucurbits, leafy vegetables, carrots, radish, celery, rice, tree nuts, sugarcane and cotton, as well as data for seed treatment and in-furrow application to potatoes.

It is noted that a number of crops (bulb vegetables, Brassica vegetables, cucurbits, leafy vegetables, celery, rice, sorghum and cotton) for which the critical GAP considered is a foliar application use pattern in the USA also have seed treatment uses registered, and the same crops could be treated with both a seed treatment and foliar application of fluxapyroxad.

All residue data provided was for the foliar use pattern (no seed treatment data was available). The foliar use patterns involve application much closer to harvest, with multiple applications and much shorter pre-harvest intervals. The Meeting noted that residue data for seed treatment of cotton at rates up to 100 g ai/100 kg seed considered by the 2012 Meeting showed no detectable residues of fluxapyroxad in cottonseed or gin by-products at harvest. Seed treatment uses are therefore not expected to contribute significantly to the residues of fluxapyroxad in harvested commodities. The Meeting therefore considered that maximum residue levels recommended based on the foliar use patterns are sufficient to cover residues arising from seed treatment use alone, or combined seed treatment/foliar use.

For dietary intake assessment, the residues are expressed as the sum of fluxapyroxad, M700F008, and M700F048, expressed as fluxapyroxad (total residues). Residues of the metabolites are reported as parent equivalents.

The method LOQ was 0.01 mg/kg for each analyte as measured, or 0.01, 0.02, 0.01 and 0.01 mg/kg as parent equivalents for parent, M700F002, M700F008, and M700F048 respectively. The treatment of residues < LOQ for the purpose of summing residue components is illustrated in the table below.

Residues, mg/kg parent equivalents			Total (sum of fluxapyroxad, M700F008, and M700F048)
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

Citrus fruits

The maximum GAP for the citrus fruit group is in Argentina, with 3× 0.0033 kg ai/hL applications, with a maximum spray volume of 5000 L/ha, giving a per hectare rate of 0.165 kg ai/ha, and a pre-harvest interval of 7 days. No trials matching that GAP were available.

The GAP in Brazil is 3× 0.0025 kg ai/hL applications at 7-day intervals, with a spray volume of 2000 L/ha (0.05 kg ai/ha), with a 14-day PHI.

Residue trials in oranges, lemons and limes in accordance with the Brazilian GAP were undertaken in Brazil and Argentina.

Residues of fluxapyroxad (parent only) in oranges (whole fruit) at a 14-day PHI were 0.03, 0.04, 0.05 (2), 0.06 (2), 0.07, 0.14 (2), 0.16, and 0.17 mg/kg.

Total residues in whole oranges were 0.03, 0.04, 0.05 (2), 0.06 (2), 0.07, 0.14 (2), 0.16, and 0.17 mg/kg.

Residue data in peel and pulp were available for some of the trials.

Total residues of fluxapyroxad in pulp (edible portion) in oranges (4 trials) and lemons (2 trials) were < 0.01 (6) mg/kg.

The Meeting concluded that there was sufficient edible portion data on which to estimate the STMR and HR for oranges.

The Meeting estimated a maximum residue level of 0.3 mg/kg for fluxapyroxad in oranges, sweet, sour, together with an STMR and an HR of 0.01 mg/kg (based on the edible portion data).

Residues of fluxapyroxad (parent only and total residues) in whole lemons at a 14-day PHI were 0.09 and 0.13 mg/kg.

Residues of fluxapyroxad (parent only and total residues) in limes at a 14-day PHI were 0.04 and 0.06 mg/kg.

The Meeting concluded that there were insufficient data available to estimate maximum residue levels for fruits other than oranges in the citrus fruit group.

Stone fruits

The critical GAP for the stone fruit group is in the USA, with 3× 0.123 kg ai/ha applications at 7-day intervals, and a 0-day pre-harvest interval.

Residue data in peaches, plums and cherries was considered by the 2012 Meeting in conjunction with the above GAP, and a group maximum residue level of 2 mg/kg was estimated for stone fruit.

A request was received by the present Meeting to reconsider the MRL for cherries, with a view to establishing a higher limit to facilitate trade, noting that the highest residue for stone fruit (in cherries) was 1.9 mg/kg. No new data for stone fruit were provided to the current Meeting: two cherry trials were submitted; however, these were considered by the 2012 Meeting. The 2012-submitted stone fruit data are reconsidered in accordance with the 2013 and 2014 JMPR general considerations relating to group MRLs.

Residues of fluxapyroxad (parent compound) in cherries from supervised trials in accordance with GAP were 0.26, 0.31, 0.55, 0.56, 0.59, 0.82, 1.1, and 1.9 mg/kg.

Total residues in cherries were 0.37, 0.50, 0.72, 0.73, 0.78, 1.1, 1.4, and 2.3 mg/kg.

Residues of fluxapyroxad (parent compound) in peaches from supervised trials in accordance with 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.

Total residues in peaches were 0.30, 0.31, 0.33, 0.34, 0.35, 0.45, 0.48, 0.58, 0.62, 0.63, and 0.66 (2) mg/kg.

Residues of fluxapyroxad (parent compound) in plums from supervised trials in accordance with 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.

Total residues in plums 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 Meeting noted the use in the USA is for the stone fruit crop group. Although the median residues for each fruit differed by less than a factor of five, the Meeting decided to recommend maximum residue levels for the individual sub-groups of stone fruit as there are sufficient trials available for each sub-group. The Meeting estimated a maximum residue level for cherries of 3 mg/kg, together with an STMR and an HR of 0.755 and 2.3 mg/kg respectively. The Meeting estimated a maximum residue level of 1.5 mg/kg for the sub-group peaches, together with an STMR and HR of 0.465 and 0.66 mg/kg respectively. The Meeting estimated a maximum residue level of 1.5 mg/kg for the sub-group plums, together with an STMR and an HR of 0.44 and 0.95 mg/kg. The Meeting withdrew its previous recommendation of 2 mg/kg for stone fruit.

Berries and other small fruits (except grapes)

The critical GAP for bushberries, caneberries, low growing berries, and strawberries is in the USA, with 3× 0.2 kg ai/ha applications at 7-day intervals, and a 0-day pre-harvest interval.

A series of trials in blueberries (highbush type) was conducted in the USA. Residues of fluxapyroxad (parent only) immediately after the last of 3× 0.2 kg ai/ha applications were 1.3, 1.7, 2.4 (2), and 3.8 mg/kg.

Total residues were: 1.3, 1.7, 2.4 (2), and 3.8 mg/kg.

A trial in blackberries was conducted in the USA. Residues of fluxapyroxad (parent only and total residues) immediately after the last of 3× 0.2 kg ai/ha applications were 1.4 mg/kg.

A trial in raspberries was conducted in the USA. Residues of fluxapyroxad (parent only and total residues) immediately after the last of 3 × 0.2 kg ai/ha applications were: 2.0 mg/kg.

In a series of trials in strawberries conducted in the USA, residues of fluxapyroxad (parent only) immediately after the last of 3 × 0.2 kg ai/ha applications were: 0.21, 0.26, 0.76 (2), 0.87, 0.97, 1.0, and 2.3 mg/kg.

Total residues were: 0.22, 0.26, 0.76 (2), 0.87, 0.97, 1.0, and 2.4 mg/kg.

The Meeting noted that the GAPs for the subgroups bushberries, caneberries and low growing berries, and strawberries are the same, and noted that the medians for blueberries and strawberries differed by less than 5× (2.9×) and agreed to consider a group MRL. In determining which datasets to use for estimating the MRL, the Meeting noted that the datasets for blueberries and strawberries were not statistically similar (Mann-Whitney), and, based on the blueberries data set, estimated a maximum residue level of 7 mg/kg for berries and other small fruits (except grapes), together with an STMR and an HR of 2.4 and 3.9 mg/kg (based on the highest residue of duplicate samples) respectively.

Grapes

The critical GAP for grapes is in the USA, with 3× 0.2 kg ai/ha applications at 10-day intervals, and a 14-day pre-harvest interval.

A series of trials was conducted in the USA. Residues of fluxapyroxad (parent only) at a 14-day PHI after 3× 0.2 kg ai/ha applications were 0.11, 0.13, 0.23, 0.43, 0.51, 0.62, 0.71, and 1.4 mg/kg.

Total residues were: 0.11, 0.13, 0.23, 0.43, 0.51, 0.62, 0.71, and 1.4 mg/kg.

The Meeting estimated a maximum residue level of 3 mg/kg for fluxapyroxad in grapes, together with an STMR and an HR of 0.47 and 1.4 mg/kg respectively.

Tropical fruit—inedible peel

Banana

The critical GAP in bananas is 4× 0.15 kg ai/ha applications at 8-day intervals, with a 0-day pre-harvest interval, in Belize, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras and Panama. Trials matching GAP and conducted in Brazil, Colombia, and Ecuador were available. Results were reported for both bagged and unbagged fruit for each trial plot; the results for unbagged bananas were considered for estimation of the maximum residue level and dietary risk assessment.

Residues of fluxapyroxad (parent compound) in unbagged bananas (whole fruit) after treatment in accordance with GAP were 0.06, 0.07, 0.08, 0.10, 0.14, 0.15, 0.16, 0.36, 0.66, 0.77, and 1.6 mg/kg.

Total residues of fluxapyroxad in banana pulp (edible portion) were 0.03 (2), 0.05, 0.06, 0.09, and 0.10 mg/kg.

The Meeting estimated a maximum residue level of 3 mg/kg for bananas, based on the whole fruit data, and an STMR and an HR of 0.055 and 0.10 mg/kg, based on the edible portion data.

Mango

The critical GAP for mango is in Brazil, with 4× 0.0067 kg ai/hL applications at 7-day intervals, a spray volume of up to 1000 L/ha (giving a maximum per-hectare rate of 0.067 kg ai/ha), and a pre-harvest interval of 7 days.

In trials conducted at GAP in Brazil, residues of fluxapyroxad (parent compound) at a 7-day PHI were 0.14, 0.16, 0.21, and 0.39 mg/kg. Total residues were 0.14, 0.16, 0.21, and 0.39 mg/kg.

The Meeting concluded that there was insufficient data to estimate a maximum residue level for mango.

Papaya

The critical GAP for papaya is in Mexico, with 2× 0.1 kg ai/ha applications at 14-day intervals, and a 7-day pre-harvest interval.

The Meeting concluded that the residue data did not match the GAP (maximum two sprays GAP versus four sprays in the trials).

Bulb vegetables

The critical GAP for the bulb vegetables group is in the USA (3× 0.2 kg ai/ha applications at 7-day intervals and a 7-day pre-harvest interval).

Residue trials were conducted in bulb onions (dry) and green onions.

Residues of fluxapyroxad (parent only) at a 7-day PHI in bulb onions were 0.03, 0.16, 0.23 (2), and 0.27 mg/kg.

Total fluxapyroxad residues were 0.03, 0.16, 0.23 (2), and 0.27 mg/kg.

The Meeting estimated a maximum residue level of 0.6 mg/kg for bulb onions, together with an STMR and an HR of 0.23 and 0.28 mg/kg respectively.

The Meeting agreed to extrapolate the maximum residue level, STMR and HR values estimated for bulb onions to garlic and shallot.

Residues of fluxapyroxad (parent only) at a 7-day PHI in green onions were 0.24 and 0.56 mg/kg.

Total fluxapyroxad residues were 0.24 and 0.56 mg/kg.

The Meeting concluded that there were insufficient data to estimate maximum residue levels for other crops in the bulb vegetables group.

Brassica vegetables

The critical GAP for Brassica vegetables is in the USA (3× 0.1 kg ai/ha applications, a re-treatment interval of 7 days, and a pre-harvest interval of 3 days).

Residue data in cabbage and broccoli from trials conducted in the USA in accordance with GAP were available to the Meeting.

Fluxapyroxad was accidentally applied at double the label application rate for one of the broccoli trials. The Meeting noted that the application rate was within the acceptable range of 0.3–4× GAP and that other parameters were in accordance with GAP. The Meeting agreed that this result could be scaled to GAP using proportionality.

Residues of fluxapyroxad (parent only) in broccoli (unscaled results) at a 3-day PHI were 0.17, 0.32, 0.35, 0.57, and 1.2 mg/kg. Total residues were 0.17, 0.34, 0.36, 0.61, and 1.5 mg/kg.

Residues of fluxapyroxad (parent only) in broccoli at a 3-day PHI were 0.17, 0.29 (s), 0.32, 0.35, and 1.2 mg/kg, where (s) indicates a result that was scaled to the proposed GAP.

Total residues in broccoli were 0.17, 0.31 (s), 0.34, 0.36, and 1.5 mg/kg.

Residues of fluxapyroxad (parent only) in cabbage (heads with wrapper leaves) at a 3-day PHI were 0.07, 0.11, 0.13, 0.14, 0.22, and 1.2 mg/kg.

Total residues in cabbage (head with wrapper leaves) were 0.07, 0.11, 0.14 (2), 0.22, and 1.3 mg/kg.

Total residues in cabbage heads (without wrapper leaves) were < 0.01, 0.01, 0.04 (2), 0.05, and 0.07 mg/kg.

The Meeting noted that the GAP was for the Brassica vegetables group and considered a group MRL. The Meeting further noted the similarity of the datasets (median for broccoli was 2.6× the median for cabbage, and agreed to consider a group MRL. In determining which datasets to use for estimating the MRL, the datasets were confirmed to be similar by the Mann-Whitney U test) and it was agreed to combine the datasets for the purpose of estimating a group maximum residue level.

Combined dataset for fluxapyroxad (parent only) in broccoli and cabbage (with wrapper leaves): 0.07, 0.11, 0.13, 0.14, 0.17, 0.22, 0.32, 0.35, 0.57, and 1.2 (2) mg/kg.

Combined dataset for total residues in broccoli and cabbage (with wrapper leaves): 0.07, 0.11, 0.14 (2), 0.17, 0.22, 0.31, 0.34, 0.36, 1.3, and 1.5 mg/kg.

The Meeting estimated a maximum residue level for Brassica vegetables of 2 mg/kg. Based on the data for total residues in cabbages with wrapper leaves removed, the Meeting estimated an STMR and an HR of 0.04 and 0.07 mg/kg respectively for cabbage. Based on the combined total residues data set, the Meeting estimated an STMR and an HR of 0.22 and 1.7 mg/kg respectively.

Fruiting vegetables, Cucurbits

The critical GAP for cucurbit fruiting vegetables is in the USA (3× 0.1 kg ai/ha, with a 7-day retreatment interval and a 0-day pre-harvest interval). Residue trials in excess of GAP (3× 0.2 kg ai/ha applications) were conducted in the USA in cucumber, melon (cantaloupe), and summer squash. Trials in melons, including watermelons were also conducted in Brazil, but these did not match the critical GAP (four applications rather than three, and the rate differed by more than ±30%).

Residue data for the crops at the appropriate PHI are summarized below.

Residues of fluxapyroxad (parent only and total residues) in cucumber: 0.03, 0.17 (2), and 0.24 mg/kg.

Residues of fluxapyroxad (parent only and total residues) in whole melons (other than watermelons): 0.05 (2), 0.08, 0.21, and 0.24 mg/kg.

Residues of fluxapyroxad (parent only and total residues) in summer squash: 0.05, 0.07, 0.10, 0.11, and 0.14 mg/kg.

Data for the three crops when scaled to the US GAP (divide by 2) are summarized below:

Residues of fluxapyroxad (parent only and total residues) in cucumber: 0.015, 0.085 (2), and 0.12 mg/kg.

Residues of fluxapyroxad (parent only and total residues) in melons (other than watermelons): 0.025 (2), 0.04, 0.105, and 0.12 mg/kg.

Residues of fluxapyroxad (parent only and total residues) in summer squash: 0.025, 0.035, 0.05, 0.055, and 0.07 mg/kg.

The Meeting noted that the GAP is for the cucurbit fruiting vegetables group and further noted that the datasets are similar (maximum difference in the median was 2.1×). In determining which datasets to use for estimating the MRL, the similarity of the datasets was confirmed by the Kruskal-Wallis test. The Meeting decided to combine the scaled datasets for the purpose of estimating a group maximum residue level.

The combined dataset for residues of fluxapyroxad (parent only) in cucumber, melon and summer squash is 0.015, 0.025 (3), 0.035, 0.04, 0.05, 0.055, 0.07, 0.085 (2), 0.105, and 0.12 (2) mg/kg.

The combined dataset for total residues in cucurbits (whole fruit) is 0.015, 0.025 (3), 0.035, 0.04, 0.05, 0.055, 0.07, 0.085 (2), 0.105, and 0.12 (2) mg/kg.

The Meeting estimated a maximum residue level of 0.2 mg/kg for fruiting vegetables, cucurbits, together with an STMR and an HR of 0.0525 and 0.13 mg/kg respectively.

Leafy vegetables

Brassica leafy vegetables

The critical GAP for Brassica leafy vegetables is in the USA (3× 0.1 kg ai/ha applications, a 7-day retreatment interval, and a 3-day pre-harvest interval).

Residue trials in mustard greens were conducted in the USA in accordance with GAP.

Residues of fluxapyroxad (parent only) at a 3-day PHI were 0.48, 0.57, 0.90, 1.7, and 1.9 mg/kg.

Total residues were 0.93, 1.3, 1.7, 2.7, and 3.1 mg/kg.

The Meeting agreed to extrapolate the residue data for mustard greens to the Brassica leafy vegetables subgroup. The Meeting estimated a maximum residue level of 4 mg/kg for brassica leafy vegetables, together with an STMR and an HR of 1.7 and 3.1 mg/kg respectively.

Leafy vegetables (except Brassica leafy vegetables)

The critical GAP for leafy vegetables other than Brassica leafy vegetables is in the USA (3× 0.2 kg ai/ha applications with a retreatment interval of 7 days, and a 1-day pre-harvest interval).

Residue trials in head lettuce, leaf lettuce, and spinach were conducted in the USA in accordance with the cGAP for leafy vegetables (except Brassica leafy vegetables).

Residues of fluxapyroxad (parent only and total residues) at a 1-day PHI in head lettuce were 0.14, 0.47, 0.51, 0.66, and 1.9 mg/kg.

Residues of fluxapyroxad (parent only) in leaf lettuce at a 1-day PHI were 2.7 and 4.4 mg/kg.

Total residues in leaf lettuce were 2.7 and 4.4 mg/kg.

Two of the residue trials reported as leafy lettuce were for cos lettuce varieties.

Residues of fluxapyroxad (parent only) in cos lettuce at a 1-day PHI were 3.3 and 6.2 mg/kg.

Total residues in cos lettuce were 3.4 and 6.2 mg/kg.

Residues of fluxapyroxad (parent only) in spinach at a 1-day PHI were 5.2, 6.0, 6.7, 8.3, and 11.5 mg/kg.

Total residues in spinach were 5.2, 6.3, 6.8, 8.8, and 12.2 mg/kg.

The Meeting estimated a maximum residue level of 4 mg/kg for head lettuce, together with an STMR and an HR of 0.51 and 2.0 mg/kg respectively.

The Meeting noted that there were insufficient leafy and cos lettuce data for estimation of maximum residue levels.

The Meeting estimated a maximum residue level of 30 mg/kg for spinach, together with an STMR and an HR of 6.8 and 13 mg/kg respectively.

Residue data for radish tops were also available from trials conducted on radish in the USA, in accordance with the GAP for root vegetables (3× 0.1 kg ai/ha, with a 7-day PHI).

Residues of fluxapyroxad (parent only) in radish tops at a 7-day PHI were 0.2 (2), 0.7, 1, and 4 mg/kg.

Total residues in radish tops were 0.4, 0.6, 1.2, 1.7, and 5 mg/kg.

The Meeting estimated a maximum residue level of 8 mg/kg for radish leaves, together with an STMR and HR of 1.2 and 6 mg/kg (based on the highest residue of duplicate samples) respectively.

Short term intake assessment showed that residues in spinach exceed the acute reference dose of 0.3 mg/kg bw, at 180% of the ARfD, for children.

Root and tuber vegetables

The 2012 Meeting considered residue data for potato and sugar beet, in accordance with GAP in the USA (3× 0.1 kg ai/ha foliar applications with 7-day retreatment interval and a 7-day PHI, and maximum residue levels of 0.03 and 0.15 mg/kg were estimated for potato and sugar beet respectively.

The current Meeting received residue data for potato (soil application at planting), carrots and radish (both for foliar applications).

Carrot

The critical GAP for carrots (for the group root and tuber vegetables except sugar beet) is in the USA, at 3× 0.1 kg ai/ha foliar applications, with a 7-day retreatment interval and a 7-day pre-harvest interval.

Trials were conducted in the USA in accordance with GAP.

Residues of fluxapyroxad (parent only and total residues) in carrots at a 7-day PHI were 0.04, 0.05, 0.06, 0.1, and 0.5 mg/kg.

Potato

A series of residue trials was conducted in northern and southern Europe involving a single, at planting, in-furrow application at 0.24 kg ai/ha. However, there are currently no registrations for that GAP. The Meeting therefore was unable to estimate a maximum residue level for potatoes based on at planting soil application.

The 2012 Meeting considered residue data for foliar application to potatoes from trials conducted in accordance with the US GAP for root and tuber vegetables (except sugar beet) group (3× 0.1 kg ai/ha foliar applications, with a 7-day pre-harvest interval).

Residues of fluxapyroxad (parent only and total residues) in potatoes at a 7-day PHI were < 0.01 (17), and 0.02 (2) mg/kg.

Radish

The critical GAP for radish (for the group root and tuber vegetables except sugar beet) is in the USA, at 3× 0.1 kg ai/ha foliar applications, with a 7-day retreatment interval and a 7-day pre-harvest interval.

Trials were conducted in the USA in accordance with GAP.

Residues of fluxapyroxad (parent only and total) in radish roots at a 7-day PHI were 0.03, 0.04, 0.05, and 0.1 (2) mg/kg.

Sugar beet

The critical GAP for sugar beet is in the USA, at 3× 0.1 kg ai/ha foliar applications, with a 7-day retreatment interval and a 7-day pre-harvest interval. Residue data for this GAP was considered by the 2012 Meeting.

Residues of fluxapyroxad (parent only and total residues) in sugar beet roots at a 7-day PHI were 0.01 (2), 0.03 (3), 0.04 (3), 0.05 (2), and 0.06 (2) mg/kg.

The Meeting noted that the critical GAPs for root and tuber vegetables (except sugar beet) and sugar beet were the same, and considered a group maximum residue level.

The Meeting noted that the median residue for potatoes differed from those carrot and radish by > 5-fold (> 6× and > 5× respectively) and concluded that a group maximum residue level was not appropriate. The Meeting confirmed the 2012 recommendation for a maximum residue level, STMR and HR of 0.03, 0.01 and 0.02 mg/kg respectively for fluxapyroxad in potatoes. The Meeting confirmed the 2012 recommendation for a maximum residue level, STMR and HR of 0.15, 0.04, and 0.06 mg/kg respectively for fluxapyroxad in sugar beet.

The Meeting estimated a maximum residue level of 1 mg/kg for fluxapyroxad in carrot, together with an STMR and an HR of 0.06 and 0.5 mg/kg respectively. The Meeting agreed to extrapolate these values to parsnips.

The Meeting estimated a maximum residue level of 0.2 mg/kg for fluxapyroxad in radish, together with an STMR and an HR of 0.05 and 0.1 mg/kg respectively.

Celery

The critical GAP for celery is in the USA, at 3× 0.2 kg ai/ha applications, with a 7-day retreatment interval, and a 1-day pre-harvest interval.

Residues of fluxapyroxad (parent only and total residues) in US trials matching GAP were 1.3, 1.4, 1.8, and 5.2 mg/kg.

The Meeting estimated a maximum residue level of 10 mg/kg for celery, together with an STMR and an HR of 1.6 and 5.5 mg/kg respectively.

Cereals

Rice

The critical GAP for rice is in the USA, with 2× 0.15 kg ai/ha applications, a 7-day retreatment interval, and a 28-day pre-harvest interval. Residue trials matching the GAP were conducted in the USA.

Residues of fluxapyroxad (parent only) in paddy rice (with husks) at a 28-day PHI were 0.26, 0.34, 0.37, 0.59, 0.60, 0.61, 0.80, 0.92 (2), 0.94, 1.1, 1.2 (2), 1.7, and 3.7 mg/kg.

Total residues were 0.35, 0.37, 0.49, 0.59, 0.61, 0.62, 0.83, 0.94, 0.95, 0.96, 1.1, 1.2 (2), 1.7, and 3.7 mg/kg.

The Meeting estimated a maximum residue level of 5 mg/kg for rice, together with an STMR of 0.94 mg/kg.

Sorghum

Residue data for sorghum were provided to the 2012 Meeting, however at the time no maximum residue level was estimated as the data did not match any label GAP. GAPs have now been provided to the Meeting for consideration against the previously submitted data.

The GAP for sorghum in Mexico is 2× 0.1 kg ai/ha applications 14 days apart, with a 10-day pre-harvest interval. No data matching that GAP is available to the Meeting.

The GAP for sorghum in the USA is 2× 0.1 kg ai/ha applications, with a 21-day pre-harvest interval. Data from trials conducted in the USA and submitted to the 2012 Meeting match the US GAP for sorghum.

Residues of fluxapyroxad (parent only) in sorghum at a 21-day PHI were 0.13, 0.15 (2), 0.17, 0.19, 0.21, 0.24, 0.31, and 0.40 mg/kg.

Total residues in sorghum were 0.13, 0.15, 0.17, 0.19, 0.20, 0.22, 0.30, 0.32, and 0.40 mg/kg.

The Meeting estimated a maximum residue level of 0.7 mg/kg for sorghum, together with an STMR of 0.2 mg/kg.

Sugar cane

The critical GAP for sugarcane is in the USA, with 2× 0.125 kg ai/ha applications, a 14-day retreatment interval, and a 14-day pre-harvest interval. Residue trials matching GAP were conducted in the USA.

Residues of fluxapyroxad (parent only) in sugarcane at a 14-day PHI were 0.06, 0.26, 0.56, and 1.3 mg/kg.

Total residues were 0.06, 0.26, 0.58, and 1.4 mg/kg.

The Meeting concluded that there was insufficient data to estimate a maximum residue level for sugarcane.

Tree nuts

The critical GAP for fluxapyroxad in tree nuts is in the USA, with 3× 0.125 kg ai/ha applications, a 7-day retreatment interval, and a 14-day PHI.

Residue trials conducted in the USA in almonds and pecans and matching the US GAP were available to the Meeting.

Residues of fluxapyroxad (parent compound and total residues) in almond kernels at a 14-day PHI were < 0.01 (3), 0.01 and 0.02 mg/kg.

Residues of fluxapyroxad (parent compound and total residues) in pecan kernels at a 14-day PHI were < 0.01 (4), and 0.03 mg/kg.

The Meeting noted that the US GAP was for the tree nuts group and noted the similarity of the datasets for almonds and pecans (the medians were identical at 0.01 mg/kg). The Meeting decided to combine the datasets for almonds and pecans for the purpose of estimating a group maximum residue level.

Parent compound and total residues in almond and pecan kernels were: < 0.01 (7), 0.01, 0.02, and 0.03 mg/kg.

The Meeting estimated a maximum residue level of 0.04 mg/kg for tree nuts, together with an STMR and an HR of 0.01 and 0.03 mg/kg respectively.

Cotton

The 2012 Meeting considered a USA GAP and residue trials for seed treatment application to cotton, and estimated a maximum residue level of 0.01* mg/kg, together with an STMR of 0.

Residue data for foliar application to cotton was presented to the current Meeting.

The GAP for foliar application of fluxapyroxad to cotton in Brazil is 4× 0.058 kg ai/ha applications, with a 12-day retreatment interval and a 14-day pre-harvest interval. No data matching that GAP was available to the Meeting.

The USA GAP for cotton is 3× 0.1 kg ai/ha, with a 7-day retreatment interval and a 30-day pre-harvest interval. A series of trials conducted in the USA in accordance with the GAP was available to the Meeting.

Residues of parent compound in cottonseed after treatment in accordance with GAP were < 0.01, 0.01 (2), 0.03, 0.07, 0.09, 0.11 (2), and 0.13 mg/kg.

Total residues in cottonseed were < 0.01, 0.01 (2), 0.03, 0.07, 0.09, 0.11, 0.12, and 0.13 mg/kg.

The Meeting estimated a maximum residue level of 0.3 mg/kg for cottonseed, together with an STMR of 0.07 mg/kg. The Meeting withdrew the previous maximum residue level recommendation of 0.01* mg/kg for fluxapyroxad in cottonseed.

Animal feeds

Rice straw

The critical GAP for rice is in the USA, with 2× 0.15 kg ai/ha applications, and a 28-day pre-harvest interval.

Residues of fluxapyroxad parent compound in rice straw after treatment in accordance with GAP were 1.5, 1.8, 1.9, 2.5, 2.9, 3.1, 3.6, 4.0, 4.2, 5.2, 6.8, 6.9, 7.3, 10, and 42 mg/kg (dry weight basis).

Total residues were 1.5, 1.9 (2), 2.6, 2.9, 3.2, 3.8, 4.2 (2), 5.4, 7.0 (2), 7.4, 10, and 42 mg/kg (dry weight basis).

The Meeting estimated a maximum residue level of 50 mg/kg for rice straw and fodder, dry, together with a median residue and a highest residue of 4.2 and 48 mg/kg respectively.

Sorghum forage and stover

Residue data for sorghum were provided to the 2012 Meeting, but the Meeting was unable to estimate any maximum residue levels due to the data not corresponding with any label GAP. GAPs have now been provided to the Meeting for consideration against the previously submitted data.

The GAP for sorghum in the USA is 2× 0.1 kg ai/ha applications, with a 21-day pre-harvest interval. Data from trials conducted in the USA and submitted to the 2012 Meeting match the US GAP for sorghum.

Residues of fluxapyroxad (parent only) in sorghum forage at a 7-day PHI were 1.5, 1.8, 2.3, 2.7, 2.9, 3.1, 3.5, 6.4, and 7.0 mg/kg (dry weight basis).

Total residues in sorghum forage were 1.6, 2.0, 2.4, 2.8, 3.1, 3.2, 3.5, 6.8, and 7.1 mg/kg (dry weight basis).

The Meeting estimated a median residue and a highest residue of 3.1 and 7.1 mg/kg (dry weight basis) respectively.

Residues of fluxapyroxad (parent only) in sorghum stover at a 21-day PHI were 0.72, 1.3, 1.6 (2), 2.1, 2.5 (2), 2.8, and 3.2 mg/kg (dry weight basis).

Total residues in sorghum stover were 0.72, 1.4,1.8 (2), 2.2, 2.6 (2), 2.9, and 3.3 mg/kg (dry weight basis).

The Meeting estimated a maximum residue level of 7 mg/kg, together with a median residue and a highest residue of 2.2 and 3.3 mg/kg respectively, for sorghum straw and fodder, dry (dry weight basis).

Almond hulls

The critical GAP for fluxapyroxad in tree nuts is in the USA, with 3× 0.125 kg ai/ha applications (maximum two consecutive applications), and a 14-day PHI.

Residues of fluxapyroxad (parent compound and total residues) in almond hulls were 0.88, 0.92, 1.1, 1.4 and 1.7 mg/kg.

The Meeting estimated a median residue of 1.1 mg/kg.

Cotton gin trash

The USA GAP for cotton is 3× 0.1 kg ai/ha, with a 30-day pre-harvest interval.

Residues in cotton gin trash (parent compound) were 6.9 and 8.0 mg/kg, while total residues were 6.9 and 8.1 mg/kg.

The Meeting concluded that there were insufficient data for estimation of a median residue and highest residue for cotton gin trash.

Processing studies

The Meeting received processing studies for oranges, grapes, sugarcane, and cottonseed. The 2012 Meeting received processing studies for plums, rice and sorghum. Processing factors, HR-P, STMR-P and maximum residue levels are summarized in the table below.

Plums

Based on the processing factor of 2.81 for prunes (which was the same for both parent compound and total residues), the STMR and HR of 0.44 and 0.95 mg/kg for plums, the 2012 Meeting estimated an

STMR-P, HR-P and maximum residue level of 1.2, 2.7 and 5 mg/kg respectively for prunes. The current Meeting confirmed those recommendations.

Grapes

Based on the processing factor of 4.25 for raisins (for parent compound and total residues), the STMR of 0.47 mg/kg for grapes, and the HR of 1.4 mg/kg for grapes, the Meeting estimated an STMR-P, an HR-P and a maximum residue level of 2.0, 6.0, and 15 mg/kg respectively for dried grapes.

Using the parent compound and total residues processing factor of 5.25 for grape pomace (wet), the OECD guideline value of 15% for the dry matter content of wet grape pomace, and the above STMR value for grapes, the Meeting estimated a maximum residue level and STMR-P of 150 and 16.5 mg/kg respectively for grape pomace, dry.

Rice

Based on the processing factor of 0.07 for polished rice (which was the same for parent and total residues), the maximum residue level of 5 mg/kg for rice, and the STMR of 0.94 mg/kg, the Meeting estimated a maximum residue level and an STMR-P of 0.4 and 0.066 mg/kg respectively for rice, polished.

Based on the processing factor of 0.59 (for both parent and total residues) for rice, husked produced using the parboiling process, the maximum residue level and STMR of 5 and 0.94 mg/kg respectively, the Meeting estimated a maximum residue level and an STMR-P of 3 and 0.55 mg/kg respectively for rice, husked.

Sugarcane

Although a processing study was provided, there were insufficient data for sugarcane to estimate STMR and HR values, so values for processed commodities were not estimated.

RAC	Processed commodity	PF (parent)	RAC maximum residue level	Processed commodity maximum residue level	PF (total)	RAC STMR	Processed commodity STMR-P	RAC HR	Processed commodity HR-P
Orange	Dried pulp	0.095	0.3	–	0.095	0.06 (whole fruit)	0.006	0.17 (whole fruit)	0.016
	Oil	27.5		–	27.5		1.7		4.7
	Juice	0.045		–	0.045	0.01 (pulp)	0.00045	0.01 (pulp)	0.00045
Plum	Washed plums	0.77	1.5	–	0.77	0.44	0.34	0.95	0.73
	Puree	0.83		–	0.83		0.37		0.79
	Jam	0.41		–	0.41		0.18		0.39
	Dried prunes	2.81		5	2.81		1.23		2.66
Grape	Stalks	5.95	3	–	5.95	0.47	2.8	1.4	8.3
	Grape crush	0.83		–	0.83		0.39		1.2
	Must	0.23		–	0.23		0.11		0.32
	Wet pomace	5.25		–	5.25		2.5		7.4
	Dry pomace	35		150	35		16.5		105
	Must deposit	0.88		–	0.88		0.41		1.2
	Separated must	0.26		–	0.26		0.12		0.36
	Pasteurised juice	0.345		–	0.345		0.16		0.48

RAC	Processed commodity	PF (parent)	RAC maximum residue level	Processed commodity maximum residue level	PF (total)	RAC STMR	Processed commodity STMR-P	RAC HR	Processed commodity HR-P
	Yeast deposit	2.75		–	2.75		1.3		3.9
	Red wine	0.2		–	0.2		0.094		0.28
	Rosé wine	0.23		–	0.23		0.11		0.32
	Raisins	4.25		15	4.25		2		6
Rice	Rice, polished (white rice)	0.07	5	0.4	0.07	0.94	0.066	–	–
	Hulls	4.3		–	4.3		4.04		–
	Bran	3.79		–	3.78		3.55		–
	Rice, husked (brown rice)	0.59		3	0.59		0.55		–
	Flour	0.08		–	0.08		0.08		–
Sorghum	Aspirated grain fractions	14.5	0.7	–	13.8	0.2	2.76	–	–
	Syrup	0.135		–	0.13		0.026		–
Sugar cane	Molasses	0.17	–	–	0.17	–	–	–	–
	Raw sugar	0.25		–	0.25		–		–
	Refined sugar	0.04		–	0.04		–		–
Cotton seed	Meal	0.055	0.3	–	0.055	0.07	0.004	–	–
	Hulls	0.185		–	0.185		0.013		–
	Refined oil	0.045		–	0.045		0.003		–

Residues in animal commodities

Farm animal dietary burden

Dietary burden calculations incorporating all commodities considered by the current and 2012 Meetings for beef cattle, dairy cattle, broilers and laying poultry are presented in Annex 6. The calculations are made according to the livestock diets of the USA/Canada, the European Union, Australia and Japan as laid out in the OECD table.

	US/CAN		EU		AU		Japan	
	Max.	Mean	Max.	Mean	Max.	Mean	Max.	Mean
Beef cattle	4.73	2.64	22.8	6.81	45.2	12.7	27.3	3.25
Dairy cattle	19.7	4.63	23.3	7.95	40.9	11.9	14.1	2.43
Poultry—broiler	0.985	0.985	1.27	0.898	1.37	1.37	0.35	0.35
Poultry—layer	0.985	0.985	8.53	2.69	1.37	1.37	0.947	0.947

Animal commodity maximum residue levels

The animal commodity maximum residue levels were estimated by the 2012 Meeting based on the following maximum and mean dietary burdens:

Animal (commodities)	Dietary burden (ppm)	
	Maximum	Mean
Beef cattle (mammalian meat and offal)	40.7 (Australia)	11.4 (Australia)
Dairy cattle (milk)	39.2 (Australia)	9.37 (Australia)
Poultry–layers (poultry meat, offal and eggs)	7.14 (EU)	2.10 (EU)

The Meeting noted that the dietary burdens had not changed significantly from those determined by the 2012 Meeting and confirmed its previous recommendations for meat (from mammals other than marine mammals), edible offal (mammalian), milks, poultry meat, poultry, edible offal of, and eggs.

RECOMMENDATIONS

On the basis of the data from supervised trials the Meeting concluded that the residue levels listed below are suitable for establishing maximum residue limits and for dietary intake assessment.

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-(ß-D-glucopyranosyl)-N-(3′,4′,5′-triflurobipheny-2-yl)-1H-pyrzaole-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) expressed as parent equivalents.*

The residue is fat soluble.

CCN	Commodity	Recommended Maximum residue level (mg/kg)		STMR or STMR-P mg/kg	HR or HR-P mg/kg
		New	Previous		
FI 0327	Banana	3		0.055[a]	0.10 [a]
FB 0018	Berries and other small fruits (except grapes)	7		1.3	3.9
VB 0040	Brassica (cole or cabbage) vegetables, Head cabbages, Flowerhead brassicas	2		0.04 (cabbage) 0.22 (others)	0.07 (cabbage) 1.7 (others)
VL 0054	Brassica leafy vegetables	4		1.7	3.1
VR 0577	Carrot	1		0.06	0.5
VS 0624	Celery	10		1.6	5.5
FS 0013	Cherries	3		0.755	2.3
SO 0691	Cotton seed	0.3	0.01*	0.07	
DF 0269	Dried grapes (=Currants, Raisins and Sultanas)	15		2.0	6.0
VC 0045	Fruiting vegetables, Cucurbits	0.2		0.0525	0.13
VA 0381	Garlic	0.6		0.23	0.27
FB 0269	Grapes	3		0.47	1.4
AB 0269	Grape pomace, dry	150		16.5	
VL 0482	Lettuce, head	4		0.51	2.0
VA 0385	Onion (bulb)	0.6		0.23	0.28
FC 0004	Oranges, Sweet, Sour	0.3		0.01[a]	0.01[a]
VR 0588	Parsnip	1		0.06	0.5
FS 2001	Peaches (including nectarine and	1.5		0.465	0.66

CCN	Commodity	Recommended Maximum residue level (mg/kg)		STMR or STMR-P mg/kg	HR or HR-P mg/kg
		New	Previous		
	apricots)				
FS 0014	Plums (including prunes)	1.5		0.44	0.95
VL 0494	Radish leaves (including radish tops)	8		1.2	6
VR 0494	Radish	0.2		0.05	0.1
GC 0649	Rice	5		0.94	
CM 0649	Rice, husked	3		0.55	
CM 1205	Rice, polished	0.4		0.066	
AS 0649	Rice straw and fodder, dry (dry weight)	50		4.2	48
VA 0388	Shallot	0.6		0.23	0.27
GC 0651	Sorghum	0.7		0.2	
AS 0651	Sorghum straw and fodder, dry (dry weight)	7		2.3	3.3
VL 0502	Spinach [b]	30		6.8	13
FS 0012	Stone fruits	W	2		
TN 0085	Tree nuts	0.04		0.01	0.03
OR 0691	Cotton seed oil, edible			0.003	
JF 0269	Grape juice			0.16	0.48
JF 0004	Orange juice			0.00045	0.00045
CM 1206	Rice bran, Unprocessed			3.55	
	Rice flour			0.08	
	Wine			0.11	0.23
AB 0001	Citrus pulp, dry			0.006	0.016
AB 0691	Cotton seed hulls			0.013	
AB 1203	Cotton seed meal			0.004	
	Grape must			0.11	0.32
CM 1207	Rice hulls			4.04	
AF 1053	Sorghum forage (dry)			3.0	6.9

[a] edible portion

[b] On the basis of information provided to the JMPR, , the Meeting concluded that the short-term intake of residues of fluxapyroxad from consumption of spinach for children may present a public health concern.

DIETARY RISK ASSESSMENT

Long-term intake

The International Estimated Dietary Intakes (IEDIs) of fluxapyroxad were calculated for the 17 GEMS/food cluster diets using STMRs/STMR-Ps estimated by the current Meeting and by the 2012 JMPR. The results are shown in Annex 3 to the 2015 Report.

The calculated IEDIs of fluxapyroxad were 4–20% of the maximum ADI (0.02 mg/kg bw). The Meeting concluded that the long-term intakes of residues of fluxapyroxad, resulting from the uses considered by the current Meeting and by the 2012 JMPR, are unlikely to present a public health concern.

Short-term intake

The 2012 Meeting estimated an ARfD of 0.3 mg/kg bw for fluxapyroxad. The International Estimated Short Term Intakes were calculated for fluxapyroxad using the recommendations for STMRs and HRs for raw and processed commodities in combination with consumption data for the corresponding food commodities. The results are shown in Annex 4 to the 2015 Report.

The IESTI for spinach represented 190% of the ARfD for children. On the basis of the information provided to the JMPR, the Meeting concluded that the short-term intake of fluxapyroxad from consumption of spinach may present a public health concern. The Meeting noted that no data for alternative GAPs in spinach were presented.

For the other commodities, the IESTI for fluxapyroxad calculated on the base of recommendations made by JMPR represented 0–60% of the ARfD for children, and 0–60% for the general population.

REFERENCES

Code	Author	Year	Title, Institution, Report reference
366265	Belcher, TI & Riley, M	2012-a	Magnitude and Decline of Fluxapyroxad Residues Following Applications of BAS 700 04 F to Grapes, Eurofins Agroscience Services Inc., BASF DocID 2012 7000114
366266	Belcher, TI & Riley, M	2012-b	Magnitude of Fluxapyroxad Residues in Grape Processed Fractions Following Applications of BAS 700 04 F to Grapes, Eurofins Agroscience Services Inc., BASF DocID 2012/7000115
407714	Csinos, AL	2012-a	Magnitude of Residues of BAS 700 F in Bulb Vegetables Following Applications of BAS 700 01 F, SGS North America Inc., BASF DocID 2012/7003528
407713	Csinos, AL	2012-b	Magnitude of Residues of BAS 700 F in Cucurbit Vegetables Following Applications of BAS 700 01 F, SGS North America Inc., BASF DocID 2012/7003527
381037	Dantas, C & Cardoso, B	2012	Residue Study of Pyraclostrobin and Fluxapyroxad in Mango (Fruits) After Treatment with BAS 703 02 F Under Field Conditions in Brazil, BASF S.A., BASF DocID 2012/3006601
381027	Dantas, C, Cardoso, B & Schwerz, L	2012	Study of Residue of Pyraclostrobin and Fluxapyroxad in Citrus (Fruits) After Treatment with BAS 703 02 F Under Field Conditions in Brazil, BASF S.A., BASF DocID 2012/3006821
381041	Guimaraes, SF	2010-a	Residue Study of Pyraclostrobin and Fluxapyroxad in Melon (Fruits) After Treatment with BAS 703 02 F Under Field Conditions in Brazil, BASF S.A., BASF DocID 2012/3000488
381039_1	Guimaraes, SF	2010-b	Residue Study of Pyraclostrobin and Fluxapyroxad in Watermelon (Fruit) After Treatment with BAS 703 02 F Under Field Conditions in Brazil, BASF S.A., BASF DocID 2013/30013461
434965	Guimaraes, SF	2013-a	Study of Fluxapyroxad Residues in Banana (Fruits) After Treatment with BAS 700 04 F Under Field Conditions in Brazil, BASF S.A., BASF DocID 2013/3012923
434965_1	Guimaraes, SF	2013-b	Study of Fluxapyroxad Residues in Banana (Whole Fruit, Peel and Pulp) After Treatment with BAS 700 04 F Under Field Conditions in Costa Rica, Ecuador and Colombia, BASF S.A., BASF DocID 2013/3012924
435452	Guimaraes, SF	2014-a	Study of Fluxapyroxad Residues in Citrus (Whole Fruit, Peel and Pulp) After Treatment with BAS 703 02 F Under Field Conditions in Brazil and Argentina, BASF S.A., BASF DocID 2014/3004545
435453	Guimaraes, SF	2014-b	Study of Pyraclostrobin and Fluxapyroxad Residues in Citrus (Fruits and Processed Fractions) After Treatment with BAS 703 02 F Under Field Conditions in Brazil, BASF S.A., BASF DocID 2014/3004544
2009/ 7003643	Johnston, RL & Saha, M	2010	Magnitude of BAS 700 F Residues in Raw Agricultural Commodities of Potatoes and Sugar Beets Following Applications of BAS 700 AE F. BASF Agricultural Research Centre, Research Triangle Park NC, United States of America. Report No. 2009/7003643. Unpublished.
381043	Jones, B	2011	Study of Pyraclostrobin and Fluxapyroxad Residues in Papaya (Fruits) After Treatment with BAS 703 02 F Under Field Conditions in Brazil, BASF S.A., BASF DocID 2013/3006542

Code	Author	Year	Title, Institution, Report reference
2009/ 7003328	Jordan, JM	2010	Magnitude of BAS 700 F Residues in Stonefruit Following Applications of BAS 700 AE F. BASF Agricultural Research Centre, Research Triangle Park NC, United States of America. Report No. 2009/7003328. Unpublished.
407715	Korpalski, SJ	2012-a	Magnitude and Decline of Fluxapyroxad Residues Following Applications of BAS 700 01 F to Strawberry, Eurofins Agroscience Services Inc., BASF DocID 2012/7000169
407716	Korpalski, SJ	2012-b	Magnitude and Decline of Fluxapyroxad Residues Following Application of BAS 700 01 F to Berries (Crop Group 13), Eurofins Agroscience Services Inc., BASF DocID 2012/7000170
406885	Kramm, R	2013-a	Study of the Residue Behaviour of BAS 700 F After Application in the Furrow Before Planting and on the Seed Potatoes Directly After Planting with BAS 700 04 F Under Field Conditions in United Kingdom, Belgium, Netherlands and Germany, 2011, BASF S.E., BASF DocID 2012/1137316
406886	Kramm, R	2013-b	Study on the Residue Behaviour of Fluxapyroxad in Potatoes After Treatment of the Seed Potatoes with BAS 700 04 F and Planting Under Field Conditions in Germany, Southern France and Spain, 2012, BASF S.E., BASF DocID 2013/1036304
429832	Lange, S & Korpalski, SJ	2013	Magnitude of Fluxapyroxad Residues Following Applications of BAS 700 01 F to Strawberry, Eurofins Agroscience Services Inc., BASF DocID 2013/7002079
386591	Norris, FA	2012	Magnitude of the Residue of BAS 700 F in Carrot and Radish, American Agricultural Services Inc., BASF DocID 2011/7005301
421251	Schaufele, M	2013	Residue Study (At Harvest) with BAS 700 04 F Applied in the Furrow Directly Before Planting and on the Seed Potatoes Directly After Planting in Southern France, Greece, Italy and Spain in 2012, Huntingdon Life Sciences, BASF DocID 2012/1352716
413126	Schreier, T	2012-a	Magnitude of Residues of BAS 700 F in Cherries Following Applications of BAS 700 01 F, SGS North America Inc., BASF DocID 2011/7004953
386949	Schreier, T	2012-b	Magnitude of the Residue of BAS 700 F in/on Sugar cane Raw Agricultural Commodities and Processed Fractions, SGS North America Inc., BASF DocID 2012/7003749
366267	Schreier, T	2013-a	Magnitude of Fluxapyroxad Residues in Brassica Vegetables, SGS North America Inc., BASF DocID 2013/7002271
407717	Schreier, T	2013-b	Magnitude of Residues of BAS 700 F in Leafy Vegetables Following Applications of BAS 700 01 F and BAS 700 04 F, SGS North America Inc., BASF DocID 2013/7002138
417891	Schreier, T	2014	Magnitude of Residues of Fluxapyroxad in Cotton Following Applications of BAS 700 01 F, SGS North America Inc., BASF DocID 2014/7000422
717219	Schreier, T	2015	Magnitude of Residues of Fluxapyroxad in Carrot Following Applications of BAS 700 01 F
407770	Thiel, A	2012	Magnitude and Decline of Residues of Fluxapyroxad in Rice Following Applications of BAS 700 04 F, ABC Laboratories Inc., BASF DocID 2012/7000161
2010/ 7003693	White, MT	2010	Magnitude of BAS 700 F Residues in Raw Agricultural Commodities of the Cereal Grains and Forage. Fodder and Straw of Cereal Grains Crop Groups Following Applications of BAS 700 AE F. BASF Agricultural Research Centre, Research Triangle Park NC, United States of America. Report No. 2010/7003693. Unpublished.
417892	Woodard, DL & Brungardt, JN	2014	Magnitude of Fluxapyroxad Residues in Cotton Processed Fractions Following Applications of BAS 703 02 F to Cotton, SynTech Research Laboratory Services, LLC., BASF DocID 2014/7000423
407712	Wyatt, DR	2012	Magnitude and Decline of the Residues of Fluxapyroxad in or on Tree Nuts Raw Agricultural Commodities Following Three Foliar Applications of BAS 700 01 F Fungicide, The Carringers Inc., BASF DocID 2012/7000159