

SPINETORAM (233)

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EXPLANATION

Spinetoram is a multicomponent tetracyclic macrolide in the class of spinosyn insecticides obtained from chemical modification of fermentation product of *Saccharopolyspora spinosa*. It consists of two closely related active ingredients, XDE-175-J and XDE-175-L, present approximately in a three to one ratio. It controls Lepidopterous larvae, leafminers, and thrips on a variety of crops by disruption of nicotinic/gamma amino butyric acid-gated chloride channels.

It was first evaluated by the 2008 JMPR which established an ADI of 0–0.05 mg/kg bw and decided that an ARfD is unnecessary. The 2008 Meeting also received information on metabolism on lactating goat and laying hens, apple, lettuce and turnip; environmental fate in soil (aerobic soil metabolism and aqueous photolysis); residues in succeeding crops; methods of analysis for plant and animal matrices; storage stability; supervised residue trials; processing of apple and orange; and farm animal feeding studies. After reviewing these data, it recommended the following residue definition for plant and animal commodities:

Definition of the residue (for compliance with the MRL): *Spinetoram*.

Definition of the residue (for estimation of dietary intake): *Spinetoram and N-demethyl and N-formyl metabolites of the major spinetoram component*.

The residue is fat-soluble.

Note: Spinetoram consists of two related components.

Spinetoram was subsequently reviewed by the 2012 Meeting for additional MRLs. The 2008 and 2012 Meetings estimated maximum residue levels for beans, except broad bean and soya bean (green pods and immature seeds); blueberries; Brassica (cole or cabbage) vegetables, Head cabbages, flowerhead brassicas; celery; lettuce, head; eggs; grapes; lettuce, leaf; nectarine; Onion, bulb; onion, Welsh; oranges, sweet, sour; peach; pome fruits; raspberries, red, black; spinach, spring onion; sugar beet; tomato; tree nuts; edible offal, mammalian; meat (from mammals other than marine mammals); milk fats; milks; poultry fats; poultry meat; and poultry, edible offal of.

The current Meeting received information on supervised trials on additional crops in support of additional maximum residue levels.

METHODS OF RESIDUE ANALYSIS

Analytical methods

Analytical methods GRM 05.03 and GRM 05.04, which were used in the supervised trials provided to the current Meeting, were reviewed by the 2008 JMPR. These methods were developed for the determination of residues of XDE-175-J and XDE-175-L and their metabolites N-demethyl-175-J and -L, N-formyl-175-J and -L in plant matrices using HPLC with positive-ion electron-spray (ESI) tandem mass spectrometry (LC-MS/MS). Each method has been validated for each analyte at 0.01–1.0 mg/kg for a variety of crops for which Codex MRLs had been established. Mean recovery was in a range of 82–111%.

The Meeting received more recent information on validation of analytical method GRM 05.03 for representative crops was provided to the current Meeting and summarized in Table 1.

Table 1 Summary of recoveries of spinetoram and its metabolites in representative plant matrices by GRM 05.03 (Austin, R. and Turner, R., 2014; Report No. 140001)

Matrix	Analyte	Fortification (mg/kg)	n	Recovery (%)		RSD (%)	Linear Range (ng/mL) ^{a)}
				Range	Mean		

Matrix	Analyte	Fortification (mg/kg)	n	Recovery (%)		RSD (%)	Linear Range (ng/mL) ^{a)}
				Range	Mean		
Quantitation							
Lemon	XDE-175-J (m/z 749/142)	0.01	6	84-93	87	4.0	0.14 - 50 (r ² =0.9999)
		1.0	6	97-102	99	2.0	
	XDE-175-L (m/z 761/142)	0.01	6	80-93	86	7.2	0.14 - 50 (r ² =0.9998)
		1.0	6	96-101	99	2.2	
	XDE-175-N-demethyl-J (m/z 735/128)	0.01	6	63-75	71	6.2	0.14 - 50 (r ² =0.9999)
		1.0	6	91-100	96	3.5	
	XDE-175-N-formyl-J (m/z 763/156)	0.01	6	88-116	103	8.9	0.14 - 50 (r ² =0.9988)
		1.0	6	74-96	88	10.4	
	XDE-175-N-demethyl-L (m/z 747/128)	0.01	6	81-90	87	3.7	0.14 - 50 (r ² =0.9999)
		1.0	6	94-101	98	2.8	
	XDE-175-N-formyl-L (m/z 775/156)	0.01	6	72-86	79	6.8	0.14 - 50 (r ² =0.9994)
Lettuce	XDE-175-J (m/z 749/142)	0.01	6	79-84	82	2.4	0.14 - 50 (r ² =0.9999)
		1.0	6	94-104	97	3.6	
		10.0	10	88-95	92	2.4	
	XDE-175-L (m/z 761/142)	0.01	6	78-85	83	3.7	0.14 - 50 (r ² =0.9998)
		1.0	6	95-99	97	1.4	
		10.0	10	89-96	92	2.5	
	XDE-175-N-demethyl-J (m/z 735/128)	0.01	6	70-75	73	2.4	0.14 - 50 (r ² =0.9999)
		1.0	6	93-98	96	1.7	
		10.0	10	92-94	93	0.8	
	XDE-175-N-formyl-J (m/z 763/156)	0.01	6	72-84	77	6.7	0.14 - 50 (r ² =0.9988)
		1.0	6	87-107	95	8.0	
		10.0	10	83-90	87	2.6	
	XDE-175-N-demethyl-L (m/z 747/128)	0.01	6	87-92	90	2.1	0.14 - 50 (r ² =0.9999)
		1.0	6	96-105	99	3.2	
		10.0	10	90-95	92	1.5	
	XDE-175-N-formyl-L (m/z 775/156)	0.01	6	68-79	73	5.2	0.14 - 50 (r ² =0.9994)
		1.0	6	82-104	92	9.0	
		10.0	10	77-104	88	9.9	
Barley grain	XDE-175-J (m/z 749/142)	0.01	6	86-98	94	5.1	0.14 - 50 (r ² =0.9999)
		1.0	6	100-104	102	1.4	
	XDE-175-L (m/z 761/142)	0.01	6	78-84	81	2.7	0.14 - 50 (r ² =0.9998)
		1.0	6	100-105	102	1.6	
	XDE-175-N-demethyl-J (m/z 735/128)	0.01	6	72-89	82	6.8	0.14 - 50 (r ² =0.9999)
		1.0	6	95-105	100	3.6	
	XDE-175-N-formyl-J (m/z 763/156)	0.01	6	70-90	76	10.6	0.14 - 50 (r ² =0.9988)
		1.0	6	87-105	97	7.0	
	XDE-175-N-demethyl-L (m/z 747/128)	0.01	6	83-86	85	1.2	0.14 - 50 (r ² =0.9999)
		1.0	6	97-103	100	2.2	
	XDE-175-N-formyl-L (m/z 775/156)	0.01	6	67-83	77	8.5	0.14 - 50 (r ² =0.9994)
		1.0	6	94-117	101	8.5	
Rapeseed (seed)	XDE-175-J (m/z 749/142)	0.01	6	102-110	107	3.0	0.14 - 50 (r ² =0.9999)
		1.0	6	102-105	103	1.1	
	XDE-175-L (m/z 761/142)	0.01	6	80-91	85	5.2	0.14 - 50 (r ² =0.9998)
		1.0	6	100-106	104	2.0	
	XDE-175-N-demethyl-J (m/z 735/128)	0.01	6	75-87	82	5.1	0.14 - 50 (r ² =0.9999)
		1.0	6	96-106	100	3.8	
	XDE-175-N-formyl-J (m/z 763/156)	0.01	6	87-105	97	7.9	0.14 - 50 (r ² =0.9988)
		1.0	6	88-112	98	8.5	
	XDE-175-N-demethyl-L (m/z 747/128)	0.01	6	80-84	82	1.8	0.14 - 50 (r ² =0.9999)
		1.0	6	98-105	101	3.2	
	XDE-175-N-formyl-L (m/z 775/156)	0.01	6	70-81	77	5.3	0.14 - 50 (r ² =0.9994)
		1.0	6	92-115	103	8.4	
Confirmation							
Lemon	XDE-175-J (m/z 749/142)	0.01	6	83-92	87	4.3	0.14 - 50 (r ² =0.9992)
		1.0	6	97-106	102	3.1	
	XDE-175-L (m/z 761/142)	0.01	6	88-100	94	5.0	0.14 - 50 (r ² =0.9989)
		1.0	6	98-103	100	2.0	
XDE-175-N-demethyl-J	0.01	6	67-74	71	3.3	0.14 - 50	

Matrix	Analyte	Fortification (mg/kg)	n	Recovery (%)		RSD (%)	Linear Range (ng/mL) ^{a)}	
				Range	Mean			
	(m/z 735/128)	1.0	6	93-102	97	4.0	(r ² =0.9994)	
	XDE-175-N-formyl-J (m/z 763/156)	0.01	6	70-79	74	5.4	0.14 - 50 (r ² =0.9997)	
		1.0	6	85-92	88	3.3		
	XDE-175-N-demethyl-L (m/z 747/128)	0.01	6	83-93	87	4.3	0.14 - 50 (r ² =0.9999)	
		1.0	6	92-102	96	3.7		
	XDE-175-N-formyl-L (m/z 775/156)	0.01	6	89-98	94	3.9	0.14 - 50 (r ² =0.9990)	
		1.0	6	92-104	97	4.4		
	Lettuce	XDE-175-J (m/z 749/142)	0.01	6	80-96	89	6.1	0.14 - 50 (r ² =0.9992)
			1.0	6	97-109	101	4.5	
			10.0	10	92-95	93	1.1	
XDE-175-L (m/z 761/142)		0.01	6	87-104	96	5.7	0.14 - 50 (r ² =0.9989)	
		1.0	6	97-104	100	2.3		
		10.0	10	89-94	92	1.7		
XDE-175-N-demethyl-J (m/z 735/128)		0.01	6	67-72	70	2.4	0.14 - 50 (r ² =0.9994)	
		1.0	6	95-103	98	3.4		
		10.0	10	91-93	92	0.9		
XDE-175-N-formyl-J (m/z 763/156)		0.01	6	66-76	70	6.2	0.14 - 50 (r ² =0.9997)	
	1.0	6	88-101	95	4.8			
	10.0	10	82-97	90	6.3			
	XDE-175-N-demethyl-L (m/z 747/128)	0.01	6	79-84	82	2.4	0.14 - 50 (r ² =0.9999)	
		1.0	6	93-101	95	3.3		
		10.0	10	88-91	89	0.9		
	XDE-175-N-formyl-L (m/z 775/156)	0.01	6	83-92	86	4.4	0.14 - 50 (r ² =0.9990)	
		1.0	6	90-105	97	5.6		
		10.0	10	86-97	93	4.4		
	Barley grain	XDE-175-J (m/z 749/142)	0.01	6	63-88	78	12.6	0.14 - 50 (r ² =0.9992)
			1.0	6	95-105	101	4.1	
		XDE-175-L (m/z 761/142)	0.01	6	70-84	78	7.2	0.14 - 50 (r ² =0.9989)
			1.0	6	97-105	100	2.9	
XDE-175-N-demethyl-J (m/z 735/128)		0.01	6	64-72	70	4.5	0.14 - 50 (r ² =0.9994)	
		1.0	6	93-104	99	4.1		
XDE-175-N-formyl-J (m/z 763/156)		0.01	6	76-94	86	7.8	0.14 - 50 (r ² =0.9997)	
		1.0	6	79-88	84	3.8		
XDE-175-N-demethyl-L (m/z 747/128)		0.01	6	79-100	90	10.6	0.14 - 50 (r ² =0.9999)	
		1.0	6	97-105	100	2.8		
	XDE-175-N-formyl-L (m/z 775/156)	0.01	6	75-97	86	11.5	0.14 - 50 (r ² =0.9990)	
		1.0	6	101-116	104	5.6		
	Rapeseed (seed)	XDE-175-J (m/z 749/142)	0.01	6	69-85	79	7.0	0.14 - 50 (r ² =0.9992)
			1.0	6	94-100	98	2.7	
		XDE-175-L (m/z 761/142)	0.01	6	75-89	82	5.7	0.14 - 50 (r ² =0.9989)
			1.0	6	95-107	101	4.1	
		XDE-175-N-demethyl-J (m/z 735/128)	0.01	6	66-74	71	4.0	0.14 - 50 (r ² =0.9994)
			1.0	6	95-104	99	3.2	
		XDE-175-N-formyl-J (m/z 763/156)	0.01	6	81-126	103	18.4	0.14 - 50 (r ² =0.9997)
			1.0	6	95-100	99	2.1	
XDE-175-N-demethyl-L (m/z 747/128)		0.01	6	81-95	88	5.8	0.14 - 50 (r ² =0.9999)	
		1.0	6	93-102	96	3.5		
	XDE-175-N-formyl-L (m/z 775/156)	0.01	6	97-111	104	4.6	0.14 - 50 (r ² =0.9990)	
		1.0	6	104-118	110	5.7		

^a N=8

The LOQ of 0.01 mg/kg was confirmed. The mean recoveries were between 70–110% and RSDs were below 20%. Its linearity was confirmed with $r^2 > 0.99$ between 0.14 and 50 ng/mL. Therefore, the method meets the requirements.

Analytical method GRM 05.03 was modified for the determination of spinetoram and its metabolites in rice matrices. Modifications are in the extraction procedure and determination. In addition to the extraction of samples with the extraction solution described in the original GRM 05.03

(acetonitrile: water= 80: 20 (v/v)). Another extraction solution (0.16M hydrochloric acid + 5% sodium chloride solution=1:1 (v/v)) was added and petroleum ether was used for extraction after acidification with hydrochloric acid. Petroleum ether was dephased and ethyl acetate was used for extraction after the addition of sodium hydroxide to adjust the pH. Extracts were diluted by acetonitrile. Samples were analysed for residues of spinetoram (XDE-175-J) and metabolites (N-Demethyl-J and N-Formyl-J) according to LC-UV. XDE-175-L was not tested.

Summary of method validation is presented in Table 2.

Table 2 Summary of recoveries of spinetoram and its metabolites in rice matrices by modified GRM 05.03 (Yinming, X, 2010; Report No. 2009P227)

Matrix	Analyte	Fortification (mg/kg)	n	Recovery (%)		RSD (%)
				Range	Mean	
Husked Rice	XDE-175-J	0.2	5	91.1-99.6	95.0	3.4
		0.5	5	91.0-99.7	94.7	3.3
		2	5	94.3-98.8	96.6	2.0
	XDE-175-N-demethyl-J	0.2	5	92.1-96.6	95.0	1.8
		0.5	5	89.3-95.0	92.0	2.6
		2	5	89.1-92.0	91.2	1.7
	XDE-175-N-formyl-J	0.2	5	89.7-98.9	94.0	4.1
		0.5	5	91.4-99.3	94.6	3.4
		2	5	89.4-95.6	91.9	3.0
Rice hulls	XDE-175-J	0.2	5	93.6-107.3	99.9	6.0
		0.5	5	89.0-98.0	92.8	3.8
		2	5	92.1-99.3	96.3	2.9
	XDE-175-N-demethyl-J	0.2	5	80.7-88.2	84.7	3.8
		0.5	5	87.4-93.3	90.3	2.6
		2	5	98.5-101.2	99.9	1.2
	XDE-175-N-formyl-J	0.2	5	92.0-105.8	98.2	5.1
		0.5	5	83.3-94.5	88.9	5.3
		2	5	92.0-98.2	94.2	2.6
Rice, whole plant	XDE-175-J	0.2	5	80.2-97.7	88.8	8.1
		0.5	5	95.7-103.3	98.6	3.3
		2	5	96.6-106.4	100.6	3.6
	XDE-175-N-demethyl-J	0.2	5	83.5-95.4	89.9	5.1
		0.5	5	88.1-101.4	93.4	5.7
		2	5	97.4-100.6	99.0	1.5
	XDE-175-N-formyl-J	0.2	5	84.7-98.2	91.2	6.8
		0.5	5	85.9-96.7	91.1	5.0
		2	5	96.0-99.5	97.6	1.5

The individual and mean recoveries were between 70–110% and RSDs were below 20%. The linearity was demonstrated between 0.4 and 10 µg/mL with $R^2 > 0.999$. The LOQ is 0.02 mg/kg for spinetoram and its associated metabolites in husked rice and 0.04 mg/kg in rice hulls and whole rice plant.

The 2008 JMP also reviewed the validation data of one of the existing multi-residue enforcement methods, DFG S19, and concluded that the method was validated successfully for the determination of spinetoram and its N-demethyl and N-formyl metabolites in apples, grapes and oranges.

Storage Stability under Frozen Conditions

The 2008 JMPR evaluated stability of spinetoram and its N-demethyl and N-formyl metabolites (each at a fortification level of 0.10 mg/kg) in homogenized samples of orange, lettuce, sugar beet, soya bean and wheat grain stored in deep freezer at -20 °C over 372 days. These commodities represented each of the five crop groupings (dry, oily, acidic, wet, and root crops). The 2008 JMPR concluded that at -20 °C, spinetoram and its N-demethyl and N-formyl metabolites were stable for about 12 months (372 days) in orange, sugar beet, soya bean and wheat.

Additionally, the frozen storage stability of spinetoram and its metabolites were studied at the fortification level of 0.10 mg/kg in apple, melon and maize grain at -20 °C for 755 days (Rodrigues, A. Jr., 2011; Report No. 080170). Samples were analysed using analytical method GRM 05.03 at various intervals. The results are shown in Table 3.

Table 3 Storage stability of spinetoram and its metabolites fortified at 0.10 mg/kg in apple, melon and maize grain, and stored at -20 °C

Matrix	Analyte	Storage (days)	Mean concentration (mg/kg)	% Remaining	Procedural recovery (%)
Apple (whole fruit)	XDE-175-J	0	0.092	92	117
		34	0.109	109	112
		67	0.089	89	97
		197	0.080	80	98
		385	0.080	80	97
		639	0.075	75	87
		755	0.073	73	96
	XDE-175-L	0	0.101	101	96
		34	0.111	111	106
		67	0.103	103	105
		197	0.081	81	97
		385	0.108	108	106
		639	0.091	91	92
		755	0.096	96	105
	XDE-175-N-formyl-J	0	0.091	91	87
		34	0.094	94	88
		67	0.120	120	108
		197	0.079	79	97
		385	0.072	72	88
		639	0.108	108	116
		755	0.089	89	83
	XDE-175-N-demethyl-J	0	0.098	98	106
		34	0.086	86	90
		67	0.084	84	87
		197	0.078	78	90
		385	0.101	101	106
		639	0.087	87	92
		755	0.079	79	92
	XDE-175-N-demethyl-L	0	0.096	96	104
		34	0.105	105	102
		67	0.106	106	97
		197	0.088	88	89
		385	0.101	101	105
		639	0.092	92	101
		755	0.097	97	103
	XDE-175-N-formyl-L	0	0.093	93	104
		34	0.090	90	113
		67	0.113	113	112
		197	0.066	66	84
		385	0.064	64	90
		639	0.104	104	118
		755	0.122	122	103
Melon Whole fruit	XDE-175-J	0	0.095	95	119
		34	0.103	103	103
		67	0.107	107	103
		197	0.071	71	75
		385	0.088	88	105
		639	0.069	69	79
		755	0.088	88	91
	XDE-175-L	0	0.100	100	101
		34	0.107	107	101
		67	0.113	113	113
		197	0.088	88	96

Matrix	Analyte	Storage (days)	Mean concentration (mg/kg)	% Remaining	Procedural recovery (%)	
	XDE-175-N-demethyl-J	385	0.103	103	112	
		639	0.094	94	93	
		755	0.096	96	104	
		0	0.096	96	104	
		34	0.093	93	92	
		67	0.089	89	97	
		197	0.082	82	91	
		385	0.092	92	100	
		639	0.084	84	84	
	755	0.079	79	85		
	XDE-175-N-formyl-J	0	0.095	95	94	
		34	0.091	91	117	
		67	0.110	110	108	
		197	0.081	81	99	
		385	0.079	79	106	
		639	0.107	107	116	
		755	0.124	124	104	
	XDE-175-N-demethyl-L	0	0.096	96	98	
		34	0.103	103	103	
		67	0.095	95	93	
		197	0.086	86	95	
		385	0.094	94	104	
		639	0.088	88	98	
		755	0.093	93	97	
	XDE-175-N-formyl-L	0	0.090	90	92	
		34	0.084	84	112	
		67	0.113	113	110	
		197	0.073	73	85	
		385	0.071	71	92	
		639	0.113	113	109	
		755	0.108	108	111	
	Maize (grain)	XDE-175-J	0	0.082	82	94
			34	0.111	111	108
			67	0.098	98	108
			197	0.111	111	102
			385	0.084	84	94
			639	0.087	87	89
			755	0.105	105	89
		XDE-175-L	0	0.106	106	98
			34	0.117	117	111
			67	0.106	106	104
			197	0.087	87	93
385			0.111	111	116	
639			0.102	102	99	
755			0.093	93	97	
XDE-175-N-demethyl-J		0	0.096	96	100	
		34	0.087	87	91	
		67	0.093	93	93	
		197	0.079	79	88	
		385	0.097	97	104	
		639	0.084	84	81	
		755	0.088	88	81	
XDE-175-N-formyl-J		0	0.088	88	99	
		34	0.110	110	103	
		67	0.119	119	118	
		197	0.070	70	76	
		385	0.069	69	76	
		639	0.093	93	87	
		755	0.113	113	97	
XDE-175-N-demethyl-L		0	0.107	107	99	
		34	0.094	94	85	
		67	0.102	102	105	

Matrix	Analyte	Storage (days)	Mean concentration (mg/kg)	% Remaining	Procedural recovery (%)
	XDE-175-N-formyl-L	197	0.090	90	93
		385	0.094	94	92
		639	0.096	96	102
		755	0.105	105	115
		0	0.093	93	118
		34	0.066	66	87
		67	0.102	102	118
		197	0.069	69	86
		385	0.115	115	103
		639	0.112	112	112
		755	0.092	92	100

Residues of spinetoram and metabolites (XDE-175-N-demethyl-J, XDE-175-N-formyl-J, XDE-175-N-demethyl-L and XDE-175-N-formyl-L) were found to be stable during frozen storage of samples of maize apple, melon and maize grain temperatures of -20 °C for up to 755 days.

USE PATTERN

The Meeting received approved labels in Australia, Brazil, Canada, China, Columbia, EU member countries, Mexico, New Zealand, South Africa, Turkey and the United States of America.

Information on registered formulations, application methods and dosage rates of spinetoram for uses on the crops for which supervised trial data were provided is summarized in Table 4. Unless otherwise noted, each of the following GAPS are for field use, and all applications are foliar applications.

Table 4 Registered uses of spinetoram related to supervised trials

Crop	Country	Formulation		Application				PHI days
		g ai/L or g ai/kg	type	Max g ai/ha	Max g ai/ hL	Interval days	Max no. or g ai/ season/ha	
Citrus Fruits								
Citrus fruit (tangerine not explicitly included)	Australia	120	SC		1.2-4.8	7-14	4	1
Citrus fruits	Brazil	250	WG	(100)	2.5		3	1
Tangerine	Mexico	60	SC		3		1	1
Citrus fruits	New Zealand	120	SC	96	4.8	14	4	14
Citrus fruits	South Africa	250	WG		5		4	7
Tangerine (included in Citrus fruits)	USA	250	WG	105		7	3/(210) ^a	1
Pome Fruits								
Persimmon (included in tropical and subtropical fruits)	Australia	120	SC		4.8	7-14	4	0
Persimmons	South Africa	250	WG		5		4	7
Stone Fruits								
Stone fruit	New Zealand	120	SC	96		7	2	3
Apricots, cherries, plums (included in stone fruit)	Australia	250	WG		5	3-5 (>20°C) 6-12 (<20°C)	4	3
Apricot, cherry, nectarine, peach	Italy	250	WG	100			1	7
Apricot (included in Stone fruit)	Canada	250	WG	105		7	3	14
Cherries (included in Stone fruit)	Canada	250	WG	105		7	3	7

Crop	Country	Formulation		Application				PHI days
		g ai/L or g ai/kg	type	Max g ai/ha	Max g ai/ hL	Interval days	Max no. or g ai/season/ha	
Plums (included in Stone fruit)	Canada	250	WG	105		7	3	7
Apricots, cherries and plums (included in Stone fruit)	South Africa	250	WG		5	14	3	7
Apricot	France	250	WG	75			1	7
Apricot	Greece	250	WG	75	7.5		1	7
Apricots (included in Stone fruit)	USA	250	WG	123		3-7	4/(490) ^{a)}	14
Cherry	Greece	250	WG	75	9.4		1	7
Cherries, and plums (included in Stone fruit)	USA	250	WG	123		3-7	4/(490) ^{a)}	7
Plum	France	250	WG	75			1	7
Plum	Greece	250	WG	75	7.5		1	7
Berries and Other Small Fruits								
Currants (included in berry fruit)	Australia	120	SC		4.8	7-14	4	1
Currants (included in bushberries) ^{e)}	Canada	250	WG	105		7	3	3
Currants	Mexico	60	SC	19.8		8	2	3
Currants (included in bushberries)	USA	250	WG	105		6	6/(342) ^{a)}	3
Strawberry (included in berry fruit)	Australia	120	SC		4.8	7-14	4	1
Strawberry	Brazil	250	WG	(50)	5	Determine d according to reinfestation	4	3
Strawberry ^{e)}	Canada	250	WG	70		3	3	1
Strawberry	Mexico	60	SC	19.8		8	2	1
Strawberry	Mexico	60	SC	24			1	1
Strawberry (included in berries)	South Africa	250	WG		3	NS	3	7
Strawberry (indoor)	Turkey	120	SC	60			2	3
Strawberry	USA	120	SC	84		3-4	5/(328) ^{a)}	1
Assorted Tropical and Sub-Tropical Fruits – Edible Peel								
Olive	Greece	250	WG	25	2.5	28	2	21
Olive	Italy	250	WG	18.5			NS	21
Olive	South Africa	250	WG		5		3	14
Assorted Tropical and Sub-Tropical Fruits – Inedible Peel								
Avocado, feijoa, kiwi, mango, passionfruit (included in Tropical and sub-tropical fruit with inedible peel)	Australia	120	SC		4.8	7-14	4	0 (excl. kiwi)
Avocado, feijoa passionfruit, tamarillo and other subtropical fruit with inedible peel (excl. kiwifruit)	New Zealand	120	SC	96	4.8	14	4	14
Avocado, litchi, mango, passionfruit (included in Tropical tree fruit)	USA	250	WG	123		4	3/(245) ^{a)}	1
Litchi	Thailand	120	SC	60	6			14
Avocados	Australia	120	SC		2.4		7-14	0
Avocado	Colombia	60	SC	18		NS	NS	1

Crop	Country	Formulation		Application				PHI days
		g ai/L or g ai/kg	type	Max g ai/ha	Max g ai/hL	Interval days	Max no. or g ai/season/ha	
Avocado	Mexico	60	SC		2.1	28	2	1
Mango	Australia	120	SC	24 (aerial only)	2.4 (ground)	7-14	4	14
Mango	Thailand	120	SC	30	3			14
Tamarillo (tree tomato)	Mexico	60	SC	24		7	2	1
Kiwifruit	Australia	120	SC	24		7	7-14	7
Passion fruit	Colombia	60	SC	13.5		NS	NS	1
Bulb Vegetables								
Leeks (included in bulb vegetables)	Canada	250	WG	84		7-10	3	3
Leeks	Netherlands	25	SC	60		28	2/(120) ^{a)}	7
Leek (included in bulb vegetables)	USA	120	SC	84		4	5/(252) ^{a)}	1
Fruiting Vegetables, Cucurbits								
Cucumbers included in Cucurbits	Australia	120	SC	48		7-14	4	3
Cucumber	Brazil	250	WG	(50)	5	Determined according to reinfestation	4	3
Cucumber (indoor)	Canada	250	WG		3.3	7	3	2
Cucumber	Mexico	60	SC	36		7	2	1
Cucumber (indoor)	Turkey	120	SC	60			2	3
Cucumber (included in Cucurbits)	USA	120	SC	84		4	6/(286) ^{a)}	1
Squash (included in Cucurbits)	Australia	120	SC	48		7-14	4	3
Summer squash	Mexico	60	SC	36		7	2	3
Summer squash (included in Cucurbits)	USA	120	SC	84		4	6/(286) ^{a)}	3
Melons included in Cucurbits	Australia	120	SC	48		7-14	4	3
Melon	Brazil	250	WG	40		Determined according to reinfestation	4	3
Melon	Colombia	60	SC	15		NS	NS	1
Melon	Mexico	60	SC	36		7	2	3
Melons (included in Cucurbits)	USA	120	SC	84		4	6/(286) ^{a)}	3
Fruiting Vegetables, other than Cucurbits								
Peppers included in Fruiting vegetables	Australia	120	SC	48 ^{d)}	4.8 ^{d)}	7-14	4	1
Pepper	Brazil	250	WG	(50)	5	Determined according to reinfestation	4	3
Pepper (included in fruiting vegetables)	Canada	250	WG	50		5	3	1
Pepper (indoor)	Canada	250	WG		3.3	7	3	2

Crop	Country	Formulation		Application				PHI days
		g ai/L or g ai/kg	type	Max g ai/ha	Max g ai/hL	Interval days	Max no. or g ai/season/ha	
Peppers	Mexico	60	SC	36		7	2	1
Pepper (indoor)	Turkey	120	SC	60			2	3
Pepper (included in Fruiting vegetables)	USA	120	SC	84		4	6/(285) ^a	1
Pulses								
Soya beans	Brazil	120	SC	18		Determined according to reinfestation	2	7
Soya beans	Canada	250	WG	50		5	3	28
Soya beans	Mexico	60	SC	18			1	28
Soya beans	USA	120	SC	37		4	4/(118) ^a	28
Root and Tuber Vegetables								
Potato included in root and tuber vegetables	Australia	120	SC	48		7-14	4	3
Potato	Brazil	250	WG	50		Determined according to reinfestation	3	1
Potato	Canada	250	WG	60		7	3	7
Potato	Mexico	60	SC	24			1	1
Potato	New Zealand	120	SC	60		7	4	7
Potato	South Africa	250	WG	37.5		7	4	3
Potato	Turkey	120	SC	60			3	3
Potato (included in root and tuber vegetables)	USA	120	SC	67		7	4/(269) ^a	7
Cereal Grains								
Rice	Colombia	60	SC	3		NS	NS	1
Rice	China	60	SC	27		7	2	21
Corn (maize)	Brazil	120	SC	12		Determined according to reinfestation	3	7
Corn, seed	Canada	250	WG	12.5		5	3	1 28 (stover) 7 (forage)
Popcorn	Canada	250	WG	12.5		5	3	28 28 (stover) 7 (forage)
Corn (maize)	Colombia	60	SC	6		NS	NS	1
Corn (maize)	Mexico	60	SC	6		NS	NS	1 (grain); 3 (forage)
Corn (maize)(included in Corn)	USA	120	SC	50		2-4	6/(303) ^a	1 (grain); 3 (forage, fodder)
Popcorn (included in Corn)	USA	120	SC	50		2-4	6/(303) ^a	1 (grain); 28 (forage, fodder)
Sweet corn	Australia	120	SC	48		7-14	4	3
Sweet corn	Canada	250	WG	12.5		5	3	1 28 (stover) 7 (forage)

Crop	Country	Formulation		Application				PHI days
		g ai/L or g ai/kg	type	Max g ai/ha	Max g ai/ hL	Interval days	Max no. or g ai/ season/h a	
Sweet corn (included in Corn)	USA	120	SC	50		2-4	6/(303) ^a	1 (ears); 3 (forage)
Oilseeds								
Cotton	Brazil	120	SC	18		Determine d according to reinfestati on	4	7
Cotton	Colombia	60	SC	18		NS	NS	1
Cotton	USA	120	SC	67		4	6(286) ^{a)}	28

^a Total application per season or year.

^b The application rate in g ai/ha is not specified on the label

^c Applicable to Puerto Rico, Autonomous Territory of the USA.

^d Either the maximum of "48 g ai/ha" or "4.8 g/hL"

^e On one label, there are two slightly different descriptions of use pattern.

RESIDUES RESULTING FROM SUPERVISED TRIALS ON CROPS

The Meeting received information on supervised field trials of spinetoram on the following crops:

Crop Group	Commodity	Country	Table No.
Citrus fruits	Tangerine	Brazil	Table 5, 6
Pome fruits	Persimmon	New Zealand	Table 7, 8
Stone fruits	Apricot	France, Greece, Italy, Spain	Table 9,10
	Cherry	France, Germany, Italy, Poland, Spain	Table 11, 12
	Plum	France, Italy, Spain	Table 13, 14
Berries and other small fruits	Currants	<i>Indoor:</i> France, Germany, Netherlands <i>Outdoor:</i> France, Germany, Italy, UK	Table 15, 16
	Strawberry	<i>Indoor:</i> France, Germany, Greece, Italy, Netherlands, Spain <i>Outdoor:</i> Brazil, Bulgaria, France, Greece, Italy, Spain	Table 17, 18
Assorted tropical fruits – edible peel	Olive	Italy, Spain	Table 19, 20
Assorted tropical fruits – inedible peel	Litchi	Thailand,	Table 21, 22
	Avocado	Colombia, New Zealand	Table 23, 24
	Feijoa	New Zealand	Table 25, 26
	Mango	Thailand	Table 27, 28
	Tamarillo	New Zealand	Table 29, 30
	Kiwi	New Zealand	Table 31, 32
	Passionfruit	New Zealand	Table 33, 34
Bulb vegetables	Leek	Denmark, Germany, Poland,	Table 35, 36

Crop Group	Commodity	Country	Table No.
Fruiting vegetables, Cucurbits	Cucumber	<i>Indoor:</i> Brazil, France, Germany, Greece, Italy, Spain <i>Outdoor:</i> France, Greece, Italy, Spain	Table 37, 38
	Summer squash	<i>Indoor:</i> France, Greece, Italy, Netherlands, Spain <i>Outdoor:</i> France, Greece, Italy, Spain	Table 39, 40
	Melons	<i>Indoor:</i> France, Greece, Italy, Spain <i>Outdoor:</i> Brazil, France, Italy, Spain	Table 41, 42
Fruiting vegetables, other than Cucurbits	Peppers	<i>Indoor:</i> Brazil, Denmark, France, Germany, Greece, Italy, Netherlands, Spain <i>Outdoor:</i> France, Greece, Italy, Spain	Table 43, 44
Pulses	Soya bean	Argentina, Brazil	Table 45, 46
Root and tuber vegetables	Potato	Brazil, New Zealand	Table 47, 48
Cereal grains	Rice	China	Table 49, 50
	Maize	Argentina, Brazil,	Table 51, 52
	Sweet corn	Australia	Table 53, 54
Oilseeds	Cotton seed	Brazil, Greece	Table 55, 56

There are two tables for each commodity: one for estimating MRLs and the other for estimating dietary intakes.

Trials were generally well documented with full laboratory and field reports. Laboratory reports include method validation, with batch recoveries at residue levels similar to those occurring in samples from the supervised trials. Dates of analyses or duration of residue sample storage were also provided. The analytical methods GRM 05.03 or 05.04 employed in relation to the supervised residue trials provided to the current Meeting were reviewed by the 2008 JMPR and the current Meeting and considered to be sufficiently validated. In general, procedural recoveries were within the acceptable range of 70–120%, with relative standard deviation of < 20%.

All commodities tested were stored at or below -20 °C for periods ranging from 16 to 655 days, most of which are within the demonstrated stable periods of up to 372 days or 755 days at the same condition. Only when the storage period is longer than 372 days, the information on storage is not included in explanations below.

Field reports provide data on the dates of spray applications, methods used and sampling dates. Although trials included control plots, no control data are recorded in the tables below unless residues in control samples exceeded the LOQ.

The residue concentrations are reported for XDE-175-J, XDE-175-L, N-demethyl-175-J and N-formyl-175-J. They are unadjusted for procedural recovery. Where residues were below the limit of detection, they are expressed as “ND”. Where they are below the LOQ of 0.01 mg/kg and at or above the limit of detection, they are expressed as “< 0.01”.

Total residues for estimation of maximum residue levels and those for estimation of STMRLs were calculated in the same manner as done by the 2008 and 2012 JMPR.

Total residues for estimation of maximum residue levels were calculated by summing up the concentrations of XDE-175-J and XDE-175-L. XDE-175-J was the primary residue reflecting higher ratio in spinetoram formulations. The method for calculation of the total residues is illustrated below. In the calculation, “ND” is treated in the same manner as “< 0.01”.

XDE-175-J	XDE-175-L	Total
mg/kg		
< 0.01	< 0.01	< 0.01
0.05	< 0.01	0.05
0.06	0.02	0.08

NB: in the case of supervised trials, the LOQs are 0.02 mg/kg for husked rice, and 0.04 mg/kg for rice hulls and whole plant.

Total residues for estimation of STMRs were calculated by summing up the concentrations of XDE-175-J, XDE-175-L, *N*-demethyl-175-J and *N*-formyl-175-J. In most trials, XDE-175-J was the primary residue at shorter PHIs while, in many cases, *N*-formyl-175-J was found at higher concentrations than XDE-175-J at longer PHIs. On the other hand, XDE-175-L, with its concentration being one third of that of XDE-175-J, was a minor component in the four compounds. *N*-demethyl-J was in most cases at lower concentrations than XDE-175-J and in a number of trials was not determined. The method for calculation of the total residues taking the above into account is illustrated below. In the calculation, “ND” is treated in the same manner as “< 0.01”.

XDE-175-J	XDE-175-L	<i>N</i> -demethyl-175-J	<i>N</i> -formyl-175-J	Total
mg/kg				
< 0.01	< 0.01	< 0.01	< 0.01	< 0.02
0.05	< 0.01	< 0.01	< 0.01	0.06
< 0.01	< 0.01	< 0.01	0.05	0.06
0.05	< 0.01	< 0.01	0.05	0.10
0.06	0.02	0.02	0.06	0.16

NB: in the case of supervised trials, the LOQs are 0.02 mg/kg for husked rice, and 0.04 mg/kg for rice hulls and whole plant.

In trials where replicate field samples were taken from a single plot and analysed separately, or where duplicate analyses of the same sample were made, the average of residue values were used for the estimation of maximum residue levels or STMRs.

Total values of XDE-175-J and XDE-175-L residues from the trials conducted according to the GAP are underlined and used for the estimation of maximum residue levels using the OECD calculator. Corresponding total values of XDE-175-J, XDE-175-L, *N*-demethyl-175-J and *N*-formyl-175-J residues were used for estimation of STMRs and they are double underlined.

Citrus fruits

There is an existing CXL of 0.07 mg/kg for oranges (sweet, sour), recommended by the 2008 JMPR on a basis of supervised trials conducted according to the GAP in the USA (3 applications for a total seasonal rate of 210 g ai/ha and a PHI of 1 day). Additional trials later conducted on oranges and tangerines were submitted to the 2012 JMPR but as only one new trial matched GAP, the previous recommendation for oranges (sweet, sour) was maintained. At the time, the proportionality concept was not used.

Tangerine

A total of eight supervised trials on tangerines were carried out in Brazil during 2006 (Reports 246809, 246802, 246803/247091 (amended), 246811, 246796, 246801, 246806/242998 (amended), 246807/246658 (Amended)). Most of these trials were submitted to the 2012 JMPR. Each treated plot received 3 applications of a 250 WG formulation of spinetoram at the rate of 70 g ai/ha for a total of 210 g ai/ha per season. Mature samples were collected one day after the last application, and for decline trials, samples were also harvested at 0, 3, 7, 14 and 28 days after the last application. The GAP in Brazil allows 3 applications at 25–100 g ai/ha spinetoram and PHI is 1 day. The trials used the

rate outside of the acceptable deviation of $\pm 25\%$ of the critical GAP of Brazil but within the range of $0.3\times$ to $4\times$ of the GAP.

Samples from five trials were frozen and analysed within 373-380 days, slightly outside the period of demonstrated frozen stability of 372 days. Samples stored longer than 372 days were not used for MRL proposal.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04 with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in whole fruit. Results of the trials are summarized in Tables 11 and 12.

Table 5 Residues of spinetoram from supervised trials on tangerines in Brazil (for estimation of maximum residue level)

TANGERINE Country, year (Variety)	Form	Application/treatment			Total/ season, g ai/ha	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	Total	
GAP, Brazil	SC or WG	1.25- 2.5	25- 100 ^a	3		1				
60020 Piracicaba, SP Brazil, 2006 (Poncã)	250 WG	7	70	3	210	1	0.012	ND	0.012	242939/ 246809 (Amended) storage: 425 d.
60020.01 Londrina, PR Brazil, 2006 (Poncã)	250 WG		70	3	210	1	0.026	< 0.01	0.026	242944/ 246802 (Amended)storage: 409 d.
60020.02 Campinas, SP Brazil, 2006 (Mexerica Murcote)	250 WG	7	70	3	210	0 1 3 7 14 28	0.110 0.026 0.022 0.013 ND ND	0.034 < 0.01 ND ND ND ND	0.144 <u>0.026</u> (for scaling) 0.022 0.013 < 0.01 < 0.01	242943/ 246803 and 247091 (Amended)
60020.03 Mogi Mirim, SP, Brazil 2006 (Poncã)	250 WG	4.7	70	3	210	0 1 3 7 14 28	0.051 0.034 0.020 0.017 ND ND	0.018 0.011 < 0.01 < 0.01 ND ND	0.069 <u>0.045</u> (for scaling) 0.020 0.017 < 0.01 < 0.01	242945/ 246811 (Amended)
60020.04 Monte Santo de Minas, Minas Gerais, Brazil, 2006 (Poncã)	250 WG	3.5	70	3	210	1	0.018	< 0.01	<u>0.018</u> (for scaling)	242942/ 246796 (Amended)
60020.05 Anhembi, SP Brazil, 2006 (Poncã)	250 WG	4.7	70	3	210	1	0.028	< 0.01	<u>0.028</u> (for scaling)	242940/ 246801 (Amended)
60020.06 Limeira, SP Brazil, 2006 (Poncã)	250 WG	7	70	3	210	0 1 3 7 14 28	0.091 0.038 ND 0.022 0.012 ND	0.015 < 0.01 0.012 ND ND ND	0.106 <u>0.038</u> (for scaling) 0.012 0.022 0.012 < 0.01	243036/ 246806 and 242998 (Amended)
60020.07 Conchal, SP Brazil, 2006	250 WG	4.7	70	3	210	0 1	0.035 0.018	0.01 < 0.01	0.045 <u>0.018</u> (for scaling)	243034/ 246807 and 246658 (Amended)

TANGERINE Country, year (Variety)	Form	Application/treatment			Total/ season, g ai/ha	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	Total	
(Murcote)						3	< 0.01	ND	< 0.01	
						7	< 0.01	ND	< 0.01	
						14	ND	ND	< 0.01	
						28	ND	ND	< 0.01	

^a Calculated from the specified spray volume and spray concentration.

Table 6 Residues of spinetoram from supervised trials on tangerines in Brazil (for estimation of STMR)

TANGERINE Country, year (Variety)	Form	Application/treatment			Total/ season g ai/ha	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	N- demethyl-J	N- formyl-J	Total	
GAP, Brazil	WG	1.25– 2.5	25- 100 ^a	3								
60020 Piracicaba, SP Brazil, 2006 (Poncã)	250 WG	7	70	3	210	1	0.012	ND	< 0.01	< 0.01	0.022	242939/ 246809 (Amended)
60020.01 Londrina, Paraná Brazil, 2006 (Poncã)	250 WG	3.5	70	3	210	1	0.026	< 0.01	0.010	0.016	0.052	242944/ 246802 (Amended)
060020.02 Campinas, SP Brazil, 2006 (Poncã)	250 WG	7	70	3	210	0 1 3 7 14 28	0.110 0.026 0.022 0.013 ND ND	0.034 < 0.01 ND ND ND ND	0.037 < 0.01 < 0.01 ND ND ND	0.013 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	0.194 <u>0.036</u> (scaling) 0.032 0.023 < 0.02 < 0.02	242943/ 246803 and 247079 (Amended)
060020.03 Mogi Mirim, SP, Brazil 2006 (Poncã)	250 WG	4.7	70	3	210	0 1 3 7 14 28	0.051 0.034 0.020 0.017 ND ND	0.018 0.011 < 0.01 < 0.01 ND ND	0.012 < 0.01 < 0.01 < 0.01 ND ND	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 ND	0.081 <u>0.055</u> 0.030 0.027 < 0.02 < 0.02	242945/ 246811 (Amended)
060020.04 Monte Santo de Minas, Minas Gerais, Brazil, 2006 (Poncã)	250 WG	3.5	70	3	210	1	0.018	< 0.01	< 0.01	< 0.01	0.028 (scaling)	242942/ 246796 (Amended)
060020.05 Anhembi, SP Brazil, 2006 (Poncã)	250 WG	4.7	70	3	210	1	0.028	< 0.01	0.011	0.014	0.053 (scaling)	242940/ 246801 (Amended)
060020.06 Limeira, SP Brazil, 2006 (Poncã)	250 WG	7	70	3	210	0 1 3 7 14 28	0.091 0.038 ND 0.022 0.012 ND	0.015 < 0.01 0.012 ND ND ND	< 0.01 < 0.01 0.019 < 0.01 < 0.01 ND	ND < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	0.116 <u>0.048</u> 0.031 0.032 0.022 < 0.02	243036/ 246806 and 242998 (Amended)
060020.07 Conchal, SP Brazil, 2006 (Poncã)	250 WG	4,7	70	3	210	0 1 3 7	0.035 0.018 < 0.01 < 0.01	0.01 < 0.01 ND ND	< 0.01 < 0.01 ND ND	< 0.01 < 0.01 ND ND	0.055 <u>0.028</u> < 0.02 < 0.02	243034/ 246807 and 246658 (Amended)

TANGERINE Country, year (Variety)	Form	Application/treatment			Total/ season g ai/ha	DALA, days	Residue, mg/kg				Report No.	
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	N- demethyl-J	N- formyl-J		Total
						14	ND	ND	ND	ND	< 0.02	
						28	ND	ND	ND	ND	< 0.02	

^a Calculated from the specified spray volume and spray concentration.

Pome fruits

Persimmon

Two residue trials on persimmon were conducted in New Zealand during 2012 (SFF11-053/200-01). Each treated plot received 4 applications of 120 SC spinetoram at a concentration of 4.8 g ai/hL and RTI 14. Samples of mature fruits were collected 14 days after the last application and for decline trials, at 0, 7, 21 and 28 days after application. Samples were also taken at 14 days after the third application. The GAP in Australia consists of 4 applications at 4.8 g ai/hL, RTI 14 days and a PHI of 0 day.

Residues of spinetoram were analysed by method GRM 05.03, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram in the acceptable range of 70–120% in fruit.

Residues were calculated as total spinetoram (J + L) in the trials. The apple metabolism study (JMPR 2008) was used to estimate XDE-175-L and spinetoram metabolites concentrations. No detectable residues of XDE-175-L were found after application of ¹⁴C-XDE-175-L at a rate of 1.1 kg ai/ha. The highest rate applied in the presented trials was 50 g ai/ha of 120 SC spinetoram (XDE-175-J and XDE-175-L). Therefore it is assumed that the residue value for XDE-175 J + L is for residues of XDE-175-J only and residues of XDE-175-L are recorded as 'not detected'. Metabolites are recorded as 9.1% (conversion factor 0.091) and 3.0% (conversion factor 0.03) of the XDE-175-J residues for N-demethyl-J and N-formyl-J respectively.

Table 7 Residues of spinetoram from supervised trials on persimmon in New Zealand (for estimation of maximum residue level)

PERSIMMON Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, Australia		4.8		4	0				
SFF11-053/200-01e Gisborne New Zealand, 2012 (Wase Fuyu)	120 SC	2.4 2.4 2.4 2.4	50 50 50 47	4	0* 0 7 14 21 28	ND 0.020 ND ND ND ND	ND ND ND ND ND ND	< 0.01 <u>0.020</u> < 0.01 < 0.01 < 0.01 < 0.01	SFF11- 053/200-01
SFF11-053/200-01f Kamo New Zealand, 2012 (Fuyu)	120 SC	2.4 2.4 2.4 2.4	36 36 36 36	4	14# 0 7 14 21 28	ND 0.022 ND ND ND ND	ND ND ND ND ND ND	< 0.01 <u>0.022</u> < 0.01 < 0.01 < 0.01 < 0.01	SFF11- 053/200-01

*Days before last application; ND- Not detected; # days after third application. It is assumed that residue value for total XDE-175 J + L is for residues of XDE-175-J only and residues of XDE-175-L are recorded as 'not detected'.

Table 8 Residues of spinetoram from supervised trials on persimmon in New Zealand (for estimation of STMR)

PERSIMMON Country, year	Form	Application/ treatment	DALA , days	Residue, mg/kg	Report No.
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(Variety)		g ai/h L	g ai/h a	N o		XDE-175- J	XDE-175- L	N-demethyl- J	N-formyl-J	Total	
GAP, Australia		4.8		4	0						
SFF11-053/200-01e	120 SC	2.4 2.4	50 50	4	0* 0	ND 0.020	ND ND	ND (0.0009) ND (0.0018)	ND (0.0003) ND (0.0006)	< 0.02 <u>0.030</u>	SFF11- 053/200-01
Gisborne		2.4	50		7	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
New Zealand, 2012 (Wase Fuyu)		2.4	47		14 21 28	ND ND ND	ND ND ND	ND (0.0009) ND (0.0009) ND (0.0009)	ND (0.0003) ND (0.0003) ND (0.0003)	< 0.02 < 0.02 < 0.02	
SFF11-053/200-01f	120 SC	2.4 2.4	36 36	4	14# 0	ND 0.022	ND ND	ND (0.0009) ND (0.002)	ND (0.0003) ND (0.0007)	< 0.02 <u>0.032</u>	SFF11- 053/200-01
Kamo		2.4	36		7	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
New Zealand, 2012 (Fuyu)		2.4	36		14 21 28	ND ND ND	ND ND ND	ND (0.0009) ND (0.0009) ND (0.0009)	ND (0.0003) ND (0.0003) ND (0.0003)	< 0.02 < 0.02 < 0.02	

*Days before last application; ND- Not detected; # days after third application. N-demethyl-J or N-formyl-J metabolites are calculated based on conversion factors of 0.091 and 0.003 respectively from XDE-175-J residues. It is assumed that the residue value for total XDE-175 J + L is for residues of XDE-175-J only and residues of XDE-175-L are recorded as 'not detected'. Residues in parentheses are actual calculated values that are below the LOQ or LOD.

Stone fruit

The 2008 JMPR and 2012 JMPR reviewed information on the supervised field trial data on apricot, cherry, nectarine, peach and plum conducted in Australia, New Zealand, Argentina and Chile. An MRL of 0.3 mg/kg was set for peach and nectarine by the 2012 JMPR but no MRL could be established for apricot, cherry or plum due to insufficient data.

Additional trials were conducted on apricot, cherries and plum in Europe. To the 2012 JMPR, ten trials on peach and twelve trials on plum were submitted, but a registered use for spinetoram was yet to be registered in Europe. Trials are resubmitted in order to support MRLs in apricot, plum and cherry. In all trials on stone fruits, the residue was determined on the pitted fruit but the data reported for whole fruit after correcting for weight of the seed.

Apricot

Six supervised trials were carried out in Southern France (3), Spain (1), Greece (1) and Italy (1) during 2014 (Reports 140149 and 130179). Each treated plot received 2 applications of 250 WG spinetoram at a nominal rate 100 g ai/ha and RTI 22–32 days. Samples of mature fruits were collected 6/7 days after the last application and for decline trials, also at 0–1, 3, 5, 6–7, and 13-14 days after application. The approved GAP in Europe consists of 1 application at 75 g ai/ha, RTI of 28 days, and a PHI of 7 days.

Three decline trials contained samples taken immediately before the second application, i.e. 28 days after the first application. Residues in these samples were all below the LOQ (< 0.01 mg/kg) confirming that an application 35 days before harvest will not contribute quantifiable residues to the harvested commodity. Therefore, residues arising after one application are not expected to differ significantly from residues arising after two applications (the submitted trials), and the data from trials with two applications are used to estimate MRL.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in fruit.

Table 9 Residues of spinetoram from supervised trials on apricot in Europe (for estimation of maximum residue level)

APRICOT Country, year (Variety)	Form	Application/treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, Italy	250 WG		75	1	7				
S14-02933-01 Aramon, Gard France, 2014 (Frunés)	250 WG	10 10	98 105	2	6	0.057	0.012	<u>0.069</u>	140149
S14-02933-02 Alarba, Zaragoza, Spain, 2014 (Moniqui)	250 WG	10 10	98 93	2	7	0.053	< 0.01	<u>0.053</u>	140149
S14-02933-03 Bages, Pyrienees orientales, France, 2014 (Farbaly)	250 WG	10 10	103 97	2	0* 0 3 5 7 13	< 0.01 0.045 0.024 0.033 0.019 0.024	ND 0.012 < 0.01 < 0.01 < 0.01 < 0.01	< 0.01 0.057 0.024 0.033 0.019 <u>0.024</u>	140149
S14-02933-04 Altedo, Bologna, Italy, 2014 (Precoce d'imola)	250 WG	10 10	101 104	2	0* 0 3 5 6 14	ND 0.124 0.012 < 0.01 < 0.01 < 0.01	ND 0.031 ND ND ND ND	< 0.01 0.155 0.012 < 0.01 <u>< 0.01</u> < 0.01	140149
S13-02001-01 Bages, Pyrénées- Orientales France, 2013 (Helena du Roussillon)	250 WG	10 10	100 103	2	0* 0 3 5 7 14	< 0.01 0.135 0.066 0.043 0.035 0.016	ND 0.038 0.015 < 0.01 < 0.01 ND	< 0.01 0.173 0.081 0.043 <u>0.035</u> 0.016	130179
S13-02001-04 Achladochori, Pella Greece, 2013 (Bebekou)	250 WG	6.7 6.7	101 101	2	7	0.062	0.016	<u>0.078</u>	130179

Table 10 Residues of spinetoram from supervised trials on apricot in Europe (for estimation of STMR)

APRICOT Country, year (Variety)	Form	Application/treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175- J	XDE- 175-L	N- demethyl- J	N-formyl- J	Total	
S14-02933-01 Aramon, Gard France, 2014 (Frunés)	250 WG	10 10	98 105	2	6	0.057	0.012	< 0.01	0.011	<u>0.08</u>	140149
S14-02933-02 Alarba, Zaragoza, Spain, 2014 (Moniqui)	250 WG	10 10	98 93	2	7	0.053	< 0.01	< 0.01	< 0.01	<u>0.063</u>	140149
S14-02933-03 Bages, Pyrienees orientales, France, 2014 (Farbaly)	250 WG	10 10	103 97	2	0* 0 3 5 7 13	< 0.01 0.045 0.024 0.033 0.019 0.024	ND 0.012 < 0.01 < 0.01 < 0.01 < 0.01	ND < 0.01 < 0.01 < 0.01 ND < 0.01	ND ND < 0.01 < 0.01 < 0.01 < 0.01	< 0.02 0.067 0.034 0.043 0.029 <u>0.034</u>	140149

APRICOT Country, year (Variety)	Form	Application/treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175- J	XDE-175- L	N- demethyl- J	N-formyl- J	Total	
S14-02933-04 Altedo, Bologna, Italy, 2014 (Precoce d'imola)	250 WG	10 10	101 104	2	0*	ND	ND	ND	ND	< 0.02	140149
					0	0.124	0.031	< 0.01	< 0.01	0.165	
					3	0.012	ND	< 0.01	< 0.01	0.022	
					5	< 0.01	ND	< 0.01	< 0.01	< 0.02	
					6	< 0.01	ND	< 0.01	< 0.01	< 0.02	
					14	< 0.01	ND	ND	ND	< 0.02	
S13-02001-01 Bages, Pyrénées- Orientales France, 2013 (Helena du Roussillon)	250 WG	10 10	100 103	2	0*	< 0.01	ND	ND	ND	< 0.02	130179
					0	0.135	0.038	0.012	< 0.01	0.195	
					3	0.066	0.015	< 0.01	< 0.01	0.091	
					5	0.043	< 0.01	< 0.01	ND	0.053	
					7	0.035	< 0.01	< 0.01	< 0.01	<u>0.045</u>	
					14	0.016	ND	< 0.01	< 0.01	<u>0.026</u>	
S13-02001-04 Achladochori, Pella Greece, 2013 (Bebekou)	250 WG	6.7 6.7	101 101	2	7	0.062	0.016	< 0.01	ND	<u>0.088</u>	130179

Cherry

Twelve supervised trials were carried out in France (6), Spain (2), Italy (2), Germany (1) and Poland (1) during 2013 and 2014 (Reports 130182, 130178 and 140138). Each treated plot received 2 applications of 250 WG spinetoram at a nominal rate of 75 g ai/ha and RTI 28 days. Samples of mature fruits were collected 6-8 days after the last application and for decline trials, also at 0, 3, 5 and 14 days after application. The critical GAP in Greece allows 1 application of 75 g ai/ha with a PHI of 7 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in fruit.

Table 11 Residues of spinetoram from supervised trials on cherries in Europe (for estimation of maximum residue level)

CHERRY Country, year (Variety)	Form	Application/treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, Italy			100	1	7				
S13-02003-01 St Hilaire St Mesmin, Loiret France, 2013 (Van)	250 WG	8 8	73 74	2	0*	ND	ND	< 0.01	130182
					0	0.053	0.014	0.067	
					3	0.020	< 0.01	0.020	
					5	ND	ND	< 0.01	
					7	ND	ND	<u>< 0.01</u>	
					14	ND	ND	< 0.01	
S13-02003-02 Jork, Niedersachsen Germany, 2013 (Merchant)	250 WG	11 11	79 77	2	0*	ND	ND	< 0.01	130182
					0	0.048	0.01	0.058	
					3	0.014	< 0.01	0.014	
					5	0.026	< 0.01	0.026	
					6	0.015	ND	<u>0.015</u>	
					14	< 0.01	ND	< 0.01	
S13-02003-03 Stotzheim, Alsace/Bas- Rhin France, 2013 (Dollensteler)	250 WG	8 8	77 75	2	7	0.013	ND	<u>0.013</u>	130182

CHERRY Country, year (Variety)	Form	Application/treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
S13-02003-04 Wychowaniec, Wielkopolska Poland, 2013 (Łutowka)	250 WG	8 8	76 74	2	7	0.028	< 0.01	<u>0.028</u>	130182
S-13-02002-01 Montbeton, Tarn et Garrone, France, 2013 (Noir de Meched)	250 WG	12.5 12.5	77 80	2	0* 0 3 5 7 14	ND 0.051 0.042 < 0.01 ND < 0.01	ND 0.014 0.011 ND ND ND	< 0.01 0.065 0.053 < 0.01 <u>< 0.01</u> < 0.01	130178
S13-02002-02 Epila, Zaragoza, Spain, 2013 (Blanca de Provenza)	250 WG	9.4 7.5	79 70	2	0* 0 3 5 8 14	< 0.01 0.082 < 0.01 < 0.01 < 0.01 < 0.01	ND 0.022 ND ND ND ND	< 0.01 0.104 < 0.01 < 0.01 <u>< 0.01</u> < 0.01	130178
S13-02002-03 Meauzac, Tarn et Garonne France, 2013 (Van)	250 WG	10.3 10.1	77 78	2	7	< 0.01	< 0.01	<u>< 0.01</u>	130178
S13-02002-04 Faenza, Province of Ravenna Italy, 2013 (Lapins)	250 WG	7.5 7.5	81 76	2	8 8	ND	ND	<u>< 0.01</u>	130178
S14-02934-01 Tresques, Gard France, 2014 (Summit)	250 WG	8 8	80 74	2	3 7	0.063 0.027	0.014 < 0.01	0.077 <u>0.027</u>	140138
S14-02934-02 La Viluena, Zaragoza Spain, 2014 (Staccato)	250 WG	8 8	77 71	2	3 6	0.017 0.011	< 0.01 ND	0.017 <u>0.011</u>	140138
S14-02934-03 Beaumont du Ventoux, Vauclose France, 2014 (Belge)	250 WG	8 8	79 74	2	0* 0 3 5 7 13	ND 0.072 0.025 0.017 < 0.01 ND	ND 0.018 < 0.01 ND ND ND	< 0.01 0.090 0.025 0.017 <u>< 0.01</u> < 0.01	140138
S14-02934-04 Bazzano, Province Bologna Italy, 2014 (Lapins)	250 WG	8 8	76 77	2	0* 0 3 5 7 14	ND 1.369 0.929 0.284 0.054 ND	ND 0.367 0.242 0.079 0.015 ND	< 0.01 1.736 1.171 0.363 <u>0.069</u> < 0.01	140138

Table 12 Residues of spinetoram from supervised trials on cherries in Europe (for estimation of STMR)

CHERRY Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N- demethyl- J	N- formyl- J	Total ¹	

CHERRY Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N- demethyl- J	N- formyl- J	Total ¹	
S13-02003-01 St Hilaire St Mesmin, Loiret France, 2013 (Van)	250 WG	8 8	73 74	2	0*	ND	ND	ND	ND	< 0.02	130182
					0	0.053	0.014	< 0.01	ND	0.077	
					3	0.020	< 0.01	< 0.01	< 0.01	0.030	
					5	ND	ND	< 0.01	ND	< 0.02	
					7	ND	ND	< 0.01	ND	< 0.02	
					14	ND	ND	< 0.01	< 0.01	< 0.02	
S13-02003-02 Jork, Niedersachsen Germany, 2013 (Merchant)	250 WG	11 11	79 77	2	0*	ND	ND	< 0.01	ND	< 0.02	130182
					0	0.048	0.01	< 0.01	ND	0.068	
					3	0.014	< 0.01	< 0.01	ND	0.024	
					5	0.026	< 0.01	0.016	< 0.01	0.052	
					6	0.015	ND	0.013	< 0.01	0.038	
					14	< 0.01	ND	< 0.01	< 0.01	< 0.02	
S13-02003-03 Stotzheim, Alsace/Bas- Rhin France, 2013 (Dollensteler)	250 WG	8	77	2	7	0.013	ND	0.011	< 0.01	0.034	130182
		8	75								
S13-02003-04 Wychowaniec, Wielkopolska Poland, 2013 (Łutowka)	250 WG	8	76	2	7	0.028	< 0.01	< 0.01	ND	0.038	130182
		8	74								
S13-02002-01 Montbeton, Tarn et Garrone, France, 2013 (Noir de Meched)	250 WG	12.5 12.5	77 80	2	0*	ND	ND	ND	ND	< 0.02	130178
					0	0.051	0.014	< 0.01	ND	0.075	
					3	0.042	0.011	< 0.01	< 0.01	0.063	
					5	< 0.01	ND	ND	< 0.01	< 0.02	
					7	ND	ND	ND	ND	< 0.02	
					14	< 0.01	ND	< 0.01	ND	< 0.02	
S13-02002-02 Epila, Zaragoza, Spain, 2013 (Blanca de Provenza)	250 WG	9.4 7.5	79 70	2	0*	< 0.01	ND	< 0.01	ND	< 0.02	130178
					0	0.082	0.022	0.011	< 0.01	0.125	
					3	< 0.01	ND	< 0.01	< 0.01	< 0.02	
					5	< 0.01	ND	< 0.01	< 0.01	< 0.02	
					8	< 0.01	ND	< 0.01	< 0.01	< 0.02	
					14	< 0.01	ND	< 0.01	< 0.01	< 0.02	
S13-02002-03 Meuzac, Tarn et Garonne France, 2013 (Van)	250 WG	10.3	77	2	7	< 0.01	< 0.01	< 0.01	ND	< 0.02	130178
		10.1	78								
S13-02002-04 Faenza, Province of Ravenna Italy, 2013 (Lapins)	250 WG	7.5	81	2	8	ND	ND	ND	ND	< 0.02	130178
		7.5	76		8						
S14-02934-01 Tresques, Gard France, 2014 (Summit)	250 WG	8 8	80 74	2	3	0.063	0.014	< 0.01	< 0.01	0.087	140138
					7						
S14-02934-02 La Viluena, Zaragoza Spain, 2014 (Staccato)	250 WG	8 8	77 71	2	3	0.017	< 0.01	< 0.01	< 0.01	0.027	140138
					6						

CHERRY Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N- demethyl- J	N- formyl- J	Total ¹	
S14-02934-03 Beaumont du Ventoux, Vauclose France, 2014 (Belge)	250 WG	8	79	2	0*	ND	ND	ND	ND	< 0.02	140138
					0	0.072	0.018	< 0.01	ND	0.100	
					3	0.025	< 0.01	< 0.01	< 0.01	0.035	
					5	0.017	ND	< 0.01	< 0.01	0.027	
					7	< 0.01	ND	< 0.01	ND	<u>< 0.02</u>	
					13	ND	ND	ND	ND	< 0.02	
S14-02934-04 Bazzano, Province Bologna Italy, 2014 (Lapins)	250 WG	8	76	2	0*	ND	ND	ND	ND	< 0.02	140138
					0	1.369	0.367	0.016	ND	1.762	
					3	0.929	0.242	< 0.01	ND	1.181	
					5	0.284	0.079	< 0.01	ND	0.373	
					7	0.054	0.015	ND	ND	<u>0.079</u>	
					14	ND	ND	ND	ND	< 0.02	

Plum

Ten supervised trials were carried out in France (5), Spain (3) and Italy (2) during 2011 (GHE-P-12670 and 130179). Each treated plot received 2 applications of 250 WG spinetoram at a nominal rate of 100 g ai/ha and RTI 27-29 days. Samples of mature fruits were collected 6–8 days after the last application and for decline trials, also at 0, 1, 3, 5 and 13 days after application. The GAP in Greece consists of 1 application at 75 g ai/ha (within 25% application rate of trials) and a PHI of 7 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in fruit.

Table 13 Residues of spinetoram from supervised trials on plums in Europe (for estimation of maximum residue level)

PLUM Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, Italy			100	1	7				
CEMS-4963A Lizac, Tam et Garonne France, 2011 (Angelino)	250 WG	10	101	2	0	< 0.01	ND	< 0.01	GHE-P- 12670
					1	< 0.01	< 0.01	< 0.01	
					3	< 0.01	ND	< 0.01	
					5	< 0.01	ND	< 0.01	
					7	ND	ND	<u>< 0.01</u>	
CEMS-4963B Innenheim, Alsace Northern France, 2011 (Quetsche)	250 WG	10	98	2	0	0.038	0.011	0.049	GHE-P- 12670
					1	0.041	0.01	0.051	
					3	0.018	< 0.01	0.018	
					5	0.014	ND	0.014	
					7	< 0.01	ND	<u>< 0.01</u>	
CEMS-4963C Canals, Valencia Spain, 2011 (Songold)	250 WG	10	106	2	0	0.036	0.011	0.047	GHE-P- 12670
					1	0.028	< 0.01	0.028	
					3	0.017	< 0.01	0.017	
					5	0.01	ND	0.01	
					7	< 0.01	ND	<u>< 0.01</u>	
CEMS-4963D Altado, Bologna Italy, 2011 (Ersinger)	250 WG	10	103	2	0	< 0.01	ND	< 0.01	GHE-P- 12670
					1	ND	ND	< 0.01	
					3	ND	ND	< 0.01	
					5	ND	ND	< 0.01	
					7	ND	ND	<u>< 0.01</u>	
CEMS-4963F Stotzheim, Alsace France, 2011 (Elena)	250 WG	10 10	92 100	2	7	0.014	ND	<u>0.014</u>	GHE-P- 12670

PLUM Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
CEMS-4963G Espartinas, Sevilla Spain, 2011 (Red Beauty)	250 WG	6.7 6.7	100 101	2	7	ND	ND	< 0.01	GHE-P- 12670
CEMS-4963H Altado, Bologna Italy, 2011 (Ozark Prennier)	250 WG	10 8.3	112 102	2	7	ND	ND	< 0.01	GHE-P- 12670
CEMS-4963I Mas Grenier, Tam et Garonne France, 2011 (Prune d'Ente)	250 WG	10 10	87 99	2	6	< 0.01	ND	< 0.01	GHE-P- 12670
S13-02001 Calatorao, Zaragoza Spain, 2013 (Claudia)	250 WG	10 10	98 97	2	0* 0 3 5 8 13	ND 0.041 0.033 0.019 < 0.01 < 0.01	ND 0.011 < 0.01 < 0.01 ND ND	< 0.01 0.052 0.033 0.019 < 0.01 < 0.01	130179
S13-02001 Montesquieu, Tarn et Garonne France, 2013 (President)	250 WG	10 10	107 105	2	7	< 0.01	ND	< 0.01	130179

Table 14 Residues of spinetoram from supervised trials on plums in Europe (for estimation of STMR)

PLUM Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl-J	N-formyl-J	Total	
GAP, Italy			100	2	7						
CEMS-4963A Lizac, Tam et Garonne France, 2011 (Angelino)	250 WG	10 10	101 113	2	0 1 3 5 7	< 0.01 < 0.01 < 0.01 < 0.01 ND	ND < 0.01 ND ND ND	ND ND ND ND ND	< 0.02 < 0.02 < 0.02 < 0.02 < 0.02	GHE-P- 12670	
CEMS-4963B Innenheim, Alsace Northern France, 2011 (Quetsche)	250 WG	10 10	98 102	2	0 1 3 5 7	0.038 0.041 0.018 0.014 < 0.01	0.011 0.01 < 0.01 ND ND	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01	0.059 0.061 0.028 0.024 < 0.02	GHE-P- 12670	
CEMS-4963C Canals, Valencia Spain, 2011 (Songold)	250 WG	10 10	106 100	2	0 1 3 5 7	0.036 0.028 0.017 0.01 < 0.01	0.011 < 0.01 < 0.01 ND ND	< 0.01 ND < 0.01 ND ND	0.057 0.038 0.027 0.02 < 0.02	GHE-P- 12670	
CEMS-4963D Altado, Bologna Italy, 2011 (Ersinger)	250 WG	10 10	103 106	2	0 1 3 5 7	< 0.01 ND ND ND ND	ND ND ND ND ND	ND ND ND ND ND	< 0.02 < 0.02 < 0.02 < 0.02 < 0.02	GHE-P- 12670	
CEMS-4963F Stotzheim, Alsace France, 2011 (Elena)	250 WG	10 10	92 100	2	7	0.014	ND	< 0.01	< 0.01	0.024	GHE-P- 12670

PLUM Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175- J	XDE-175- L	N- demethyl-J	N-formyl-J	Total	
CEMS-4963G Espartinas, Sevilla Spain, 2011 (Red Beauty)	250 WG	6.7 6.7	100 101	2	7	ND	ND	ND	ND	< 0.02	GHE-P- 12670
CEMS-4963H Altedo, Bologna Italy, 2011 (Ozark Prennier)	250 WG	10 8.3	112 102	2	7	ND	ND	ND	ND	< 0.02	GHE-P- 12670
CEMS-4963I Mas Grenier, Tarn et Garonne France, 2011 (Prune d'Ente)	250 WG	10 10	87 99	2	6	< 0.01	ND	ND	ND	< 0.02	GHE-P- 12670
S13-02001 Calatorao, Zaragoza Spain, 2013 (Claudia)	250 WG	10 10	98 97	2	0* 0 3 5 8 13	ND 0.041 0.033 0.019 < 0.01 < 0.01	ND 0.011 < 0.01 < 0.01 ND ND	ND ND < 0.01 < 0.01 ND ND	ND ND ND ND ND ND	< 0.02 0.052 0.043 0.029 < 0.02 < 0.02	130179
S13-02001 Montesquieu, Tarn et Garonne France, 2013 (President)	250 WG	10 10	107 105	2	7	< 0.01	ND	ND	ND	< 0.02	130179

Berries and other small fruits

The 2012 JMPR estimated maximum residue levels for raspberry at 0.8 mg/kg, blueberry at 0.2 mg/kg and grape at 0.3 mg/kg.

Currant

Twelve supervised trials were carried out in France (6), UK (3), Germany (2) and Italy (1) during 2013-2015 (Reports 130177, 140137 and 150595). Each treated plot received 2 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI 28 days. Samples of mature fruits were collected 3 days after the last application and for decline trials, also at 0, 1, 7 and 14 days after application. The GAP in the USA for bush berry (including currant) consists of 6 applications of 105 g ai/ha (seasonal maximum rate of 342 g ai/ha), RTI of 6 days and a PHI of 3 days.

Table 15 Residues of spinetoram from supervised trials on currants in Europe (for estimation of maximum residue level)

CURRANT Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, USA (bushberry)	250 WG		105	6	3				(Seasonal max. 342 g ai/ha)

CURRANT Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
S13-02012-01 Mormant France, 2013 (Rovada)	25 SC	10	59	2	0*	ND	ND	< 0.01	130177
		10	61		0	0.175	0.046	0.221	
					1	0.113	0.027	0.140	
					3	0.088	0.020	<u>0.108</u>	
					7	0.014	ND	0.014	
					14	< 0.01	ND	< 0.01	
S13-02012-02 Lancie France, 2013 (Noir de Bourgogne)	25 SC	10	61	2	0*	ND	ND	< 0.01	130177
		10	59		0	0.086	0.022	0.108	
					1	0.051	0.012	0.063	
					3	0.061	0.013	<u>0.074</u>	
					7	0.022	ND	0.022	
					14	< 0.01	ND	< 0.01	
S13-02012-04 Mormant France, 2013 (Andorine)	25 SC	10 10	61 64	2	3	0.153	0.037	<u>0.190</u>	130177
S13-02012-05 Sant' Orsola Italy, 2013 (Rovada)	250SC	6 6	60 62	2	3	0.075	0.016	<u>0.091</u>	130177
S14-02927-01 Les Rosiers Sur Loire, Maine et Loire France, 2014 (Black dawn)	25 SC	6 6	63 63	2	3	0.068	0.012	<u>0.080</u>	140137
S14-02927-02 Guderhandviertel, Niedersachsen Germany, 2014 (Bona)	25 SC	6 6	63 58	2	3	0.092	0.016	<u>0.108</u>	140137
S14-02927-04 Schalkwijk, Utrecht The Netherlands, 2014 (Juniver)	25 SC	12	62	2	0*	0.010	ND	0.010	140137
		12	60		0	0.048	0.010	0.058	
					1	0.037	0.008	0.045	
					3	0.021	0.004	<u>0.025</u>	
					7	0.014	ND	0.014	
					14	0.011	ND	0.011	
S14-02927-05 Aze, Saone et Loire France, 2014 (Noir de Bourgogne)	25 SC	6	61	2	0*	0.004	ND	0.004	140137
		6	58		0	0.117	0.030	0.147	
					1	0.101	0.022	0.123	
					3	0.078	0.017	<u>0.095</u>	
					7	0.012	ND	0.012	
					14	0.005	ND	0.005	
S15-02338-01 Azé, Saône-et- Loire France, 2015 (Noir de Bourgogne)	25 SC	13	66	2	0*	0.017	ND	0.017	150595
		12	61		0	0.227	0.058	0.285	
					1	0.143	0.033	0.176	
					3	0.097	0.020	<u>0.117</u>	
					7	0.077	0.015	0.091	
					14	0.033	0.004	0.037	
S15-02338-02 Leutershausen Baden- Württemberg Germany, 2015 (Rovada)	25 SC	6	61	2	0*	ND	ND	< 0.01	150595
		6	58		0	0.067	0.017	0.084	
					1	0.029	0.004	0.033	
					3	0.032	0.004	<u>0.036</u>	
					7	0.009	ND	0.009	
					14	0.010	ND	0.010	
S15-02338-03 Nottensdorf, Niedersach-sen Germany, 2015 (Black Gigant)	25 SC	6 6	56 61	2	3	0.010	ND	<u>0.010</u>	150595

CURRANT Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
S15-02338-04 Bradford, Essex UK, 2015 (Rovado)	25 SC	6 6	60 60	2	3	0.063	0.013	<u>0.076</u>	150595

Table 16 Residues of spinetoram from supervised trials on currants in Europe (for estimation of STMR)

CURRANT Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl-J	N-formyl-J	Total	
GAP, EU			60	2-3	3						
S13-02012-01 Mormant France, 2013 (Rovada)	25 SC	10 10	59 61	2	0* 0 1 3 7 14	ND 0.175 0.113 0.088 0.014 < 0.01	ND 0.046 0.027 0.020 ND ND	ND < 0.01 0.014 0.011 < 0.01 < 0.01	< 0.01 < 0.01 < 0.01 < 0.01 0.013 < 0.01	< 0.02 0.241 0.164 <u>0.129</u> 0.027 < 0.02	130177
S13-02012-02 Lancié France, 2013 (Noir de Bourgogne)	25 SC	10 10	61 59	2	0* 0 1 3 7 14	ND 0.086 0.051 0.061 0.022 < 0.01	ND 0.022 0.012 0.013 ND ND	ND < 0.01 < 0.01 < 0.01 0.014 < 0.01	ND < 0.01 < 0.01 < 0.01 0.015 < 0.01	< 0.02 0.118 0.073 <u>0.084</u> 0.051 < 0.02	130177
S13-02012-04 Mormant France, 2013 (Andorine)	25 SC	10 10	61 64	2	3	0.153	0.037	0.014	0.011	<u>0.215</u>	130177
S13-02012-05 Sant' Orsola Italy, 2013 (Rovada)	25 SC	6 6	60 62	2	3	0.075	0.016	< 0.01	< 0.01	<u>0.101</u>	130177
S14-02927-01 Les Rosiers Sur Loire, Maine et Loire France, 2014 (Black dawn)	25 SC	6 6	63 63	2	3	0.068	0.012	0.018	0.012	<u>0.110</u>	140137
S14-02927-02 Guderhandviertel, Niedersachsen Germany, 2014 (Bona)	25 SC	6 6	63 58	2	3	0.092	0.016	0.020	0.022	<u>0.150</u>	140137
S14-02927-04 Schalkwijk, Utrecht The Netherlands, 2014 (Juniver)	25 SC	12 12	62 60	2	0* 0 1 3 7 14	0.010 0.048 0.037 0.021 0.014 0.011	ND 0.010 0.008 0.004 ND ND	0.005 0.007 0.008 0.005 0.005 0.005	ND ND ND ND ND ND	0.025 0.075 0.063 <u>0.040</u> 0.029 0.026	140137
S14-02927-05 Aze, Saone et Loire France, 2014 (Noir de Bourgogne)	25 SC	6 6	61 58	2	0* 0 1 3 7 14	0.004 0.117 0.101 0.078 0.012 0.005	ND 0.030 0.022 0.017 ND ND	ND 0.008 0.013 0.010 0.007 ND	ND ND 0.006 0.006 0.007 ND	0.014 0.165 0.142 <u>0.111</u> 0.026 0.015	140137

CURRANT Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl-J	N-formyl-J	Total	
S15-02338-01 Azé, Saône-et-Loire France, 2015 (Noir de Bourgogne)	25 SC	13	66	2	0*	0.017	ND	0.007	0.006	0.030	150595
		12	61		0	0.227	0.058	0.016	0.007	0.308	
					1	0.143	0.033	0.025	0.012	0.213	
					3	0.097	0.020	0.019	0.013	0.149	
					7	0.077	0.015	0.016	0.010	0.118	
					14	0.033	0.004	0.008	0.005	0.050	
S15-02338-02 Leutershausen Baden- Württemberg Germany, 2015 (Rovada)	25 SC	6	61	2	0*	ND	ND	ND	ND	< 0.02	150595
		6	58		0	0.067	0.017	0.009	0.004	0.097	
					1	0.029	0.004	0.015	0.009	0.057	
					3	0.032	0.004	0.016	0.009	0.061	
					7	0.009	ND	0.007	0.005	0.021	
					14	0.010	ND	0.006	0.005	0.021	
S15-02338-03 Nottensdorf, Niedersach-sen Germany, 2015 (Black Gigant)	25 SC	6 6	56 61	2	3	0.010	ND	0.005	0.010	0.025	150595
S15-02338-04 Bradford, Essex UK, 2015 (Rovado)	25 SC	6 6	60 60	2	3	0.063	0.013	0.015	0.011	0.102	150595

Strawberry

Eight outdoor (field) residue trials from Brazil were carried out during 2006/2007 (246799, 246798, 246797, 246790/247120 (amended), 246805, 246800, 246810, 246804, 246818, 246841, 246788, 246816). Each treated plot received 4 applications of 250 WG spinetoram at a nominal rate of 50 g ai/ha. Samples of mature fruits were collected 3 days after the last application and for decline trials, also at 0, 1, 7, 10 and 14 days after application. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in fruit.

Eight outdoor (field) residue trials from Europe were carried out in France (2), Spain (2), Italy (2), Bulgaria (1), and Greece (1) during 2012 and 2013 (Reports GHE-P-12830 and 130180). Each treated plot received 2 or 3 applications of 25 SC spinetoram at a nominal rate of 50 g ai/ha and RTI 14-29. Samples of mature fruits were collected 3 days after the last application and for decline trials, also at 0, 1, 7/8 and 13-16 days after application. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days. Decline trials demonstrate that only the final application significantly contributes to the final residue. Non-detectable residues or very low residue values were measured just before the final application in comparison to the residues directly after the last application. Therefore, these trials can be considered for estimation of maximum residue level.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in fruit.

Eight indoor residue trials from Europe were carried out in Netherlands (1), Germany (2), France (2), Greece (1), Spain (1), and Italy (1) during 2012 and 2013 (Reports 130162 and GHE-P-12821). Each treated plot received 3 applications of 25 SC spinetoram at a nominal rate of 50 g ai/ha and RTI 12-14 days. Samples of mature fruits were collected 3 days after the last application and for decline trials, also at 0, 1, 7 and 14 days after application. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days. Decline trials demonstrate that only the final application significantly contributes to the harvest residue. Non-detectable residues or very low

residue values were measured just before the final application in comparison to the residues directly after the last application. Therefore, these trials can be used for estimation of maximum residue levels.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in fruit.

Table 17 Residues of spinetoram from supervised trials on strawberry in Brazil and Europe (for estimation of maximum residue level)

STRAWBERRY Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, Brazil (field)	250 WG		50	4	3				
Outdoor									
060021 Londrina Brazil, 2006/2007 (Camino Real)	250 WG		50 50 50	4	3	0.017	< 0.01	<u>0.017</u>	246799 246798
060021.01 Mogi Mirim Brazil, 2006/2007 (Aleluia)	250 WG		50 50 50	4	0 1 3 7 10 14	0.095 0.062 0.052 0.025 0.018 < 0.01	0.020 0.012 0.011 < 0.01 < 0.01 ND	0.115 0.074 <u>0.063</u> 0.025 0.018 < 0.01	246797 246790/247120 (amended)
60021.02 Caldas Brazil, 2006/2007 (Dover)	250 WG		50 50 50	4	0 1 3 7 10 14	0.089 0.037 0.015 < 0.01 0.01 < 0.01	0.025 < 0.01 < 0.01 ND ND ND	0.114 0.037 <u>0.015</u> < 0.01 0.01 < 0.01	246805 246800
060021.03 Cambui Brazil, 2006/2007 (Oso Grande)	250 WG		50 50 50	4	3	0.024	ND	<u>0.024</u>	246810 246804
060021.04 Monte Alegre do Sul Brazile, 2006 (Oso Grande)	250 WG		50 50 50	4	0 1 3 7 10 14	0.102 0.047 0.011 < 0.01 ND ND	0.027 < 0.01 ND ND ND ND	0.129 0.047 <u>0.011</u> < 0.01 < 0.01 < 0.01	246818
060021.05 Piracicaba Brazil, 2006 (Aleluia)	250 WG		50 50 50	4	0 1 3 7 10 14	0.108 0.182 0.022 0.01 < 0.01 ND	0.036 0.039 ND ND ND ND	0.144 0.221 <u>0.022</u> 0.01 < 0.01 < 0.01	246841
060021.06 Valinhos Brazil, 2006 (Oso Grande)	250 WG		50 50 50	4	3	< 0.01	ND	<u>< 0.01</u>	246788
060021.07 Pouso Alegre Brazil, 2006 (Oso Grande)	250 WG		50 50 50	4	3	< 0.01	ND	<u>< 0.01</u>	246816
Outdoor									
CEMS-5435A Cartaya, Huelva Spain, 2012 (Amiga)	25 SC	7 7 7	48 52 45	3	0* 0 1 3 8 14	< 0.01 0.037 0.029 0.016 < 0.01 < 0.01	ND 0.011 < 0.01 < 0.01 ND ND	< 0.01 0.048 0.029 <u>0.016</u> < 0.01 < 0.01	GHE-P- 12830(I)

STRAWBERRY Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
CEMS-5435B Boves, Piemonte Italy, 2012 (Arosa)	25 SC	5 5 5	50 50 50	3	0* 0 1 3 7 13	ND 0.037 0.02 0.016 < 0.01 ND	ND 0.012 < 0.01 ND ND ND	< 0.01 0.049 0.02 <u>0.016</u> < 0.01 < 0.01	GHE-P-12830
CEMS-5435C Villaudric, Midi- Pyrénées France, 2012 (Darselect Bright)	25 SC	8.3 8.3 8.3	48 50 51	3	3	0.012	ND	<u>0.012</u>	GHE-P-12830
CEMS-5435D Svoronos, Pieria Greece, 2012 (Kamaroza)	25 SC	4.6 4.6 4.6	45 46 46	3	3	0.025	< 0.01	<u>0.025</u>	GHE-P-12830
S13-02014-01 Quatretonda, Valencia Spain, 2013 (Pájaro)	25 SC	6 6	53 49	2	0* 0 1 3 7 13	ND 0.038 0.032 0.013 < 0.01 ND	ND < 0.01 < 0.01 ND ND ND	< 0.01 0.038 0.032 <u>0.013</u> < 0.01 < 0.01	130180 (I)
S13-02014-02 Biagio, Latina Italy, 2013 (Nayad)	25 SC	5 5	49 52	2	0* 0 1 3 7 14	ND 0.050 0.016 < 0.01 ND ND	ND 0.012 ND ND ND ND	< 0.01 0.062 0.016 <u>< 0.01</u> < 0.01 < 0.01	130180
S13-02014-03 Lafrançaise, Tarn et Garonne France, 2013 (Matis)	25 SC	8 8	53 53	2	0* 0 1 3 7 16	ND 0.029 0.039 0.015 ND ND	ND < 0.01 < 0.01 < 0.01 ND ND	< 0.01 0.029 0.039 <u>0.015</u> < 0.01 < 0.01	130180
S13-02014-04 Lenitsa, Bulgaria, 2013 (Polca)	25 SC	5 5	50 51	2	0* 0 1 3 7 14	ND < 0.01 ND ND ND ND	ND ND ND ND ND ND	< 0.01 < 0.01 < 0.01 <u>< 0.01</u> < 0.01 < 0.01	130180
Indoor									
CEMS-5426A Cartaya, Huelva Spain, 2012 (Amiga)	25 SC	7 7 7	50 45 55	3	0* 0 1 3 8 14	< 0.01 0.044 0.032 0.026 0.014 < 0.01	ND 0.013 < 0.01 < 0.01 < 0.01 ND	< 0.01 0.057 0.032 <u>0.026</u> 0.014 < 0.01	GHE-P-12821 (F)
CEMS-5426B Scanzano Jonico, Basilicata Italy, 2012 (Candongia)	25 SC	5 5 5	50 50 49	3	0* 0 1 3 7 14	< 0.01 0.021 0.019 0.016 0.01 < 0.01	ND < 0.01 < 0.01 < 0.01 ND ND	< 0.01 0.021 0.019 <u>0.016</u> 0.01 < 0.01	GHE-P-12821
CEMS-5426C Nîmes, Languedoc Roussillon France, 2012 (Cirafine)	25 SC	25 25 25	50 50 54	3	3	0.052	0.013	<u>0.065</u>	GHE-P-12821

STRAWBERRY Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
CEMS-5426D Svoronos, Peiria, Central Macedonia Greece, 2012 (Kamaroza)	25 SC	4.6 4.6 4.6	46 46 46	3	3	0.022	< 0.01	<u>0.022</u>	GHE-P-12821
S13-02018-01 Eberdingen, Baden- Württemberg Germany, 2013 (Clery)	25 SC	5 5 5	50 50 50	3	0* 0 1 3 7 14	ND 0.023 0.013 0.014 < 0.01 < 0.01	ND < 0.01 < 0.01 < 0.01 ND ND	< 0.01 0.023 0.013 <u>0.014</u> < 0.01 < 0.01	130162 (F)
S13-02018-02 Sulniac, Morbihan France, 2013 (Charlotte)	25 SC	17 17 17	50 49 54	3	0* 0 1 3 7 14	0.053 0.190 0.254 0.092 0.091 0.067	0.011 0.052 0.058 0.021 0.022 0.015	0.064 0.242 0.312 0.113 <u>0.113</u> 0.082	130162
S13-02018-03 Ladenburg, Baden- Württemberg Germany, 2013 (Clery)	25 SC	5 5 5	50 50 50	3	3	0.015	< 0.01	<u>0.015</u>	130162
S13-02018-04 Heeswijk-Dinther, Brabant The Netherlands, 2013 (Elsanta)	25 SC	10 10 10	54 50 50	3	3	0.035	< 0.01	<u>0.035</u>	130162

Table 18 Residues of spinetoram from supervised trials on strawberry in Brazil and Europe (for estimation of STMR)

STRAWBERRY Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl-J	N-formyl-J	Total	
GAP, Brazil (field)			50	4	3						
Outdoor											
060021 Londrina Brazil, 2006/2007 (Camino Real)	250 WG		50 50 50 50	4	3	0.017	< 0.01	< 0.01	< 0.01	<u>0.027</u>	246799 246798
060021.01 Mogi Mirim Brazil, 2006/2007 (Aleluia)	250 WG		50 50 50 50	4	0 1 3 7 10 14	0.095 0.062 0.052 0.025 0.018 < 0.01	0.020 0.012 0.011 < 0.01 < 0.01 ND	0.029 0.019 0.018 < 0.01 < 0.01 < 0.01	0.024 0.028 0.033 < 0.01 < 0.01 < 0.01	0.168 0.121 <u>0.114</u> 0.035 0.028 < 0.02	246797 246790/ 247120 (amended)
060021.02 Caldas Brazil, 2006/2007 (Dover)	250 WG		50 50 50 50	4	0 1 3 7 10 14	0.089 0.037 0.015 < 0.01 0.01 < 0.01	0.025 < 0.01 < 0.01 ND ND ND	0.015 0.015 < 0.01 < 0.01 ND ND	0.014 0.019 0.019 0.01 < 0.01 ND	0.143 0.071 <u>0.034</u> 0.020 0.020 < 0.02	246805 246800

STRAWBERRY Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N- demethyl-J	N-formyl- J	Total	
060021.03 Cambui Brazil, 2006/2007 (Oso Grande)	250 WG		50 50 50 50	4	3	0.024	ND	< 0.01	< 0.01	<u>0.034</u>	246810 246804
060021.04 Monte Alegre Sul Brazil, 2006 (Oso Grande)	250 WG		50 50 50 50	4	0 1 3 7 10 14	0.102 0.047 0.011 < 0.01 ND ND	0.027 < 0.01 ND ND ND ND	< 0.01 < 0.01 < 0.01 ND ND ND	< 0.01 < 0.01 < 0.01 < 0.01 ND ND	0.139 0.057 <u>0.021</u> < 0.02 ND < 0.02	246818
060021.05 Piracicaba Brazil, 2006 (Aleluia)	250 WG		50 50 50 50	4	0 1 3 7 10 14	0.108 0.182 0.022 0.01 < 0.01 ND	0.036 0.039 ND ND ND ND	0.012 0.023 < 0.01 ND ND ND	< 0.01 0.015 < 0.01 < 0.01 < 0.01 ND	0.166 0.259 <u>0.032</u> 0.02 < 0.02 < 0.02	246841
060021.06 Valinhos Brazil, 2006 (Oso Grande)	250 WG		50 50 50	4	3	< 0.01	ND	ND	< 0.01	<u>< 0.02</u>	246788
060021.07 Pouso Alegre Brazil, 2006 (Oso Grande)	250 WG		50 50 50	4	3	< 0.01	ND	ND	< 0.01	<u>< 0.02</u>	246816
Outdoor											
CEMS-5435A Cartaya, Huelva Spain, 2012 (Amiga)	25 SC	7 7 7	48 52 45	3	0* 0 1 3 8 14	< 0.01 0.037 0.029 0.016 < 0.01 < 0.01	ND 0.011 < 0.01 < 0.01 ND ND	ND < 0.01 < 0.01 ND ND ND	ND ND ND ND ND ND	< 0.02 0.058 0.039 <u>0.026</u> ND < 0.02 < 0.02	GHE-P- 12830
CEMS-5435B Boves, Piemonte Italy, 2012 (Arosa)	25 SC	5 5 5	50 50 50	3	0* 0 1 3 7 13	ND 0.037 0.020 0.016 < 0.01 ND	ND 0.012 < 0.01 < 0.01 ND ND	ND < 0.01 < 0.01 < 0.01 ND ND	ND ND ND < 0.01 ND ND	< 0.02 0.059 0.030 <u>0.026</u> < 0.02 < 0.02	GHE-P- 12830
CEMS-5435C Villaudric, Midi- Pyrénées France, 2012 (Darselect Bright)	25 SC	8.3 8.3 8.3	48 50 51	3	3	0.012	ND	< 0.01	< 0.01	<u>0.022</u>	GHE-P- 12830
CEMS-5435D Svoronos, Pieria Greece, 2012 (Kamarozza)	25 SC	4.6 4.6 4.6	45 46 46	3	3	0.025	< 0.01	ND	< 0.01	<u>0.035</u>	GHE-P- 12830
S13-02014-01 Quatretonda, Valencia Spain, 2013 (Pájaro)	25 SC	6 6	53 49	2	0* 0 1 3 7 13	ND 0.038 0.032 0.013 < 0.01 ND	ND < 0.01 < 0.01 ND ND ND	ND < 0.01 ND ND ND ND	ND ND < 0.01 ND ND ND	< 0.02 0.048 0.042 <u>0.023</u> < 0.02 < 0.02	130180
S13-02014-02 Biagio, Latina Italy, 2013 (Nayad)	25 SC	5 5	49 52	2	0* 0 1 3 7 14	ND 0.050 0.016 < 0.01 ND ND	ND 0.012 ND < 0.01 ND ND	ND < 0.01 < 0.01 < 0.01 ND ND	ND ND ND ND ND ND	< 0.02 0.072 0.026 <u>< 0.02</u> < 0.02 < 0.02	130180

STRAWBERRY Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N- demethyl-J	N-formyl- J	Total	
S13-02014-03 Lafrançaise, Tarn et Garonne France, 2013 (Matis)	25 SC	8 8	53 53	2	0*	ND	ND	ND	ND	< 0.02	130180
					0	0.029	< 0.01	ND	ND	0.039	
					1	0.039	< 0.01	< 0.01	< 0.01	0.049	
					3	0.015	< 0.01	ND	ND	<u>0.025</u>	
					7	ND	ND	ND	ND	< 0.02	
					16	ND	ND	ND	ND	< 0.02	
S13-02014-04 Lenitsa, Bulgaria, 2013 (Polca)	25 SC	5 5	50 51	2	0*	ND	ND	ND	ND	< 0.02	130180
					0	< 0.01	ND	ND	ND	< 0.02	
					1	ND	ND	ND	ND	< 0.02	
					3	ND	ND	ND	ND	< 0.02	
					7	ND	ND	ND	ND	< 0.02	
					14	ND	ND	ND	ND	< 0.02	
Indoor											
CEMS-5426A Cartaya, Huelva Spain, 2012 (Amiga)	25 SC	7 7 7	50 45 55	3	0*	< 0.01	ND	ND	ND	< 0.02	GHE-P- 12821
					0	0.044	0.013	< 0.01	ND	0.067	
					1	0.032	< 0.01	< 0.01	< 0.01	0.042	
					3	0.026	< 0.01	ND	< 0.01	<u>0.036</u>	
					8	0.014	< 0.01	ND	ND	0.024	
					14	< 0.01	ND	ND	ND	< 0.02	
CEMS-5426B Scanzano Jonico, Basilicata Italy, 2012 (Candongia)	25 SC	5 5 5	50 50 49	3	0*	< 0.01	ND	ND	ND	< 0.02	GHE-P- 12821
					0	0.021	< 0.01	ND	ND	0.031	
					1	0.019	< 0.01	ND	< 0.01	0.029	
					3	0.016	< 0.01	ND	< 0.01	<u>0.026</u>	
					7	0.01	ND	ND	ND	0.02	
					14	< 0.01	ND	ND	ND	< 0.02	
CEMS-5426C Nimes, Languedoc Roussillon France, 2012 (Cirafine)	25 SC	25	50	3	3	0.052	0.013	< 0.01	< 0.01	<u>0.075</u>	GHE-P- 12821
		25	50								
		25	54								
CEMS-5426D Svoronos, Peiria, Central Macedonia Greece, 2012 (Kamaroza)	25 SC	4.6	46	3	3	0.022	< 0.01	ND	ND	<u>0.032</u>	GHE-P- 12821
		4.6	46								
		4.6	46								
S13-02018-01 Eberdingen, Baden- Württemberg Germany, 2013 (Clery)	25 SC	5 5 5	50 50 50	3	0*	ND	ND	ND	ND	< 0.02	130162
					0	0.023	< 0.01	< 0.01	ND	0.033	
					1	0.013	< 0.01	< 0.01	ND	0.023	
					3	0.014	< 0.01	< 0.01	ND	<u>0.024</u>	
					7	< 0.01	ND	< 0.01	< 0.01	< 0.02	
					14	< 0.01	ND	< 0.01	ND	< 0.02	
S13-02018-02 Sulniac, Morbihan France, 2013 (Charlotte)	25 SC	17 17 17	50 49 54	3	0*	0.053	0.011	0.022	0.014	0.100	130162
					0	0.190	0.052	0.017	0.020	0.279	
					1	0.254	0.058	0.043	0.043	0.398	
					3	0.092	0.021	0.019	< 0.01	<u>0.142</u>	
					7	0.091	0.022	0.016	< 0.01	0.139	
					14	0.067	0.015	0.015	< 0.01	0.107	
S13-02018-03 Ladenburg, Baden- Württemberg Germany, 2013 (Clery)	25 SC	5	50	3	3	0.015	< 0.01	ND	ND	<u>0.025</u>	130162
		5	50								
		5	50								
S13-02018-04 Heeswijk- Dinther, Brabant The Netherlands, 2013 (Elsanta)	25 SC	10	54	3	3	0.035	< 0.01	< 0.01	ND	<u>0.045</u>	130162
		10	50								
		10	50								

*Assorted tropical and sub-tropical fruit - edible peel**Olive*

Eight supervised trials were carried out in Spain (4), Italy (4), during 2008, 2009 and 2011 (GHE-P-12479 and GHE-P-12094). Each treated plot received 2 applications of 250 WG spinetoram at a nominal rate of 25 g ai/ha and RTI 21. Samples of mature fruits were collected 21 days after the last application and for decline trials, also at 0, 7, 13/14 and 28 days after application. The GAP in Europe consists of 2 applications at 25 g ai/ha, RTI 28 days and a PHI of 21 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in fruit. Whole fruit residues were calculated from flesh residue and weight of stones.

Table 19 Residues of spinetoram from supervised trials on olive in Europe (for estimation of maximum residue level)

OLIVE Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, Greece		2.5	25	2	21				
CEMS-3819A Palese Bari, Puglia Italy, 2008 (Ogliarola)	250 WG		25 25	2	21	< 0.01	ND	< 0.01	GHE-P- 12094
CEMS-3819B Mariotto- Bitonto, Puglia Italy, 2008 (Termite)	250 WG		25 26	2	0* 0 7 14 21 28	ND 0.036 < 0.01 < 0.01 ND ND	ND 0.01 ND ND ND ND	< 0.01 0.046 < 0.01 < 0.01 < 0.01 < 0.01	GHE-P- 12094
CEMS-3819C Pruna, Sevilla Spain, 2008 (Piwal)	250 WG		24 25	2	22 22 22	ND ND ND	ND ND ND	< 0.01 < 0.01 < 0.01	GHE-P- 12094
CEMS-3819D Villa Nueva del Arisca, Sevilla Spain, 2008 (Manzanillo)	250 WG		23 24	2	0* 0 7 13 21 28	< 0.01 0.116 0.021 < 0.01 ND ND	ND 0.031 < 0.01 ND ND ND	< 0.01 0.147 0.021 < 0.01 < 0.01 < 0.01	GHE-P- 12094
CEMS-4366A Fondi, Latina Italy, 2009 (Frantoio)	250 WG		25 25	2	21	ND	ND	< 0.01	GHE-P- 12479
CEMS-4366B Arahal, Andalucía Spain, 2009 (Gordal)	250 WG		25 25	2	21	0.045	< 0.01	0.045	GHE-P- 12479
CEMS-4366C Fondi, Latina Italy Spain, 2009 (Leccino)	250 WG		24 24	2	0 <0 7 14 21 28	0.024 ND ND ND ND	< 0.01 ND ND ND ND	0.024 < 0.01 < 0.01 < 0.01 < 0.01	GHE-P- 12479
CEMS-4366D Montellano, Andalucía Spain, 2009 (Manzanilla)	250 WG		25 25	2	0 0* 7 14 21 28	0.063 ND 0.03 < 0.01 < 0.01 ND	0.016 ND < 0.01 ND ND ND	0.079 < 0.01 0.03 < 0.01 < 0.01 < 0.01	GHE-P- 12479

Table 20 Residues of spinetoram from supervised trials on olive in Europe (for estimation of STMR)

OLIVE Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N- demethyl- J	N-formyl-J	Total	
GAP, Greece		2.5	25	2	21						
CEMS-3819A Palese Bari, Puglia Italy, 2008 (Ogliarola)	250 WG		25 25	2	21	< 0.01	ND	ND	ND	< 0.02	GHE-P- 12094
CEMS-3819B Mariotto- Bitonto, Puglia Italy, 2008 (Termite)	250 WG		25 26	2	0* 0 7 14 21 28	ND 0.036 < 0.01 < 0.01 ND ND	ND 0.01 ND ND ND ND	ND < 0.01 ND ND ND ND	ND ND ND ND ND ND	< 0.02 0.056 < 0.02 < 0.02 < 0.02 < 0.02	GHE-P- 12094
CEMS-3819C Pruna, Sevilla Spain, 2008 (Piwal)	250 WG		24 25	2	22 22 22	ND ND ND	ND ND ND	< 0.01 ND ND	ND ND ND	< 0.02 < 0.02 < 0.02	GHE-P- 12094
CEMS-3819D Villa Nueva del Arisca, Sevilla Spain, 2008 (Manzanillo)	250 WG		23 24	2	0* 0 7 13 21 28	< 0.01 0.116 0.021 < 0.01 ND ND	ND 0.031 < 0.01 ND ND ND	ND < 0.01 < 0.01 ND ND ND	ND < 0.01 ND ND ND ND	< 0.02 0.157 0.031 < 0.02 < 0.02 < 0.02	GHE-P- 12094
CEMS-4366A Fondi, Latina Italy, 2009 (Frantoio)	250 WG		25 25	2	21	ND	ND	ND	ND	< 0.02	GHE-P- 12479
CEMS-4366B Arahal, Andalucía Spain, 2009 (Gordal)	250 WG		25 25	2	21	0.045	< 0.01	0.011	< 0.01	0.055	GHE-P- 12479
CEMS-4366C Fondi, Latina Italy Spain, 2009 (Leccino)	250 WG		24 24	2	0 <0 7 14 21 28	0.024 ND ND ND ND ND	< 0.01 ND ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND ND	0.034 < 0.02 < 0.02 < 0.02 < 0.02 < 0.02	GHE-P- 12479
CEMS-4366D Montellano, Andalucía Spain, 2009 (Manzanilla)	250 WG		25 25	2	0 0* 7 14 21 28	0.063 ND 0.03 < 0.01 < 0.01 ND	0.016 ND < 0.01 ND ND ND	< 0.01 ND ND ND ND ND	< 0.01 ND ND ND ND ND	0.089 < 0.02 0.04 < 0.02 < 0.02 < 0.02	GHE-P- 12479

Assorted tropical and subtropical fruit – inedible peel

Litchi

Six supervised trials were carried out in Thailand during 2015 (IR-4 PR No. 11437). Each treated plot received 3 applications of 120 SC spinetoram at a nominal rate of 60 g ai/ha and RTI 7. Samples of mature fruits were collected 12–14 days after the last application and for decline trials, also at 0, 3, 7, 14 and 19–21 days after application. The GAP in Thailand consists of 3 applications at 60 g ai/ha, RTI 7 days and a PHI of 14 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in fruit.

Table 21 Residues of spinetoram from supervised trials on Litchi in Thailand (for estimation of MRL)

LITCHI Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA , days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	Total	
GAP, Thailand			60	3		14				
11437.14-TH*01 Chanthaburi Province Thailand, 2015 (Khom)	120 SC		61.1 61.9 61.8	3	WF	0 3 7 14 19	0.154 0.124 0.035 < 0.01 < 0.01	0.037 0.026 < 0.01 < 0.01 < 0.01	0.191 0.149 0.035 < 0.01 < 0.01	IR-4 PR No. 11437
11437.14-TH*02 Parg Nan Ron, Fang. Chiang Mai Province Thailand, 2015 (Hong Huay)	120 SC		61.4 61.2 60.8	3	WF	14	0.011	< 0.01	<u>0.011</u>	IR-4 PR No. 11437
11437.14-TH*03 Mueung, Chiang Rai Province Thailand, 2015 (Hong Huay)	120 SC		61.3 61.4 61.3	3	flesh peel	12 12	< 0.01 0.015	< 0.01 < 0.01	< 0.01 0.015	IR-4 PR No. 11437
11437.14-TH04 Pa Feak, Mae Chiai Phayao District Thailand, 2015 (Hong Huay)	120 SC		71.2 71.2 71.0	3	WF	0 3 7 14 21	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01	IR-4 PR No. 11437
11437.14-TH05 Thatou, Mae Mi Ai, Chiangmae District Thailand, 2015 (Chakrapad)	120 SC		69.5 69.5 65.4	3	WF	12	< 0.01	< 0.01	<u>< 0.01</u>	IR-4 PR No. 11437
11437.14-TH06 Mae Sun, Fang, Chiang Mai Province Thailand, 2015 (Chakrapad)	120 SC		61.8 61.8 61.8	2	WF	14	< 0.01	< 0.01	<u>< 0.01</u>	IR-4 PR No. 11437

Table 22 Residues of spinetoram from supervised trials on Litchi in Thailand (for estimation of STMR)

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	N- demethyl- J	N- formyl-J	Total	
GAP, Thailand			60	3		14						
11437.14- TH*01 Thailand, 2015 (Khom)	120 SC		61.1 61.9 61.8	3	WF	0 3 7 14 19	0.154 0.124 0.035 < 0.01 < 0.01	0.037 0.026 < 0.01 < 0.01 < 0.01	0.026 0.028 0.021 < 0.01 < 0.01	0.019 0.030 0.014 < 0.01 < 0.01	0.236 0.207 0.070 < 0.02 < 0.02	IR-4 PR No. 11437
11437.14- TH*02 Thailand, 2015 (Hong Huay)	120 SC		61.4 61.2 60.8	3	WF	14	0.011	< 0.01	0.013	0.027	<u>0.061</u>	IR-4 PR No. 11437

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	N- demethyl- J	N- formyl-J	Total	
11437.14- TH*03 Thailand, 2015 (Hong Huay)	120 SC		61.3	3	WF (flesh)	12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	IR-4 PR No. 11437
			61.4		WF (peel)	12	0.015	< 0.01	0.024	0.035	0.084	
11437.14- TH04 Thailand, 2015 (Hong Huay)	120 SC		71.2	3	WF	0	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	IR-4 PR No. 11437
			71.2			3	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
			71.0			7	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
						14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
					21	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02		
11437.14- TH05 Thailand, 2015 (Chakrapad)	120 SC		69.5	3	WF	12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	IR-4 PR No. 11437
			69.5									
			65.4									
11437.14- TH06 Thailand, 2015 (Chakrapad)	120 SC		61.8	2	WF	14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	IR-4 PR No. 11437
			61.8		Flesh	14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
			61.8		Peel	14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	

Avocado

Three supervised trials were carried out in New Zealand during 2012 and 2013 (Reports FF11-053/2012-04 and SFF11-053/200-01). Each treated plot received 4 applications of 120 SC spinetoram at 2.4 or 4.8 g ai/hL and RTI 13-15. Samples of mature fruits were collected 0 days after the last application and for decline trials, at 7, 14, 21 and 27/28 days after application. Samples were also taken at 14 days after the third application. The GAP in Australia consists of 4 applications at 4.8 g ai/hL, RTI 7–14 days and a PHI of 0 days.

Residues of spinetoram were analysed by method GRM 05.03, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram in the acceptable range of 70–120% in fruit. The skin and flesh are analysed but the results are corrected for the stone.

Residues were calculated as total spinetoram (J + L) in the trials. The apple metabolism study (JMPR 2008) was used to estimate XDE-175-L and spinetoram metabolites concentrations. No detectable residues of XDE-175-L were found after application of ¹⁴C-XDE-175-L at a rate of 1.1 kg ai/ha. The highest rate applied in the presented trials was 50 g ai/ha of 120 SC spinetoram (XDE-175-J and XDE-175-L). Therefore it is assumed that the residue value for XDE-175 J + L is for residues of XDE-175-J only and residues of XDE-175-L are recorded as 'not detected'. Metabolites are recorded as 9.1% (conversion factor 0.091) and 3.0% (conversion factor 0.03) of the XDE-175-J residues for N-demethyl-J and N-formyl-J respectively.

Six supervised trials were carried out in Colombia during 2014 (IR-4 PR No. 11400). Each treated plot received 3 applications of 60 SC spinetoram at 60 g ai/ha and RTI 6–8 days. Trial 14-CO03 received one additional application due to a heavy rain after the first application. Samples of mature fruits were collected 14 days after the last application and for the decline trial, at 0, 1, 3, 7, 11, and 21 days after application. Samples were frozen and analysed within the 511–655 days, which is outside the period of demonstrated stability of 372 days. The GAP in Australia consists of 4 applications at 4.8 g ai/hL, RTI 7-14 days and a PHI of 0 days. Although the trials from Colombia contain 3 applications rather than the 4 applications of the Australian GAP, residues of spinetoram are observed to decline by the time of next application and are dependent on the final application.

Residues of spinetoram were analysed by a method very similar to GRM 05.03, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram in the acceptable range of 70–120% in fruit, peel and flesh.

Table 23 Residues of spinetoram from supervised trials on avocado in New Zealand and Colombia (for estimation of maximum residue level)

AVOCADO Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA , days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	Total	
GAP, Australia	120 SC	4.8		4		0				
SFF11-053/2012-04d Katikati New Zealand, 2013 (Hass)	120 SC	4.8 4.8 4.8 4.8		4	WF	14# 0 7 14 21 28	< 0.01 (0.009) 0.052 0.024 < 0.01 (0.009) < 0.01 (0.009) < 0.01 (0.009)	ND (0.001) < 0.01 (0.007) ND (0.003) ND (0.001) ND (0.001) ND (0.001)	< 0.01 <u>0.052</u> 0.024 < 0.01 < 0.01 < 0.01	SFF11-053/2012-04
SFF11-053/200-01I Katikati New Zealand, 2012 (Hass)	120 SC	2.4 2.4 2.4 2.4		4	WF	14# 0 7 14 21 28	< 0.01 (0.009) 0.045 0.032 < 0.01 (0.009) < 0.01 (0.009) < 0.01 (0.009)	ND (0.001) < 0.01 (0.006) ND (0.004) ND (0.001) ND (0.001) ND (0.001)	< 0.01 <u>0.045</u> 0.032 < 0.01 < 0.01 < 0.01	SFF11-053/200-01
SFF11-053/200-01J Katikati New Zealand, 2012 (Hass)	120 SC	2.4 2.4 2.4 2.4		4	WF	14# 0 7 14 21 27	< 0.01 (0.009) 0.048 0.026 < 0.01 (0.009) < 0.01 (0.009) < 0.01 (0.009)	ND < 0.01 (0.006) ND (0.003) ND (0.001) ND (0.001) ND (0.001)	< 0.01 <u>0.048</u> 0.026 < 0.01 < 0.01 < 0.01	SFF11-053/200-01
GAP in Colombia	60 SC		18	-		14				
14-CO01 Popayán, Cauca Colombia, 2014 (Hass)	60 SC	5.8 5.8 5.8	62 60 61	3	WF	1 14	0.049 0.013	< 0.01 < 0.01	<u>0.049</u> 0.013	IR-4 PR No. 11400
14-CO02 El Santuario, Antioquia Colombia, 2014 (Reed)	60 SC	5.0 5.0 5.0	63 62 63	3	WF Flesh Peel WF Flesh Peel	1 1 1 14 14 14	0.079 < 0.01 0.283 < 0.01 < 0.01 0.045	< 0.01 < 0.01 0.062 < 0.01 < 0.01 < 0.01	<u>0.079</u> < 0.01 0.345 < 0.01 < 0.01 0.045	IR-4 PR No. 11400
14-CO03 Popayán, Cauca Colombia, 2014 (Hass)	60 SC	5.9 5.9 5.3 5.5	60 63 60 61	4	WF Flesh Peel WF Flesh Peel	1 1 1 14 14 14	0.142 < 0.01 0.900 0.029 < 0.01 0.146	0.011 < 0.01 0.067 < 0.01 < 0.01 < 0.01	<u>0.153</u> < 0.01 0.967 0.029 < 0.01 0.146	IR-4 PR No. 11400
14-CO04 Pereira, Risaralda Colombia, 2014 (Papelillo)	60 SC	7.35 7.1 7.5	61 60 61	3	WF	1 14	0.032 0.011	< 0.01 < 0.01	<u>0.032</u> 0.011	IR-4 PR No. 11400
14-CO05 Pereira, Risaralda Colombia, 2014 (Hass)	60 SC	4.2 4.3 4.3 4.3	61 60 61**	3	WF Flesh Peel WF Flesh Peel	1 1 1 14 14 14	0.057 < 0.01 0.247 0.014 < 0.01 0.064	< 0.01 < 0.01 0.020 < 0.01 < 0.01 < 0.01	<u>0.057</u> < 0.01 0.267 0.014 < 0.01 0.064	IR-4 PR No. 11400
14-CO06 El Santuario, Antioquia. Colombia, 2014 (Hass)	60 SC	4.0 3.9 4.2	62 61 60	3	WF	0 1 3 4 7 11 14 21	0.024 0.023 0.012 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	<u>0.024</u> 0.023 0.012 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	IR-4 PR No. 11400

WF, Whole fruit

Table 24 Residues of spinetoram from supervised trials on avocado in New Zealand and Colombia (for estimation of STMR)

AVOCADO Country, year (Variety)	Form	Application/ treatment			Portions analyse d	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	N-demethyl- J	N-formyl-J	Total	
GAP, Australia	120 SC	4.8		4		14						
SFF11-053/2012-04d Katikati New Zealand, 2013 (Hass)	120 SC	4.8 4.8 4.8 4.8		4	WF	14# 0 7 14 21 28	< 0.01 (0.009) 0.052 0.024 < 0.01 (0.009) < 0.01 (0.009) < 0.01 (0.009)	ND (0.001) < 0.01 (0.007) ND (0.003) ND (0.001) ND (0.001) ND (0.001)	ND (0.0004) ND (0.003) ND (0.001) ND (0.0004) ND (0.0001) ND (0.0004) ND (0.0001)	ND (0.0001) ND (0.0009) ND (0.0004) ND (0.0001) ND (0.0001) ND (0.0001)	< 0.02 <u>0.062</u> 0.034 < 0.02 < 0.02 < 0.02	SFF11-053/2012-04
SFF11-053/200-01I Katikati New Zealand, 2012 (Hass)	120 SC	2.4 2.4 2.4 2.4		4	WF	14# 0 7 14 21 28	< 0.01 (0.009) 0.045 0.032 < 0.01 (0.009) < 0.01 (0.009) < 0.01 (0.009)	ND (0.001) < 0.01 (0.006) ND (0.004) ND (0.001) ND (0.001) ND (0.001)	ND (0.0004) ND (0.0022) ND (0.0016) ND (0.0004) ND (0.0001) ND (0.0004) ND (0.0001)	ND (0.0001) ND (0.0008) ND (0.0005) ND (0.0001) ND (0.0001) ND (0.0001)	< 0.02 <u>0.055</u> 0.042 < 0.02 < 0.02 < 0.02	SFF11-053/200-01
SFF11-053/200-01J Katikati New Zealand, 2012 (Hass)	120 SC	2.4 2.4 2.4 2.4		4	WF	14# 0 7 14 21 27	< 0.01 (0.009) 0.048 0.026 < 0.01 (0.009) < 0.01 (0.009) < 0.01 (0.009)	ND < 0.01 (0.006) ND (0.003) ND (0.001) ND (0.001) ND (0.001)	ND (0.0004) ND (0.0024) ND (0.0013) ND (0.0004) ND (0.0001) ND (0.0004) ND (0.0001)	ND (0.0001) ND (0.0008) ND (0.0004) ND (0.0001) ND (0.0001) ND (0.0001)	< 0.02 <u>0.058</u> 0.034 < 0.02 < 0.02 < 0.02	SFF11-053/200-01
GAP in Colombia	60 SC		18	-		14						
14-CO01 Popayán, Cauca Colombia, 2014 (Hass)	60 SC	5.8 5.8 5.8	62 60 61	3	WF	1 14	0.049 0.013	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01	0.059 0.023	IR-4 PR No. 11400
14-CO02 El Santuario, Antioquia Colombia, 2014 (Reed)	60 SC	5.0 5.0 5.0	63 62 63	3	WF Flesh Peel WF Flesh Peel	1 1 1 14 14 14	0.079 < 0.01 0.283 < 0.01 < 0.01 0.045	< 0.01 < 0.01 0.062 < 0.01 < 0.01 < 0.01	0.048 < 0.01 0.190 < 0.01 < 0.01 0.068	0.019 < 0.01 0.093 < 0.01 < 0.01 0.039	0.146 <u>≤ 0.02</u> 0.628 < 0.02 < 0.02 0.152	IR-4 PR No. 11400
14-CO03 Popayán, Cauca Colombia, 2014 (Hass)	60 SC	5.88 5.87 5.25 5.46	60 63 60 61	4	WF Flesh Peel WF Flesh Peel	1 1 1 14 14 14	0.142 < 0.01 0.900 0.029 < 0.01 0.146	0.011 < 0.01 0.067 < 0.01 < 0.01 < 0.01	0.054 < 0.01 0.286 0.013 < 0.01 0.067	< 0.01 < 0.01 0.085 < 0.01 < 0.01 0.015	0.217 <u>≤ 0.02</u> 1.338 0.052 < 0.02 0.228	IR-4 PR No. 11400
14-CO04 Pereira, Risaralda Colombia, 2014 (Papelillo)	60 SC	7.35 7.07 7.45	61 60 61	3	WF	1 14	0.032 0.011	< 0.01 < 0.01	< 0.01 < 0.01	< 0.01 < 0.01	0.042 <u>0.021</u>	IR-4 PR No. 11400
14-CO05 Pereira, Risaralda Colombia, 2014 (Hass)	60 SC	4.19 4.29 4.28 4.28	61 60 61**	3	WF Flesh Peel WF Flesh Peel	1 1 1 14 14 14	0.057 < 0.01 0.247 0.014 < 0.01 0.064	< 0.01 < 0.01 0.020 < 0.01 < 0.01 < 0.01	< 0.01 < 0.01 0.029 < 0.01 < 0.01 0.014	< 0.01 < 0.01 0.012 < 0.01 < 0.01 0.01	0.067 <u>≤ 0.02</u> 0.308 0.024 < 0.02 0.088	IR-4 PR No. 11400

AVOCADO Country, year (Variety)	Form	Application/ treatment			Portions analyse	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	N-demethyl- J	N-formyl-J	Total	
14-CO06 El Santuario, Antioquia, Colombia, 2014 (Hass)	60 SC	4.03 3.91 4.16	62 61 60	3	WF	0	0.024	< 0.01	< 0.01	< 0.01	0.034	IR-4 PR No. 11400
						1	0.023	< 0.01	< 0.01	0.033		
						3	0.012	< 0.01	0.013	0.035		
						4	< 0.01	< 0.01	< 0.01	< 0.02		
						7	< 0.01	< 0.01	< 0.01	< 0.02		
						11	< 0.01	< 0.01	< 0.01	< 0.02		
						14	< 0.01	< 0.01	< 0.01	< 0.02		
21	< 0.01	< 0.01	< 0.01	< 0.02								

Feijoa

Three supervised trial was carried out in New Zealand in 2013 (Report FF11-053/2012-04). The treated plots received 3/4 applications of 120 SC spinetoram at 2.4/4.8 g ai/hL and RTI 13-14. Samples of mature fruits were collected 0 days after the last application and at 7, 14, 21 and 28 days after application. Samples were also taken at 14 days after the third application. The GAP in Australia consists of 4 applications at 4.8 g ai/hL, RTI 7–14 days and a PHI of 0 days.

Residues of spinetoram were analysed by method GRM 05.03, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram in the acceptable range of 70–120% in fruit.

Residues were calculated as total spinetoram (J + L) in the trials. The apple metabolism study (JMPR 2008) was used to estimate XDE-175-L and spinetoram metabolites concentrations. No detectable residues of XDE-175-L were found after application of ¹⁴C-XDE-175-L at a rate of 1.1 kg ai/ha. The highest rate applied in the presented trials was 50 g ai/ha of 120 SC spinetoram (XDE-175-J and XDE-175-L). Therefore it is assumed that the residue value for XDE-175 J + L is for residues of XDE-175-J only and residues of XDE-175-L are recorded as 'not detected'. Metabolites are recorded as 9.1% (conversion factor 0.091) and 3.0% (conversion factor 0.03) of the XDE-175-J residues for N-demethyl-J and N-formyl-J respectively.

Table 25 Residues of spinetoram from supervised trials on feijoa in New Zealand (for estimation of maximum residue level)

FEIJOA Country, year (Variety)	Form	Application/ treatment			DALA , days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, Australia				96	4	14			
SFF11-053/2012-04a Matamata New Zealand, 2013 (Unique)	120 SC	4.8 4.8 4.8 4.8		4	14#	ND (0.004)	ND (0.001)	< 0.01	SFF11- 053/2012-04
					0	< 0.01	ND (0.001)	< 0.01	
					7	(0.009)	ND (0.001)	< 0.01	
					14	< 0.01	ND (0.001)	≤ 0.01	
					21	(0.009)	ND (0.001)	< 0.01	
28	ND (0.004)	ND (0.001)	< 0.01						
SFF11-053/200-01A Maungaturoto New Zealand, 2012 (Opal Star)	120 SC	2.4 2.4 2.4 2.4		3	14#	ND (0.004)	ND (0.001)	< 0.01	SFF11- 053/200-01
					0	0.018	ND (0.003)	0.018	
					7	ND (0.004)	ND (0.001)	< 0.01	
					14	ND (0.004)	ND (0.001)	< 0.01	
					21	ND (0.004)	ND (0.001)	< 0.01	
28	ND (0.004)	ND (0.001)	< 0.01						
SFF11-053/200-01B Matamata New Zealand, 2012 (Unique)	120 SC	2.4 2.4 2.4 2.4		4	14#	ND (0.004)	ND (0.001)	< 0.01	SFF11- 053/200-01
					0	< 0.01	ND (0.001)	< 0.01	
					7	(0.009)	ND (0.001)	< 0.01	
					14	ND (0.004)	ND (0.001)	< 0.01	
					21	ND (0.004)	ND (0.001)	< 0.01	
28	ND (0.004)	ND (0.001)	< 0.01						

Table 26 Residues of spinetoram from supervised trials on feijoa in New Zealand (for estimation of STMR)

FEIJOA Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl-J	N-formyl-J	Total	
GAP, Australia	120 SC	4.8		4		0					
SFF11- 053/2012-04a Matamata New Zealand, 2013 (Unique)	120 SC	4.8		4	14#	ND (0.004)	ND (0.001)	ND (0.0002)	ND (0.0001)	< 0.02	SFF11- 053/2012- 04
		4.8			0	< 0.01 (0.009)	ND (0.001)	ND (0.0004)	ND (0.0001)	< 0.02	
		4.8			7	< 0.01 (0.009)	ND (0.001)	ND (0.0004)	ND (0.0001)	< 0.02	
		4.8			14	ND (0.004)	ND (0.001)	ND (0.0002)	ND (0.0001)	< 0.02	
		4.8			21	ND (0.004)	ND (0.001)	ND (0.0002)	ND (0.0001)	< 0.02	
SFF11-053/200- 01A Maungaturoto New Zealand, 2012 (Opal Star)	120 SC	2.4		3	14#	ND (0.004)	ND (0.001)	ND (0.0002)	ND (0.0001)	< 0.02	SFF11- 053/200- 01
		2.4			0	0.018	ND (0.003)	ND (0.0009)	ND (0.0003)	0.028	
		2.4			7	ND (0.004)	ND (0.001)	ND (0.0002)	ND (0.0001)	< 0.02	
		2.4			14	ND (0.004)	ND (0.001)	ND (0.0002)	ND (0.0001)	< 0.02	
		2.4			21	ND (0.004)	ND (0.001)	ND (0.0002)	ND (0.0001)	< 0.02	
SFF11-053/200- 01B Matamata New Zealand, 2012 (Unique)	120 SC	2.4		4	14#	ND (0.004)	ND (0.001)	ND (0.0002)	ND (0.0001)	< 0.02	SFF11- 053/200- 01
		2.4			0	< 0.01 (0.009)	ND (0.001)	ND (0.0004)	ND (0.0001)	< 0.02	
		2.4			7	ND (0.004)	ND (0.001)	ND (0.0002)	ND (0.0001)	< 0.02	
		2.4			14	ND (0.004)	ND (0.001)	ND (0.0002)	ND (0.0001)	< 0.02	
		2.4			21	ND (0.004)	ND (0.001)	ND (0.0002)	ND (0.0001)	< 0.02	
			28	ND (0.004)	ND (0.001)	ND (0.0002)	ND (0.0001)	< 0.02			

Mango

Six supervised trials were carried out in Thailand during 2013 (IR-4 PR No. 10992). Each treated plot received 3 applications of 250 WG spinetoram at a nominal rate of 60 g ai/ha and RTI 7. Samples of mature fruits were collected 14 days after the last application and for decline trials, also at 0, 3, 7, 14 and 21 days after application. The GAP in Thailand consists of 3 applications at 60 g ai/ha, RTI 7 days and a PHI of 14 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in fruit.

Table 27 Residues of spinetoram from supervised trials on mango in Thailand (for estimation of MRL)

MANGO Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	Total	
GAP, Thailand			60	3		14				
10992.13-TH*01 Plang Yao, Chachoengsao, Thailand, 2015 (Nam Dok Mai)	250 WG		63	3	WF	0	0.018	< 0.01	0.018	IR-4 PR No. 10992
			61.4		(flesh with peel)	3	< 0.01	< 0.01	< 0.01	
			59.7			7	< 0.01	< 0.01	< 0.01	
						14	< 0.01	< 0.01	< 0.01	
						21	< 0.01	< 0.01	< 0.01	
10992.13-TH*02 Ampfior Wang Thailand, 2015 (Nam Dok Mai)	250 WG		60.7	3	WF	0	< 0.01	< 0.01	< 0.01	IR-4 PR No. 10992
			62.6							
			62.3							
10992.13-TH*03 Thailand, 2015 (Khiao Sawoei)	250 WG		63.3	3	WF	0	< 0.01	< 0.01	< 0.01	IR-4 PR No. 10992
			60.4		WF	14	< 0.01	< 0.01	< 0.01	
			62.4		flesh	0	< 0.01	< 0.01	< 0.01	
					flesh	14	< 0.01	< 0.01	< 0.01	
					peel	0	< 0.01	< 0.01	< 0.01	
					peel	14	< 0.01	< 0.01	< 0.01	

MANGO Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	Total	
10992.13-TH04 Thailand, 2015 (Nom Dok Mai Sritong)	250 WG		62.2 62.1 62.2	3	WF	0	0.025	< 0.01	0.025	IR-4 PR No. 10992
						3	0.020	< 0.01	0.020	
						7	< 0.01	< 0.01	< 0.01	
						14	< 0.01	< 0.01	< 0.01	
						21	< 0.01	< 0.01	< 0.01	
10992.13-TH05 Thailand, 2015 (Maha Chanok)	250 WG		62.2 62.2 62.2	3	WF	14	< 0.01	< 0.01	< 0.01	IR-4 PR No. 10992
10992.13-TH06 Thailand, 2015 (Num Dok Mai)	250 WG		62.7 62.7 62.7	2	WF flesh peel	14	< 0.01	< 0.01	< 0.01	IR-4 PR No. 10992
						14	< 0.01	< 0.01	< 0.01	
						14	< 0.01	< 0.01	< 0.01	

Table 28 Residues of spinetoram from supervised trials on Mango in Thailand (for estimation of STMR)

MANGO Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	N- demethyl- J	N- formyl-J	Total	
GAP, Thailand			60	3		14						
10992.13- TH*01 Thailand, 2015 (Nam Dok Mai)	250 WG		63 61.4 59.7	3	WF	0	0.018	< 0.01	< 0.01	< 0.01	0.028	IR-4 PR No. 10992
						3	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
						7	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
						14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
						21	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
10992.13- TH*02 Thailand, 2015 (Nam Dok Mai)	250 WG		60.7 62.6 62.3	3	WF	0	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	IR-4 PR No. 10992
10992.13- TH*03 Thailand, 2015 (Khiao Sawoei)	250 WG		63.3 60.4 62.4	3	WF WF flesh flesh peel peel	0	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	IR-4 PR No. 10992
						14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
						0	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
						14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
						14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
10992.13-TH04 Thailand, 2015 (Nom Dok Mai Sritong)	250 WG		62.2 62.1 62.2	3	WF	0	0.025	< 0.01	< 0.01	< 0.01	0.035	IR-4 PR No. 10992
						3	0.020	< 0.01	< 0.01	< 0.01	0.030	
						7	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
						14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
						21	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
10992.13-TH05 Thailand, 2015 (Maha Chanok)	250 WG		62.2 62.2 62.2	3	WF	14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	IR-4 PR No. 10992
10992.13-TH06 Thailand, 2015 (Num Dok Mai)	250 WG		62.7 62.7 62.7	2	WF flesh peel	14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	IR-4 PR No. 10992
						14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	
						14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	

Tamarillo

Three supervised trials on tamarillo were conducted in New Zealand during 2012 and 2013 (SFF11-053/2012-04 and SFF11-053/200-01). Each treated plot received 4 applications of 120 SC spinetoram at a nominal rate of 24–50 g ai/ha and RTI 14. Samples of mature fruits were collected 14 days after the last application and for decline trials, at 0, 7, 21 and 28 days after application. Samples were also taken at 14 days after the third application. The GAP in New Zealand consists of 4 applications at 4.8 g ai/hL, RTI 14 days and a PHI of 14 day.

Residues of spinetoram were analysed by method GRM 05.03, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram in the acceptable range of 70–120% in fruit.

Residues were calculated as total spinetoram (J + L) in the trials. The apple metabolism study (JMPR 2008) was used to estimate XDE-175-L and spinetoram metabolites concentrations. No detectable residues of XDE-175-L were found after application of ¹⁴C-XDE-175-L at a rate of 1.1 kg ai/ha. The highest rate applied in the presented trials was 50 g ai/ha of 120 SC spinetoram (XDE-175-J and XDE-175-L). Therefore, it is assumed that the residue value for XDE-175 J + L is for residues of XDE-175-J only and residues of XDE-175-L are recorded as 'not detected'. Metabolites are recorded as 9.1% (conversion factor 0.091) and 3.0% (conversion factor 0.03) of the XDE-175-J residues for N-demethyl-J and N-formyl-J respectively.

Table 29 Residues of spinetoram from supervised trials on tamarillo in New Zealand (for estimation of maximum residue level)

TAMARILLO Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, New Zealand		4.8		4	14				
SFF11-053/2012-04b Maungatapere New Zealand, 2013 (Liard's Large)	120 SC	4.8	48	4	14#	ND	ND	< 0.01	SFF11-053/2012-04
		4.8	48		0	0.020	ND	0.020	
		4.8	48		7	ND	ND	< 0.01	
		4.8	48		14	ND	ND	< 0.01	
					21	ND	ND	< 0.01	
			28	ND	ND	< 0.01			
SFF11-053/200-01c Maungatapere New Zealand, 2012 (Liard's Large)	120 SC	2.4	24	4	14#	ND	ND	< 0.01	SFF11-053/200-01
		2.4	24		0	ND	ND	< 0.01	
		2.4	24		7	ND	ND	< 0.01	
		2.4	24		14	ND	ND	< 0.01	
					21	ND	ND	< 0.01	
			28	NA	ND	< 0.01			
SFF11-053/200-01d Opotiki New Zealand, 2012 (Liard's Large)	120 SC	2.4	36	4	14#	ND	ND	< 0.01	SFF11-053/200-01
		2.4	36		0	ND	ND	< 0.01	
		2.4	36		7	ND	ND	< 0.01	
		2.4	36		14	ND	ND	< 0.01	
					21	ND	ND	< 0.01	
			28	ND	ND	< 0.01			

*Days before last application; ND- Not detected; # days after third application.

Table 30 Residues of spinetoram from supervised trials on tamarillo in New Zealand (for estimation of STMR)

TAMARILLO Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg				Report No.	
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl-J	N-formyl-J		Total
GAP, New Zealand		4.8		4	14						
SFF11-053/2012-04b Maungatapere New Zealand, 2013 (Liard's Large)	120 SC	4.8	48	4	14#	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	SFF11-053/2012-04
		4.8	48		0	0.020	ND	ND (0.0018)	ND (0.0006)	0.030	
		4.8	48		7	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
		4.8	48		14	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
					21	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
			28	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02			
SFF11-053/200-01c Maungatapere New Zealand, 2012 (Liard's Large)	120 SC	2.4	24	4	14#	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	SFF11-053/200-01
		2.4	24		0	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
		2.4	24		7	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
		2.4	24		14	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
					21	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
			28	NA	ND	ND (0.0009)	ND (0.0003)	< 0.02			

TAMARILLO Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl- J	N-formyl-J	Total	
SFF11-053/200-01d Opotiki New Zealand, 2012 (Liard's Large)	120 SC	2.4	36	4	14#	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	SFF11- 053/200-01
		2.4	36		0	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
		2.4	36		7	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
		2.4	36		14	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
		2.4	36		21	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	
					28	ND	ND	ND (0.0009)	ND (0.0003)	< 0.02	

*Days before last application; ND- Not detected; # days after third application.

Kiwifruit

Two supervised trials were carried out in New Zealand in 2012 (Report SFF11-053/200-01). The treated plot received 4 applications of 120 SC spinetoram at 2.4 g ai/hL and RTI 14. Samples of mature fruits were collected 0 days after the last application and for decline, at 7, 14, 21 and 28 days after application. Samples were also taken at 14 days after the third application. The GAP in Australia consists of 4 applications at 4.8 g ai/hL, RTI 7-14 days and a PHI of 7 days.

Residues of spinetoram were analysed by method GRM 05.03, with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram in the acceptable range of 70–120% in fruit.

Residues were calculated as total spinetoram (J + L). However, based on the apple metabolism study (JMPR 2008), residues of XDE-175-J and XDE-175-L were in the ratio of 0.88 to 0.12 and this ratio is applied to the total residue value of XDE-175-J plus XDE-175-L to get individual values for each XDE-175-J and XDE-175-L. Spinetoram metabolites, N-demethyl-175-J and N-formyl-175-J are estimated as 5% (conversion factor 0.05) and 1.7% (conversion factor 0.017) respectively of XDE-175-J residues.

Table 31 Residues of spinetoram from supervised trials on kiwifruit in New Zealand (for estimation of MRL)

KIWIFRUIT Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, Australia	120 SC	4.8		4	7				
SFF11-053/200-01K Omokoroa New Zealand, 2012 (G3)	120 SC	2.4		4	14#	0.038	< 0.01 (0.005)	0.038	SFF11- 053/200-01
		2.4			0	0.086	0.012	0.098	
		2.4			7	0.048	< 0.01 (0.006)	<u>0.048</u>	
		2.4			14	0.032	ND (0.004)	0.032	
		2.4			21	0.062	< 0.01 (0.009)	0.062	
					28	0.034	< 0.01 (0.005)	0.034	
SFF11-053/200-01L Katikati New Zealand, 2012 (G14)	120 SC	2.4		4	14#	0.051	< 0.01 (0.007)	0.051	SFF11- 053/200-01
		2.4			0	0.123	0.017	0.14	
		2.4			7	0.053	< 0.01 (0.007)	<u>0.053</u>	
		2.4			14	0.070	0.010	0.080	
		2.4			21	0.040	< 0.01 (0.006)	0.040	
					28	0.022	ND (0.003)	0.022	

Table 32 Residues of spinetoram from supervised trials on kiwifruit in New Zealand (for estimation of STMR)

KIWIFRUIT Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl-J	N-formyl-J	Total	
GAP, Australia	120 SC	4.8		4	7						
SFF11-053/200-01K Omokoroa New Zealand, 2012 (G3)	120 SC	2.4		4	14#	0.038	< 0.01 (0.005)	ND (0.0019)	ND (0.0006)	0.048	SFF11- 053/200- 01
		2.4			0	0.086	0.012	ND (0.0043)	ND (0.0015)	0.108	
		2.4			7	0.048	< 0.01 (0.006)	ND (0.0024)	ND (0.0008)	<u>0.058</u>	
		2.4			14	0.032	ND (0.004)	ND (0.0016)	ND (0.0005)	0.042	
		2.4			21	0.062	< 0.01 (0.009)	ND (0.0031)	ND (0.0011)	0.072	
				28	0.034	< 0.01 (0.005)	ND (0.0017)	ND (0.0006)	0.044		
SFF11-053/200-01L Katikati New Zealand, 2012 (G14)	120 SC	2.4		4	14#	0.051	< 0.01 (0.007)	ND (0.0026)	ND (0.0009)	0.061	SFF11- 053/200- 01
		2.4			0	0.123	0.017	< 0.01 (0.0062)	ND (0.0021)	0.150	
		2.4			7	0.053	< 0.01 (0.007)	ND (0.0026)	ND (0.0009)	<u>0.063</u>	
		2.4			14	0.070	0.010	ND (0.0035)	ND (0.0012)	0.090	
		2.4			21	0.040	< 0.01 (0.006)	ND (0.0020)	ND (0.0007)	0.050	
				28	0.022	ND (0.003)	ND (0.0011)	ND (0.0004)	0.032		

Passion fruit

Three supervised trials were carried out in New Zealand in 2012 and 2013 (Reports FF11-053/2012-04 and SFF11-053/200-01). The treated plot received 4 applications of 120 SC spinetoram at 2.4 or 4.8 g ai/hL and RTI 13/14. Samples of mature fruits were collected 0 days after the last application and for decline, at 7, 14, 21 and 28 days after application. Samples were also taken at 14 days after the third application. The GAP in Australia consists of 4 applications at 4.8 g ai/hL, RTI 7–14 days and a PHI of 0 days.

Residues of spinetoram were analysed by method GRM 05.03, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram in the acceptable range of 70–120% in fruit.

Residues were calculated as total spinetoram (J + L). However, based on the apple metabolism study (JMPR 2008) at 0 DAT, residues of XDE-175-J and XDE-175-L were in the ratio of 0.88 to 0.12 and this ratio is applied to the total residue value of XDE-175-J plus XDE-175-L to get individual values for each XDE-175-J and XDE-175-L. Spinetoram metabolites, N-demethyl-175-J and N-formyl-175-J are estimated as 5% (conversion factor 0.05) and 1.7% (conversion factor 0.017) respectively of XDE-175-J residues.

Table 33 Residues of spinetoram from supervised trials on passion fruit in New Zealand (for estimation of MRL)

PASSION FRUIT Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, Australia	120 SC	4.8		4	0				
SFF11-053/2012- 04c Katikati New Zealand, 2013 (Purple)	120 SC	4.8		4	14#	ND (0.004)	ND (0.001)	< 0.01	SFF11- 053/2012-04
		4.8			0	0.051	< 0.01	<u>0.051</u>	
		4.8			7	< 0.01	(0.007)	< 0.01	
		4.8			14	(0.009)	ND (0.001)	< 0.01	
					21	ND (0.004)	ND (0.001)	< 0.01	
			28	ND (0.004)	ND (0.001)	< 0.01			
					ND (0.004)	ND (0.001)	< 0.01		
SFF11-053/200-01G Aongatete New Zealand, 2012 (Purple)	120 SC	2.4		4	14#	< 0.01	ND (0.001)	< 0.01	SFF11- 053/200-01
		2.4			0	(0.009)	0.010	<u>0.087</u>	
		2.4			7	0.077	ND (0.001)	< 0.01	
		2.4			14	ND (0.004)	ND (0.001)	< 0.01	
					21	ND (0.004)	ND (0.001)	< 0.01	
			28	ND (0.004)	ND (0.001)	< 0.01			
					ND (0.004)	ND (0.001)	< 0.01		

PASSION FRUIT Country, year (Variety)	Form	Application/ treatment			DALA , days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
SFF11-053/200-01H Katikati New Zealand, 2012 (Purple)	120 SC	2.4 2.4 2.4 2.4		4	14# 0 7 14 21 28	ND (0.004) 0.049 ND (0.004) ND (0.004) ND (0.004) ND (0.004)	ND (0.001) < 0.01 (0.007) ND (0.001) ND (0.001) ND (0.001) ND (0.001)	< 0.01 <u>0.049</u> < 0.01 < 0.01 < 0.01 < 0.01	SFF11- 053/200-01

Table 34 Residues of spinetoram from supervised trials on passion fruit in New Zealand (for estimation of STMR)

PASSION FRUIT Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl- J	N-formyl-J	Total	
GAP, Australia	120 SC	4.8		4	0						
Katikati New Zealand, 2013 (Purple)	120 SC	4.8 4.8 4.8		4	14# 0 7 14 21 28	ND (0.004) 0.051 < 0.01(0.009) ND (0.001) ND (0.004) ND (0.004) ND (0.004)	ND (0.001) < 0.01(0.007) ND (0.001) ND (0.001) ND (0.001) ND (0.001)	ND (0.0002) ND (0.0026) ND (0.0004) ND (0.0002) ND (0.0002) ND (0.0002)	ND (0.0001) ND (0.0009) ND (0.0001) ND (0.0001) ND (0.0001) ND (0.0001)	< 0.02 <u>0.061</u> < 0.02 < 0.02 < 0.02 < 0.02	SFF11- 053/2012- 04
Aongatete New Zealand, 2012 (Purple)	120 SC	2.4 2.4 2.4		4	14# 0 7 14 21 28	< 0.01(0.009) 0.010 0.077 ND (0.004) ND (0.004) ND (0.004)	ND (0.001) ND (0.0038) ND (0.001) ND (0.001) ND (0.001) ND (0.001)	ND (0.0004) ND (0.0013) ND (0.0002) ND (0.0002) ND (0.0002) ND (0.0002)	ND (0.0001) ND (0.0013) ND (0.0001) ND (0.0001) ND (0.0001) ND (0.0001)	< 0.02 <u>0.097</u> < 0.02 < 0.02 < 0.02 < 0.02	SFF11- 053/200-01
Katikati New Zealand, 2012 (Purple)	120 SC	2.4 2.4 2.4		4	14# 0 7 14 21 28	ND (0.004) 0.049 ND (0.004) ND (0.004) ND (0.004) ND (0.004)	ND (0.001) < 0.01(0.007) ND (0.001) ND (0.001) ND (0.001) ND (0.001)	ND (0.0002) ND (0.0025) ND (0.0013) ND (0.0002) ND (0.0002) ND (0.0002)	ND (0.0001) ND (0.0008) ND (0.0001) ND (0.0001) ND (0.0001) ND (0.0001)	< 0.02 <u>0.059</u> < 0.02 < 0.02 < 0.02 < 0.02	SFF11- 053/200-01

Bulb vegetable

Previously MRLs were recommended for onion (bulb) at 0.01 mg/kg and Welsh onion at 0.8 mg/kg. No data had been submitted for leek.

Leek

Eight supervised trials were carried out in Denmark (2), Germany (4) and Poland (2) during 2014 and 2015 (Reports 150016 and 140141). Each treated plot received 2 applications of 25 SC spinetoram at a nominal rate 60 g ai/ha and RTI 28 days. Samples of mature leek plants were collected 6–8 days after the last application and for decline trials, also at 0, 1, 3 and 13/14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Europe consists of 2 applications at 60 g ai/ha, RTI 28 days and a PHI of 7 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in leek plant.

Table 35 Residues of spinetoram from supervised trials on leek in the EU (for estimation of MRL)

LEEK Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, NL			60	2	7				
S14-02929-01 Nørreby, Fyn Denmark, 2014 (Lexton)	25 SC	10 10	64 62	2	7	0.018	ND	<u>0.018</u>	140141
S14-02929-02 Neurott, Baden Württemberg Germany, 2014 (Sevilla)	25 SC	10 10	59 63	2	7	ND	ND	<u>< 0.01</u>	140141
S14-02929-03 Altenbruch, Niedersachsen Germany, 2014 (Alcazar)	25 SC	10 10	60 60	2	0* 0 1 3 6 13	< 0.01 0.049 0.045 0.021 0.021 < 0.01	ND 0.011 < 0.01 < 0.01 < 0.01 ND	< 0.01 0.060 0.045 0.021 <u>0.021</u> < 0.01	140141
S14-02929-04 Chludowo, Wielkopolska Poland, 2014 (Lancia)	25 SC	10 10	61 61	2	0* 0 1 3 7 14	ND 0.317 0.297 0.033 0.018 < 0.01	ND 0.073 0.062 < 0.01 ND ND	< 0.01 0.039 0.359 0.033 <u>0.018</u> < 0.01	140141
S15-01037-01 Bogense, Syddanmark Denmark, 2015 (Lexton)	25 SC	15 15	65 64	2	0* 0 1 3 7 13	ND 0.157 0.074 0.040 0.014 0.010	ND 0.044 0.015 < 0.01 ND ND	< 0.01 0.020 0.089 0.040 <u>0.014</u> 0.010	150016
S15-01037-02 Altenbruch, Niedersachsen Germany, 2015 (Herbstriesen)	25 SC	12 12	61 61	2	0* 0 1 3 7 14	ND 0.057 0.058 0.033 0.028 < 0.01	ND 0.016 0.012 < 0.01 < 0.01 ND	< 0.01 0.073 0.070 0.033 <u>0.028</u> < 0.01	150016
S15-01037-03 Unterriexingen, Markgröningen, Ludwigsburg, Baden- Württemberg Germany, 2015 (Krupton F1)	25 SC	12 12	65 62	2	6	< 0.01	ND	<u>< 0.01</u>	150016
S15-01037-04 Chludowo, Wielkopolska, Poland, 2015 (Bulgina)	25 SC	15 15	60 65	2	8	< 0.01	ND	<u>< 0.01</u>	150016

* Before the last application. ND- Not detected.

Table 36 Residues of spinetoram from supervised trials on leek in the EU (for estimation of STMR)

LEEK Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.	
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N-demethyl- J	N-formyl- J	Total		
GAP, NL			60	2	7							
S14-02929-01 Nørreby, Fyn Denmark, 2014 (Lexton)	25 SC	10 10	64 62	2	7	0.018	ND	< 0.01	ND	<u>0.028</u>	140141	
S14-02929-02 Neurott, Baden Württemberg Germany, 2014 (Sevilla)	25 SC	10 10	59 63	2	7	ND	ND	ND	ND	<u>< 0.02</u>	140141	
S14-02929-03 Altenbruch, Niedersachsen Germany, 2014 (Alcazar)	25 SC	10 10	60 60	2	0* 0 1 3 6 13	< 0.01 0.049 0.045 0.021 0.021 < 0.01	ND 0.011 < 0.01 < 0.01 < 0.01 ND	ND ND 0.011 < 0.01 < 0.01 ND	ND ND ND ND ND ND	< 0.02 0.070 0.066 0.031 <u>0.031</u> < 0.02	140141	
S14-02929-04 Chludowo, Wielkopolska Poland, 2014 (Lancia)	25 SC	10 10	61 61	2	0* 0 1 3 7 14	ND 0.317 0.297 0.033 0.018 < 0.01	ND 0.073 0.062 < 0.01 ND ND	ND 0.023 0.050 0.022 < 0.01 ND	ND ND 0.022 0.016 < 0.01 ND	< 0.02 0.423 0.431 0.071 <u>0.028</u> < 0.02	140141	
S15-01037-01 Bogense, Syddanmark Denmark, 2015 (Lexton)	25 SC	15 15	65 64	2	0* 0 1 3 7 13	ND 0.157 0.074 0.040 0.014 0.010	ND 0.044 0.015 < 0.01 ND ND	ND 0.014 0.058 0.029 < 0.01 < 0.01	ND ND 0.032 0.026 < 0.01 < 0.01	< 0.02 0.225 0.179 0.095 <u>0.024</u> 0.020	150016	
S15-01037-02 Altenbruch, Niedersachsen Germany, 2015 (Herbstriesen)	25 SC	12 12	61 61	2	0* 0 1 3 7 14	ND 0.057 0.058 0.033 0.028 < 0.01	ND 0.016 0.012 < 0.01 < 0.01 ND	ND < 0.01 0.025 0.018 0.015 < 0.01	ND ND < 0.01 < 0.01 < 0.01 ND	< 0.02 0.083 0.105 0.061 <u>0.053</u> < 0.02	150016	
S15-01037-03 Unterriexingen, Markgröningen, Ludwigsburg, Baden- Württemberg Germany, 2015 (Krupton F1)	25 SC	12 12	65 62	2	6	< 0.01	ND	ND	< 0.01	<u>< 0.02</u>	150016	
S15-01037-04 Chludowo, Wielkopolska, Poland, 2015 (Bulgina)	25 SC	15 15	60 65	2	8	< 0.01	ND	ND	ND	<u>< 0.02</u>	150016	

* Before the last application. ND- Not detecte

Fruiting vegetables, Cucurbits

Cucurbits, edible peel - Cucumber

Eight indoor trials from Brazil, were carried out during 2006 and 2007 (Reports 246823, 246821/256519 (amended), 246822, 246830, 246829, 246828, 246825, 246831, 246820, 246819, 246824, and 246827). Each treated plot received 4 applications of 250 WG spinetoram at a nominal rate of 50 g ai/ha. Samples of mature fruits were collected 3 days after the last application and for

decline trials, also at 0, 1, 7, 10 and 14 days after application. Samples were frozen and analysed within the period of demonstrated stability. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in whole fruit.

Six outdoor trials from Europe were carried out in France (2), Spain (2), Greece (1) and Italy (1) during 2012 and 2013 (Reports GHE-P-12826 and 130175). Each treated plot received 2 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI 27–29. Samples of mature fruit were collected 3 days after the last application and for decline trials fruit, also at 0, 1, 7/8 and 13/14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in whole fruit.

Six indoor trials from Europe were carried out in France (1), Spain (1), Italy (1), Greece (1) and Germany (2), during 2012 and 2013 (Reports GHE-P-12817 and 130164). Each treated plot received 3 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI 12–14. Samples of mature fruit were collected 3 days after the last application and for decline trials fruit, also at 0, 1, 7/8 and 13-16 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in whole fruit, except for N-formyl XDE-175-J in report GHE-P-12817. However, in all trials the residues of N-formyl XDE-175-J are below the LOQ.

Table 39 Residues of spinetoram from supervised trials on Cucumber in the EU and Brazil (for estimation of MRL)

CUCUMBER Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175- J	XDE-175-L	Total	
GAP, Brazil	250 WG		50	4	3				
Brazil (Indoor)									
060027 Campinas Brazil, 2006/2007 (Tysuataro)	250 WG		50	4	0	0.01	ND	0.01	246823 and 246821/256519 (amended)
			50		1	< 0.01	ND	< 0.01	
			50		3	< 0.01	ND	<u>< 0.01</u>	
			50		7	< 0.01	ND	< 0.01	
			50		10	< 0.01	ND	< 0.01	
			50		14	ND	ND	< 0.01	
060027.01 Jaboticabal Brazil, 2006/2007 (Tsubasa)	250 WG		50	4	3	< 0.01	ND	<u>< 0.01</u>	246822 246828
			50						
			50						
			50						
060027.02 Indianapolis Brazil, 2006/2007 (Nikkey)	250 WG		50	4	3	ND	ND	<u>< 0.01</u>	246830 246825
			50						
			50						
			50						

CUCUMBER Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175- J	XDE-175-L	Total	
060027.03 Pouso Alegre Brazil, 2006/2007 (Safira)	250 WG		50	4	0	0.017	< 0.01	0.017	246831 246829
			50		1	< 0.01	ND	< 0.01	
			50		3	< 0.01	ND	<u>< 0.01</u>	
			50		7	< 0.01	ND	< 0.01	
					10	ND	ND	< 0.01	
	14	ND	ND	< 0.01					
060027.04 Mogi Mirim Brazil, 2006 Tsuyatano	250 WG		50	4	0	0.01	ND	0.010	246820
			50		1	0.01	ND	0.010	
			50		3	ND	ND	<u>< 0.01</u>	
			50		7	ND	ND	< 0.01	
					10	ND	ND	< 0.01	
	14	ND	ND	< 0.01					
060027.05 Campinas Brazil, 2006 (Runner)	250 WG		50	4	0	0.023	ND	0.023	246819
			50		1	< 0.01	ND	< 0.01	
			50		3	0.012	ND	<u>0.012</u>	
			50		7	< 0.01	ND	< 0.01	
					10	< 0.01	ND	< 0.01	
	14	ND	ND	< 0.01					
060027.06 Piracicaba Brazil, 2006 (Twister)	250 WG		50	4	3	ND	ND	<u>< 0.01</u>	246824
			50						
			50						
			50						
060027.07 Rolandia Brazil, 2007 (Japones)	250 WG		50	4	3	ND	ND	<u>< 0.01</u>	246827
			50						
			50						
			50						
Europe (Outdoor)									
CEMS-5431E Los Palacios y Villafranca, Sevilla Spain, 2012 (Camas)	25 SC	15 7.5	59 58	2	0*	ND	ND	< 0.01	GHE-P-12826
					0	0.018	< 0.01	0.018	
					1	< 0.01	ND	< 0.01	
					3	< 0.01	ND	<u>< 0.01</u>	
					8	< 0.01	ND	< 0.01	
14	ND	ND	< 0.01						
CEMS-5431F Montferran Savès, Midi-Pyrénées France, 2012 (Gynial)	25 SC	8.6 8.6	61 59	2	0*	ND	ND	< 0.01	GHE-P-12826
					0	0.012	< 0.01	0.012	
					1	< 0.01	ND	< 0.01	
					3	ND	ND	<u>< 0.01</u>	
					7	ND	ND	< 0.01	
13	ND	ND	< 0.01						
CEMS-5431G Gaeta, Lazio Italy, 2012 (Piccolo de Parigi)	25 SC	6 6	56	2	3	ND	ND	<u>< 0.01</u>	GHE-P-12826
			57						
CEMS-5431H Perea, Thessaloniki Greece, 2012 (Baboo F1)	25 SC	5.5 5.5	55	2	3	< 0.01	ND	<u>< 0.01</u>	GHE-P-12826
			55						
S13-02009-01 Xativa, Valencia Spain, 2013 (Dasher)	25 SC	8.5 6	64	2	0*	ND	ND	< 0.01	130175
			60		0	0.032	< 0.01	0.032	
					1	0.018	ND	0.018	
					3	< 0.01	ND	<u>< 0.01</u>	
					7	ND	ND	< 0.01	
	14	ND	ND	< 0.01					
S13-02009-02 Laurent de la Salanque, Pyrénées- Orientales France, 2013	25 SC	6 6	63	2	3	< 0.01	ND	<u>< 0.01</u>	130175
			56						
Europe (Indoor)									

CUCUMBER Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175- J	XDE-175-L	Total	
S13-02021-01 Altenbruch, Niedersachsen Germany, 2013 (Cordoba)	25 SC	12 9 8	58 62 57	3	0*	< 0.01	ND	< 0.01	130164
					0	0.029	< 0.01	0.029	
					1	0.013	ND	0.013	
					3	0.010	ND	<u>0.010</u>	
					7	< 0.01	ND	< 0.01	
16	ND	ND	< 0.01						
S13-02021-03 Unterriexingen, Baden-Württemberg Germany, 2013 (Indira)	25 SC	6 6 6	60 61 60	3	3	0.012	ND	<u>0.012</u>	130164
CEMS-5422E Los Palacios y Villafranca, Sevilla Spain, 2012 (Suso)	25 SC	20 7.5 6.3	60 64 59	3	<0	ND	ND	< 0.01	GHE-P-12817
					0	0.028	< 0.01	0.028	
					1	< 0.01	ND	< 0.01	
					3	< 0.01	ND	< 0.01	
					8	< 0.01	ND	< 0.01	
15	< 0.01	ND	< 0.01						
CEMS-5422F Scanzano Jonico, Basilicata Italy, 2012 (Prima Top)	25 SC	6 6 6	60 60 60	3	<0	ND	ND	< 0.01	GHE-P-12817
					0	0.028	< 0.01	0.028	
					1	0.01	ND	0.010	
					3	0.011	ND	<u>0.011</u>	
					7	< 0.01	ND	< 0.01	
13	ND	ND	< 0.01						
CEMS-5422G Nimes, Languedoc- Roussillon France, 2012 (Rober)	25 SC	20 20 20	65 65 61	3	3	< 0.01	ND	<u>< 0.01</u>	GHE-P-12817
CEMS-5422H Chalkidona, Thessaloniki Greece, 2012 (Tiffany F1)	25 SC	5.5 5.5 5.5	55 55 55	3	3	0.021	< 0.01	<u>0.021</u>	GHE-P-12817

ND- Not detected; * days before last application

Table 40 Residues of spinetoram from supervised trials on Cucumber in the EU and Brazil (for estimation of STMR)

CUCUMBER Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg				Report No.	
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N- demethyl-J	N-formyl- J		Total
GAP, Brazil			50	4	3						
Brazil (indoor)											
060027 Campinas Brazil, 2006/2007 (Tysuataro)	250 WG		50	4	0	0.01	ND	< 0.01	ND	0.020	246823 and 246821/256519 (amended)
					1	< 0.01	ND	ND	ND	< 0.02	
					3	< 0.01	ND	ND	ND	< 0.02	
					7	< 0.01	ND	ND	ND	< 0.02	
					10	< 0.01	ND	ND	ND	< 0.02	
14	ND	ND	ND	ND	< 0.02						
60027.01 Jaboticabal Brazil, 2006/2007 (Tsubasa)	250 WG		50 50 50	4	3	< 0.01	ND	ND	ND	< 0.02	246822 246828
60027.02 Indianapolis Brazil, 2006/2007 (Nikkey)	250 WG		50 50 50	4	3	ND	ND	ND	ND	< 0.02	246830 246825

CUCUMBER Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N- demethyl- J	N-formyl- J	Total	
060027.03 Pouso Alegre Brazil, 2006/2007 (Safira)	250 WG		50	4	0	0.017	< 0.01	< 0.01	ND	0.027	246831
			50		1	< 0.01	ND	ND	ND	< 0.02	246829
			50		3	< 0.01	ND	ND	ND	< 0.02	
			50		7	< 0.01	ND	ND	ND	< 0.02	
					10	ND	ND	ND	ND	< 0.02	
				14	ND	ND	ND	ND	< 0.02		
60027.04 Mogi Mirim Brazil, 2006 Tsuyatano	250 WG		50	4	0	0.01	ND	ND	ND	0.020	246820
			50		1	0.01	ND	ND	ND	0.020	
			50		3	ND	ND	ND	ND	< 0.02	
			50		7	ND	ND	ND	ND	< 0.02	
					10	ND	ND	ND	ND	< 0.02	
				14	ND	ND	ND	ND	< 0.02		
060027.05 Campinas Brazil, 2006 (Runner)	250 WG		50	4	0	0.023	ND	ND	ND	0.033	246819
			50		1	< 0.01	ND	ND	ND	< 0.02	
			50		3	0.012	ND	ND	ND	0.022	
			50		7	< 0.01	ND	ND	ND	< 0.02	
					10	< 0.01	ND	ND	ND	< 0.02	
				14	ND	ND	ND	ND	< 0.02		
060027.06 Piracicaba Brazil, 2006 (Twister)	250 WG		50	4	3	ND	ND	ND	ND	< 0.02	246824
			50								
			50								
			50								
60027.07 Rolandia Brazil, 2007 (Japones)	250 WG		50	4	3	ND	ND	ND	ND	< 0.02	246827
			50								
			50								
			50								
Europe (Outdoor)											
CEMS-5431E Los Palacios y Villafranca, Sevilla Spain, 2012 (Camas)	25 SC	15 7.5	59 58	2	0*	ND	ND	ND	ND	< 0.02	GHE-P-12826
					0	0.018	< 0.01	ND	ND	0.028	
					1	< 0.01	ND	ND	ND	< 0.02	
					3	< 0.01	ND	ND	ND	< 0.02	
					8	< 0.01	ND	ND	ND	< 0.02	
				14	ND	ND	ND	ND	< 0.02		
CEMS-5431F Montferran Savès, Midi- Pyrénées France, 2012 (Gynial)	25 SC	8.6 8.6	61 59	2	0*	ND	ND	ND	ND	< 0.02	GHE-P-12826
					0	0.012	< 0.01	ND	ND	0.022	
					1	< 0.01	ND	ND	ND	< 0.02	
					3	ND	ND	ND	ND	< 0.02	
					7	ND	ND	ND	ND	< 0.02	
				13	ND	ND	ND	ND	< 0.02		
CEMS-5431G Gaeta, Lazio Italy, 2012 (Piccolo de Parigi)	25 SC	6 6	56 57	2	3	ND	ND	ND	ND	< 0.02	GHE-P-12826
CEMS-5431H Perea, Thessaloniki Greece, 2012 (Baboo F1)	25 SC	5.5 5.5	55 55	2	3	< 0.01	ND	ND	ND	< 0.02	GHE-P-12826
S13-02009-01 Xativa, Valencia Spain, 2013 (Dasher)	25 SC	8.5 6	64 60	2	0*	ND	ND	ND	ND	< 0.02	130175
					0	0.032	< 0.01	< 0.01	ND	0.042	
					1	0.018	ND	ND	ND	0.028	
					3	< 0.01	ND	ND	ND	< 0.02	
					7	ND	ND	ND	ND	< 0.02	
				14	ND	ND	ND	ND	< 0.02		

CUCUMBER Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N- demethyl-J	N-formyl- J	Total	
S13-02009-02 Laurent de la Salanque, Pyrénées- Orientales France, 2013 (Marketer)	25 SC	6 6	63 56	2	3	< 0.01	ND	ND	ND	< 0.02	130175
Europe (Indoor)											
S13-02021-01 Altenbruch, Niedersachsen Germany, 2013 (Cordoba)		12 9 8	58 62 57	3	0* 0 1 3 7 16	< 0.01 0.029 0.013 0.010 < 0.01 ND	ND < 0.01 ND ND ND ND	ND < 0.01 ND ND ND ND	ND ND ND ND ND ND	< 0.02 0.039 0.023 0.020 < 0.02 < 0.02	130164
S13-02021-03 Unterriexingen, Baden- Württemberg Germany, 2013 (Indira)		6 6 6	60 61 60	3	3	0.012	ND	ND	ND	0.022	130164
CEMS-5422E Los Palacios y Villafranca, Sevilla Spain, 2012 (Suso)	25 SC	20 7.5 6.3	60 64 59	3	<0 0 1 3 8 15	ND 0.028 < 0.01 < 0.01 < 0.01 < 0.01	ND < 0.01 ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND ND	< 0.02 0.038 < 0.02 < 0.02 < 0.02 < 0.02	GHE-P-12817
CEMS-5422F Scanzano Jonico, Basilicata Italy, 2012 (Prima Top)	25 SC	6 6 6	60 60 60	3	<0 0 1 3 7 13	ND 0.028 0.01 0.011 < 0.01 ND	ND < 0.01 ND ND ND ND	ND ND ND ND ND ND	ND ND < 0.01 < 0.01 < 0.01 ND	< 0.02 0.038 0.020 0.021 < 0.02 < 0.02	GHE-P-12817
CEMS-5422G Nîmes, Languedoc- Roussillon France, 2012 (Rober)	25 SC	20 20 20	65 65 61	3	3	< 0.01	ND	ND	ND	< 0.02	GHE-P-12817
CEMS-5422H Chalkidona, Thessaloniki Greece, 2012 (Tiffany F1)	25 SC	5.5 5.5 5.5	55 55 55	3	3	0.021	< 0.01	ND	< 0.01	0.031	GHE-P-12817

ND- Not detected; * days before last application.

Summer squash

Six outdoor residue trials from Europe were carried out in France (2), Spain (1), Greece (1) and Italy (2) during 2012 and 2013 (Reports GHE-P-12826 and 130175). Each treated plot received 2 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI 27-29. Samples of mature fruit were collected 3 days after the last application and for decline trials fruit, also at 0, 1, 7 and 13/14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in whole fruit.

Six indoor residue trials from Europe were carried out in France (2), Spain (1), Italy (1), Netherlands (1) and Greece (1), during 2012 and 2013 (Reports GHE-P-12817 and 130164). Each treated plot received 3 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI 12-16. Samples of mature fruit were collected 3 days after the last application and for decline trials fruit, also at 0, 1, 7 and 13/14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in whole fruit, except for N-formyl XDE-175-J in report GHE-P-12817. However, in all trials the residues of N-formyl XDE-175-J are below the LOQ.

Table 41 Residues of spinetoram from supervised trials on summer squash in the EU (for estimation of MRL)

SUMMER SQUASH Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175- J	XDE-175-L	Total	
GAP, Brazil			50	4	3				
Europe (outdoor)									
CEMS-5431A Los Palacios y Villafranca, Sevilla Spain, 2012 (Amelia)	25 SC	15 7.5	58 86	2	0* 0 1 3 7 13	ND < 0.01 < 0.01 < 0.01 ND ND ND	ND ND ND ND ND ND	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	GHE-P-12826
CEMS-5431B Monferran Savès, Midi-Pyrénées France, 2012 (Cora)	25 SC	8.6 8.6	58 62	2	0* 0 1 3 7 14	ND 0.027 0.016 < 0.01 ND ND	ND < 0.01 ND ND ND ND	< 0.01 0.027 0.016 < 0.01 < 0.01 < 0.01	GHE-P-12826
CEMS-5431C Asti, Piemonte Italy, 2012 (Xsara)	25 SC	6 6	58 60	2	3	< 0.01	ND	< 0.01	GHE-P-12826
CEMS-5431D Chalkidona, Thessaloniki Greece, 2012 (Jedida FI)	25 SC	5.5 5.5	55 55	2	3	< 0.01	ND	< 0.01	GHE-P-12826
S13-02009-04 Saint Laurent de la Salanque, Pyrénées- Orientales France, 2013 (Greyzini)	25 SC	6 6	64 61	2	3	0.012	ND	0.012	130175
S13-02009-05 Biagio, Province of Latina Italy, 2013 (Ortano)	25 SC	6 6	59 64	2	0* 0 1 3 7 14	ND 0.092 0.026 0.012 ND ND	ND 0.021 < 0.01 ND ND ND	< 0.01 0.113 0.026 0.012 < 0.02 < 0.02	130175
Europe (indoor)									

SUMMER SQUASH Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175- J	XDE-175-L	Total	
S13-02021-04 Monster, Zuid Holland The Netherlands, 2013 (Parador)	25 SC	6 6 6	61 60 61	3	3	< 0.01	ND	< 0.01	130164
S13-02021-05 Allonnes, Pays de Loire France, 2013 (Kimber F1)	25 SC	6 6 6	60 60 59	3	0* 0 1 3 7 14	ND 0.020 < 0.01 ND ND ND	ND < 0.01 ND ND ND ND	< 0.01 0.020 < 0.01 < 0.01 < 0.01 < 0.01	130164
CEMS-5422A Los Palacios y Villafranca, Sevilla Spain, 2013 (Jedida)	25 SC	7.5 7.5 6.7	59 64 61	3	0* 0 1 3 7 13	ND 0.041 0.048 0.035 0.011 ND	ND 0.013 0.015 < 0.01 ND ND	< 0.01 0.054 0.063 <u>0.035</u> 0.011 < 0.01	GHE-P-12817
CEMS-5422B Scanzano Jonico, Basilicata Italy, 2013 (Roberta)	25 SC	6 6 6	60 60 61	3	0* 0 1 3 7 13	ND 0.024 0.015 < 0.01 ND ND	ND < 0.01 < 0.01 ND ND ND	< 0.01 0.024 0.015 <u>≤ 0.01</u> < 0.01 < 0.01	GHE-P-12817
CEMS-5422C Nîmes, Languedoc- Roussillon France, 2013 (Cora)	25 SC	15 15 15	60 61 57	3	3	< 0.01	ND	< 0.01	GHE-P-12817
CEMS-5422D Chalkidona, Thessaloniki Greece, 2013 (Jedid F1)	25 SC	5.5 5.5 5.5	57 55 55	3	3	ND	ND	< 0.01	GHE-P-12817

ND- Not detected; * days before last application

Table 42 Residues of spinetoram from supervised trials on summer squash in the EU (for estimation of STMR)

SUMMER SQUASH Country, year (Variety)	Form	Application/ treatment			DALA , days	Residue, mg/kg				Report No.
		g ai/hL	g ai/ha	N o		XDE-175- J	XDE-175- L	N-demethyl- J	N-formyl- J	
GAP, Brazil			50	4	3					
CEMS-5431A Los Palacios y Villafranca, Sevilla Spain, 2012 (Amelia)	25 SC	15 7.5	58 86	2	0* 0 1 3 7 13	ND < 0.01 < 0.01 < 0.01 ND ND	ND ND ND ND ND ND	ND ND < 0.01 ND ND ND	< 0.02 < 0.02 < 0.02 < 0.02 < 0.02 < 0.02	GHE-P- 12826
CEMS-5431B Monferran Savès, Midi-Pyrénées France, 2012 (Cora)	25 SC	8.6 8.6	58 62	2	0* 0 1 3 7 14	ND 0.027 0.016 < 0.01 ND ND	ND < 0.01 ND ND ND ND	ND < 0.01 ND ND ND ND	< 0.02 0.037 0.026 <u>≤ 0.02</u> < 0.02 < 0.02	GHE-P- 12826

SUMMER SQUASH Country, year (Variety)	Form	Application/ treatment			DALA , days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	N o		XDE-175- J	XDE-175- L	N-demethyl- J	N-formyl- J	Total	
CEMS-5431C Asti, Piemonte Italy, 2012 (Xsara)	25 SC	6 6	58 60	2	3	< 0.01	ND	ND	ND	< 0.02	GHE-P- 12826
CEMS-5431D Chalkidona, Thessaloniki Greece, 2012 (Jedida F1)	25 SC	5.5 5.5	55 55	2	3	< 0.01	ND	ND	< 0.01	< 0.02	GHE-P- 12826
S13-02009-04 Saint Laurent de la Salanque, Pyrénées- Orientales France, 2013 (Greyzini)	25 SC	6 6	64 61	2	3	0.012	ND	ND	ND	0.022	130175
S13-02009-05 Biagio, Province of Latina Italy, 2013 (Ortano)	25 SC	6 6	59 64	2	0* 0 1 3 7 14	ND 0.092 0.026 0.012 ND ND	ND 0.021 < 0.01 ND ND ND	ND 0.011 ND ND ND ND	ND ND ND ND ND ND	< 0.02 0.134 0.036 0.022 < 0.02 < 0.02	130175
S13-02021-04 Monster, Zuid Holland The Netherlands, 2013 (Parador)	25 SC	6 6 6	61 60 61	3	3	< 0.01	ND	ND	ND	< 0.02	130164
S13-02021-05 Allonnes, Pays de Loire France, 2013 (Kimber F1)	25 SC	6 6 6	60 60 59	3	0* 0 1 3 7 14	ND 0.020 < 0.01 ND ND ND	ND < 0.01 ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND ND	< 0.02 0.030 < 0.02 < 0.02 < 0.02 < 0.02	130164
CEMS-5422A Los Palacios y Villafranca, Sevilla Spain, 2013 (Jedida)	25 SC	7.5 7.5 6.7	59 64 61	3	0* 0 1 3 7 13	ND 0.041 0.048 0.035 0.011 ND	ND 0.013 0.015 < 0.01 ND ND	ND < 0.01 ND ND ND ND	ND ND < 0.01 ND ND ND	< 0.02 0.064 0.073 0.045 0.021 < 0.02	GHE-P- 12817
CEMS-5422B Scanzano Jonico, Basilicata Italy, 2013 (Roberta)	25 SC	6 6 6	60 60 61	3	0* 0 1 3 7 13	ND 0.024 0.015 < 0.01 ND ND	ND < 0.01 < 0.01 ND ND ND	ND ND ND ND ND ND	ND ND < 0.01 < 0.01 ND ND	< 0.02 0.034 0.025 < 0.02 < 0.02 < 0.02	GHE-P- 12817
CEMS-5422C Nimes, Languedoc- Roussillon France, 2013 (Cora)	25 SC	15 15 15	60 61 57	3	3	< 0.01	ND	ND	ND	< 0.02	GHE-P- 12817
CEMS-5422D Chalkidona, Thessaloniki Greece, 2013 (Jedid F1)	25 SC	5.5 5.5 5.5	57 55 55	3	3	ND	ND	ND	ND	< 0.02	GHE-P- 12817

ND- Not detected; * days before last application

Cucurbits, inedible peel - Melons

Eight outdoor residue trials from Brazil were carried out during 2005, 2006 and 2007 (Reports 246817, 246808, 246791, 246795, 246787/243264 (amended), 246794, 246786, 246793, 246848, 246847, 246846, 246842). Each treated plot received 4 applications of spinetoram at a nominal rate of 50 g ai/ha. Samples of mature fruits were collected 3 days after the last application and for decline trials, also at 0, 1, 7, 10 and 14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Brazil consists of 4 applications at 40 g ai/ha and a PHI of 3 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in peel, flesh and whole fruit.

Eight outdoor residue trials from Europe were carried out in France (2), Spain (3) and Italy (3) during 2012 and 2013 (Reports GHE-P-12827 and 130174). Each treated plot received 2 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI 27/28. Samples of mature fruit were collected 3 days after the last application and for decline trials fruit, also at 0, 1, 7 and 13/14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Europe is still pending and therefore the data were evaluated against the GAP in Brazil.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in peel, flesh and whole fruit. Whole fruit residues at PHI 3 are calculated from the individual weights of the peel and flesh fractions.

Eight indoor residue trials from Europe were carried out in France (2), Spain (2), Italy (2), Greece (2), during 2012 and 2013 (Reports 130166 and GHE-P-12818). Each treated plot received 3 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI 14. Samples of mature fruit, flesh and peel were collected 3 days after the last application and for decline trials fruit, also at 0, 1, 7/8 and 13/14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Europe pending authorization consists of 3 applications at 60 g ai/ha, RTI 14 and a PHI of 3 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in peel, flesh and whole fruit. Whole fruit residues at PHI 3 are calculated from the individual weights of the peel and flesh fractions.

Table 37 Residues of spinetoram from supervised trials on Melon in the EU and Brazil (for estimation of MRL)

MELON Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	Total	
GAP, Brazil	250 WG		40	4		3				
Brazil (Indoor)										
050087 Mogi Mirim, Brazil, 2005 (Sweet Market)	250 WG		50	4	WF	0 3 7 10 14	< 0.01 ND ND ND ND	< 0.01 < 0.01 ND ND ND	< 0.01 ≤ 0.01 < 0.01 < 0.01 < 0.01	246817 246808

MELON Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	Total	
050087.01 Mogi Mirim Brazil, 2006/2007 (Sweet Market)	250 WG		50 50 50 50	4	WF	3	< 0.01	ND	< 0.01	246791 246795
050087.02 Indianapolis Brazil, 2006/2007 (Hibrido Goldex F1)	250 WG		50 50 50 50	4	WF WF WF WF WF	0 1 3 7 10 14	0.01 < 0.01 < 0.01 ND ND ND	< 0.01 ND ND ND ND	0.01 < 0.01 < 0.01 < 0.01 < 0.01	246787/243264 (amended) 246794
050087.03 Rolandia Brazil, 2006/2007 (Caipira)	250 WG		50 50 50 50	4	WF	3	ND	ND	< 0.01	246786 246793
060029.01 Piracicaba Brazil, 2006 (Sweet Market)	250 WG		50 50 50 50	4	WF	3	ND	ND	< 0.01	246848
060029.03 Mogi Mirim Brazil, 2006 (Sweet Market)	250 WG		50 50 50 50	4	WF WF WF WF WF	0 1 3 7 10 14	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 ND	ND < 0.01 ND ND < 0.01 ND	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01	246847
060029.04 Indianapolis Brazil, 2007 (F1 frevo)	250 WG		50 50 50 50	4	WF	3	ND	ND	< 0.01	246846
060029.06 Amhemi Brazil, 2007 (Caipira)	250 WG		50 50 50 50	4	WF WF WF WF WF	0 1 3 7 10 14	< 0.01 ND < 0.01 ND < 0.01 ND	ND ND ND ND < 0.01 ND	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01	246842
Europe (outdoor)										
CEMS-5432A Montferran Savès, Midi-Pyrénées France, 2012 (Cezanne)	25 SC	8.6 8.6	62 61	2	Peel Flesh WF WF WF WF WF	3 3 3 0* 0 1 7 13	ND ND ND ND < 0.01 ND ND ND	ND ND ND ND 0.017 ND ND ND	< 0.01 < 0.01 < 0.01 < 0.01 0.027 < 0.01 < 0.01 < 0.01	GHE-P-12827
CEMS-5432B Xilxes, Castellón Spain, 2012 (Sancho)	25 SC	6 6	58 61	2	Peel Flesh WF WF WF WF WF	3 3 3 0* 0 1 7 14	ND ND ND ND ND ND ND ND	ND ND ND ND ND < 0.01 ND ND	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	GHE-P-12827
CEMS-5432C Isola Sant' Antoni, Piemonte Italy, 2012 (Tales)	25 SC	6 6	59 62	2	Peel Flesh WF	3 3 3	ND ND ND	< 0.01 ND < 0.01	< 0.01 < 0.01 < 0.01	GHE-P-12827
CEMS-5432D Govone, Piemonte Italy, 2012 (Macigno)	25 SC	6 6	59 60	2	Peel Flesh WF	3 3 3	ND ND ND	ND ND ND	< 0.01 < 0.01 < 0.01	GHE-P-12827

MELON Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	Total	
S13-02010-01 Sevilla, Andalusia Spain, 2013 (Sancho)	25 SC	6	58	2	WF	0*	ND	ND	< 0.01	130174
		6	64		WF	0	< 0.01	ND	< 0.01	
					WF	1	ND	ND	< 0.01	
					WF	3	ND	ND	< 0.01	
					WF	7	ND	ND	< 0.01	
					WF	13	ND	ND	< 0.01	
S13-02010-03 Huelva, Province Huelva Spain, 2013 (Quijote)	25 SC	6	62	2	WF	3	ND	ND	< 0.01	130174
		6	61							
S13-02010-04 Budrio, Province of Bologna Italy, 2013 (Bacir)	25 SC	6	61	2	WF	3	ND	ND	< 0.01	130174
		6	66							
S13-02010-05 Elne, Pyrénées- Orientales France, 2013 (Stellio)	25 SC	6	62	2	WF	0*	ND	ND	< 0.01	130174
		6	60		WF	0	< 0.01	ND	< 0.01	
					WF	1	ND	ND	< 0.01	
					WF	3	ND	ND	< 0.01	
					WF	7	ND	ND	< 0.01	
					WF	14	ND	ND	< 0.01	
Europe (indoor)										
CEMS-5423A Barbate, Cádiz Spain, 2012 (Jucar)	25 SC	6	60	3	Peel	3	0.016	< 0.01	0.016	GHE-P-12818
		6	57		Flesh	3	ND	ND	< 0.01	
		6	57		WF	3	0.011	ND	0.011	
					WF	0*	ND	ND	< 0.01	
					WF	0	0.011	< 0.01	0.011	
					WF	1	< 0.01	ND	< 0.01	
					WF	7	< 0.01	ND	< 0.01	
					WF	14	< 0.01	ND	< 0.01	
CEMS-5423B Scanzano Jonico, Basilicata Italy, 2012 (Sigal F1)	25 SC	6	60	3	Peel	3	< 0.01	ND	< 0.01	GHE-P-12818
		6	61		Flesh	3	ND	ND	< 0.01	
		6	62		WF	3	< 0.01	ND	< 0.01	
					WF	0*	ND	ND	< 0.01	
					WF	0	0.025	< 0.01	0.025	
					WF	1	0.034	< 0.01	0.034	
					WF	7	< 0.01	ND	< 0.01	
					WF	13	< 0.01	ND	< 0.01	
CEMS-5423C Nimes, Languedoc Roussillon France, 2012 (Anasta)	25 SC	15	64	3	Peel	3	0.012	< 0.01	0.012	GHE-P-12818
		15	58		Flesh	3	ND	ND	< 0.01	
		15	61		WF	3	< 0.01	ND	< 0.01	
CEMS-5423D Chalkidona, Thessaloniki, Central Macedonia Greece, 2012 (Lavigal)	25 SC	6	55	3	Peel	3	< 0.01	ND	< 0.01	GHE-P-12818
		6	55		Flesh	3	ND	ND	< 0.01	
		6	55		WF	3	< 0.01	ND	< 0.01	
S13-02015-01 Xativa, Valencia Spain, 2013 (Edecos, Galia Type)	25 SC	6	59	3	WF	0*	< 0.01	ND	< 0.01	130166
		6	61		WF	0	0.014	< 0.01	0.014	
		6	57		WF	1	0.011	ND	0.011	
					Peel	3	0.041	< 0.01	0.041	
					Flesh	3	ND	ND	< 0.01	
					WF	3	< 0.01	ND	< 0.01	
					WF	7	< 0.01	ND	< 0.01	
					WF	14	< 0.01	ND	< 0.01	

MELON Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175- L	Total	
S13-02015-02 Sermide, Province of Mantova Italy, 2013 (Honey Moon)	25 SC	6	59	3	WF	0*	ND	ND	< 0.01	130166
		6	61		WF	0	< 0.01	ND	< 0.01	
		6	60		WF	1	< 0.01	ND	< 0.01	
					Peel	3	0.026	< 0.01	0.026	
					Flesh	3	ND	ND	< 0.01	
					WF	3	< 0.01	ND	< 0.01	
S13-02015-03 Castelsarrasin, Tarn et Garonne France, 2013 (Hugo)	25 SC	6	62	3	Peel	3	< 0.01	ND	< 0.01	130166
		6	60		Flesh	3	ND	ND	< 0.01	
		6	62		WF	3	ND	ND	< 0.01	
S13-02015-04 Svoronos, Pieria Greece, 2013 (Masada)	25 SC	6	60	3	Peel	3	0.034	< 0.01	0.034	130166
		6	64		Flesh	3	ND	ND	< 0.01	
		6	57		WF	3	< 0.01	ND	< 0.01	

ND- Not detected; * days before last application

WF: whole fruit

Table 38 Residues of spinetoram from supervised trials on Melon in the EU and Brazil (for estimation of STMR)

MELON Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg				Report No.	
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	N-demethyl-J	N-formyl-J		Total
GAP, Brazil			40	4		3						
Brazil (Indoor)												
050087 Mogi Mirim, Brazil, 2005 (Sweet Market)	250 WG	50	4	WF	0	< 0.01	< 0.01	< 0.01	ND	< 0.02	246817 246808	
		50			3	ND	< 0.01	ND	ND	< 0.02		
		50			7	ND	ND	ND	ND	< 0.02		
		50			10	ND	ND	ND	ND	< 0.02		
		50			14	ND	ND	ND	ND	< 0.02		
050087.01 Mogi Mirim Brazil, 2006/2007 (Sweet Market)	250 WG	50	4	WF	3	< 0.01	ND	ND	ND	< 0.02	246791 246795	
		50										
		50										
		50										
050087.02 Indianapolis Brazil, 2006/2007 (Hibrido Goldex F1)	250 WG	50	4	WF	0	0.01	< 0.01	ND	ND	0.02	246787/24 3264 (amended) 246794	
		50		WF	1	< 0.01	ND	ND	ND	< 0.02		
		50		WF	3	< 0.01	ND	ND	ND	< 0.02		
		50		WF	7	ND	ND	ND	ND	< 0.02		
		50		WF	10	ND	ND	ND	ND	< 0.02		
050087.03 Rolandia Brazil, 2006/2007 (Caipira)	250 WG	50	4	WF	3	ND	ND	ND	ND	< 0.02	246786 246793	
		50										
060029.01 Piracicaba Brazil, 2006 (Sweet Market)	250 WG	50	4	WF	3	ND	ND	ND	ND	< 0.02	246848	
060029.03 Mogi Mirim Brazil, 2006 (Sweet Market)	250 WG	50	4	WF	0	< 0.01	ND	ND	< 0.01	< 0.02	246847	
		50		WF	1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02		
		50		WF	3	< 0.01	ND	ND	< 0.01	< 0.02		
		50		WF	7	< 0.01	ND	ND	< 0.01	< 0.02		
		50		WF	10	< 0.01	< 0.01	< 0.01	ND	< 0.02		
		WF	14	ND	ND	ND	ND	< 0.02				

MELON Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	N-demethyl-J	N-formyl-J	Total	
060029.04 Indianapolis Brazil, 2007 (F1 frevo)	250 WG		50 50 50 50	4	WF	3	ND	ND	ND	ND	< 0.02	246846
060029.06 Amhembí Brazil, 2007 (Caipira)	250 WG		50 50 50 50	4	WF	0 1 3 7 10 14	< 0.01 ND < 0.01 ND < 0.01 ND	ND ND ND ND ND	ND ND ND ND ND	ND ND < 0.01 ND ND	< 0.02 < 0.02 < 0.02 < 0.02 < 0.02 < 0.02	246842
Europe (Outdoor)												
CEMS-5432A Montferran Savès, Midi-Pyrénées France, 2012 (Cezanne)	25 SC	8.6 8.6	62 61	2	Peel Flesh WF WF WF WF WF	3 3 3 0* 1 7 13	ND ND ND < 0.01 ND ND ND	ND ND ND 0.017 ND ND ND	ND ND ND ND ND ND ND	ND ND ND ND ND ND ND	< 0.02 < 0.02 < 0.02 0.037 < 0.02 < 0.02 < 0.02	GHE-P- 12827
CEMS-5432B Xilxes, Castellón Spain, 2012 (Sancho)	25 SC	6 6	58 61	2	Peel Flesh WF WF WF WF WF	3 3 3 0* 1 7 14	ND ND ND ND ND ND ND	ND ND ND ND < 0.01 ND ND	ND ND ND ND ND ND ND	ND ND ND ND ND ND ND	< 0.02 < 0.02 < 0.02 < 0.02 < 0.02 < 0.02 < 0.02	GHE-P- 12827
CEMS-5432C Isola Sant'Antoni, Piemonte Italy, 2012 (Tales)	25 SC	6 6	59 62	2	Peel Flesh WF	3 3 3	ND ND ND	< 0.01 ND < 0.01	ND ND ND	ND ND ND	< 0.02 < 0.02 < 0.02	GHE-P- 12827
CEMS-5432D Govone, Piemonte Italy, 2012 (Macigno)	25 SC	6 6	59 60	2	Peel Flesh WF	3 3 3	ND ND ND	ND ND ND	ND ND ND	ND ND ND	< 0.02 < 0.02 < 0.02	GHE-P- 12827
S13-02010-01 Sevilla, Andalusia Spain, 2013 (Sancho)	25 SC	6 6	58 64	2	WF WF WF Peel Flesh WF WF WF	0* 0 1 3 3 3 7 13	ND < 0.01 ND 0.018 ND ND ND ND ND	ND ND ND ND ND ND ND ND	ND ND ND ND ND ND ND ND	ND ND ND ND ND ND ND ND	< 0.02 < 0.02 < 0.02 0.028 < 0.02 < 0.02 < 0.02 < 0.02	130174
S13-02010-03 Huelva, Province Huelva Spain, 2013 (Quijote)	25 SC	6 6	62 61	2	Peel Flesh WF	3 3 3	0.013 ND ND	ND ND ND	ND ND ND	ND ND ND	0.023 < 0.02 < 0.02	130174
S13-02010-04 Budrio, Province of Bologna Italy, 2013 (Bacir)	25 SC	6 6	61 66	2	Peel Flesh WF	3 3 3	ND ND ND	ND ND ND	ND ND ND	< 0.01 ND ND	< 0.02 < 0.02 < 0.02	130174
S13-02010-05 Elne, Pyrenées- Orientales France, 2013 (Stellio)	25 SC	6 6	62 60	2	WF WF WF Peel Flesh WF WF WF	0* 0 1 3 3 3 7 14	ND < 0.01 ND 0.013 ND ND ND ND ND	ND ND ND ND ND ND ND ND	ND ND ND ND ND ND ND ND	ND ND ND ND ND ND ND ND	< 0.02 < 0.02 < 0.02 0.023 < 0.02 < 0.02 < 0.02 < 0.02	130174

MELON Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	N-demethyl-J	N-formyl-J	Total	
Europe (Indoor)												
CEMS-5423A Barbate, Cádiz Spain, 2012 (Jucar)	25 SC	6	60	3	Peel	3	0.016	< 0.01	ND	< 0.01	0.026	GHE-P- 12818
					Flesh	3	ND	ND	ND	< 0.02		
					WF	3	0.011	ND	ND	< 0.01		
					WF	0*	ND	ND	ND	< 0.02		
					WF	0	0.011	< 0.01	ND	< 0.01		
					WF	1	< 0.01	ND	ND	< 0.01		
					WF	7	< 0.01	ND	ND	< 0.02		
WF	14	< 0.01	ND	ND	< 0.01							
CEMS-5423B Scanzano Jonico, Basilicata Italy, 2012 (Sigal F1)	25 SC	6	60	3	Peel	3	< 0.01	ND	ND	< 0.01	< 0.02	GHE-P- 12818
					Flesh	3	ND	ND	ND	< 0.02		
					WF	3	< 0.01	ND	ND	< 0.01		
					WF	0*	ND	ND	ND	< 0.02		
					WF	0	0.025	< 0.01	ND	< 0.01		
					WF	1	0.034	< 0.01	ND	0.017		
					WF	7	< 0.01	ND	ND	< 0.01		
WF	13	< 0.01	ND	ND	ND							
CEMS-5423C Nimes, Languedoc Roussillon France, 2012 (Anasta)	25 SC	15	64	3	Peel	3	0.012	< 0.01	ND	< 0.01	0.022	GHE-P- 12818
					Flesh	3	ND	ND	ND	< 0.02		
					WF	3	< 0.01	ND	ND	< 0.02		
CEMS-5423D Chalkidona, Thessaloniki, Central Macedonia Greece, 2012 (Lavigal)	25 SC	6	55	3	Peel	3	< 0.01	ND	ND	ND	< 0.02	GHE-P- 12818
					Flesh	3	ND	ND	ND	< 0.02		
					WF	3	< 0.01	ND	ND	ND	< 0.02	
S13-02015-01 Xativa, Valencia Spain, 2013 (Edecos, Galia Type)	25 SC	6	59	3	WF	0*	< 0.01	ND	ND	< 0.01	< 0.02	130166
					WF	0	0.014	< 0.01	ND	< 0.01	0.024	
					WF	1	0.011	ND	ND	< 0.01	0.021	
					Peel	3	0.041	< 0.01	< 0.01	0.032	0.073	
					Flesh	3	ND	ND	ND	ND	< 0.02	
					WF	3	< 0.01	ND	ND	< 0.01	< 0.02	
					WF	7	< 0.01	ND	ND	< 0.01	< 0.02	
WF	14	< 0.01	ND	ND	< 0.01	< 0.02						
S13-02015-02 Sermide, Province of Mantova Italy, 2013 (Honey Moon)	25 SC	6	59	3	WF	0*	ND	ND	ND	ND	< 0.02	130166
					WF	0	< 0.01	ND	ND	ND	< 0.02	
					WF	1	< 0.01	ND	ND	ND	< 0.02	
					Peel	3	0.026	< 0.01	< 0.01	< 0.01	0.036	
					Flesh	3	ND	ND	ND	ND	< 0.02	
					WF	3	< 0.01	ND	ND	ND	< 0.02	
					WF	8	ND	ND	ND	ND	< 0.02	
WF	14	ND	ND	ND	ND	< 0.02						
S13-02015-03 Castelsarrasi, Tarn et Garonne France, 2013 (Hugo)	25 SC	6	62	3	Peel	3	< 0.01	ND	ND	ND	< 0.02	130166
					Flesh	3	ND	ND	ND	ND	< 0.02	
					WF	3	ND	ND	ND	ND	< 0.02	
S13-02015-04 Svoronos, Pieria Greece, 2013 (Masada)	25 SC	6	60	3	Peel	3	0.034	< 0.01	< 0.01	0.010	0.044	130166
					Flesh	3	ND	ND	ND	ND	< 0.02	
					WF	3	< 0.01	ND	ND	ND	< 0.02	

ND- Not detected; * Days before last application

*Fruiting vegetables, other than Cucurbits**Peppers*

Eight indoor trials from Brazil were carried out during 2006 and 2007 (Reports 246837, 246860, 246838, 246840, 246832, 246839, 246834, 246835, 246843, 246833, 246836, 246844). Each treated plot received 4 applications of spinetoram at a nominal rate of 50 g ai/ha. Samples of mature fruits were collected 3 days after the last application and for decline trials, also at 0, 1, 7, 10 and 14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in whole fruit.

Eight outdoor residue trials from Europe were carried out in France (2), Spain (2), Italy (2) and Greece (2) during 2012 and 2013 (Reports GHE-P-12832 and 130172). Each treated plot received 2 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI 28/29. Samples of mature fruit were collected 3 days after the last application and for decline trials fruit, also at 0, 1, 7 and 14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in whole fruit.

Eight indoor residue trials from Europe were carried out in France (2), Netherlands (1), Denmark (1), Germany (1), Spain (1), Italy (1) and Greece (1) during 2012 and 2013 (Reports GHE-P-12820 and 130163). Each treated plot received 3 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI 13-14. Samples of mature fruit were collected 3 days after the last application and for decline trials fruit, also at 0, 1, 7 and 14/15 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in whole fruit.

Table 43 Residues of spinetoram from supervised trials on pepper in the EU and Brazil (for estimation of MRL)

PEPPER Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	Total	
GAP, Brazil (indoor)	250 WG		50	4	3				
060025 Indaiatuba Brazil, 2006/2007 (Vando)	250 WG		50 50 50 50	4	3	< 0.01	ND	< 0.01	246837 246840 (non-bell)
060025.01 Campinas Brazil, 2006/2007 (Proador-RF1)	250 WG		50 50 50 50	4	0 1 3 7 10 14	0.02 < 0.01 < 0.01 < 0.01 < 0.01 ND	< 0.01 ND ND ND ND ND	0.02 < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	246860 246838 (non-bell)

PEPPER Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	Total	
060025.02 Jaboticabal Brazil, 2006/2007 (Magali)	250 WG		50 50 50 50	4	3	0.326	0.050	<u>0.376</u>	246832 246839 (non-bell)
060025.03 Indianapolis Brazil, 2006 (Nikkey)	250 WG		50 50 50 50	4	3	ND	ND	<u>< 0.01</u>	246834 (non-bell)
060025.04 Piracicaba Brazil, 2006 (Sandi)	250 WG		50 50 50 50	4	3	ND	ND	<u>< 0.01</u>	246835 (non-bell)
060025.05 Conchal Brazil, 2006/2007 (Zarco)	250 WG		50 50 50 50	4	0 1 3 7 10 14	0.029 0.027 0.012 0.011 < 0.01 ND	< 0.01 ND < 0.01 ND ND ND	0.029 0.027 <u>0.012</u> 0.011 < 0.01 < 0.01	246843 246833 (non-bell)
060025.06 Mogi Mirim Brazil, 2006 (Magali-R)	250 WG		50 50 50 50	4	0 1 3 7 10 14	0.038 0.027 0.016 < 0.01 ND ND	< 0.01 < 0.01 ND ND ND ND	0.038 0.027 <u>0.016</u> < 0.01 < 0.01 < 0.01	246836 (non-bell)
060025.07 Campinas Brazil, 2006 (Magali)	250 WG		50 50 50 50	4	0 1 3 7 10 14	0.065 0.019 0.020 0.019 0.022 0.023	< 0.01 ND < 0.01 ND ND ND	0.065 0.019 0.020 0.019 0.022 <u>0.023</u>	246844 (non-bell)
CEMS-5437A Montferran-Savès, Midi-Pyrénées France, 2012 (Lamuyo)	25 SC	8.6 8.6	60 58	2	0* 0 1 3 7 14	ND 0.014 < 0.01 < 0.01 ND ND	ND < 0.01 ND ND ND ND	< 0.01 0.014 < 0.01 <u>< 0.01</u> < 0.01 < 0.01	GHE-P-12832 (bell)
CEMS-5437B Almussafes, Valencia Spain, 2012 (Stilo)	25 SC	6 6	59 58	2	0* 0 1 3 7 14	ND 0.042 0.034 0.019 ND ND	ND 0.011 < 0.01 < 0.01 ND ND	< 0.01 0.053 0.034 <u>0.019</u> < 0.01 < 0.01	GHE-P-12832 (non-bell)
CEMS-5437C Asti, Piemonte Italy, 2012 (Gotico)	25 SC	6 6	63 60	2	3	ND	ND	<u>< 0.01</u>	GHE-P-12832 (non-bell)
CEMS-5437D Epanomi, Thessaloniki Greece, 2012 (Thor)	25 SC	6 6	60 60	2	3	0.016	< 0.01	<u>0.016</u>	GHE-P-12832 (non-bell)
S13-02000-01 Pyrénées- Orientales France, 2013 (Remus)	25 SC	6 6	60 62	2	0* 0 1 3 7 14	ND 0.061 0.067 0.067 0.014 ND	ND 0.017 0.017 0.015 ND ND	< 0.01 0.078 0.084 <u>0.082</u> 0.014 < 0.01	130172 (bell)
S13-02000-02 Carmona, Seville Spain, 2013 (Dulce italiano)	25 SC	6 6	59 61	2	0* 0 1 3 7 14	ND 0.062 0.020 0.017 0.010 ND	ND 0.016 < 0.01 ND ND ND	< 0.01 0.078 0.020 <u>0.017</u> 0.010 < 0.01	130172 (non-bell)

PEPPER Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	Total	
S13-02000-03 Paternó, Sicilia Italy, 2013 (Raul)	25 SC	6 6	55 61	2	3	< 0.01	ND	<u>< 0.01</u>	130172 (non-bell)
S13-02000-04 Diavata, Thessaloniki Greece, 2013 (Piperoudi)	25 SC	6 6	60 60	2	3	0.068	0.013	<u>0.081</u>	130172 (non-bell)
S13-02017-01 Ubstadt-Weiher, Baden Württemberg Germany, 2013 (Sombbrero)	25 SC	6 6 6	58 62 58	3	0* 0 1 3 7 14	0.011 0.056 0.039 0.023 0.019 0.012	ND 0.014 < 0.01 < 0.01 < 0.01 ND	0.011 0.070 0.039 <u>0.023</u> 0.019 0.012	130163 (bell)
S13-02017-02 Erdeven, Morbihan France, 2013 (Gonto)	25 SC	20 20 20	60 63 62	3	0* 0 1 3 7 14	0.035 0.106 0.061 0.047 0.027 < 0.01	< 0.01 0.028 0.016 0.012 < 0.01 ND	0.035 0.134 0.077 <u>0.059</u> 0.027 < 0.01	130163 (non-bell)
S13-02017-03 Odense, Beldringe Denmark, 2013 (Artega)	25 SC	4 4 4	63 62 66	3	3	0.015	< 0.01	<u>0.015</u>	130163 (bell)
S13-02017-04 Bemmel, Gelderland The Netherlands, 2013 (Maranello)	25 SC	6 6 6	60 60 60	3	3	0.018	< 0.01	<u>0.018</u>	130163 (bell)
CEMS-5425A Barbate, Cádiz Spain, 2012 (Barbate)	25 SC	10 8.6 8.6	59 61 61	3	0* 0 1 3 7 14	ND < 0.01 0.021 0.012 < 0.01 ND	ND ND < 0.01 ND ND	< 0.01 < 0.01 0.021 <u>0.012</u> < 0.01 < 0.01	GHE-P-12820 (bell)
CEMS-5425B Poirino, Piemonte Italy, 2012 (Quadrato di Carmagnola)	25 SC	6 6 6	62 61 61	3	0* 0 1 3 7 15	< 0.01 0.015 0.017 < 0.01 < 0.01 < 0.01	ND < 0.01 < 0.01 ND ND ND	< 0.01 0.015 0.017 <u>< 0.01</u> < 0.01 < 0.01	GHE-P-12820 (bell)
CEMS-5425C Nîmes, Languedoc Roussillon France, 2012 (Lamuyo)	25 SC	20 20 20	60 64 64	3	3	0.029	< 0.01	<u>0.029</u>	GHE-P-12820 (bell)
CEMS-5425D Epanomi, Thessaloniki Greece, 2012 (Florinis Buko)	25 SC	6 6 6	60 60 60	3	3	0.032	0.011	<u>0.043</u>	GHE-P-12820 (non-bell)

ND- Not detected; * days before last application

Table 44 Residues of spinetoram from supervised trials on pepper in the EU and Brazil (for estimation of STMR)

PEPPER Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl- J	N-formyl-J	Total	
GAP, Brazil (indoor)			50	4	3						
060025 Indaiatuba Brazil, 2006/2007 (Vando)	250 WG		50 50 50 50	4	3	< 0.01	ND	ND	ND	< 0.02	246837 246840
060025.01 Campinas Brazil, 2006/2007 (Proador-RF1)	250 WG		50 50 50 50	4	0 1 3 7 10 14	0.02 < 0.01 < 0.01 < 0.01 < 0.01 ND	< 0.01 ND ND ND ND ND	ND ND ND ND ND ND	ND < 0.01 ND ND < 0.01 ND	0.030 < 0.02 < 0.02 < 0.02 < 0.02 < 0.02	246860 246838
060025.02 Jaboticabal Brazil, 2006/2007 (Magali)	250 WG		50 50 50 50	4	3	0.326	0.050	0.046	0.028	0.450	246832 246839
060025.03 Indianapolis Brazil, 2006 (Nikkey)	250 WG		50 50 50 50	4	3	ND	ND	ND	ND	< 0.02	246834
060025.04 Piracicaba Brazil, 2006 (Sandi)	250 WG		50 50 50 50	4	3	ND	ND	ND	< 0.01	< 0.02	246835
060025.05 Conchal Brazil, 2006/2007 (Zarco)	250 WG		50 50 50 50	4	0 1 3 7 10 14	0.029 0.027 0.012 0.011 < 0.01 ND	< 0.01 ND < 0.01 ND ND ND	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 ND	ND ND ND ND ND < 0.01	0.039 0.037 0.022 0.021 < 0.02 < 0.02	246843 246833
060025.06 Mogi Mirim Brazil, 2006 (Magali-R)	250 WG		50 50 50 50	4	0 1 3 7 10 14	0.038 0.027 0.016 < 0.01 ND ND	< 0.01 < 0.01 ND ND ND ND	< 0.01 < 0.01 < 0.01 ND ND ND	< 0.01 < 0.01 0.012 < 0.01 < 0.01 < 0.01	0.048 0.037 0.026 < 0.02 < 0.02 < 0.02	246836
060025.07 Campinas Brazil, 2006 (Magali)	250 WG		50 50 50 50	4	0 1 3 7 10 14	0.065 0.019 0.020 0.019 0.022 0.023	< 0.01 ND < 0.01 ND ND ND	< 0.01 ND 0.011 < 0.01 < 0.01 < 0.01	ND ND ND ND ND ND	0.075 0.029 0.041 0.029 0.032 0.033	246844
CEMS-5437A Montferran- Savès, Midi- Pyrénées France, 2012 (Lamuyo)	25 SC	8.6 8.6	60 58	2	0* 0 1 3 7 14	ND 0.014 < 0.01 < 0.01 ND ND	ND < 0.01 ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND ND	< 0.02 0.024 < 0.02 < 0.02 < 0.02 < 0.02	GHE-P- 12832
CEMS-5437B Almussafes, Valencia Spain, 2012 (Stilo)	25 SC	6 6	59 58	2	0* 0 1 3 7 14	ND 0.042 0.034 0.019 ND ND	ND ND < 0.01 < 0.01 ND ND	ND < 0.01 < 0.01 < 0.01 ND ND	ND < 0.01 < 0.01 < 0.01 < 0.01 ND	< 0.02 0.063 0.044 0.029 < 0.02 < 0.02	GHE-P- 12832

PEPPER Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl- J	N-formyl-J	Total	
CEMS-5437C Asti, Piemonte Italy, 2012 (Gotico)	25 SC	6 6	63 60	2	3	ND	ND	ND	ND	< 0.02	GHE-P- 12832
CEMS-5437D Epanomi, Thessaloniki Greece, 2012 (Thor)	25 SC	6 6	60 60	2	3	0.016	< 0.01	ND	ND	0.026	GHE-P- 12832
S13-02000-01 Pyrénées- Orientales France, 2013 (Remus)	25 SC	6 6	60 62	2	0* 0 1 3 7 14	ND 0.061 0.067 0.067 0.014 ND	ND 0.017 0.017 0.015 ND ND	ND 0.011 < 0.01 < 0.01 < 0.01 ND	ND ND < 0.01 ND ND ND	< 0.02 0.099 0.094 0.092 0.024 < 0.02	130172
S13-02000-02 Carmona, Seville Spain, 2013 (Dulce italiano)	25 SC	6 6	59 61	2	0* 0 1 3 7 14	ND 0.062 0.020 0.017 0.010 ND	ND 0.016 < 0.01 ND ND ND	ND < 0.01 ND < 0.01 < 0.01 ND	ND ND ND ND ND ND	< 0.02 0.088 0.030 0.027 0.020 < 0.02	130172
S13-02000-03 Paternó, Sicilia Italy, 2013 (Raul)	25 SC	6 6	55 61	2	3	< 0.01	ND	< 0.01	ND	< 0.02	130172
S13-02000-04 Diavata, Thessaloniki Greece, 2013 (Piperoudi)	25 SC	6 6	60 60	2	3	0.068	0.013	0.012	< 0.01	0.103	130172
S13-02017-01 Ubstadt-Weiher, Baden Württemberg Germany, 2013 (Sombbrero)	25 SC	6 6 6	58 62 58	3	0* 0 1 3 7 14	0.011 0.056 0.039 0.023 0.019 0.012	ND 0.014 < 0.01 < 0.01 < 0.01 ND	< 0.01 0.014 < 0.01 < 0.01 < 0.01 < 0.01	ND < 0.01 < 0.01 < 0.01 < 0.01 < 0.01	0.021 0.094 0.049 0.033 0.029 0.022	130163
S13-02017-02 Erdeven, Morbihan France, 2013 (Gonto)	25 SC	20 20 20	60 63 62	3	0* 0 1 3 7 14	0.035 0.106 0.061 0.047 0.027 < 0.01	< 0.01 0.028 0.016 0.012 < 0.01 ND	0.011 0.018 0.013 0.012 < 0.01 < 0.01	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01 ND	0.056 0.162 0.100 0.081 0.037 < 0.02	130163
S13-02017-03 Odense, Beldringe Denmark, 2013 (Artega)	25 SC	4 4 4	63 62 66	3	3	0.015	< 0.01	ND	< 0.01	0.025	130163
S13-02017-04 Bemmel, Gelderland The Netherlands, 2013 (Maranello)	25 SC	6 6 6	60 60 60	3	3	0.018	< 0.01	< 0.01	ND	0.028	130163
CEMS-5425A Barbate, Cádiz Spain, 2012 (Barbate)	25 SC	10 8.6 8.6	59 61 61	3	0* 0 1 3 7 14	ND < 0.01 0.021 0.012 < 0.01 ND	ND ND < 0.01 ND ND ND	ND ND < 0.01 ND ND ND	ND ND ND ND ND ND	< 0.02 < 0.02 0.031 0.022 < 0.02 < 0.02	GHE-P- 12820

PEPPER Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl- J	N-formyl-J	Total	
CEMS-5425B Poirino, Piemonte Italy, 2012 (Quadrato di Carmagnola)	25 SC	6	62	3	0*	< 0.01	ND	ND	ND	< 0.02	GHE-P- 12820
		6	61		0	0.015	< 0.01	ND	ND	0.025	
		6	61		1	0.017	< 0.01	ND	ND	0.027	
					3	< 0.01	ND	ND	ND	< 0.02	
					7	< 0.01	ND	ND	ND	< 0.02	
					15	< 0.01	ND	ND	ND	< 0.02	
CEMS-5425C Nimes, Languedoc Roussillon France, 2012 (Lamuyo)	25 SC	20	60	3	3	0.029	< 0.01	< 0.01	ND	0.039	GHE-P- 12820
		20	64								
		20	64								
CEMS-5425D Epanomi, Thessaloniki Greece, 2012 (Florinis Buko)	25 SC	6	60	3	3	0.032	0.011	< 0.01	ND	0.053	GHE-P- 12820
		6	60								
		6	60								

ND- Not detected; * days before last application

Pulses

Previous data have been submitted for beans, and a MRL set for beans, except broad bean and soya bean at 0.05 mg/kg. No previous data have been submitted for soya bean. Trials conducted in Brazil according to the Brazilian GAP are submitted in document in order to support a MRL in soya bean.

Soya beans

Four supervised trials were carried out in Brazil during 2006 and 2007 (Reports 256443, 247707, 247709 and 247708). Each treated plot received 2 applications of 120 SC spinetoram at a nominal rate of 24 g ai/ha. Samples of mature seed were collected 7 days after the last application and for decline trials seeds, also at 0, 1, 3, 10 and 14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Brazil consists of 2 applications at 18 g ai/ha and a PHI of 7 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in seed.

Table 45 Residues of spinetoram from supervised trials on soya bean in Brazil (for estimation of MRL)

SOYA BEAN Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, Brazil	120 SC		18	2	7				
050092.01 Mogi Mirim, Sao Paulo Brazil 2006/2007 (BRS-245)	120 SC		24	2	0	< 0.01	ND	< 0.01	256443
			24		3	ND	ND	< 0.01	
					7	ND	ND	< 0.01	
					10	ND	ND	< 0.01	
					14	ND	ND	< 0.01	

SOYA BEAN Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
050092.02 Londrina, Parana Brazil, 2006/2007 (BRS-184)	120 SC		24 24	2	0	< 0.01	ND	< 0.01	247708
					1	ND	ND	< 0.01	
					3	ND	ND	< 0.01	
					7	ND	ND	< 0.01	
					10	ND	ND	< 0.01	
050092.03 Indianapolis Brazil, 2006/2007 (BRS-MG 68 - Vencedora)	120 SC		24 24	2	7	ND	ND	< 0.01	247707
050092.04 Goiania, Goias Brazil, 2006/2007 (BRS Sylvania RR)	120 SC		24 24	2	7	ND	ND	< 0.01	247709

ND- Not detected

Table 46 Residues of spinetoram from supervised trials on soya bean in Brazil (for estimation of STMR)

SOYA BEAN Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N-demethyl- J	N- formyl-J	Total	
GAP, Brazil	120 SC		18	2	7						
050092.01 Mogi Mirim, Sao Paulo Brazil 2006/2007 (BRS-245)	120 SC		24 24	2	0	< 0.01	ND	ND	ND	< 0.02	256443
					3	ND	ND	ND	< 0.02		
					7	ND	ND	ND	< 0.02		
					10	ND	ND	ND	< 0.02		
					14	ND	ND	ND	< 0.02		
050092.02 Londrina, Parana Brazil, 2006/2007 (BRS-184)	120 SC		24 24	2	0	< 0.01	ND	ND	ND	< 0.02	247708
					1	ND	ND	ND	< 0.02		
					3	ND	ND	ND	< 0.02		
					7	ND	ND	ND	< 0.02		
					10	ND	ND	ND	< 0.02		
050092.03 Indianapolis Brazil, 2006/2007 (BRS-MG 68 - Vencedora)	120 SC		24 24	2	7	ND	ND	ND	< 0.02	247707	
050092.04 Goiania, Goias Brazil, 2006/2007 (BRS Sylvania RR)	120 SC		24 24	2	7	ND	ND	ND	< 0.02	247709	

ND- Not detected.

Root and tuber vegetables

Previous data have been submitted for sugar beet and a MRL set at 0.01 mg/kg. No previous data have been submitted for potato. Trials conducted in Brazil according to the Brazil GAP are submitted in document in order to support a MRL in potato.

Potato

Four residue trials from Brazil were carried out during 2006 and 2007 (Reports 256512, 257921, 257917 and 257918). Each treated plot received 3 applications of 250 WG spinetoram at a nominal rate of 60 g ai/ha. Samples of mature tubers were collected 1 day after the last application and for decline trials seeds, also at 0, 3, 7, 10 and 14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Brazil consists of 3 applications at 50 g ai/ha and a PHI of 1 day.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in tubers.

Two residue trials from New Zealand were carried out during 2010 (Report 090112). Each treated plot received 4 applications of 120 SC spinetoram at a nominal rate of 60 g ai/ha. Samples of mature tubers were collected 7 days after the last application and for decline trials seeds, also at 1, 3, 10 and 14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in New Zealand consists of 4 applications at 60 g ai/ha, RTI 7 days and a PHI of 7 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.03, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in tubers.

Table 47 Residues of spinetoram from supervised trials on potato in Brazil and New Zealand (for estimation of MRL)

POTATO Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	Total	
GAP, Brazil	250 WG		50	3	1				
60022 Mogi Mirim, Brazil 2006 (Agata)	250 WG		60 60 60	3	0 1 3 7 10 14	<0.01 ND ND ND ND ND	ND ND ND ND ND ND	<0.01 <u><0.01</u> <0.01 <0.01 <0.01 <0.01	256512
60022.01 Mogi Mirim, Brazil 2007 (Agata)	250 WG		60 60 60	3	0 1 3 7 10 14	ND ND ND ND ND ND	ND ND ND ND ND ND	<0.01 <u><0.01</u> <0.01 <0.01 <0.01 <0.01	257921
60022.02 Sao Miguel Arcanjo Brazil 2007 (Agata)	250 WG		60 60 60	3	0 1 3 7 10 14	ND ND ND ND ND ND	ND ND ND ND ND ND	<0.01 <u><0.01</u> <0.01 <0.01 <0.01 <0.01	257917
60022.04 Bairro Vila Nova Brazil, 2007 (Agata)	250 WG		60 60 60	3	0 1 3 7 10 14	ND ND ND ND ND ND	ND ND ND ND ND ND	<0.01 <u><0.01</u> <0.01 <0.01 <0.01 <0.01	257918
GAP, New Zealand	120 SC		60	4	7				

POTATO Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	Total	
09051/1 Hastings, Hawke's Bay New Zealand, 2010 (Moonlight)	120 SC	15	62	4	1	ND	ND	< 0.01	090112
		15	60		3	ND	ND	< 0.01	
		15	60		7	ND	ND	< 0.01	
		15	62		10	ND	ND	< 0.01	
		15	62		14	ND	ND	< 0.01	
09051/2 Christchurch, Canterbury New Zealand, 2010 (Agria)	120 SC	15	60	4	1	ND	ND	< 0.01	090112
		15	60		3	ND	ND	< 0.01	
		15	60		7	ND	ND	< 0.01	
		15	60		10	ND	ND	< 0.01	
		15	60		14	ND	ND	< 0.01	

ND- Not detected

Table 48 Residues of spinetoram from supervised trials on potato in Brazil and New Zealand (for estimation of STMR)

POTATO Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.	
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N-demethyl- J	N- formyl-J	Total		
GAP, Brazil	250 WG		50	3	1							
60022 Mogi Mirim, Brazil 2006 (Agata)	250 WG		60	3	0	< 0.01	ND	ND	ND	ND	< 0.02	256512
			60		1	ND	ND	ND	ND	ND	< 0.02	
			60		3	ND	ND	ND	ND	ND	< 0.02	
					7	ND	ND	ND	ND	ND	< 0.02	
					10	ND	ND	ND	ND	ND	< 0.02	
60022.01 Mogi Mirim, Brazil 2007 (Agata)	250 WG		60	3	0	ND	ND	ND	ND	ND	< 0.02	257921
			60		1	ND	ND	ND	ND	ND	< 0.02	
			60		3	ND	ND	ND	ND	ND	< 0.02	
					7	ND	ND	ND	ND	ND	< 0.02	
					10	ND	ND	ND	ND	ND	< 0.02	
60022.02 Sao Miguel Arcanjo Brazil 2007 (Agata)	250 WG		60	3	0	ND	ND	ND	ND	ND	< 0.02	257917
			60		1	ND	ND	ND	ND	ND	< 0.02	
			60		3	ND	ND	ND	ND	ND	< 0.02	
					7	ND	ND	ND	ND	ND	< 0.02	
					10	ND	ND	ND	ND	ND	< 0.02	
60022.04 Bairro Vila Nova Brazil, 2007 (Agata)	250 WG		60	3	0	ND	ND	ND	ND	ND	< 0.02	257918
			60		1	ND	ND	ND	ND	ND	< 0.02	
			60		3	ND	ND	ND	ND	ND	< 0.02	
					7	ND	ND	ND	ND	ND	< 0.02	
					10	ND	ND	ND	ND	ND	< 0.02	
GAP, New Zealand	120 SC		60	4	7							
09051/1 Hastings, Hawke's Bay New Zealand, 2010 (Moonlight)	120 SC	15	62	4	1	ND	ND	ND	ND	ND	< 0.02	090112
		15	60		3	ND	ND	ND	ND	ND	< 0.02	
		15	60		7	ND	ND	ND	ND	ND	< 0.02	
		15	62		10	ND	ND	ND	ND	ND	< 0.02	
		15	62		14	ND	ND	ND	ND	ND	< 0.02	

POTATO Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N-demethyl- J	N- formyl-J	Total	
09051/2 Christchurch, Canterbury New Zealand, 2010 (Agria)	120	15	60	4	1	ND	ND	ND	ND	< 0.02	090112
	SC	15	60		3	ND	ND	ND	ND	< 0.02	
	15	15	60		7	ND	ND	ND	ND	< 0.02	
			60		10	ND	ND	ND	ND	< 0.02	
					14	ND	ND	ND	ND	< 0.02	

ND- Not detected.

Cereal grains

No previous data have been submitted for cereal grains. Trials conducted in Brazil and China according to the respective Brazil and China GAPs are submitted in document in order to support MRLs in maize and rice.

Rice

Six supervised trials were carried out in China during 2009 and 2010 (Report 2009P227). Each treated plot received 2 applications of 60 SC spinetoram at a nominal rate 28 g ai/ha and RTI 7 days. Samples of grain were collected 21 days after the last application and for decline trials, also at 14 and 30 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in China consists of 2 applications at 27g ai/ha, RTI 7–10 days and a PHI of 21 days.

Residues of spinetoram and the main metabolites were analysed by modified method GRM 05.03 for rice, which has been validated with an LOQ of 0.02 mg/kg (grain) and 0.04 mg/kg (hulls and plant). The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in hulled rice, hulls and plant.

Parent XDE-175 measured in the trials was in the form of the major component XDE-175-J and no residue values for XDE-175-L were measured. No detectable residues of XDE-175-J or metabolites were apparent in hulled rice and therefore, values recorded for XDE-175-L (the minor component of XDE-175) are also recorded as not-detected for rice grain only. In hulls and plant, for the purposes of dietary burden the ratio in which the two active ingredients exist in spinetoram is 3:1 of XDE-175-J: XDE-175-L. Therefore a conversion factor of 0.33 is applied to the XDE-175-J residue value for estimation of XDE-175-L residues. No cereal metabolism studies are available or have been previously evaluated to refine this conversion factor.

Table 49 Residues of spinetoram from supervised trials on rice in China (for estimation of MRL)

RICE Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE-175-L	Total	
GAP, China			27	2		21				
Nanning, Guangxi China, 2009	60 SC		28	2	Grain	14	ND	ND	< 0.02	2009P227
			28		Grain	21	ND	ND	< 0.02	
					Grain	30	ND	ND	< 0.02	
Hangzhou, Zhejiang Province China, 2009	60 SC		28	2	Grain	14	ND	ND	< 0.02	2009P227
			28		Grain	21	ND	ND	< 0.02	
					Grain	30	ND	ND	< 0.02	
Xiqing District, Tianjin China, 2009	60 SC		28	2	Grain	14	ND	ND	< 0.02	2009P227
			28		Grain	21	ND	ND	< 0.02	
					Grain	30	ND	ND	< 0.02	

RICE Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE-175-L	Total	
Nanning, Guangxi China, 2010	60 SC		28	2	Grain	14	ND	ND	< 0.02	2009P227
			28		Grain	21	ND	ND	< 0.02	
					Grain	30	ND	ND	< 0.02	
Hangzhou, Zhejiang Province China, 2010	60 SC		28	2	Grain	14	ND	ND	< 0.02	2009P227
			28		Grain	21	ND	ND	< 0.02	
					Grain	30	ND	ND	< 0.02	
Xiqing District, Tianjin China, 2010	60 SC		28	2	Grain	14	ND	ND	< 0.02	2009P227
			28		Grain	21	ND	ND	< 0.02	
					Grain	30	ND	ND	< 0.02	

ND- Not detected. Residues in parentheses are actual calculated values when below the LOQ/LOD

Table 50 Residues of spinetoram from supervised trials on rice in China (for estimation of STMR)

RICE Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE-175- J	XDE- 175-L	N- demethyl-J	N- formyl-J	Total	
GAP, China			27	2		21						
Nanning, Guangxi China, 2009	60 SC		28	2	Grain	14	ND	ND	ND	ND	< 0.04	2009P227
			28		Grain	21	ND	ND	ND	< 0.04		
					Grain	30	ND	ND	ND	< 0.04		
Hangzhou, Zhejiang Province China, 2009	60 SC		28	2	Grain	14	ND	ND	ND	ND	< 0.04	2009P227
			28		Grain	21	ND	ND	ND	< 0.04		
					Grain	30	ND	ND	ND	< 0.04		
Xiqing District, Tianjin China, 2009	60 SC		28	2	Grain	14	ND	ND	ND	ND	< 0.04	2009P227
			28		Grain	21	ND	ND	ND	< 0.04		
					Grain	30	ND	ND	ND	< 0.04		
Nanning, Guangxi China, 2010	60 SC		28	2	Grain	14	ND	ND	ND	ND	< 0.04	2009P227
			28		Grain	21	ND	ND	ND	< 0.04		
					Grain	30	ND	ND	ND	< 0.04		
Hangzhou, Zhejiang Province China, 2010	60 SC		28	2	Grain	14	ND	ND	ND	ND	< 0.04	2009P227
			28		Grain	21	ND	ND	ND	< 0.04		
					Grain	30	ND	ND	ND	< 0.04		
Xiqing District, Tianjin China, 2010	60 SC		28	2	Grain	14	ND	ND	ND	ND	< 0.04	2009P227
			28		Grain	21	ND	ND	ND	< 0.04		
					Grain	30	ND	ND	ND	< 0.04		

ND- Not detected

Maize

Four supervised trials were carried out in Brazil during 2006 and 2007 (Reports 247411, 247412, 247413 and 247409). Each treated plot received 3 applications of 120 SC spinetoram at a nominal rate 24 g ai/ha. Samples of mature grain were collected 7 days after the last application and for decline trials, also at 0, 3, 10 and 14 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Brazil consists of 3 applications at 12 g ai/ha and a PHI of 7 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in grain.

Table 51 Residues of spinetoram from supervised trials on maize in Brazil (for estimation of MRL)

MAIZE Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	Total	
GAP, Brazil	120 SC		12	3	7				
050093 Mogi Mirim Brazil, 2005/2006 (DAS-766)	120 SC	6	24	3	0	ND	ND	< 0.01	247413
		6	24		3	ND	ND	< 0.01	
		6	24		7	ND	ND	< 0.01	
					10	ND	ND	< 0.01	
					14	ND	ND	< 0.01	
050093.01 Mogi Mirim Brazil 2006/2007 (DAS-2B710)	120 SC	6	24	3	0	ND	ND	< 0.01	247411
		6	24		3	ND	ND	< 0.01	
		6	24		7	ND	ND	< 0.01	
					10	ND	ND	< 0.01	
					14	ND	ND	< 0.01	
050093.02 Indianapolis Brazil, 2006/2007 (2A525)	120 SC	6	24	3	7	ND	ND	< 0.01	247412
		6	24						
		6	24						
050093.03 Goiania Brazil, 2006/2007 (2B710)	120 SC	7	24	3	7	ND	ND	< 0.01	247409
		7	24						
		7	24						

ND- Not detected.

Table 52 Residues of spinetoram from supervised trials on maize in Brazil (for estimation of STMR)

MAIZE Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE-175-J	XDE-175-L	N-demethyl-J	N-formyl-J	Total	
GAP, Brazil	120 SC		12	3	7						
050093 Mogi Mirim Brazil, 2005/2006 (DAS-766)	120 SC	6	24	3	0	ND	ND	ND	ND	< 0.02	247413
		6	24		3	ND	ND	ND	ND	< 0.02	
		6	24		7	ND	ND	ND	ND	< 0.02	
					10	ND	ND	ND	ND	< 0.02	
					14	ND	ND	ND	ND	< 0.02	
050093.01 Mogi Mirim Brazil 2006/2007 (DAS-2B710)	120 SC	6	24	3	0	ND	ND	ND	ND	< 0.02	247411
		6	24		3	ND	ND	ND	ND	< 0.02	
		6	24		7	ND	ND	ND	ND	< 0.02	
					10	ND	ND	ND	ND	< 0.02	
					14	ND	ND	ND	ND	< 0.02	
050093.02 Indianapolis Brazil, 2006/2007 (2A525)	120 SC	6	24	3	7	ND	ND	ND	ND	< 0.02	247412
		6	24								
		6	24								

MAIZE Country, year (Variety)	Form	Application/ treatment			DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No		XDE- 175-J	XDE- 175-L	N- demethyl-J	N- formyl- J	Total	
050093.03 Goiania Brazil, 2006/2007 (2B710)	120 SC	7 7 7	24 24 24	3	7	ND	ND	ND	ND	<u><0.02</u>	247409

ND- Not detected

Sweet corn

Four supervised trials were carried out in Australia during 2012 (Report 110713). Each treated plot received 4 applications of 120 SC spinetoram at a nominal rate of 48 g ai/ha and RTI 6–8 days. Samples of cobs were collected 3 days after the last application and for decline trials fruit, also at 0, 6–8 and 13–15 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Australia consists of 4 applications at 48 g ai/ha, RTI 7–14 and a PHI of 3 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.03, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram in the acceptable range of 70–120% in wrapper leaves, forage, stover and cobs.

Residues were only calculated of XDE-175-J and XDE-175-L. For cobs all residues were 'not detected' and therefore no metabolites are expected and are recorded also as 'not detected' for risk assessment. However, for the purposes of dietary burden, metabolites were calculated from XDE-175-J residues, based on the lettuce metabolism study (JMPR 2008) at 3 DAT (multiple applications), by applying conversion factors of 0.072 and 0.148 to the XDE-175-J residue value for estimation of N-demethyl-175-J and N-formyl-175-J residues, respectively.

Table 53 Residues of spinetoram from supervised trials on sweetcorn in Australia (for estimation of MRL)

SWEET CORN Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE-175- J	XDE-175- L	Total	
GAP, Australia	120 SC		48	4		3				
110797 Gatton, Queensland Australia, 2012 ("Garrison" GC 0654)	120 SC	12 12 11 11	48 48 48 48	4	Cobs Cobs Cobs Cobs	0 3 7 14	ND ND ND* ND	ND ND ND* ND	<0.01 <u><0.01</u> <0.01 <0.01	110713
110798 Fernvale, Queensland Australia, 2012 ("Garrison" GC 0654)	120 SC	11 11 11 11	48 48 48 48	4	Cobs Cobs Cobs Cobs	0 3 7 14	ND ND ND ND	ND ND ND* ND	<0.01 <u><0.01</u> <0.01 <0.01	110713
110799 Narromine, New South Wales Australia, 2012 ("Enterprise" GC 0654)	120 SC	9.7 9.8 10 10	49 49 49 49	4	Cobs Cobs Cobs Cobs	0 3 6 13	ND ND ND* ND	ND ND ND* ND	<0.01 <u><0.01</u> <0.01 <0.01	110713

SWEET CORN Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE-175- J	XDE-175- L	Total	
110800 Bathurst, New South Wales Australia, 2012 ("Galaxy" GC 0654)	120 SC	9.3	49	4	Cobs	0	ND	ND	< 0.01	110713
		9.8	49		Cobs	3	ND	ND	< 0.01	
		10	49		Cobs	8	ND*	ND*	< 0.01	
		10	48		Cobs	15	ND	ND	< 0.01	

ND- Not detected; * average of two replicates

Table 54 Residues of spinetoram from supervised trials on sweetcorn in Australia (for estimation of STMR)

SWEET CORN Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE-175- J	XDE-175- L	N-demethyl- J	N-formyl- J	Total	
GAP, Australia	120 SC		48	4		3						
110797 Gatton, Queensland Australia, 2012 ("Garrison" GC 0654)	120 SC	12	48	4	Cobs	0	ND	ND	ND	ND	< 0.02	110713
		12	48		Cobs	3	ND	ND	ND	ND	< 0.02	
		11	48		Cobs	7	ND*	ND*	ND	ND	< 0.02	
		11	48		Cobs	14	ND	ND	ND	ND	< 0.02	
110798 Fernvale, Queensland Australia, 2012 ("Garrison" GC 0654)	120 SC	11	48	4	Cobs	0	ND	ND	ND	ND	< 0.02	110713
		11	48		Cobs	3	ND	ND	ND	ND	< 0.02	
		11	48		Cobs	7	ND	ND*	ND	ND	< 0.02	
		11	48		Cobs	14	ND	ND	ND	ND	< 0.02	
110799 Narromine, New South Wales Australia, 2012 ("Enterprise" GC 0654)	120 SC	9.7	49	4	Cobs	0	ND	ND	ND	ND	< 0.02	110713
		9.8	49		Cobs	3	ND	ND	ND	ND	< 0.02	
		10	49		Cobs	6	ND*	ND*	ND	ND	< 0.02	
		10	49		Cobs	13	ND	ND	ND	ND	< 0.02	
110800 Bathurst, New South Wales Australia, 2012 ("Galaxy" GC 0654)	120 SC	9.3	49	4	Cobs	0	ND	ND	ND	ND	< 0.02	110713
		9.8	49		Cobs	3	ND	ND	ND	ND	< 0.02	
		10	49		Cobs	8	ND*	ND*	ND	ND	< 0.02	
		10	48		Cobs	15	ND	ND	ND	ND	< 0.02	

ND- Not detected; * average of two replicates. N-demethyl-J or N-formyl-J metabolites are calculated based on conversion factors of 0.072 and 0.148 respectively for forage and stover. In cobs metabolites are recorded as 'not detected' as residues of XDE-175-J and XDE-175-L are < LOD. Values in parentheses are actual calculated values which are below the LOQ/LOD.

Oilseeds

No previous data have been submitted for oilseeds. Trials conducted in the EU and Brazil according to the EU and Brazil GAPs are submitted in document in order to support a MRL in cotton.

Cotton

Ten supervised residue trials were carried out in Brazil during 2013 and 2014 (Report 130029 and 131282). Each treated plot received 3 or 4 applications of 60 SC or 120 SC spinetoram at a nominal

rate of 24 or 36 g ai/ha. Samples of mature fruits were collected 7 days after the last application and for decline trials, also at 0, 2–4, 9–11 and 13–15 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Brazil consists of 4 applications at 12–18 g ai/ha and a PHI of 7 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04 and 05.03, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in seed.

Nine supervised trials were carried out in Greece during 2014 and 2015 (Reports 140140 and 150019). Each treated plot received 2 applications of 120 SC spinetoram at a nominal rate 60 g ai/ha and RTI 28/29 days. Samples of mature seed (undelinted) were collected 21/22 days after the last application and for decline trials, also at 0, 7/8, 14/15 and 28/29 days after application. Samples were frozen and analysed within the period of demonstrated storage stability. The GAP in Europe consists of 2 applications at 60 g ai/ha, RTI 28 days and a PHI of 21 days.

Residues of spinetoram and the main metabolites were analysed by method GRM 05.04, which has been validated with an LOQ of 0.01 mg/kg. The performance of the method was verified by mean recoveries of spinetoram and its metabolites in the acceptable range of 70–120% in seed.

Table 55 Residues of spinetoram from supervised trials on cotton in the EU and Brazil (for estimation of MRL)(seeds)

COTTON Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	Total	
GAP, Brazil			12- 18	4		7				
GO1 Montividiu, Goiás Brazil, 2013 (FM966LL)	60 SC		23 23 23	3	Seed Seed Seed Seed Seed	0 4 7 11 14	< 0.01 ND ND ND ND	ND ND ND ND ND	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01	130029
GO2 Rio Verde, Goiás Brazil, 2013 (FM966LL)	60 SC		23 24 24	3	Seed	7	ND	ND	< 0.01	130029
GO3 Chapadão do Céu, Goiás Brazil, 2013 (Sicala RR)	60 SC		23 25 25	3	Seed Seed Seed Seed Seed	0 3 7 10 15	< 0.01 ND < 0.01 ND ND	ND ND ND ND ND	< 0.01 < 0.01 < 0.01 < 0.01 < 0.01	130029
GO4 Palmeiras de Goiás, Goiás Brazil, 2013 (DP 555 BG RR)	60 SC		23 23 23	3	Seed Seed Seed Seed Seed	0 2 7 9 13	0.018 < 0.01 ND ND ND	ND ND ND ND ND	0.018 < 0.01 < 0.01 < 0.01 < 0.01	130029
SP1 Jaboticabal, São Paulo Brazil, 2013 (FM966LL)	60 SC		24 24 24	3	Seed	7	ND	ND	< 0.01	130029
GO1 Palmeiras de Goias, Goias Brazil, 2014 (FM 972 GL)	120 SC		35 37 38 36	4	Seed	7	ND	ND	< 0.01	131282
GO2 Rio Verde, Goiás Brazil, 2014 (DP 555 BGRR)	120 SC		36 36 37 36	4	Seed Seed Seed Seed Seed	0 4 7 11 14	0.026 ND ND ND ND	< 0.01 ND ND ND ND	0.026 < 0.01 < 0.01 < 0.01 < 0.01	131282

COTTON Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	Total	
GO3 Montividiu, Goiás Brazil, 2014 (FM 944 GL)	120 SC		36	4	Seed	0	0.020	< 0.01	0.020	131282
			36		Seed	3	ND	ND	< 0.01	
			36		Seed	7	ND	ND	< 0.01	
			37		Seed	9	ND	ND	< 0.01	
					Seed	14	ND	ND	< 0.01	
MG1 Uberlandia, Minas Gerais Brazil, 2014 (DP 555 BGRR)	120 SC		36	4	Seed	7	ND	ND	< 0.01	131282
			37						< 0.01	
			36						< 0.01	
			37						< 0.01	
SP1 Jaboticabal, São Paulo Brazil, 2014 (DP 555 BGRR)	120 SC		35	4	Seed	7	ND	ND	< 0.01	131282
			35						< 0.01	
			37						< 0.01	
			39						< 0.01	
S14-02925-01 Giannitsa, Pella Greece, 2014 (Claudia)	120 SC	12 12	62 61	2	Seed	21	ND	ND	< 0.01	140140
S14-02925-02 Giannitsa, Pella Greece, 2014 (DP396)	120 SC	12 12	62 61	2	Seed	22	ND	ND	< 0.01	140140
S14-02925-03 Giannitsa, Pella Greece, 2014 (Hazera Vered)	120 SC	12 12	62 62	2	Seed	21	ND	ND	< 0.01	140140
S14-02925-04 Giannitsa, Pella Greece, 2014 (Celia)	120 SC	12 12	61 61	2	Seed	0*	ND	ND	< 0.01	140140
						0	0.019	< 0.01	0.019	
						8	ND	ND	< 0.01	
						15	ND	ND	< 0.01	
						21	ND	ND	< 0.01	
29	ND	ND	< 0.01							
S14-02925-05 Giannitsa, Pella Greece, 2014 (Carmen)	120 SC	12 12	61 61	2	Seed	0*	ND	ND	< 0.01	140140
						0	0.017	< 0.01	0.017	
						8	ND	ND	< 0.01	
						15	ND	ND	< 0.01	
						22	ND	ND	< 0.01	
29	ND	ND	< 0.01							
S14-02925-06 Giannitsa, Pella Greece, 2014 (Elsa)	120 SC		61	2	Seed	0*	ND	ND	< 0.01	140140
			61			0	0.034	< 0.01	0.034	
						8	ND	ND	< 0.01	
						15	ND	ND	< 0.01	
						22	ND	ND	< 0.01	
29	ND	ND	< 0.01							
S15-01038-01 Giannitsa, Greece, 2015 (Claudia)	120 SC		61	2	Seed	0*	ND	ND	< 0.01	150019
			63			0	ND	ND	< 0.01	
						7	ND	ND	< 0.01	
						14	ND	ND	< 0.01	
						21	ND	ND	< 0.01	
28	ND	ND	< 0.01							
S15-01038-02 Giannitsa, Greece, 2015 (Hersi)	120 SC		62	2	Seed	0*	ND	ND	< 0.01	150019
			63			0	ND	ND	< 0.01	
						7	ND	ND	< 0.01	
						14	ND	ND	< 0.01	
						21	ND	ND	< 0.01	
28	ND	ND	< 0.01							

COTTON Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	Total	
S15-01038-03 Giannitsa, Greece, 2015 (Celia)	120 SC		62 64	2	Seed	21	ND	ND	<0.01	150019

*Days before last application; ND- Not detected.

Table 56 Residues of spinetoram from supervised trials on cotton in the EU (for estimation of STMR)

COTTON Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	N- demethyl- J	N- formyl-J	Total	
GAP, Brazil			16-18	4		7						
GO1 Montividiu, Goiás Brazil, 2013 (FM966LL)	60 SC		23 23 23	3	Seed Seed Seed Seed Seed	0 4 7 11 14	< 0.01 ND ND ND ND	ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND ND	< 0.02 < 0.02 < 0.02 < 0.02 < 0.02	130029
GO2 Rio Verde, Goiás Brazil, 2013 (FM966LL)	60 SC		23 24 24	3	Seed	7	ND	ND	ND	ND	< 0.02	130029
GO3 Chapadão do Céu, Goiás Brazil, 2013 (Sicala RR)	60 SC		23 25 25	3	Seed Seed Seed Seed Seed	0 3 7 10 15	< 0.01 ND < 0.01 ND ND	ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND ND	< 0.02 < 0.02 < 0.02 < 0.02 < 0.02	130029
GO4 Palmeiras de Goiás, Goiás Brazil, 2013 (DP 555 BG RR)	60 SC		23 23 23	3	Seed Seed Seed Seed Seed	0 2 7 9 13	0.018 < 0.01 ND ND ND	ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND ND	0.028 < 0.02 < 0.02 < 0.02 < 0.02	130029
SP1 Jaboticabal, São Paulo Brazil, 2013 (FM966LL)	60 SC		24 24 24	3	Seed	7	ND	ND	ND	ND	< 0.02	130029
GO1 Palmeiras de Goiás, Goiás Brazil, 2014 (FM 972 GL)	120 SC		35 37 38 36	4	Seed	7	ND	ND	ND	ND	< 0.02	131282
GO2 Rio Verde, Goiás Brazil, 2014 (DP 555 BGRR)	120 SC		36 36 37 36	4	Seed Seed Seed Seed Seed	0 4 7 11 14	0.026 ND ND ND ND	< 0.01 ND ND ND ND	ND ND ND ND ND	ND ND ND ND ND	0.036 < 0.02 < 0.02 < 0.02 < 0.02	131282
GO3 Montividiu, Goiás Brazil, 2014 (FM 944 GL)	120 SC		36 36 36 37	4	Seed Seed Seed Seed Seed	0 3 7 9 14	0.020 ND ND ND ND	< 0.01 ND ND ND ND	ND ND ND ND ND	ND ND ND ND ND	0.030 < 0.02 < 0.02 < 0.02 < 0.02	131282
MG1 Uberlândia, Minas Gerais Brazil, 2014 (DP 555 BGRR)	120 SC		36 37 36 37	4	Seed	7	ND	ND	ND	ND	< 0.02	131282

COTTON Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	N- demethyl- J	N- formyl-J	Total	
SP1 Jaboticabal, São Paulo Brazil, 2014 (DP 555 BGRR)	120 SC		35 35 37 39	4	Seed	7	ND	ND	ND	ND	< 0.02	131282
S14-02925-01 Giannitsa, Pella Greece, 2014 (Claudia)	120 SC	12 12	62 61	2	Seed	21	ND	ND	ND	ND	< 0.02	140140
S14-02925-02 Giannitsa, Pella Greece, 2014 (DP396)	120 SC	12 12	62 61	2	Seed	22	ND	ND	ND	ND	< 0.02	140140
S14-02925-03 Giannitsa, Pella Greece, 2014 (Hazera Vered)	120 SC	12 12	62 62	2	Seed	21	ND	ND	ND	ND	< 0.02	140140
S14-02925-04 Giannitsa, Pella Greece, 2014 (Celia)	120 SC	12 12	61 61	2	Seed	0* 0 8 15 21 29	ND 0.019 ND ND ND ND	ND < 0.01 ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND ND	< 0.02 0.029 < 0.02 < 0.02 < 0.02 < 0.02	140140
S14-02925-05 Giannitsa, Pella Greece, 2014 (Carmen)	120 SC	12 12	61 61	2	Seed	0* 0 8 15 22 29	ND 0.017 ND ND ND ND	ND < 0.01 ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND ND	< 0.02 0.027 < 0.02 < 0.02 < 0.02 < 0.02	140140
S14-02925-06 Giannitsa, Pella Greece, 2014 (Elsa)	120 SC		61 61	2	Seed	0* 0 8 15 22 29	ND 0.034 ND ND ND ND	ND < 0.01 ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND ND	< 0.02 0.044 < 0.02 < 0.02 < 0.02 < 0.02	140140
S15-01038-01 Giannitsa, Greece, 2015 (Claudia)	120 SC		61 63	2	Seed	0* 0 7 14 21 28	ND ND ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND ND	< 0.02 < 0.02 < 0.02 < 0.02 < 0.02 < 0.02	150019
S15-01038-02 Giannitsa, Greece, 2015 (Hersi)	120 SC		62 63	2	Seed	0* 0 7 14 21 28	ND ND ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND ND	< 0.02 < 0.02 < 0.02 < 0.02 < 0.02 < 0.02	150019
S15-01038-03 Giannitsa, Greece, 2015 (Celia)	120 SC		62 64	2	Seed	21	ND	ND	ND	ND	< 0.02	150019

*Days before last application; ND- Not detected.

*Animal feeds**Rice*

Table 57 Residues of spinetoram from supervised trials on rice in China (for estimation of MRL)

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE-175-L	Total	
GAP, China			27	2		21				
Nanning, Guangxi China, 2009	60 SC		28	2	Hulls	14	0.061	ND (0.020)	0.061	2009P227
					Hulls	21	ND	ND (0.013)	< 0.04	
					Hulls	30	ND	ND (0.013)	< 0.04	
					Plant	14	0.214	0.071	0.285	
					Plant	21	0.154	0.051	0.205	
Hangzhou, Zhejiang Province China, 2009	60 SC		28	2	Hulls	14	0.232	0.077	0.309	2009P227
					Hulls	21	0.196	0.065	0.261	
					Hulls	30	ND	ND (0.013)	< 0.04	
					Plant	14	0.393	0.130	0.523	
					Plant	21	0.232	0.077	0.309	
Xiqing District, Tianjin China, 2009	60 SC		28	2	Hulls	14	0.063	ND (0.021)	0.063	2009P227
					Hulls	21	ND	ND (0.013)	< 0.04	
					Hulls	30	ND	ND (0.013)	< 0.04	
					Plant	14	0.129	0.043	0.172	
					Plant	21	ND	ND (0.013)	< 0.04	
Nanning, Guangxi China, 2010	60 SC		28	2	Hulls	14	0.044	ND (0.015)	0.044	2009P227
					Hulls	21	ND	ND (0.013)	< 0.04	
					Hulls	30	ND	ND (0.013)	< 0.04	
					Plant	14	0.074	ND (0.024)	0.074	
					Plant	21	ND	ND (0.013)	< 0.04	
Hangzhou, Zhejiang Province China, 2010	60 SC		28	2	Hulls	14	0.372	0.123	0.495	2009P227
					Hulls	21	0.158	0.052	0.210	
					Hulls	30	ND	ND (0.013)	< 0.04	
					Plant	14	0.562	0.185	0.747	
					Plant	21	0.375	0.124	0.499	
Xiqing District, Tianjin China, 2010	60 SC		28	2	Hulls	14	ND	ND (0.013)	< 0.04	2009P227
					Hulls	21	ND	ND (0.013)	< 0.04	
					Hulls	30	ND	ND (0.013)	< 0.04	
					Plant	14	0.073	ND (0.024)	0.073	
					Plant	21	ND	ND (0.013)	< 0.04	
Xiqing District, Tianjin China, 2010	60 SC		28	2	Hulls	14	ND	ND (0.013)	< 0.04	2009P227
					Hulls	21	ND	ND (0.013)	< 0.04	
					Hulls	30	ND	ND (0.013)	< 0.04	
					Plant	14	0.073	ND (0.024)	0.073	
					Plant	21	ND	ND (0.013)	< 0.04	
Xiqing District, Tianjin China, 2010	60 SC		28	2	Hulls	14	ND	ND (0.013)	< 0.04	2009P227
					Hulls	21	ND	ND (0.013)	< 0.04	
					Hulls	30	ND	ND (0.013)	< 0.04	
					Plant	14	0.073	ND (0.024)	0.073	
					Plant	21	ND	ND (0.013)	< 0.04	
Xiqing District, Tianjin China, 2010	60 SC		28	2	Hulls	14	ND	ND (0.013)	< 0.04	2009P227
					Hulls	21	ND	ND (0.013)	< 0.04	
					Hulls	30	ND	ND (0.013)	< 0.04	
					Plant	14	0.073	ND (0.024)	0.073	
					Plant	21	ND	ND (0.013)	< 0.04	

ND- Not detected. Residues in parentheses are actual calculated values when below the LOQ/LOD

Table 58 Residues of spinetoram from supervised trials on rice in China

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE-175-L	N- demethyl- J	N- formyl- J	Total	
GAP, China			27	2		21						
Nanning, Guangxi China, 2009	60 SC		28	2	Hulls	14	0.061	ND (0.020)	ND	ND	0.101	2009P227
					Hulls	21	ND	ND (0.013)	ND	ND	< 0.08	
					Hulls	30	ND	ND (0.013)	ND	ND	< 0.08	
					Plant	14	0.214	0.071	0.141	0.067	0.493	
					Plant	21	0.154	0.051	ND	ND	0.245	
Xiqing District, Tianjin China, 2010	60 SC		28	2	Hulls	14	ND	ND (0.013)	ND	ND	< 0.08	2009P227
					Hulls	21	ND	ND (0.013)	ND	ND	< 0.08	
					Hulls	30	ND	ND (0.013)	ND	ND	< 0.08	
					Plant	14	0.214	0.071	0.141	0.067	0.493	
					Plant	21	0.154	0.051	ND	ND	0.245	

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE-175-L	N- demethyl-J	N- formyl- J	Total	
Hangzhou, Zhejiang Province China, 2009	60 SC		28 28	2	Hulls	14	0.232	0.077	0.101	ND	0.450	2009P227
					Hulls	21	0.196	0.065	ND	ND	<u>0.301</u>	
					Hulls	30	ND	ND (0.013)	ND	ND	< 0.08	
					Plant	14	0.393	0.130	ND	ND	0.563	
					Plant	21	0.232	0.077	ND	ND	<u>0.349</u>	
					Plant	30	ND	ND (0.013)	ND	ND	< 0.08	
Xiqing District, Tianjin China, 2009	60 SC		28 28	2	Hulls	14	0.063	ND (0.021)	0.041	0.058	0.162	2009P227
					Hulls	21	ND	ND (0.013)	ND	ND	<u>< 0.08</u>	
					Hulls	30	ND	ND (0.013)	ND	ND	< 0.08	
					Plant	14	0.129	0.043	0.141	0.103	0.416	
					Plant	21	ND	ND (0.013)	ND	ND	<u>< 0.08</u>	
					Plant	30	ND	ND (0.013)	ND	ND	< 0.08	
Nanning, Guangxi China, 2010	60 SC		28 28	2	Hulls	14	0.044	ND (0.015)	ND	ND	0.084	2009P227
					Hulls	21	ND	ND (0.013)	ND	ND	<u>< 0.08</u>	
					Hulls	30	ND	ND (0.013)	ND	ND	< 0.08	
					Plant	14	0.074	ND (0.024)	ND	ND	0.114	
					Plant	21	ND	ND (0.013)	ND	ND	<u>< 0.08</u>	
					Plant	30	ND	ND (0.013)	ND	ND	< 0.08	
Hangzhou, Zhejiang Province China, 2010	60 SC		28 28	2	Hulls	14	0.372	0.123	ND	ND	0.535	2009P227
					Hulls	21	0.158	0.052	ND	ND	<u>0.250</u>	
					Hulls	30	ND	ND (0.013)	ND	ND	< 0.08	
					Plant	14	0.562	0.185	ND	ND	0.787	
					Plant	21	0.375	0.124	ND	ND	<u>0.539</u>	
					Plant	30	0.067	ND (0.022)	ND	ND	0.107	
Xiqing District, Tianjin China, 2010	60 SC		28 28	2	Hulls	14	ND	ND (0.013)	ND	ND	< 0.08	2009P227
					Hulls	21	ND	ND (0.013)	ND	ND	<u>< 0.08</u>	
					Hulls	30	ND	ND (0.013)	ND	ND	< 0.08	
					Plant	14	0.073	ND (0.024)	0.172	0.086	0.331	
					Plant	21	ND	ND (0.013)	ND	ND	<u>< 0.08</u>	
					Plant	30	ND	ND (0.013)	ND	ND	< 0.08	

ND- Not detected

Sweet corn

Table 59 Residues of spinetoram from supervised trials on sweetcorn in Australia (for estimation of MRL)

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	Total	
GAP, Australia	120 SC		48	4		3				
110797 Gatton, Queensland Australia, 2012 ("Garrison" GC 0654)	120 SC	12 11 11	48 48 48	4	Forage Forage Forage WL WL WL WL Stover Stover Stover Stover	0 3 7 14 0 3 7 14 0 3 7 14	1.99 0.110 0.052* 0.077 0.270 0.019 0.016* < 0.01 0.014 0.019 0.026* 0.017	0.500 0.012 ND* < 0.01 0.059 0.003 0.002* ND ND ND ND	2.49 <u>0.122</u> 0.052 0.077 0.329 0.022 0.018 < 0.01 0.016 <u>0.021</u> 0.029 0.018	110713

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE-175-J	XDE-175-L	Total	
110798 Fernvale, Queensland Australia, 2012 ("Garrison" GC 0654)	120 SC	11	48	4	Forage	0	1.62	0.390	2.01	110713
		11	48		Forage	3	0.093	0.013	<u>0.106</u>	
		11	48		Forage	7	0.044*	< 0.01*	0.044	
		11	48		Forage	14	0.021	ND	0.021	
					WL	0	0.200	0.048	0.248	
					WL	3	0.049	0.010	0.059	
					WL	7	0.017*	ND*	0.017	
					WL	14	0.016	ND	0.016	
					Stover	0	0.035	< 0.01	0.035	
					Stover	3	0.029	< 0.01	<u>0.029</u>	
					Stover	7	0.029*	< 0.01*	<u>0.029</u>	
		Stover	14	0.016	ND	0.016				
110799 Narromine, New South Wales Australia, 2012 ("Enterprise" GC 0654)	120 SC	9.7	49	4	Forage	0	1.31	0.340	1.65	110713
		9.8	49		Forage	3	0.130	0.020	<u>0.15</u>	
		10	49		Forage	6	0.062*	< 0.01*	0.062	
		10	49		Forage	16	0.018	ND	0.018	
					WL	0	0.055	0.012	0.067	
					WL	3	ND	ND	< 0.01	
					WL	6	ND*	ND*	< 0.01	
					WL	13	ND	ND	< 0.01	
					Stover	0	0.010	ND	0.010	
					Stover	3	< 0.01	ND	<u>< 0.01</u>	
					Stover	6	< 0.01*	ND*	< 0.01	
		Stover	13	ND	ND	< 0.01				
110800 Bathurst, New South Wales Australia, 2012 ("Galaxy" GC 0654)	120 SC	9.3	49	4	Forage	0	2.60	0.720	3.32	110713
		9.8	49		Forage	3	2.43	0.290	<u>2.72</u>	
		10	49		Forage	8	0.610*	0.067*	0.677	
		10	48		Forage	15	0.540	0.061	0.601	
					WL	0	0.056	0.013	0.069	
					WL	3	0.120	0.019	0.139	
					WL	8	0.028*	ND*	0.028	
					WL	15	0.040	< 0.01	0.040	
					Stover	0	0.056	< 0.01	0.056	
					Stover	3	0.048	< 0.01	<u>0.048</u>	
					Stover	8	0.041*	< 0.01*	0.041	
		Stover	15	0.039	< 0.01	0.039				

ND- Not detected; * average of two replicates

WL Wrapper leaves

Table 60 Residues of spinetoram from supervised trials on sweetcorn in Australia

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	N-demethyl-J	N-formyl-J	Total	
GAP, Australia	120 SC		48	4		3						
110797 Gatton, Queensland Australia, 2012 ("Garrison" GC 0654)	120 SC	12	48	4	Forage	0	1.99	0.500	0.143	0.295	2.93	110713
		12	48		Forage	3	0.110	0.012	< 0.01 (0.008)	0.016	<u>0.138</u>	
		11	48		Forage	7	0.052*	ND*	ND (0.004)	< 0.01 (0.008)	0.062	
		11	48		Forage	14	0.077	< 0.01	< 0.01 (0.006)	0.011	0.088	
					WL	0	0.270	0.059	-	-	-	
					WL	3	0.019	0.003	-	-	-	
					WL	7	0.016*	0.002*	-	-	-	
					WL	14	< 0.01	ND	-	-	-	
					Stover	0	0.014	ND	ND (0.001)	ND (0.002)	0.024	
					Stover	3	0.019	ND	ND (0.001)	ND (0.003)	<u>0.029</u>	
					Stover	7	0.026*	ND*	ND (0.002)	ND (0.004)	0.036	
		Stover	14	0.017	ND	ND (0.001)	ND (0.003)	0.027				

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA , days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	N-demethyl-J	N-formyl-J	Total	
110798 Fernvale, Queensland Australia, 2012 ("Garrison" GC 0654)	120 SC	11	48	4	Forage	0	1.62	0.390	0.117	0.240	2.37	110713
		11	48		Forage	3	0.093	0.013	< 0.01 (0.007)	0.014	0.120	
		11	48		Forage	7	0.044*	< 0.01*	ND (0.003)	< 0.01 (0.007)	0.054	
		11	48		Forage	14	0.021	ND	ND (0.002)	ND (0.003)	0.031	
					WL	0	0.200	0.048	-	-	-	
					WL	3	0.049	0.010	-	-	-	
					WL	7	0.017*	ND*	-	-	-	
					WL	14	0.016	ND	-	-	-	
					Stover	0	0.035	< 0.01	ND (0.003)	ND (0.005)	0.045	
					Stover	3	0.029	< 0.01	ND (0.002)	ND (0.004)	0.039	
					Stover	7	0.029*	< 0.01*	ND (0.002)	ND (0.004)	0.039	
			Stover	14	0.016	ND	ND (0.001)	ND (0.002)	0.026			
110799 Narromine, New South Wales Australia, 2012 ("Enterprise" GC 0654)	120 SC	9.7	49	4	Forage	0	1.31	0.340	0.094	0.194	1.94	110713
		9.8	49		Forage	3	0.130	0.020	< 0.01 (0.009)	0.019	0.169	
		10	49		Forage	6	0.062*	< 0.01*	ND (0.004)	< 0.01 (0.009)	0.072	
		10	49		Forage	16	0.018	ND	ND (0.001)	ND (0.003)	0.028	
					WL	0	0.055	0.012	-	-	-	
					WL	3	ND	ND	-	-	-	
					WL	6	ND*	ND*	-	-	-	
					WL	13	ND	ND	-	-	-	
					Stover	0	0.010	ND	ND (0.001)	ND (0.001)	0.020	
					Stover	3	< 0.01	ND	ND (0.001)	ND (0.001)	< 0.02	
					Stover	6	< 0.01*	ND*	ND (0.001)	ND (0.001)	< 0.02	
			Stover	13	ND	ND	ND (0.0004)	ND (0.001)	< 0.02			
110800 Bathurst, New South Wales Australia, 2012 ("Galaxy" GC 0654)	120 SC	9.3	49	4	Forage	0	2.60	0.720	0.187	0.385	3.89	110713
		9.8	49		Forage	3	2.43	0.290	0.175	0.360	3.26	
		10	49		Forage	8	0.610*	0.067*	0.044	0.090	0.811	
		10	48		Forage	15	0.540	0.061	0.039	0.080	0.720	
					WL	0	0.056	0.013	-	-	-	
					WL	3	0.120	0.019	-	-	-	
					WL	8	0.028*	ND*	-	-	-	
					WL	15	0.040	< 0.01	-	-	-	
					Stover	0	0.056	< 0.01	ND (0.004)	< 0.01 (0.008)	0.066	
					Stover	3	0.048	< 0.01	ND (0.003)	< 0.01 (0.007)	0.058	
					Stover	8	0.041*	< 0.01*	ND (0.003)	< 0.01 (0.006)	0.051	
			Stover	15	0.039	< 0.01	ND (0.003)	< 0.01 (0.006)	0.049			

ND- Not detected; * average of two replicates. N-demethyl-J or N-formyl-J metabolites are calculated based on conversion factors of 0.072 and 0.148 respectively for forage and stover. In cobs metabolites are recorded as 'not detected' as residues of XDE-175-J and XDE-175-L are < LOD. Values in parentheses are actual calculated values which are below the LOQ/LOD

Cotton

Table 61 Residues of spinetoram from supervised trials on cotton in the EU (for estimation of STMR)

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	Total	
GAP, Brazil			16-18	4		7				
S14-02925-01 Giannitsa, Pella Greece, 2014 (Claudia)	120 SC	12 12	62 61	2	Gin by- products	21	0.043	< 0.01	0.043	140140
S14-02925-02 Giannitsa, Pella Greece, 2014 (DP396)	120 SC	12 12	62 61	2	Gin by- products	22	0.022	ND	0.022	140140

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg			Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	Total	
S14-02925-03 Giannitsa, Pella Greece, 2014 (Hazera Vered)	120 SC	12 12	62 62	2	Gin by- products	21	0.048	< 0.01	0.048	140140
S14-02925-04 Giannitsa, Pella Greece, 2014 (Celia)	120 SC	12 12	61 61	2	Gin by- products	21 29	0.036 0.030	< 0.01 < 0.01	0.036 0.030	140140
S14-02925-05 Giannitsa, Pella Greece, 2014 (Carmen)	120 SC	12 12	61 61	2	Gin by- products	22 29	0.018 0.019	ND ND	0.018 0.019	140140
S14-02925-06 Giannitsa, Pella Greece, 2014 (Elsa)	120 SC		61 61	2	Gin by- products	22 29	0.032 0.035	< 0.01 < 0.01	0.032 0.035	140140

*Days before last application; ND- Not detected.

Table 62 Residues of spinetoram from supervised trials on cotton in the EU (for estimation of STMR)

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	N-demethyl- J	N- formyl-J	Total	
GAP, Brazil			16-18	4		7						
S14-02925-01 Giannitsa, Pella Greece, 2014 (Claudia)	120 SC	12 12	62 61	2	Gin by- products	21	0.043	< 0.01	0.011	0.032	0.086	140140
S14-02925-02 Giannitsa, Pella Greece, 2014 (DP396)	120 SC	12 12	62 61	2	Gin by- products	22	0.022	ND	0.011	0.024	0.057	140140
S14-02925-03 Giannitsa, Pella Greece, 2014 (Hazera Vered)	120 SC	12 12	62 62	2	Gin by- products	21	0.048	< 0.01	0.010	0.042	0.100	140140

Country, year (Variety)	Form	Application/ treatment			Portion analysed	DALA, days	Residue, mg/kg					Report No.
		g ai/hL	g ai/ha	No			XDE- 175-J	XDE- 175-L	N-demethyl- J	N- formyl-J	Total	
S14-02925-04 Giannitsa, Pella Greece, 2014 (Celia)	120 SC	12 12	61 61	2	Gin by- products	21 29	0.036 0.030	< 0.01 < 0.01	0.012 0.012	0.028 0.025	0.076 0.067	140140
S14-02925-05 Giannitsa, Pella Greece, 2014 (Carmen)	120 SC	12 12	61 61	2	Gin by- products	22 29	0.018 0.019	ND ND	< 0.01 < 0.01	0.020 0.019	0.038 0.038	140140
S14-02925-06 Giannitsa, Pella Greece, 2014 (Elsa)	120 SC		61 61	2	Gin by- products d	22 29	0.032 0.035	< 0.01 < 0.01	0.016 0.016	0.035 0.037	0.083 0.088	140140

*Days before last application; ND- Not detected.

RESIDUES IN PROCESSED COMMODITIES

Olives

Two studies have been conducted to evaluate the effect of processing on spinetoram residues in olives.

Four trials were conducted in Southern Europe in 2008 (Rawle, 2009) and 2011 (Mason, 2012) to determine residues of spinetoram in olive process fractions. Each treated plot received 2 applications of 250 WG spinetoram at a nominal rate 25 or 125 g ai/ha, RTI 21 days and PHI 21 days. Residues were measured in olives, crude and refined oil and results are shown in Table 63. Fruit residues are whole fruit residues, corrected for the weight of stones.

Table 63 Spinetoram residues in olives and processed commodities and corresponding processing factors

Country (region) Year Crop (Variety)	Commodity	Spinetoram (mg/kg)	Spinetoram + two metabolites residues (mg/kg)	Report No.
CEMS-3819C Pruna, Sevilla Spain, 2008 Olives (Piwal)	Fruit	< 0.01	< 0.02	GHE-P-12094
	Crude oil	< 0.01	< 0.02	
	Refined oil	< 0.01	< 0.02	
CEMS-4962A Enguera, Valencia Spain, 2011 Olives (Manzanilla)	Fruit	< 0.01	< 0.02	GHE-P-12669
	Crude oil	< 0.01	< 0.02	
	Crude oil*	< 0.01	< 0.02	
	Refined oil	< 0.01	0.020	
CEMS-4962B Moron de la Frontera, Sevilla Spain, 2011 Olives (Manzanilla)	Fruit	< 0.01	< 0.02	GHE-P-12669
	Crude oil	< 0.01	< 0.02	
	Refined oil	< 0.01	< 0.02	
CEMS-4962C El Coronil, Sevilla Spain, 2011 Olives (Manzanilla)	Fruit	< 0.01	< 0.02	GHE-P-12669
	Crude oil	< 0.01	< 0.02	
	Refined oil	< 0.01	< 0.02	

* Crude oil after thawing. The crude oil was frozen for 53 days before processing to refined oil; n/c – Not calculable

There were no measurable residues (i.e. at or above the limit of quantification) in any of the raw or processed samples, so processing factors could not be calculated. However, no concentration has been seen up to the 5× label rate. Therefore, no MRL is needed for oil.

Soya bean

One study has been conducted to evaluate the effect of processing on spinetoram residues in soya bean.

Six trials were conducted in Argentina in 2013 and 2014 (Rampazzo, 2014) to determine residues of spinetoram in soya bean process fractions. Each treated plot received 1 applications of 60 SC spinetoram at a nominal rate 12 g ai/ha and PHI 15 days. Residues were measured in seed and oil (crude) and results are shown in Table 64.

There were no measurable residues (i.e. at or above the limit of quantification) in any of the raw or processed samples, so processing factors could not be calculated. However, no residues are expected > LOQ, and no MRL is needed for oil.

Table 64 Spinetoram residues in soya bean and processed commodities and corresponding processing factors

Country (region) Year Crop (Variety)	Commodity	Spinetoram residues (mg/kg)	Spinetoram + two metabolites residues (mg/kg)	Report No.
TC1 Tacuari Argentina, 2013 (DM 4250)	Seed	ND	ND	130001
	Oil, crude	ND	ND	
BE1 Berdier Argentina, 2013 (DM 3810)	Seed	ND	ND	130001
	Oil, crude	ND	ND	
LI1 Los Indios Argentina, 2013 (A5009RG)	Seed	ND	ND	130001
	Oil, crude	ND	ND	
TC2 Tacuari Argentina, 2014 (DM 4250)	Seed	ND	ND	130001
	Oil, crude	ND	ND	
BE2 Berdier Argentina, 2014 (DM 4670)	Seed	ND	ND	130001
	Oil, crude	ND	ND	
II1 Inés Indart Argentina, 2014 (DM 3810)	Seed	ND	ND	130001
	Oil, crude	ND	ND	

n/c – Not calculable

Maize

One study has been conducted to evaluate the effect of processing on spinetoram residues in maize.

Three trials were conducted in Argentina in 2010 and 2011 (de Mello Castanho, 2013) to determine residues of spinetoram in maize process fractions. Each treated plot received 3 applications of 120 SC spinetoram at a nominal rate 14.4 g ai/ha and PHI 21–31 days. Residues were measured in grain and oil and results are shown in Table 65.

There were no measurable residues (i.e. at or above the limit of quantification) in any of the raw or processed samples, so processing factors could not be calculated. However, no residues are expected > LOQ, and no MRL is needed for oil.

Table 65 Spinetoram residues in corn (maize) and processed commodities and corresponding processing factors

Country (region) Year, Crop (Variety)	Commodity	Spinetoram residues (mg/kg)	Spinetoram + two metabolites residues (mg/kg)	Report No.
FRR1 Ferré, Argentina, 2010 Corn (DK 670 MGRR)	Grain	< 0.01	< 0.02	102047
	Grain	< 0.01	< 0.02	
	Oil	< 0.01	< 0.02	
PGN2 Pergamino 2011 Corn (DK 670 MGRR)	Grain	< 0.01	< 0.02	102047
	Grain	< 0.01	< 0.02	
	Oil	0.010	0.020	
	Oil	< 0.01	< 0.02	
SJNI San Juan, Argentina, 2011 Corn (DK 670 MGRR)	Grain	< 0.01	< 0.02	102047
	Grain	< 0.01	< 0.02	
	Oil	< 0.01	< 0.02	

n/c – Not calculable

APPRAISAL

Spinetoram is in the class of spinosyn insecticides obtained from chemical modification of fermentation product of *Saccharopolyspora spinosa*. It consists of two closely related active ingredients (XDE-175-J and XDE-175-L) present approximately in a three to one ratio.

It was first evaluated by the 2008 JMPR which established an ADI of 0–0.05 mg/kg bw and decided that an ARfD is unnecessary. It also established the following residue definition for plant and animal commodities and recommended a number of MRLs:

Definition of the residue (for compliance with the MRL): *Spinetoram*.

Definition of the residue (for estimation of dietary intake): *Spinetoram and N-demethyl and N-formyl metabolites of the major spinetoram component*.

The residue is fat-soluble.

Note: Spinetoram consists of two related components.

Spinetoram was subsequently reviewed by the 2012 Meeting for additional MRLs. The 2008 and 2012 Meetings estimated maximum residue levels for beans, except broad bean and soya bean (green pods and immature seeds); blueberries; Brassica (cole or cabbage) vegetables, Head cabbages, flowerhead brassicas; celery; lettuce, head; eggs; grapes; lettuce, leaf; nectarine; Onion, bulb; onion, Welsh; oranges, sweet, sour; peach; pome fruits; raspberries, red, black; spinach; spring onion; sugar beet; tomato; tree nuts; edible offal, mammalian; meat (from mammals other than marine mammals); milk fats; milks; poultry fats; poultry meat; and poultry, edible offal of.

The current Meeting received information on analytical methods and supervised trials on additional crops in support of additional maximum residue levels.

Methods of analysis

The analytical methods used in the supervised trials provided to the current Meeting, i.e. GRM 05.03 and GRM 05.04, were already reviewed by the 2008 JMPR to be satisfactorily validated. These methods determine XDE-175-J and XDE-175-L and their metabolites N-demethyl-175-J and -L, N-formyl-175-J and -L in plant matrices using HPLC with positive-ion electron-spray (ESI) tandem mass spectrometry (LC-MS/MS).

The Meeting received more recent information on validation of analytical method GRM 05.03 for representative crops was provided to the current Meeting.

The mean recovery ranges from 70% to 110% and relative standard deviation was all < 20%.

Stability of residues in stored analytical samples

The 2008 JMPR over 12 months and concluded that spinetoram and its N-demethyl and N-formyl metabolites were stable for at least about 12 months (372 days) in orange, sugar beet, soya bean and wheat samples stored in deep freezer at -20 °C.

The results of a new study on frozen storage stability was provided to the current Meeting. The Meeting concluded that spinetoram and its N-demethyl and N-formyl metabolites were stable for at least about 2 years (744 days) in apple, melon and maize samples stored frozen at -20 °C.

Results of supervised residue trials on crops

The Meeting received information on supervised trials of spinetoram on citrus fruits, pome fruits, stone fruits, berry fruits and other small fruits, Assorted tropical fruits, bulb vegetables, Fruiting vegetables - Cucurbits, Fruiting vegetables-other than Cucurbits, pulses, root and tuber vegetables, cereal grains and oilseeds.

For all analytes and matrices, the LOQ was 0.01 mg/kg, except that for rice the LOQ was 0.02 mg/kg.

Spinetoram residues for estimation of maximum residues, and total residues of spinetoram, N-demethyl-J and N-formyl-J (hereafter, abbreviated as “total residues”) for estimation of STMRs were calculated in the same manner as done by the 2008 and 2012 JMPR.

Where only spinetoram residues were analysed and reported, to estimate dietary exposure and animal dietary burden, conversion factors were used. Based on the available metabolism studies, appropriate conversion factors (CF=[N-demethyl-J]/[XDE-175-J] and CF=[N-formyl-J]/[XDE-175-J]) for N-demethyl-J and for N-formyl-J are: avocado, feijoa and tamarillo 0.091 and 0.03; kiwifruit and passionfruit 0.05 and 0.017; and sweet corn 0.072 and 0.148.

Where only XDE-175-J of spinetoram was analysed and reported, the following conversion factor was used to estimate XDE-175-L: 0.33.

Citrus fruits

Tangerine

Eight supervised trials on tangerines were carried out in Brazil in 2006 which were reviewed by the 2012 JMPR. Each site received 3 applications of a 250 WG formulation of spinetoram at the rate of 70 g ai/ha for a total of 210 g ai/ha per season. The GAP in Brazil is 3 applications at 25–100 g ai/ha spinetoram. The PHI is 1 day.

As no trials exactly matched the critical GAP with deviations in application rate, the Meeting decided to apply the scaling factor of 100/70 to the trial results to estimate the residue levels at the critical GAP rate of 100 g ai/ha (n=6).

Scaled spinetoram residues were (6): 0.026, 0.026, 0.037, 0.040, 0.054 and 0.064 mg/kg.

Corresponding total residues were (6): 0.40, 0.40, 0.052, 0.069, 0.076 and 0.079 mg/kg.

The Meeting estimated a maximum residue level of 0.15 mg/kg and STMR of 0.0605 mg/kg for the subgroup of mandarins, according to the Codex classification.

*Pome fruits**Persimmon*

Two residue trials on persimmon were conducted in New Zealand during 2012 (SFF11-053/200-01). Each treated plot received 4 applications of 120 SC spinetoram at a concentration of 2.4 g ai/hL and RTI of 14 days. The GAP in Australia consists of 4 applications at 4.8 g ai/hL, RTI of 14 days and a PHI of 0 day.

The spinetoram residues from trials after scaling to the critical GAP were in rank order (n=2): $0.020 \times 4.8/2.4 = 0.040$ and $0.022 \times 4.8/2.4 = 0.044$ mg/kg.

The Meeting considered that the existing Codex MRL for pome fruits (0.05 mg/kg) covers the residues of persimmon.

*Stone fruits**Cherries*

Twelve supervised trials were carried out in France (6), Spain (2), Italy (2), Germany (1) and Poland (1) during 2013 and 2014. Each treated plot received 2 applications of 250 WG spinetoram at a nominal rate of 75 g ai/ha and RTI of 28 days. The GAP in Italy allows 1 application at 100 g ai/ha, and a PHI of 7 days.

The decline trials indicate that residues arising from the first application will be well below the LOQ at the time of last application and therefore, the impact of the first application on the final residues was negligible.

Spinetoram residues from the trials approximating the GAP in Greece (only one application) were (12): < 0.01 (6), 0.011, 0.013, 0.015, 0.027, 0.028 and 0.069 mg/kg.

Corresponding total residues were (12): < 0.02 (6), 0.021, 0.034, 0.037, 0.038, 0.038 and 0.079 mg/kg.

The Meeting estimated a maximum residue level of 0.09 mg/kg and STMR of 0.0205 mg/kg for a subgroup of cherries.

Plums

Ten supervised trials were carried out in France (5), Spain (3) and Italy (2) during 2011. Each treated plot received 2 applications of 250 WG spinetoram at a nominal rate of 100 g ai/ha and RTI of 27-29 days. The critical GAP in Italy allows 1 application at 100 g ai/ha with a PHI of 7 days.

The decline trials indicate that residues arising from the first application will be well below the LOQ at the time of last application and therefore, the impact of the first application on the final residues was negligible.

Spinetoram residues from the trials approximating the GAP in Italy (only one application) were (10): < 0.01 (9) and 0.014 mg/kg. In addition, the 11 trials conducted in Europe in 2007 and 2008 and submitted to the 2012 JMPR in which 3 to 4 applications were made at a rate of around 100 g ai/ha can be evaluated against the GAP in Italy as the earlier applications do not have significant impact on the final residue. Residues were (11): < 0.01 (4), 0.012, 0.012, 0.013, 0.016, 0.016, 0.016 and 0.082 mg/kg. As these populations were not significantly different (Kruskal-Wallis H test), the Meeting evaluated the combined residue set (21): < 0.01 (13), 0.012, 0.012, 0.013, 0.014, 0.016, 0.016, 0.016 and 0.082 mg/kg.

Corresponding total residues were: < 0.02 (13), 0.022, 0.023, 0.024, 0.026, 0.026, 0.028, 0.036 and 0.118 mg/kg.

The Meeting estimated a maximum residue level of 0.09 mg/kg and STMR of 0.02 mg/kg for the subgroup of plums.

Apricot

Six supervised trials were carried out in Southern France (3), Spain (1), Greece (1) and Italy (1) during 2014. Each treated plot received 2 applications of 250 WG spinetoram at a nominal rate 100 g ai/ha and RTI of 22-32 days. The GAP in Italy consists of 1 application at 100 g ai/ha and a PHI of 7 days.

For the same reason as for cherries and plums, the Meeting utilized the results of trials using 2 applications.

Spinetoram residues from those trials were (6): < 0.01, 0.024, 0.035, 0.053, 0.069 and 0.078 mg/kg.

Corresponding total residues were: < 0.02, 0.045, 0.034, 0.063, 0.080 and 0.088 mg/kg.

The Meeting estimated a maximum residue level of 0.15 mg/kg and STMR of 0.0485 mg/kg for apricot.

*Berries and other small fruits**Currants, Black, Red, White*

Twelve supervised trials were carried out in France (6), the UK (3), Germany (2) and Italy (1) during 2013-2015 (Reports 130177, 140137 and 150595). Each treated plot received 2 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI of 28 days. The GAP in the USA for bush berry (including currant and blue berry among others) allows 6 applications at 105 g ai/ha (seasonal maximum rate of 342 g ai/ha), RTI of 6 days and a PHI of 3 days. Decline trials indicate that residues 7 days after the first application were mostly less than 20% of those of the day of the first application and therefore, the Meeting used the results of these trials with 2 applications for estimating a maximum residue level after scaling to the GAP rate in the USA.

Scaling up to the GAP rate in the USA, spinetoram residues were (12): 0.017, 0.020, 0.061, 0.065, 0.13, 0.13, 0.13, 0.15, 0.17, 0.19, 0.20 and 0.31 mg/kg.

Corresponding total residues were (12): 0.043, 0.070, 0.11, 0.15, 0.17, 0.18, 0.18, 0.20, 0.22, 0.26, 0.27 and 0.35 mg/kg.

The Meeting estimated a maximum residue level of 0.5 mg/kg and STMR of 0.18 mg/kg for currants, black, red, white.

Strawberry

Eight outdoor supervised trials were carried out in Brazil during 2006/2007. Each treated plot received 4 applications of 250 WG spinetoram at a nominal rate of 50 g ai/ha. The GAP in Brazil consists of 4 applications at 50 g ai/ha (5 g ai/hL) and a PHI of 3 days.

Eight outdoor supervised trials were carried out in France (2), Spain (2), Italy (2), Bulgaria (1), and Greece (1) during 2012 and 2013. Each treated plot received 2 or 3 applications of 25 SC spinetoram at a nominal rate of 50 g ai/ha and RTI of 14–29. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days. Decline trials demonstrate that only the final application significantly contributes to the final residue. No GAP is available from Europe.

Eight indoor trials were carried out in Netherlands (1), Germany (2), France (2), Greece (1), Spain (1), and Italy (1) during 2012 and 2013. Each treated plot received 3 applications of 25 SC spinetoram at a nominal rate of 50 g ai/ha and RTI of 12–14 days. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days. Decline trials demonstrate that only the final application significantly contributes to the harvest residue.

Spinetoram residues in the trials following the GAP in Brazil were in mg/kg:

Outdoor trials in Brazil: < 0.01 (2), 0.011, 0.015, 0.017, 0.022, 0.024, 0.063.

Outdoor trials in Europe: < 0.01 (2), 0.012, 0.013, 0.015, 0.016 (2), 0.025.

Indoor trials in Europe: 0.014, 0.015, 0.016, 0.022, 0.026, 0.035, 0.065, 0.113.

These data populations were not significantly different (Kruskal-Wallis H test) and could be combined to estimate a maximum residue level. The Meeting estimated a maximum residue level of 0.15 mg/kg.

Corresponding total residues were: < 0.02 (4), 0.021, 0.022, 0.023, 0.024, 0.025, 0.025, 0.026, 0.026, 0.026, 0.027, 0.032, 0.032, 0.034(2), 0.035, 0.036, 0.045, 0.075, 0.11 and 0.14 mg/kg.

The Meeting estimated an STMR of 0.026 mg/kg.

Assorted tropical and sub-tropical fruits – edible peel

Olive

Eight supervised trials were carried out in Spain (4), Italy (4), during 2008, 2009 and 2011. Each treated plot received 2 applications of 250 WG spinetoram at a nominal rate of 25 g ai/ha and RTI of 21 days. The GAP in Greece consists of 2 applications at 25 g ai/ha, RTI of 28 days and a PHI of 21 days.

Spinetoram residues from those trials were (8): < 0.01 (7) and 0.045 mg/kg.

Corresponding total residue were: < 0.02 (7) and 0.055mg/kg.

The Meeting estimated a maximum residue level of 0.07 mg/kg and STMR of 0.02 mg/kg.

Assorted tropical and sub-tropical fruits – inedible peel

Litchi

Six supervised trials were carried out in Thailand during 2015. Each treated plot received 3 applications of 120 SC spinetoram at a nominal rate of 60 g ai/ha and RTI of 7 days. The GAP in Thailand for litchi consists of 3 applications at 60 g ai/ha and a PHI of 14 days.

Spinetoram residues from the trials matching the GAP in Thailand were (5): < 0.01 (4) and 0.011 mg/kg.

Corresponding total residues were: < 0.02 (4) and 0.061 mg/kg.

The Meeting estimated a maximum residue level of 0.015 mg/kg and STMR of 0.02 mg/kg for litchi.

Avocado

Three supervised trials were carried out in New Zealand during 2012 and 2013. Each treated plot received 4 applications of 120 SC spinetoram at 2.4 or 4.8 g ai/hL and RTI of 13–15 days.

Six supervised trials were carried out in Colombia during 2014. Each treated plot received 3 applications of 60 SC spinetoram at 60 g ai/ha and RTI 6–8 days.

The GAP in Australia allows up to 4 applications at 4.8 g ai/hL with an RTI of 7–14 days and a PHI of 0 days. Although samples were taken and analysed one DALA in most of the Colombian trials, a decline study indicates that there is no significant decline from 0 DALA to 1 DALA, the data from these trials were used for estimating a maximum residue level.

Spinetoram residues from the trials in New Zealand and Colombia matching the GAP in Australia after scaling to the GAP rate of 4.8 g ai/hL were (n=9) 0.020, 0.027, 0.030, 0.041, 0.052, 0.076, 0.090, 0.096 and 0.13 mg/kg.

Total residues in flesh were < 0.02 mg/kg (3). When the total residues in whole fruit was 0.217 mg/kg, those in flesh were < 0.02 mg/kg.

The Meeting estimated a maximum residue level of 0.3 mg/kg and STMR of 0.02 mg/kg for avocado.

Feijoa

Three supervised trial was carried out in New Zealand in 2013. The treated plots received 3 or 4 applications of 120 SC spinetoram at 2.4 or 4.8 g ai/hL and RTI of 13–14 days. The GAP in New Zealand for feijoa (included in tropical and sub-tropical fruit with inedible peel) consists of 4 applications at 96 g ai/ha, 4.8 g ai/hL, RTI of 7-14 days and a PHI of 14 days.

Spinetoram residues from the independent trials matching the GAP in New Zealand were: < 0.01 mg/kg (1).

The Meeting concluded that the data were insufficient for estimating a maximum residue level.

Mango

Six supervised trials were carried out in six provinces in Thailand during 2013. Each treated plot received 3 applications of 250 WG spinetoram at a nominal rate of 60 g ai/ha and RTI of 7 days. The GAP in Thailand consists of 3 applications at 60 g ai/ha, RTI of 7 days and a PHI of 14 days.

Spinetoram residues from the trials matching the GAP in Thailand were: < 0.01 mg/kg (5). In another trial, residues of spinetoram were analysed on 0 DALA but were below the LOQ of 0.01 mg/kg in whole fruits.

Corresponding total residues were: < 0.02 mg/kg (5).

The Meeting estimated a maximum residue level of 0.01* mg/kg and STMR of 0.02 mg/kg.

Tamarillo

Three supervised trials on tamarillo were conducted in New Zealand during 2012 and 2013. Each treated plot received 4 applications of 120 SC spinetoram at a nominal rate of 24–50 g ai/ha and RTI of 14 days. The GAP in New Zealand consists of 4 applications at 96 g ai/ha, 4.8 g ai/hL, 14 days and a PHI of 14 days.

Spinetoram residues from the trials matching the GAP in New Zealand were: < 0.01 mg/kg (1).

The Meeting concluded that the data were insufficient for estimating a maximum residue level.

Kiwifruit

Two supervised trials were carried out in New Zealand in 2012. The treated plot received 4 applications of 120 SC spinetoram at 2.4 g ai/hL and RTI of 14 days. The GAP in Australia consists of 4 applications at 4.8 g ai/hL, RTI of 7–14 days and a PHI of 7 days. In New Zealand, spinetoram is not allowed for use on kiwifruit.

Spinetoram residues from the trials matching the GAP in Australia (after scaling) were: 0.096 (0.048×4.8/2.4) and 0.11 (0.053×4.8/2.4) mg/kg.

The Meeting concluded that the data were insufficient for estimating a maximum residue level.

Passion fruit

Three supervised trials were carried out in New Zealand in 2012 and 2013. The treated plot received 4 applications of 120 SC spinetoram at 2.4 or 4.8 g ai/hL and RTI of 13 or 14 days. The GAP in Australia consists of 4 applications at 4.8 g ai/hL, RTI 7-14 days and a PHI of 0 days.

Spinetoram residues from the trials matching the GAP in Australia (after scaling) were: 0.051, 0.098 (0.049×4.8/2.4) and 0.17 (0.087×4.8/2.4) mg/kg.

Corresponding total residues were: 0.061, 0.12 (0.059×4.8/2.4) and 0.19 (0.097×4.8/2.4) mg/kg.

The Meeting estimated a maximum residue level of 0.4 mg/kg and STMR of 0.12 mg/kg for passionfruit.

*Bulb vegetables**Leek*

Eight supervised trials were carried out in Denmark (2), Germany (4) and Poland (2) during 2014 and 2015 (Reports 150016 and 140141). Each treated plot received 2 applications of 25 SC spinetoram at a nominal rate 60 g ai/ha and RTI of 28 days. The GAP in the Netherlands consists of 2 applications at 60 g ai/ha, RTI of 28 days and a PHI of 7 days.

Spinetoram residues from the trials matching the GAP were (8): < 0.01 (3), 0.014, 0.018, 0.018, 0.021 and 0.028 mg/kg.

Corresponding total residues were: < 0.02 (3), 0.024, 0.028, 0.028, 0.031, 0.053 mg/kg.

The Meeting estimated a maximum residue level of 0.05 mg/kg and STMR of 0.026 mg/kg for leek.

*Fruiting vegetables, Cucurbits**Cucumber*

Eight indoor trials were carried out in Brazil during 2006 and 2007. Each treated plot received 4 applications of 250 WG spinetoram at a nominal rate of 50 g ai/ha. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days.

Six supervised outdoor trials were carried out in France (2), Spain (2), Greece (1) and Italy (1) during 2012 and 2013. Each treated plot received 2 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI of 27–29 days. These trials were evaluated against the GAP in Brazil.

Six indoor trials were carried out in France (1), Spain (1), Italy (1), Greece (1) and Germany (2), during 2012 and 2013. Each treated plot received 3 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI of 12–14 days.

Spinetoram residues from the trials matching the GAP in Brazil were in mg/kg:

Indoor trials in Brazil: < 0.01 (7), 0.012

Outdoor trials in Europe: < 0.01 (6)

Indoor trials in Europe: < 0.01 (2), 0.010, 0.011, 0.012, 0.021

These trials were not significantly different.

The corresponding total residues were: < 0.02 (15), 0.020, 0.021, 0.022, 0.022 and 0.031 mg/kg.

Squash, Summer

Six outdoor supervised trials were carried out in France (2), Spain (1), Greece (1) and Italy (2) during 2012 and 2013. Each treated plot received 2 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI of 27–29 days. Since there is no GAP is available for summer squash in Europe or Brazil, the Meeting used the GAP in Australia for cucurbits (including cucumber and summer squash) which allows four applications at 48 g ai/ha, RTI of 7-14 days and PHI of 3 days. This GAP is similar to the GAP in Brazil.

Six indoor trials were carried out in France (2), Spain (1), Italy (1), Netherlands (1) and Greece (1), during 2012 and 2013. Each treated plot received 3 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI of 12–16 days.

Spinetoram residues from the trials matching the GAP in Australia were in mg/kg:

Outdoor: < 0.01 (4), 0.012 (2);

Indoor: < 0.01 (5), 0.035;

These residues were not significantly different.

The data populations of indoor and outdoor trials on cucumber and summer squash evaluated against the comparable GAP were not significantly different. The Meeting considered the combined dataset for estimating a maximum residue level for the Subgroup of Fruiting vegetables, Cucurbits - Cucumbers and Summer squashes.

Combined spinetoram residues were: < 0.01 (24), 0.010, 0.011, 0.012, 0.012, 0.012, 0.012, 0.021 and 0.035 mg/kg.

The corresponding total residues were: < 0.02 (24), 0.020, 0.020, 0.021, 0.022, 0.022, 0.022, 0.031 and 0.045 mg/kg.

The Meeting estimated a maximum residue level of 0.04 mg/kg and STMR of 0.02 mg/kg for the Subgroup of Fruiting vegetables, Cucurbits - Cucumbers and Summer squashes.

Melons

Eight supervised trials were carried out in Brazil during 2005, 2006 and 2007 Each treated plot received 4 applications of spinetoram at a nominal rate of 50 g ai/ha. The GAP in Brazil for melon consists of 4 applications at 40 g ai/ha and a PHI of 3 days.

Eight supervised trials were carried out in France (2), Spain (3) and Italy (3) during 2012 and 2013. Each treated plot received 2 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI of 27 or 28 days.

Spinetoram residues from the Brazilian trials matching the GAP were (8): < 0.01 mg/kg (8).

In the outdoor trials in Europe, the application rates were 50% higher than the maximum rate in the GAP in Brazil. However, spinetoram residues from these trials were (8): < 0.01 mg/kg (8).

In the indoor trials in Europe, the application rates were about 50% higher than the maximum rate in the GAP in Brazil. Spinetoram residues from these trials were: < 0.01 (7) and $0.011 \times 40 / 57 = 0.0077$ mg/kg.

Utilizing all the trial data, the Meeting estimated a maximum residue level of 0.01* mg/kg for melons, except watermelon.

Corresponding total residues in flesh (if flesh was not analysed, then the value of whole fruit) were all < 0.02 mg/kg (24). Some residues were detected in peel.

The Meeting estimated an STMR of 0.02 mg/kg for melons, except watermelon.

*Fruiting vegetables, other than Cucurbits**Peppers*

Eight indoor trials were carried out in Brazil on non-bell peppers during 2006 and 2007. Each treated plot received 4 applications of spinetoram at a nominal rate of 50 g ai/ha. The GAP in Brazil consists of 4 applications at 50 g ai/ha and a PHI of 3 days.

Eight outdoor trials were carried out in France (2), Spain (2), Italy (2) and Greece (2) during 2012 and 2013 on both bell and non-bell peppers. Each treated plot received 2 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI of 28 or 29 days.

Eight indoor trials were carried out in France (2), Netherlands (1), Denmark (1), Germany (1), Spain (1), Italy (1) and Greece (1) during 2012 and 2013 on bell and non-bell peppers. Each treated plot received 3 applications of 25 SC spinetoram at a nominal rate of 60 g ai/ha and RTI of 13–14 days.

Spinetoram residues from the trials matching the GAP in Brazil were in mg/kg:

Indoor in Brazil: < 0.01 (4), 0.012, 0.016, 0.023, 0.38;

Indoor in Europe: < 0.01, 0.012, 0.015, 0.018, 0.023, 0.029, 0.043, 0.059;

Outdoor in Europe: < 0.01 (3), 0.016, 0.017, 0.019, 0.081, 0.082.

Since the data population from these trials were not significantly different according the Kruskal-Wallis H test, the Meeting combined the data sets for estimating a maximum residue level for peppers. Combined data were (24): < 0.01 (8), 0.012, 0.012, 0.015, 0.016, 0.016, 0.017, 0.018, 0.019, 0.023, 0.023, 0.029, 0.043, 0.059, 0.081, 0.082 and 0.38 mg/kg.

The corresponding total residues were: < 0.02 (8), 0.022, 0.022, 0.025, 0.026, 0.026, 0.027, 0.028, 0.029, 0.033, 0.039, 0.041, 0.053, 0.081, 0.092, 0.103 and 0.45 mg/kg.

The Meeting estimated a maximum residue level of 0.4 mg/kg and STMR of 0.026 mg/kg for a subgroup of peppers (except martynia, okra and roselle).

Using the concentration factor of 10, the Meeting also estimated a maximum residue level of 4 mg/kg and STMR of 0.26 mg/kg for dried chili peppers.

*Pulses**Soya bean, dry*

Four supervised trials were carried out in Brazil during 2006 and 2007. Each treated plot received 2 applications of 120 SC spinetoram at a nominal rate of 24 g ai/ha. The GAP in Brazil consists of 2 applications at 18 g ai/ha and a PHI of 7 days.

The application rate was slightly higher than 125% of the maximum rate of the GAP in Brazil. However, the spinetoram residues were all < 0.01 mg/kg (4). In addition, residues were < 0.01 mg/kg on day 0 in two decline studies. Based on these results, the Meeting estimated a maximum residue level of 0.01* mg/kg for soya bean, dry.

Corresponding total residues were all < 0.02 mg/kg (4). Total residues were also < 0.02 mg/kg on the day of application (0 day).

The Meeting estimated an STMR of 0.02 mg/kg for soya bean, dry.

*Root and tuber vegetables**Potato*

Four supervised trials were carried out in Brazil during 2006 and 2007. Each treated plot received 3 applications of 250 WG spinetoram at a nominal rate of 60 g ai/ha. The GAP in Brazil consists of 3 applications at 50 g ai/ha and a PHI of 1 day.

Two supervised trials were carried out in New Zealand during 2010. Each treated plot received 4 applications of 120 SC spinetoram at a nominal rate of 60 g ai/ha. The GAP in New Zealand consists of 4 applications at 60 g ai/ha, RTI of 7 days and a PHI of 7 days. However, as the number of trials in Brazil was not sufficient for estimating a maximum residue level for potato and the GAP in Brazil is more critical, data were evaluated against the GAP in Brazil.

Spinetoram residues were all < 0.01 mg/kg (6). In addition, residues were < 0.01 mg/kg on day 0 in six decline studies. Based on these results, the Meeting estimated a maximum residue level of 0.01* mg/kg.

Corresponding total residues were all < 0.02 mg/kg (6). Total residues were also < 0.02 mg/kg on the day of application (0 day).

The Meeting estimated STMR of 0.02 mg/kg for potato.

*Cereal grains**Rice*

Six supervised trials were carried out in China during 2009 and 2010. Each treated plot received 2 applications of 60 SC spinetoram at a nominal rate 28 g ai/ha and RTI of 7 days. The GAP in China consists of 2 applications at 27 g ai/ha, RTI of 7-10 days and a PHI of 21 days. Residues of spinetoram and the main metabolites were analysed by modified method GRM 05.03 for rice, with a validated LOQ of 0.02 mg/kg (grain) and 0.04 mg/kg (hulls and plant).

Spinetoram residues in husked rice from the trials matching the GAP in China were: < 0.02 mg/kg (6). Since in all the trials residues are below the LOQ, and residues of husked rice from 14 days after the last application, were < 0.02 mg/kg (shorter than the PHI of 21 days), the Meeting estimated a maximum residue level of 0.02* mg/kg for husked rice.

Corresponding total residues were all < 0.04 mg/kg (6). The Meeting estimated an STMR of 0.04 mg/kg for husked rice.

Maize

Four supervised trials were carried out in Brazil during 2006 and 2007. Each treated plot received 3 applications of 120 SC spinetoram at a nominal rate 24 g ai/ha. The GAP in Brazil consists of 3 applications at 12 g ai/ha and a PHI of 7 days.

Despite that there were only four trials, as they used the double rate resulting in residues below the LOQ. At the double rate, spinetoram residues were all < 0.01 mg/kg (4). In addition, residues at 0 day were < 0.01 mg/kg in two decline trials.

The Meeting estimated a maximum residue level of 0.01* mg/kg.

Corresponding total residues were all < 0.02 mg/kg (4).

The Meeting estimated an STMR of 0.02 mg/kg for maize.

Forage or fodder samples were not analysed.

Sweet Corn (Corn-on-the-cob)

Four supervised trials were carried out in Brazil during 2006 and 2007. Each treated plot received 4 applications of 120 SC spinetoram at a nominal rate 24 g ai/ha. The GAP in Australia consists of 4 applications at 48 g ai/ha and a PHI of 3 days.

Spinetoram residues from trials matching the GAP in Australia were: < 0.01 mg/kg (4). Residues were also < 0.01 mg/kg (4) at 0 days after the last application.

Corresponding total residues were: < 0.02 mg/kg (4).

The Meeting estimated a maximum residue level of 0.01* mg/kg and STMR of 0.02 mg/kg for sweet corn (corn-on-the-cob)(kernels plus cob with husk removed).

*Oilseeds**Cotton seed*

Ten supervised residue trials were carried out in Brazil during 2013 and 2014. Each treated plot received 3 or 4 applications of 60 SC or 120 SC spinetoram at a nominal rate of 24 or 36 g ai/ha. The GAP in Colombia allows applications (number not specified) at 18 g ai/ha and a PHI of 1 day. However, there were not sufficient numbers of trials matching this GAP. The GAP in Brazil consists of 4 applications at 18 g ai/ha and a PHI of 7 days.

Nine supervised trials were carried out in Greece during 2014 and 2015. Each treated plot received 2 applications of 120 SC spinetoram at a nominal rate 60 g ai/ha and RTI of 28/29 days. These trials were evaluated against the GAP in Brazil.

In many trials in Brazil and Europe, spinetoram was applied 3 times or 2 times. As the decline trials indicate that at the time of the last application, residues are negligible and any previous applications do not have an impact on the final residues. Therefore, the Meeting considered the trials where application numbers do not match the GAP in Brazil. In the trials in Brazil, the application rates were either slightly higher than 125% or double the maximum GAP rate. The spinetoram residues were all < 0.01 mg/kg (10). In the trials in Europe, the application rates were about 3 times the maximum GAP rates. The spinetoram residues were all < 0.01 mg/kg (9).

In these trials, total residues were: < 0.02 mg/kg (19).

The Meeting estimated a maximum residue level of 0.01 * mg/kg and STMR of 0 mg/kg for cotton seed.

*Animal feedstuffs**Rice straw and hulls*

Spinetoram residues in rice straw from the trials matching the GAP in China were (6): < 0.04 (3), 0.21, 0.31 and 0.50 mg/kg, which are converted to < 0.044 (3), 0.23, 0.34 and 0.56 mg/kg on a dry weight basis (90% DM).

The Meeting estimated a maximum residue level of 1.5 mg/kg for rice straw and fodder, dry, on a dry weight basis.

Corresponding total residues were (6): < 0.08 (3), 0.24, 0.35 and 0.54 mg/kg.

The Meeting estimated a median residue of 0.16 mg/kg and highest residue of 0.54 mg/kg for rice straw (as received).

Total residues in rice hulls from the trials matching the GAP in China were (6): < 0.08 (4), 0.25 and 0.30 mg/kg.

The Meeting estimated a median residue of 0.08 mg/kg for rice hulls (on an as received basis).

Sweet corn forage and stover

Total residues in forage from the trials matching the GAP in Australia were (4): 0.12, 0.14, 0.17 and 3.3 mg/kg.

The Meeting estimated a median residue of 0.155 mg/kg and highest residue of 3.3 mg/kg for sweet corn forage (as received).

Spinetoram residues in stover from the trials matching the GAP in Australia were (4): < 0.01, 0.021, 0.029 and 0.048 mg/kg, which are converted to < 0.012, 0.025, 0.035 and 0.058 mg/kg on a dry weight basis (83% DM).

The Meeting estimated a maximum residue level of 0.15 mg/kg on a dry weight basis for sweet corn fodder.

Total residues in stover from the trials matching the GAP in Australia were (4): < 0.02, 0.029, 0.039 and 0.058 mg/kg

The Meeting estimated a median residue of 0.034 mg/kg and highest residue of 0.058 mg/kg for sweet corn stover (on an as received basis).

Residues in processed commodities

Processing studies on olives, soya beans and maize were provided to the current Meeting. However, in all the studies residues in raw agricultural commodities were below the LOQ. Therefore, it was not possible to calculate processing factors for these RACs. In processed commodities, residues were also below the LOQ, except in one trial, residue in maize oil was at the LOQ.

Farm animal dietary burden

The current Meeting calculated animal burden using the OECD diets listed in Appendix IX of the 2016 edition of the FAO Manual and those commodities which were evaluated by the 2008, 2012 and the current Meeting that can be fed to animals.

	US-Canada		EU		Australia		Japan	
	Max	mean	max	Mean	max	Mean	Max	mean
Beef cattle	0.032	0.032	0.286	0.187	5.541 ^a	0.299 ^b	0.318	0.108
Dairy cattle	3.129 ^c	0.180	0.327	0.221 ^d	2.802	0.181	0.167	0.062
Broilers	0.026	0.026	0.020	0.020	0.026	0.026	0.016	0.016
Layers	0.026	0.026	0.063 ^e	0.049 ^f	0.026	0.026	0.018	0.018

^a Suitable for estimating maximum residue levels for meat, fat and edible offal of cattle.

^b Suitable for estimating STMRS for meat, fat and edible offal of cattle.

^c Suitable for estimating maximum residue level for milk.

^d Suitable for estimating STMR for milk

^e Suitable for estimating maximum residue level for meat, fat and edible offal of poultry.

^f Suitable for estimating STMR for eggs.

Residues in milk and cattle tissues

The 2008 JMPR evaluated one animal feeding study on lactating cows dosed daily for 29 consecutive days with a mixture of spinetoram and N-demethyl and N-formyl metabolites of XDE-175-J (1.2, 3.7, 11.5 and 38.6 ppm in the diet) or spinetoram only (37.6 ppm).

The maximum and mean dietary burdens in cattle were 5.54 and 0.30 ppm of dry matter diet respectively for estimating a maximum residue level and STMR for edible tissues, and 3.13 and 0.22 mg/kg for milk. The maximum residue levels, STMRS and HRs for relevant commodities of mammal origin were estimated using the residue levels identified by the 2008 JMPR in tissues and in milk.

Maximum residue level beef or dairy cattle	Feed level (ppm) for milk residues	Spinetoram (mg/kg) in milk	Feed level (ppm) for tissue residues	Spinetoram (mg/kg) in			
				Muscle	Liver	Kidney	Fat
Feeding study ^a	1.2	< 0.01	3.7	0.043	0.057	0.040	0.69
	3.7	0.0187	11.5	0.086	0.11	0.074	1.41
Dietary burden and highest residue for spinetoram only	3.13	0.017	5.54	0.053	0.070	0.048	0.86

STMR beef or dairy cattle	Feed level (ppm) for milk residues	Total residue (mg/kg) in milk	Feed level (ppm) for tissue residues	Total residue (mg/kg) in			
				Muscle	Liver	Kidney	Fat
Feeding study ^c	0	< 0.02	0	< 0.02	< 0.02	< 0.02	< 0.02
	1.2	< 0.02	1.2	< 0.02	< 0.02	< 0.02	0.10
Dietary burden and mean residue	0.22	< 0.003	0.30	< 0.005	< 0.005	< 0.005	0.025

The level <LOQ at 0 ppm dose is assumed to be 0 mg/kg residue for calculation.

The Meeting estimated STMRs of 0.003 mg/kg for milk, 0.005 mg/kg for muscle, liver and kidney, and 0.025 mg/kg for fat. The mean ratio of the total residues in cream to those in whole milk was calculated to be 5.7. An STMR for milk fat was estimated to be 0.017 mg/kg.

On the basis of the calculations shown above, the Meeting estimated maximum residue levels of 0.02 mg/kg for milks, 1 mg/kg (fat) for meat (from mammals other than marine mammals) and 0.1 mg/kg for edible offal, mammalian to replace the corresponding previous recommendations. The Meeting estimated a new maximum residue level of 1 mg/kg for mammalian fats. Using the mean ratio of spinetoram residues in cream to those in whole milk of 6.6, the Meeting estimated a maximum residue level of 0.15 mg/kg for milk fats to replace the previous recommendation.

Residues in egg and poultry tissues

The current Meeting calculated dietary burdens for poultry. The maximum and mean dietary burdens in cattle were 0.063 and 0.049 ppm of dry matter diet respectively for estimating a maximum residue level and STMR for edible tissues and eggs.

The 2008 JMPR reviewed a metabolism study on laying hens, in which either XDE-175-J or XDE-175-L (components of spinetoram) was administered for 7 consecutive days at a dose equivalent to 10 ppm in the diet. In the eggs or tissues, the major residue was unchanged administered compound (49–70% TRR) except in liver (12–13% TRR). Using the results of the metabolism study and a typical ratio in the active ingredients of 3 to 1 between XDE-175-J and XDE-175-L, the residues of spinetoram were calculated to be 0.89 mg/kg in abdominal fat, 0.59 mg/kg in skin with fat, 0.037 mg/kg in muscle, 0.078 mg/kg in liver and 0.078 mg/kg for day 4 egg. N-Demethyl metabolite was detected only in liver and the N-formyl metabolite was not detected in any of the samples. The total residues in liver were calculated to be 0.081 mg/kg.

Maximum residue level Broilers and layers	Feed level (ppm) for tissue residues	Spinetoram (mg/kg) in			
		Muscle	Liver	Fat	Eggs
Metabolism study	10	0.037	0.078	0.886	0.078
Dietary burden and highest residue	0.063	< 0.01	< 0.01	< 0.01	< 0.01

STMR Broilers and layers	Feed level (ppm) for tissue residues	Total residue (mg/kg) in			
		Muscle	Liver	Fat	Eggs
Metabolism study	10	0.037	0.081	0.886	0.078
Dietary burden and highest residue	0.049	0.00018	0.00040	0.0043	0.00038

The Meeting estimated a maximum residue level of 0.01 * mg/kg for poultry meat (fat), poultry edible offal, poultry fats and eggs. The Meeting estimated STMR of 0.0002 mg/kg for muscle, 0.0004 mg/kg for liver, 0.004 mg/kg for fat, and 0.0004 mg/kg for 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 IEDI assessment for plant and animal commodities.

Definition of the residue (for compliance with the MRL) for plant and animal commodities: *Spinetoram*.

Definition of the residue (for estimation of dietary risk assessment) for plant and animal commodities: *Spinetoram and N-demethyl and N-formyl metabolites of the major spinetoram component*.

The residue is fat-soluble.

Note: Spinetoram consists of two related components.

Commodity		Recommended MRL, mg/kg		STMR or STMR-P (mg/kg)
CCN	Name	New	Previous	
FC 003	Subgroup of mandarins	0.15	-	0.0605
FS 0013	Subgroup of cherries	0.09	-	0.0205
FS 0014	Subgroup of plums	0.09	-	0.02
FS 0240	Apricot	0.15	-	0.0485
FB 0278	Currant, Black, Red, White	0.5	-	0.18
FB 0275	Strawberry	0.15	-	0.026
FT 0305	Table olives	0.07	-	0.02
FI 0343	Litchi	0.015	-	0.02
FI 0326	Avocado	0.3	-	0.02
FI 0345	Mango	0.01 *	-	0.02
FI 0351	Passion fruit	0.4	-	0.12
VA 0384	Leek	0.05	-	0.026
VC 2039	Subgroup of Fruiting vegetables, Cucurbits - Cucumbers and Summer squashes	0.04	-	0.02
VC 0046	Melons, except water melon	0.01 *	-	0.02
VO 0051	Subgroup of peppers (except martyria, okra and roselle)	0.4	-	0.026
VD 0541	Soya bean (dry)	0.01 *	-	0.02
VR 0589	Potato	0.01 *	-	0.02
	Dried chili pepper	4	-	0.26
CM 0649	Husked rice	0.02 *	-	0.04
GC 0645	Maize	0.01 *	-	0.02
GC 0447	Sweet corn (corn-on-the-cob) (kernels plus cob with husk removed)	0.01 *	-	0.02
SO 0691	Cotton seed	0.01 *	-	0
ML 0106	Milks	0.02	0.01 *	0.003
FM 0183	Milk fats	0.15	0.1	0.017
MM 0095	Meat (from mammals other than marine mammals)	1 (fat)	0.2 (fat)	0.005 (muscle) 0.025 (fat)
MO 0105	Edible offal (mammalian)	0.1	0.01 *	0.005 (liver, kidney)
MF 0100	Mammalian fats (except milk fats)	1	-	0.025
PM 0110	Poultry meat	0.01 * (fat)	-	0.0002 (muscle) 0.004 (fat)
PO 0111	Poultry, edible offal of	0.01 *	-	0.0004
PF 0111	Poultry fats	0.01 *	-	0.004
PE 0112	Eggs	0.01 *	-	0.0004

Commodity		Recommended MRL, mg/kg		STMR or STMR-P (mg/kg)
CCN	Name	New	Previous	
AS 0649	Rice straw and fodder, dry	1.5	-	-
AS 0447	Sweet corn fodder	0.15	-	-

For calculating animal dietary burdens

Commodity		Median residue mg/kg	Highest residue mg/kg
CCN	Name		
	Rice straw	0.16	0.54
	Rice hulls	0.08	-
	Sweet corn forage	0.155	3.3
	Sweet corn stover	0.034	0.058

Expressed on an "as received" basis.

DIETARY RISK ASSESSMENT

Long-term dietary exposure

The International Estimated Daily Intakes (IEDIs) of spinetoram were calculated for the 17 GEMS/Food cluster diets using STMRs estimated by the Meeting in 2008, 2012 and 2017. The ADI is 0–0.05 mg/kg bw and the calculated IEDIs were 0.3–2% of the maximum ADI. The Meeting concluded that the long-term dietary exposure to residues of spinetoram resulting from the uses considered by the 2009 and current JMPR is unlikely to present a public health concern.

Short-term dietary exposure

The 2008 JMPR decided that an ARfD is unnecessary. The Meeting therefore concluded that the short-term dietary exposure to residues of spinetoram is unlikely to present a public health concern.

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