



Evaluation Report for Category B, Subcategory B.5.0 Application

Application Number: 2007-0222
Application: B.5.0 - MRLs for registered active ingredients on imported commodities
Product: QUADRIS Flowable Fungicide
Registration Number: 26153
Active ingredients (a.i.): Azoxystrobin
PMRA Document Number: 1716489

Background

Azoxystrobin (Reg. No. 26152) is contained in the two end use products, Quadris Flowable Fungicide (US EPA Reg. No. 100-1098) and Ortiva (German Reg. No. 4560-00), for the control of fungal diseases in a wide variety of crops. Azoxystrobin has been registered for use since 2000-05-19.

Purpose of Application

The purpose of this application is to revise maximum residue limits (MRLs) to cover combined residues of azoxystrobin and the Z-isomer in/on imported banana; field corn; Dried shelled pea and bean (except soybean) subgroup 6C; Citrus Crop Group 10; Leafy Vegetables (except brassica) Crop Group 4; Root vegetables subgroup 1A; green onions; dry bulb onions, peanut; peanut oil; rice; and dry soybeans. In addition, MRLs will be specified to cover residues of azoxystrobin in/on imported globe artichoke; Fruiting vegetables, Crop Group 8 (except tomato); Herb subgroup 19A, fresh leaves; Herb subgroup 19A, dried leaves; Spice subgroup 19B (except pepper); Berries, Caneberry subgroup 13A; Berries, Bushberry subgroup 13B; cranberry; Head and stem Brassica subgroup 5A; Leafy Brassica greens subgroup 5B; garden beet tops; hops, dried cones; lychee; mango; peppermint and spearmint tops; sunflower; and watercress.

Chemistry Assessment

A chemistry assessment was not required for this application since azoxystrobin is already registered in Canada.

Health Assessments

A toxicology assessment was not required for this application since the proposal is to specify MRLs on imported commodities of an active ingredient currently registered in Canada.

To support the specification and revision of MRLs in/on a variety of crops imported from the US, residue data were evaluated. Residue data for azoxystrobin in banana, field corn, carrot roots, radish roots, sugarbeets, spinach, head lettuce, leaf lettuce, celery, dry shelled pea and bean, green onions, dry bulb onions, summer squash, melon, cucumber, peanut, rice, and soybean seed that were previously submitted were re-assessed for the purpose of revising the MRLs for residues of azoxystrobin. In addition, a peanut processing study was also re-assessed to determine the acceptability of revising the MRL for peanut oil.

In addition, newly submitted residue data for azoxystrobin in globe artichoke, basil, chives, dill, parsley, broccoli, cabbage, mustard greens, peppers, blueberry, caneberry, garden beet, orange, lemon, grapefruit, cranberry, lychee, mango, mint, watercress, hops, and sunflowers were assessed to support the import of these commodities from the US which may contain residues of azoxystrobin.

Maximum Residue Limits

Based on the maximum residues observed in crops treated according to US label directions, maximum residue limits (MRLs) to cover residues of azoxystrobin and the Z-isomer in/on imported crops and processed commodities will be established as shown in Table 1. Residues of azoxystrobin in processed commodities not listed in Table 1 are covered under established MRLs for the raw agricultural commodities (RACs).

Commodity	Application Method/ Total Application Rate (g a.i./ha)	PHI (days)	Residues (ppm)		Experimental Processing Factor	Currently Established MRL	Recommended MRL
			Min	Max			
Globe Artichoke	Pre-harvest/1.70 kg a.i./ha	0	1.53	2.44	--	None	4.0
Banana	Pre-harvest/1.12 kg a.i./ha	0	0.09	0.27	--	1.2	2.0
	Post-harvest/400 ppm	na*	0.53	1.15			
Basil (fresh)	Pre-harvest/1.70 kg a.i./ha	0	16.29	48.98	--	None	50 (Herb subgroup 19A, fresh leaves)
Chives (fresh)	Pre-harvest/1.70 kg a.i./ha	0	1.205	7.368	--		

TABLE 1. Summary of Field Trial and Processing Data Used to Establish/Revise Maximum Residue Limit(s) (MRLs)

Commodity	Application Method/ Total Application Rate (g a.i./ha)	PHI (days)	Residues (ppm)		Experimental Processing Factor	Currently Established MRL	Recommended MRL
			Min	Max			
Basil (dried)	Pre-harvest/1.70 kg a.i./ha	0	97.6	239.9	--	None	260 (Herb subgroup 19A, dried leaves)
Chives (dried)	Pre-harvest/1.70 kg a.i./ha	0	27.37	45.77	--		
Dill seed	Pre-harvest/1.50-2.25 kg a.i./ha	0	5.17	31.65	--	None	38 (Spices subgroup 19B, except black pepper)
Broccoli	Pre-harvest/1.5 kg a.i./ha	0	0.15	2.37	--	None	3.0 (Brassica, head and stem, subgroup 5A)
Cabbage	Pre-harvest/1.7 kg a.i./ha	0	0.34	2.01	--		
Mustard greens	Pre-harvest/1.7 kg a.i./ha	0	2.41	21.60	--	None	25 (Brassica, leafy greens, subgroup 5B)
Peppers (bell and non-bell)	Pre-harvest/1.7-2.24 kg a.i./ha	0	0.08	0.94	--	None	2.0 (Vegetable, fruiting group 8, except tomato)
Blueberry	Pre-harvest/1.70 kg a.i./ha	0	0.50	1.63	--	None	3.0 (Bushberry subgroup 13B)
Caneberry (raspberry and blackberry)	Pre-harvest/1.70-1.96 kg a.i./ha	0	0.69	3.69	--	None	5.0 (Caneberry subgroup 13A)
Garden beet roots	Pre-harvest/1.70 kg a.i./ha	0	0.08	0.36	--	0.5 (Root vegetables, except sugarbeet, subgroup 1B)	0.5 (Vegetable root, subgroup 1A)
Carrots	Pre-harvest/2.22 kg a.i./ha	0	0.03	0.31	--		
Radish roots	Pre-harvest/2.22 kg a.i./ha	0	0.02	0.46	--		
Sugarbeet roots	Pre-harvest/2.22 kg a.i./ha	0	0.02	0.27	--	0.3 (sugarbeets)	

TABLE 1. Summary of Field Trial and Processing Data Used to Establish/Revise Maximum Residue Limit(s) (MRLs)

Commodity	Application Method/ Total Application Rate (g a.i./ha)	PHI (days)	Residues (ppm)		Experimental Processing Factor	Currently Established MRL	Recommended MRL
			Min	Max			
Garden beet tops	Pre-harvest/1.70 kg a.i./ha	0	6.56	22.67	--	None	35
Grapefruit	Pre-harvest/0.56 kg a.i./ha PLUS Post-harvest dip/0.120 kg a.i./100 L	0	1.21	5.45	--	0.8 (Citrus fruit,Crop Group 10)	10 (Citrus fruit,Crop Group 10)
	Pre-harvest/0.56 kg a.i./ha PLUS Post-harvest spray/1 kg a.i./250,000 kg fruit	0	0.43	1.01	--		
Orange	Pre-harvest/0.56 kg a.i./ha PLUS Post-harvest dip/0.120 kg a.i./100 L	0	1.23	4.01	--		
	Pre-harvest/0.56 kg a.i./ha PLUS Post-harvest spray/1 kg a.i./250,000 kg fruit	0	0.39	1.10	--		
Lemon	Pre-harvest/0.56 kg a.i./ha PLUS Post-harvest dip/0.120 kg a.i./100 L	0	1.49	9.20	--		
	Pre-harvest/0.56 kg a.i./ha PLUS Post-harvest spray/1 kg a.i./250,000 kg fruit	0	0.28	1.59	--		
Cranberries	Pre-harvest/1.70 kg a.i./ha	3	0.16	0.33	--	None	0.50
Lychee	Pre-harvest/1.70 kg a.i./ha	0	0.25	1.99	--	None	2.0
Mangos	Pre-harvest/1.70 kg a.i./ha	0	0.07	0.50	--	None	2.0
Mint (fresh or for processing)	Pre-harvest/1.70 kg a.i./ha	0 (fresh)	19.76	24.69	--	None	30 (peppermint/ spearmint tops)
		6-8 (for processing)	4.39	17.20			
Watercress	Pre-harvest/1.70 kg a.i./ha	7	<0.12	1.46	--	None	3.0
Hops, dried cones	Pre-harvest/1.84-2.11 kg a.i./ha	27-28	0.46	11.32	--	None	20
Beer					0.005	None	None

TABLE 1. Summary of Field Trial and Processing Data Used to Establish/Revise Maximum Residue Limit(s) (MRLs)							
Commodity	Application Method/ Total Application Rate (g a.i./ha)	PHI (days)	Residues (ppm)		Experimental Processing Factor	Currently Established MRL	Recommended MRL
			Min	Max			
Sunflowers	Pre-harvest/0.50 kg a.i./ha	30	<0.02	0.25	--	None	0.5
Soybeans (dry)	Pre-harvest/1.68 kg a.i./ha	10-16	<0.02	0.35	--	0.35	0.5
Peanut	Pre-harvest/ 896 g a.i./ha	13-14	<0.02	0.14	--	0.15	0.2
Peanut oil					3	0.45	0.6
Rice	Pre-harvest/ 0.78 kg a.i./ha	26-28	0.08	3.71	--	4.0	5
Green onions	Pre-harvest/1.68 kg a.i./ha	0	1.48	6.91	--	7.0	7.5
Dry bulb onions	Pre-harvest/1.68 kg a.i./ha	0	0.19	0.67	--	0.7	1.0
Celery	Pre-harvest/1.68 kg a.i./ha	0	1.83	9.94	--	17.0 (Leafy Vegetables, except brassica, excluding spinach)	30 (Leafy Vegetables, except brassica, Group 4)
Leaf lettuce	Pre-harvest/1.68 kg a.i./ha	0	2.74	14.02	--		
Head lettuce	Pre-harvest/1.68 kg a.i./ha	0	2.16	5.53	--		
Spinach	Pre-harvest/1.68 kg a.i./ha	0	7.14	26.79	--		

*Preharvest intervals (PHIs) are not applicable (n.a.) to post harvest application uses.

Conclusions

Following the review of all available data, the MRLs for the crops noted in Table 1 above are recommended to cover residues of azoxystrobin and the Z-isomer. Residues of azoxystrobin in these crop commodities at the established MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

n/a

Value Assessment

n/a

Conclusion

Based on the data reviewed, PMRA can support maximum residue limits (MRLs) to cover combined residues of azoxystrobin and the Z-isomer in/on a variety of crops imported from the US.

References

A. List of Studies/Information Submitted by Registrant

Health Assessment

<u>PMRA#</u>	<u>Reference</u>
1362768	2002, Azoxystrobin: Magnitude of the Residue on Artichoke, 07364, DACO: 7.4.1,7.4.2
1362769	2002, Azoxystrobin: Magnitude of the Residue on Basil, 07104, DACO: 7.4.1,7.4.2
1362770	2004, Azoxystrobin: Magnitude of the Residue on Chives, 07105, DACO: 7.4.1,7.4.2
1362771	2003, Azoxystrobin: Magnitude of the Residue on Dill (Seed), 07363, DACO: 7.4.1,7.4.2
1362773	2004, Azoxystrobin: Magnitude of the Residue on Parsley, 07111, DACO: 7.4.1,7.4.2
1362774	2002, Azoxystrobin: Magnitude of the Residue on Broccoli, 07096, DACO: 7.4.1,7.4.2
1362776	2002, Azoxystrobin: Magnitude of the Residue on Cabbage, 07095, DACO: 7.4.1,7.4.2
1362777	2001, Azoxystrobin: Magnitude of the Residue on Greens (Mustard), 06813, DACO: 7.4.1,7.4.2
1362780	2001, Azoxystrobin: Magnitude of the Residue on Peppers (Bell and Non-Bell), 06868, DACO: 7.4.1,7.4.2
1362781	2000, Azoxystrobin: Magnitude of the Residue on Blueberry, 06721, DACO: 7.4.1,7.4.2
1362782	2001, Azoxystrobin: Magnitude of the Residue on Caneberry, 06786, DACO: 7.4.1,7.4.2
1362783	2002, Azoxystrobin: Magnitude of the Residue in or on Garden Beet, 495-01, DACO: 7.4.1,7.4.2
1362784	2004, Azoxystrobin: Magnitude of the Residue on Citrus Following Field and Post-Harvest Treatment, 07593, DACO: 7.4.1,7.4.2
1362785	2001, Azoxystrobin: Magnitude of the Residue on Cranberry, 06859, DACO: 7.4.1,7.4.2
1362786	2000, Azoxystrobin: Magnitude of the Residue on Lychee, 06866, DACO: 7.4.1,7.4.2

- 1362787 2000, Azoxystrobin: Magnitude of the Residue on Mango, 06867, DACO: 7.4.1,7.4.2
- 1362788 2000, Azoxystrobin: Magnitude of the Residue on Mint (Fresh), 06756, DACO: 7.4.1,7.4.2
- 1362789 2000, Azoxystrobin: Magnitude of the Residue on Mint, 06828, DACO: 7.4.1,7.4.2
- 1362790 2000, Azoxystrobin: Magnitude of the Residue on Watercress, 06722, DACO: 7.4.1,7.4.2
- 1362792 2000, Azoxystrobin: Residue Levels in Hops, Beer and Process Fractions from Studies Carried Out in Germany during 1999, RJ3015B, DACO: 7.4.1,7.4.2
- 1362793 1999, Azoxystrobin Residue Levels in Hops, Beer and Process Fractions from Studies Carried Out in Germany during 1998, RJ2841B, DACO: 7.4.1,7.4.2
- 1362795 2000, Azoxystrobin Residue Levels in Hops from Trials Carried Out in the UK during 1999, RJ2981B, DACO: 7.4.1,7.4.2
- 1362796 1999, Azoxystrobin Residue Levels in Hops from Trials Carried Out in the UK during 1998, RJ2801B, DACO: 7.4.1,7.4.2
- 1362797 2001, Azoxystrobin: Residue Levels on Sunflowers from Trials Conducted in Canada During 2000, 00-057B, DACO: 7.4.1,7.4.2
- 1362798 2001, Azoxystrobin: Residue Levels on Sunflowers from Trials Conducted in the United States During 2000, 00-058B, DACO: 7.4.1,7.4.2
- 1362799 2001, Azoxystrobin: Magnitude of the Residue on Pistachio, 06830, DACO: 7.4.1,7.4.2
- 797614 1999, Azoxystrobin: Residue Levels on Dry Bulb Onions From Trials Conducted in the United States During 1997-1998, WRC-99-099, MRID: N/S, DACO: 7.4.1
- 797616 1999, Amendment to Azoxystrobin: Magnitude of the Residue on Spinach, WRC-99-205, MRID: N/S, DACO: 7.4.1
- 797623 1999, Azoxystrobin: Residue Levels on Celery From Trials Conducted in the United States During 1998, WRC-99-081, MRID: N/S, DACO: 7.4.1
- 1125705 1999, Azoxystrobin: Residue Levels on Head Lettuce from Trials Conducted in the United States in 1998, WRC-99-033, DACO: 7.4.1
- 1125712 1999, Azoxystrobin: Residue Levels on Leaf Lettuce From Trials Conducted in the United States In 1998, WRC-99-043, DACO: 7.4.1
- 1125691 1999, Azoxystrobin: Residue Levels on Field Corn From Trials Conducted in the United States During 1998, WRC-99-119, DACO: 7.4.1
- 1125690 1999, Azoxystrobin: Residue Levels on Carrots From Trials Conducted in the United States During 1998, WRC-99-094, DACO: 7.4.1
- 1125706 1999, Azoxystrobin: Residue Levels on Soybeans From Trials Conducted in the United States in 1998, WRC-99-117, DACO: 7.4.1
- 1125694 1999, Azoxystrobin: Residue Levels on Green Onion From Trials Conducted in the United States in 1998, WRC-98-192, DACO: 7.4.1
- 1125701 1999, Azoxystrobin: Residue Levels on Dry Bulb Onions From Trials Conducted in the United States During 1997-1998, WRC-99-099, DACO: 7.4.1
- 1131936 1996, Azoxystrobin: Residue Levels in Rice From Trials Conducted in the United States of America During 1995, DACO: 7.4.1

- 797637 1999, Azoxystrobin: Residue Levels on Peanuts From Trials Conducted in the United States in 1997 , WRC-98-092, MRID: N/S, DACO: 7.4.1
- 1179799 1996, ICIA5504: RESIDUE LEVELS IN PEANUTS FROM TRIALS CARRIED OUT IN THE UNITED STATES OF AMERICA DURING 1995, DACO: 7.4.1
- 1179841 1996, ICIA5504: RESIDUE LEVELS IN PEANUTS FROM TRIALS CARRIED OUT IN THE UNITED STATES OF AMERICA DURING 1994, DACO: 7.4.1
- 1477860 1999, Azoxystrobin: Residue Levels in Radishes from Trials conducted in the United States during 1998, AZOX-98-MR-10, DACO: 7.2.1
- 1477872 1999, Azoxystrobin: Residue Levels on Sugar Beets from Trials conducted in the United States during 1998, AZOX-98-MR-11, DACO: 7.2.1
- 1094552 2000, Azoxystrobin: Residue Levels on Dry Beans from Trials Conducted in Canada during 1999, RR00-086B, DACO: 7.4.1
- 1094553 2001, Azoxystrobin: Residue Levels on Dry Peas from Trials Conducted in Canada during 2000, RR00-055B, DACO: 7.4.12000, Azoxystrobin: Residue Levels on Dry Beans from Trials Conducted in Canada during 1999, RR00-086B, DACO: 7.4.1
- 1094554 2000, Azoxystrobin: Residue Levels on Dry Peas from Trials Conducted in Canada During 1999, RR00-049B, DACO: 7.4.12001, Azoxystrobin: Residue Levels on Dry Peas from Trials Conducted in Canada during 2000, RR00-055B, DACO: 7.4.1

ISSN: 1911-8082

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