Proposed Maximum Residue Limit PMRL2016-27

Pyraclostrobin

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) is proposing to establish maximum residue limits (MRLs) for pyraclostrobin on various commodities to permit the import and sale of foods containing such residues.

Pyraclostrobin is a fungicide currently registered in Canada for use on various commodities.

The PMRA must determine the quantity of residues that are likely to remain in or on the imported food commodities when pyraclostrobin is used according to label directions in the exporting country, and that such residues will not be a concern to human health. This quantity is then legally established as an MRL on the corresponding imported commodity. An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

Consultation on the proposed MRLs for pyraclostrobin is being conducted via this document (see Next Steps, the last section of this document). A summary of the field trial data used to support the proposed MRLs can be found in Appendix I.

To comply with Canada's international trade obligations, consultation on the proposed MRL is also being conducted internationally by notifying the World Trade Organization, as coordinated by Canada's Notification Authority and Enquiry Point.

The proposed MRLs, to replace or be added to the MRLs already established for pyraclostrobin, are as follows.

Table 1 Proposed Maximum Residue Limits for Pyraclostrobin

Common Name	Residue Definition	MRL (ppm)[1]	Food Commodity
Pyraclostrobin	Methyl *N*-[2-[[[1-(4-chlorophenyl)-1*H*-pyrazol-3-yl]oxy]methyl]phenyl]-*N*-methoxycarbamate including the metabolite [2-[[[1-(4-chlorophenyl)-1*H*-pyrazol-3-yl]oxy]methyl] phenyl] carbamate	200	Dried herbs (Crop Group 19A)
		40	Crop group 2 (leaves of root and tuber vegetables, except garden beet tops and radish tops[2, 3]), fresh herbs (crop group 19A), dill seeds, fresh chive leaves
		3.0	American persimmons, globe artichokes
		2.5	Crop group 12-09 (stone fruits)[4]
		1.4	Barley[5]
		0.6	Tropical and subtropical fruits – medium to large fruits, smooth, inedible peel, except banana[6] (Crop subgroup 24B)[7], mamey sapotes, sapodillas, sorghum

Common Name	Residue Definition	MRL (ppm)[1]	Food Commodity
		0.45	Undelinted cotton seeds
		0.3	Green coffee beans
		0.2	Sugarcane cane

[1] ppm = parts per million
[2] Garden beet tops and radish tops are excluded from this MRL action as a 40 ppm MRL is already established for these commodities.
[3] The new MRL of 40 ppm in/on Crop Group 2 – Leaves of Root and Tuber Vegetables, will replace the existing MRL of 16 ppm in/on turnip tops and celeriac tops.
[4] The new MRL of 2.5 ppm in/on Crop Group 12-09 – Stone Fruits, will replace the existing MRL of 0.7 ppm in/on apricots, fresh prune plums, nectarines, peaches, plumcots, plums, sweet cherries and tart cherries.
[5] The new MRL of 1.4 ppm in/on barley will replace the existing MRL of 0.4 ppm in/on barley.
[6] Bananas are excluded from this MRL action as a 0.04 ppm MRL is currently established for this commodity.
[7] The new MRL of 0.6 ppm in/on Crop Subgroup 24B will replace the existing MRL of 0.1 ppm for mango and papaya.

MRLs are proposed for each commodity included in the listed crop groupings in accordance with the Residue Chemistry Crop Groups webpage in the Pesticides and Pest Management section of Health Canada's website.

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum Residue Limits for Pesticides webpage. The database allows users to search for established MRLs, regulated under the *Pest Control Products Act*, both for pesticides or for food commodities.

International Situation and Trade Implications

The MRLs proposed for pyraclostrobin in Canada are the same as corresponding American tolerances, but differ from Codex MRLs.[1] Table 2 compares the MRLs proposed for pyraclostrobin in Canada with corresponding American tolerances and Codex MRLs. American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. A listing of established Codex MRLs is available on the Codex Alimentarius Pesticide Residues in Food website, by pesticide or commodity.

Table 2 Comparison of Canadian MRLs, American Tolerances and Codex MRLs (where different)

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRL (ppm)
Crop Subgroup 19A (Dried Herbs)	200	None	None

[1] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRL (ppm)
Crop Subgroup 19A (Fresh Herbs)	40	40	None
Dill seeds	40	40	None
Fresh chive leaves	40	40	None
Crop Group 2 (Leaves of Root and Tuber Vegetables)	40	16	20 (Radish leaves, including radish tops)
American persimmons	3.0	3.0	None
Globe artichokes	3.0	3.0	2.0
Crop Group 12-09 (Stone Fruits)	2.5	2.5	3.0 (Cherries) 0.3 (Nectarine, peach) 0.8 (Plums, including prunes)
Barley	1.4	1.4	1.0
Sorghum	0.6	0.6	0.5
Crop Subgroup 24B (Tropical and Subtropical Fruits – medium to large fruits, smooth, inedible peel, except banana)	0.6	0.6 (Avocado, canistel, mango, papaya, black sapote, and star apple)	0.05 (Mango) 0.15 (Papaya)
Mamey sapote	0.6	0.6	None
Sapodilla	0.6	0.6	None
Crop Group 20 (Oilseeds)	0.45	0.45	0.4 (Oilseed, except peanut)

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRL (ppm)
Sugarcane	0.2	0.2	None

Next Steps

The PMRA invites the public to submit written comments on the proposed MRLs for pyraclostrobin up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRLs will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.

Appendix I

Summary of Field Trial Data Used to Support the Proposed Maximum Residue Limits

Residue data for pyraclostrobin in various crops were submitted to support the maximum residue limits on imported globe artichokes, green coffee beans, cotton seeds, sugarcane, persimmon, sorghum grain, Crop Group 2 (Leaves or Root and Tuber Vegetables – except sugar beet), Crop Subgroup 19A (Herbs – fresh and dried), dill (fresh leaves and seeds), tropical fruits (avocado, black sapote, canistel, mamey sapote, sapodilla and star apple), and to revise the maximum residue limits on barley grain, mango, papaya and Crop Group 12-09 (Stone Fruits).

Previously reviewed residue data from field trials conducted in/on Crop Group 2 (Leaves or Root and Tuber Vegetables), Crop Group 12-09 (Stone Fruits), Crop Group 20 (Oilseeds), banana and mango were reassessed in the framework of this petition. In addition, processing studies on treated cotton seed, coffee green beans and sugarcane were reviewed and processing studies on treated plums and wheat grain were also reassessed to determine the potential for concentration of residues of pyraclostrobin into processed commodities.

Maximum Residue Limits

The recommendation for maximum residue limits (MRLs) for pyraclostrobin was based upon the residues observed in crop commodities treated according to label directions or exaggerated rates in the exporting country, and the guidance provided in the OECD MRL Calculator. Table A1 summarizes the residue data used to calculate the proposed MRLs for imported crops.

Table A1 Summary of Field Trial and Processing Data Used to Support MRLs

Commodity	Application Method/ Total Application Rate (g a.i./ha)[1]	Preharvest Interval (days)	Lowest Average Field Trial Residues (ppm)[2]	Highest Average Field Trial Residues (ppm)[2]	Experimental Processing Factor
Turnip greens	Foliar spray / 896	0	3.49	12.52	Not required
Radish tops	Foliar spray/ 661-694	0	7.67	15.37	Not required
Sweet cherry	Foliar spray / 660-672	0	<0.27	<0.44	Not required
	Foliar spray / 665	0	<0.05	1.61	
Tart cherry	Foliar spray / 660-672	0	0.46	0.66	Not required
	Foliar spray / 665	0	0.59	1.17	
Peach	Foliar spray / 660-672	0	<0.09	<0.33	Not required
	Foliar spray / 650	0	<0.25	<0.63	
	Foliar spray / 665	0	<0.33	1.65	
Plum	Foliar spray / 660-672	0	<0.04	<0.21	Dried prune: 1.3x
	Foliar spray / 650	0	<0.11	0.45	

Commodity	Application Method/ Total Application Rate (g a.i./ha)[1]	Preharvest Interval (days)	Lowest Average Field Trial Residues (ppm)[2]	Highest Average Field Trial Residues (ppm)[2]	Experimental Processing Factor
	Foliar spray / 665	0	<0.04	0.40	
Barley, grain	Foliar spray / 328-339	14-15	0.54	0.93	Based on wheat grain: Flour: 0.7x Bran: 1.3x
Sorghum, grain	Foliar spray / 217-228	46-122	<0.04	0.41	Not required
Basil, fresh leaves	Foliar spray / 896-930	0	7.86	16.08	Not required
Basil, dried leaves	Foliar spray / 896-930	0	40.11	80.57	Not required
Chive, fresh leaves	Foliar spray / 907-930	0	0.93	7.83	Not required
Dill, seeds	Foliar spray / 896-930	0	3.86	21.39	Not required
Cotton, undelinted seeds	Foliar spray / 896	29-33	<0.04	0.15	Cotton seed oil: 0.3x
Avocado	Foliar spray / 819-870	0	0.08	0.39	Not required
Banana	Foliar spray / 743-902	0	<0.04	<0.04	Not required
Mango	Foliar spray / 448	0	<0.10	<0.10	Not required
Persimmon	Foliar spray / 632-641	0	0.11	1.23	Not required
Artichoke (Globe), flower head	Foliar spray / 615-630	0	0.64	1.10	Not required
Coffee, green beans	Foliar spray / 350-400	45	<0.04	0.14	Roasted coffee bean: 0.5x Instant coffee: 0.5x
Sugarcane	Foliar spray / 875-909	13-14	<0.04	0.12	Blackstrap molasses: 0.3x Refined sugar: 0.2x

[1] g a.i./ha = grams of active ingredient per hectare
[2] Residues are expressed in parent equivalent

Following the review of all available data, MRLs as proposed in Table 1 are recommended to cover residues of pyraclostrobin. Residues of pyraclostrobin in these imported crop commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.