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Proposed Maximum Residue Limit

PMRL2020-44

# Pydiflumetofen

*(publié aussi en français)*

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Under the authority of the [Pest Control Products Act](#), Health Canada's Pest Management Regulatory Agency (PMRA) has concluded that the addition of new uses on various commodities to the product labels of A19649 Fungicide, containing pydiflumetofen, MIRAVIS Neo Fungicide, containing pydiflumetofen, azoxystrobin and propiconazole, A20560 Fungicide, containing pydiflumetofen and fludioxonil, and A20259 Fungicide, containing pydiflumetofen and difenoconazole, are acceptable. The specific uses approved in Canada are detailed on the labels of A19649 Fungicide (PCP No. 33018), MIRAVIS Neo Fungicide (PCP No. 33022), A20560 Fungicide (PCP No. 33021) and A20259 Fungicide (PCP No. 33020). Consultation on the maximum residue limits (MRLs) for difenoconazole is being conducted under a separate action while relevant MRLs for azoxystrobin, fludioxonil and propiconazole can be found in the [Maximum Residue Limit Database](#).

The evaluation of these pydiflumetofen applications indicated that the end-use products have value and the human health and environmental risks associated with their proposed uses are acceptable.

Before registering a pesticide for food use in Canada, the PMRA must determine the quantity of residues that are likely to remain in or on the food when the pesticide is used according to label directions and that such residues will not be a concern to human health. This quantity is then legally established as a maximum residue limit (MRL). 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.

In addition, the PMRA is proposing to establish MRLs for pydiflumetofen on citrus fruits (crop group 10) (revised), sorghum grain and cottonseeds (crop subgroup 20C) (revised) to permit the import and sale of food containing such residues. The PMRA has determined the quantity of residues that are likely to remain in or on the imported commodities when pydiflumetofen is used according to label directions in the exporting country, and that such residues will not be a concern to human health.

Consultation on the proposed MRLs for pydiflumetofen is being conducted via this document (see Next steps). 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 MRLs is also being conducted internationally by notifying the [World Trade Organization](#), as coordinated by the [Canada's Notification Authority and Enquiry Point](#).

The proposed MRLs, to be added to the MRLs already established for pydiflumetofen, are as follows.

**Table 1 Proposed maximum residue limits for pydiflumetofen**

Common name	Residue definition	MRL (ppm) <sup>1</sup>	Food commodity
Pydiflumetofen	3-(difluoromethyl)- <i>N</i> -methoxy-1-methyl- <i>N</i> -[1-methyl-2-(2,4,6-trichlorophenyl)ethyl]-1 <i>H</i> -pyrazole-4-carboxamide	50	Brassica leafy greens (crop subgroup 4-13B)
		30	Citrus oil
		10	Garden beet tops, radish tops
		5.0	Bushberries (crop subgroup 13-07B)
		3.0	<i>Brassica</i> head and stem vegetable group (crop group 5-13), sorghum
		2.0	Green onions (crop subgroup 3-07B), cherries (crop subgroup 12-09A)
		1.5	Citrus peel
		1.0	Edible-podded legume vegetables (crop subgroup 6A), citrus fruits (crop group 10) (revised), peaches (crop subgroup 12-09B), low growing berries (crop subgroup 13-07G) (except lowbush blueberries) and dried prune plums
		0.6	Plums (crop subgroup 12-09C)
		0.5	Root vegetable (crop subgroup 1A), sunflowers (crop subgroup 20B) (revised)
		0.4	Cottonseeds (crop subgroup 20C) (revised)
		0.2	Bulb onions (crop subgroup 3-07A), pome fruits (crop group 11-09)
0.1	Succulent shelled pea and bean (crop subgroup 6B)		
0.07	Tree nuts (crop group 14-11)		

<sup>1</sup> ppm = parts per million

MRLs are proposed for each commodity included in the listed crop groupings in accordance with the [Residue Chemistry Crop Groups](#) webpage in the Pesticides section of the Canada.ca 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

Pydiflumetofen is an active ingredient that is concurrently being registered in Canada and the United States for use on various crops. The MRLs proposed for pydiflumetofen in Canada are the same as corresponding American tolerances, except for citrus peel and commodities in crop group 2, in accordance with Table 2.

American tolerances are listed in the [Electronic Code of Federal Regulations](#), 40 CFR Part 180, by pesticide.

A listing of established Codex MRLs<sup>1</sup> is available on the Codex Alimentarius [Pesticide Index](#) webpage, by pesticide or commodity.

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

Food commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRLs (ppm)
Radish tops	10	10	Not established
Garden beet tops	10	(Vegetable, leaves of root and tuber, group 2)	Not established
Citrus peel	1.5	Not established	Not established

### Next steps

The PMRA invites the public to submit written comments on the proposed MRLs for pydiflumetofen 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](#).

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<sup>1</sup> The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

## Appendix I

### Summary of field trial data used to support the proposed maximum residue limits

Residue data for pydiflumetofen in various crops were submitted to support the domestic use of A19649 Fungicide on sunflower seeds (CSG 20B); MIRAVIS Neo Fungicide for use on edible-podded legume vegetables (CSG 6A), succulent shelled pea and bean (CSG 6B), bushberries (CSG 13-07B); A20560 Fungicide for use on bulb vegetables (CG 3-07), bushberries (CSG 13-07B) and low growing berries (CSG 13-07G); A20259 Fungicide for use on root vegetables (CSG1A), bulb vegetables (CG3-07), *Brassica* leafy greens (CSG4-13B), *Brassica* head and stem vegetables (CG5-13), pome fruits (CG11-09), stone fruits (CG12-09) and tree nuts (CG14-11). Residue data for pydiflumetofen in sorghum, citrus fruits (CG 10) (revised) and cotton (CSG 20C) were submitted to support the maximum residue limits for imports. In addition, processing studies in treated sugar beets, oranges, apples, pears, plums, almonds, sorghum, sunflower seeds and cotton seeds were reviewed to determine the potential for concentration of residues of pydiflumetofen into processed commodities.

### Maximum residue limits

The recommendation for maximum residue limits (MRLs) for pydiflumetofen was based upon the submitted field trial data, and the guidance provided in the [OECD MRL Calculator](#). Table A1 summarizes the residue data used to calculate the proposed MRLs for various crops.

**Table A1 Summary of field trial and processing data used to support the MRLs**

Commodity	Application method/ Total application rate (g a.i./ha) <sup>1</sup>	Preharvest interval (days)	Lowest average field trial residues (ppm)	Highest average field trial residues (ppm)	Experimental processing factor
Radish tops	Foliar broadcast/ 298–305	7	0.121	5.08	Not required
Radish roots (CSG 1A)	Foliar broadcast/ 298–305	7	0.013	0.166	Not required
Carrot roots (CSG1A)	Foliar broadcast/ 299–309	6–14	0.015	0.102	Not required
Sugar beet roots (CSG1A)	Foliar broadcast/ 293–311	6–28	0.016	0.135	Molasses: 0.6× Refined sugar <0.07×
Sugar beet tops	Foliar broadcast/ 293–311	6–14	0.763	6.270	Not required
Dry bulb onion (CSG3-07A)	Foliar broadcast/ 372–384	6–10	<0.010	0.121	Not required
Green onion (CSG3-07B)	Foliar broadcast/ 370–381	7	0.276	1.070	Not required
Mustard greens (CSG4-13B)	Foliar broadcast/ 398–411	0–3	0.868	28.60	Not required
Broccoli (CG5-13)	Foliar broadcast/ 364–386	0	0.417	1.430	Not required
Cabbage (CG5-13)	Foliar broadcast/ 370–376	0	0.302	0.992	Not required

Commodity	Application method/ Total application rate (g a.i./ha) <sup>1</sup>	Preharvest interval (days)	Lowest average field trial residues (ppm)	Highest average field trial residues (ppm)	Experimental processing factor
Cauliflower (CG5-13)	Foliar broadcast/ 373–377	0–9	0.039	0.365	Not required
Edible podded bean (CSG 6A)	Foliar broadcast/ 398–429	13–14	0.011	0.430	Not required
Edible podded pea (CSG 6A)	Foliar broadcast/ 402–413	13–14	0.011	0.638	Not required
Succulent shelled bean (CSG 6B)	Foliar broadcast/ 394–413	14–15	<0.010	0.065	Not required
Succulent shelled pea (CSG 6B)	Foliar broadcast/ 396–418	13–28	<0.010	0.018	Not required
Grapefruit (CG 10R)	Foliar broadcast/ 334–343	0	0.093	0.581	Not required
Lemon (CG 10R)	Foliar broadcast/ 336–344	0	0.021	0.457	Not required
Orange/Tangerine (CG 10R)	Foliar broadcast/ 335–344	0–14	0.110	0.676	Juice: <0.02× Oil: 44× Peel: 1.9×
Apples (CG11-09)	Foliar broadcast/ 196–207	28–32	0.015	0.112	Juice: 0.1× Canned apple: 0.03× Dried apple: 0.4× Apple sauce: 0.1×
Pears (CG11-09)	Foliar broadcast/ 191–207	29–31	0.019	0.115	Juice: 0.1× Canned pear: 0.1× Dried pear: 0.6×
Cherries (sweet and tart) (CSG12-09A)	Foliar broadcast/ 295–315	0–2	0.143	1.650	Not required
Peaches (CSG12-09B)	Foliar broadcast/ 298–317	0–3	0.089	0.782	Not required
Plums (CSG12-09C)	Foliar broadcast/ 295–312	0–6	0.060	0.354	Dried prune plum: 2.8× Juice: 0.02× Puree: 0.2×
Highbush blueberry (CSG 13-07B)	Foliar broadcast/ 297–320	0	0.405	3.550	Not required
Strawberry (CSG 13-07G)	Foliar broadcast/ 292–312	0–3	0.082	0.557	Not required
Almond nutmeat (CG14-11)	Foliar broadcast/ 301–307	14	<0.01	0.032	Crude almond oil: 0.4× Roasted almonds: 0.4×
Pecan nutmeat (CG14-11)	Foliar broadcast/ 301–306	14–15	<0.01	0.015	Not required

<b>Commodity</b>	<b>Application method/ Total application rate (g a.i./ha)<sup>1</sup></b>	<b>Preharvest interval (days)</b>	<b>Lowest average field trial residues (ppm)</b>	<b>Highest average field trial residues (ppm)</b>	<b>Experimental processing factor</b>
Sorghum grain	Foliar broadcast/ 244–262	18–25	0.108	1.84	Flour: 0.9×
Sunflower seeds (CSG 20B)	Foliar broadcast/ 399–412	28–40	0.016	0.370	Refined oil: 0.06×
Cotton undelinted seeds (CSG 20C)	Foliar broadcast/ 248–258	28–38	<0.010	0.291	Refined oil: 0.03×

<sup>1</sup> g a.i./ha = grams of active ingredient per hectare

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