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Proposed Maximum Residue Limit

PMRL2020-40

Afidopyropen

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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 sorghum, grass forage, fodder and hay (crop group 17) and nongrass feeds (crop group 18) to the product label of Sefina Insecticide, containing technical grade afidopyropen, is acceptable. The specific uses approved in Canada are detailed on the label of Sefina Insecticide, *Pest Control Products Act* Registration Number 33265.

The evaluation of this afidopyropen application indicated that the end-use product has value and the human health and environmental risks associated with the new 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.

Consultation on the proposed MRLs for afidopyropen 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 replace or be added to the MRLs already established for afidopyropen, are as follows.

Table 1 Proposed maximum residue limits for afidopyropen

Common name	Residue definition	MRL (ppm) ¹	Food commodity
Afidopyropen	[(3 <i>S</i> ,4 <i>R</i> ,4 <i>aR</i> ,6 <i>S</i> ,6 <i>aS</i> ,12 <i>R</i> ,12 <i>aS</i> ,12 <i>bS</i>)-3-[(cyclopropylcarbonyl)oxy]-1,3,4,4 <i>a</i> ,5,6,6 <i>a</i> ,12,12 <i>a</i> ,12 <i>b</i> -decahydro-6,12-dihydroxy-4,6 <i>a</i> ,12 <i>b</i> -trimethyl-11-oxo-9-(3-pyridinyl)-2 <i>H</i> ,11 <i>H</i> -naphtho[2,1- <i>b</i>]pyrano[3,4- <i>e</i>]pyran-4-yl)methyl cyclopropanecarboxylate	0.2	Sorghum
		0.09 ²	Liver of cattle, goats, hogs, horses and sheep
		0.01 ³	Milk

¹ ppm = parts per million

² The currently established MRL for meat byproducts of cattle, goats, hogs, horses and sheep will be revised to meat byproducts (except liver) of cattle, goats, hogs, horses and sheep.

³ The MRL is proposed to replace the currently established MRL of 0.001 ppm.

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

MRLs may vary from one country to another for a number of reasons, including differences in pesticide use patterns and the locations of the crop field trials used to generate residue chemistry data. For livestock commodities, differences in MRLs can also be due to different livestock feed items and practices.

Table 2 compares the MRLs proposed for afidopyropen in Canada with corresponding American tolerances and Codex MRLs.¹ 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 Index](#) webpage, 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)
Sorghum	0.2	Not established	Not established
Liver of cattle, goats, hogs, horses and sheep	0.09		
Milk	0.01		

Next steps

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

¹ 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 afidopyropen in sorghum, grasses/fescue and alfalfa/clover were submitted to support the domestic use of Sefina Insecticide on sorghum, grass forage, fodder and hay (crop group 17) and nongrass feeds (crop group 18). In addition, a processing study in treated sorghum was reviewed to determine the potential for concentration of residues of afidopyropen into processed commodities.

Maximum residue limits

The recommendation for maximum residue limits (MRL) for afidopyropen 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 MRL for sorghum.

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

Commodity	Application method/Total application rate (g a.i./ha) ¹	Preharvest interval (days)	Lowest average field trial residues (ppm)	Highest average field trial residues (ppm)	Experimental processing factor
Sorghum grain	Broadcast foliar / 39.1–41.0	12–15	<0.01	0.104	Sweet sorghum syrup: 0.8x

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

Based on the residue data for grasses/fescue and alfalfa/clover used to calculate the dietary burden, MRLs of 0.09 ppm in liver of cattle, goats, hogs, horses and sheep and 0.01 ppm in milk to cover afidopyropen residues are also proposed.

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