



Health
Canada

Santé
Canada

*Your health and
safety... our priority.*

*Votre santé et votre
sécurité... notre priorité.*

Proposed Maximum Residue Limit

PMRL2015-01

Ethoprophos

(publié aussi en français)

23 February 2015

This document is published by the Health Canada Pest Management Regulatory Agency. For further information, please contact:

Publications
Pest Management Regulatory Agency
Health Canada
2720 Riverside Drive
A.L. 6607 D
Ottawa, Ontario K1A 0K9

Internet: pmra.publications@hc-sc.gc.ca
healthcanada.gc.ca/pmra
Facsimile: 613-736-3758
Information Service:
1-800-267-6315 or 613-736-3799
pmra.infoserv@hc-sc.gc.ca

Canada 

ISSN: 1925-0835 (print)
1925-0843 (online)

Catalogue number: H113-24/2015-1E (print version)
H113-24/2015-1E-PDF (PDF version)

© Her Majesty the Queen in Right of Canada, represented by the Minister of Health Canada, 2015

All rights reserved. No part of this information (publication or product) may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in a retrieval system, without prior written permission of the Minister of Public Works and Government Services Canada, Ottawa, Ontario K1A 0S5.

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 ethoprophos on various commodities to permit the import and sale of foods containing such residues.

Ethoprophos is an insecticide and nematicide not currently registered for use in Canada.

The PMRA must determine the quantity of residues that are likely to remain in or on the imported food commodities when ethoprophos 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 ethoprophos 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 MRLs is also being conducted internationally by notifying the World Trade Organization, as coordinated by the Standards Council of Canada.

The proposed MRLs for ethoprophos are as follows.

Table 1 Proposed Maximum Residue Limits for Ethoprophos

Common Name	Residue Definition	MRL (ppm) ¹	Food Commodity
Ethoprophos	<i>O</i> -ethyl <i>S,S</i> -dipropyl phosphorodithioate	0.09	Succulent shelled lima bean, edible-podded snap bean
		0.02	Bananas; cabbages; cucumbers, field corn, hops (dried), peppermint tops, potatoes, spearmint tops, sugarcane cane, sweet corn kernels plus cob with husks removed, sweet potato roots

¹ ppm = parts per million

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 field crop trials used to generate residue chemistry data.

Table 2 compares the MRLs proposed for ethoprophos 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 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)
Bananas	0.02	0.02	0.02
Edible-podded snap bean	0.09	0.02	Not Established
Succulent shelled lima bean	0.09	0.02	Not Established
Cabbages	0.02	0.02	Not Established
Field corn	0.02	0.02	Not Established
Sweet corn kernel plus cob with husks removed	0.02	0.02	Not Established
Cucumbers	0.02	0.02	0.01
Hops (dried cones)	0.02	0.02	Not Established
Peppermint tops	0.02	0.02	Not Established
Spearmint tops	0.02	0.02	Not Established
Potatoes	0.02	0.02	0.05
Sweet potato roots	0.02	0.02	0.05

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

Next Steps

The PMRA invites the public to submit written comments on the proposed MRLs for ethoprophos 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 MRLs

Residue data for ethoprophos was submitted to support the maximum residue limit(s) on imported bananas, beans (snap, Lima), cabbages, field corn, sweet corn kernels plus cob with husks removed, cucumbers, hops (dried), peppermint tops, spearmint tops, potatoes, sweet potato roots and sugarcane cane. In addition, processing studies in treated field corn, potato, mint and sugarcane were reviewed to determine the potential for concentration of residues of ethoprophos into processed commodities.

Maximum Residue Limit(s)

The recommendation for maximum residue limits (MRLs) for ethoprophos was based upon the residues observed in crop commodities treated according to label directions [or to 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.

Table A1 Summary of Field Trial and Processing Data Used to Support Maximum Residue Limit(s) (MRLs)

Commodity	Application Method/ Total Application Rate	Preharvest Interval (days)	Residues (ppm)		Experimental Processing Factor
			Min	Max	
Banana	Ground/3.0-32.8 g a.i./plant	8-181	< 0.02	N/A	N/A
Snap bean	Broadcast PPI or band incorporated/3.4-22.4 kg a.i./ha	48-107	< 0.01	0.134	N/A
Lima bean			< 0.01	0.012	N/A
Cabbage heads	Broadcast preplant/13.26-13.82 kg a.i./ha	76-147	< 0.01	0.01	N/A
Cabbage heads with wrapper leaves			< 0.01	0.01	N/A
Field corn grain	Band/1.12-8.96 kg a.i./ha	80-176	< 0.01	0.01	N/A
Sweet corn kernel plus cob with husks removed (K+CWHR)	Band/1.12-8.96 kg a.i./ha	36-87	< 0.01	0.01	N/A
Cucumber	Broadcast PPI at planting or band incorporated/1.12- 17.6 kg a.i./ha	47-80	< 0.01	0.02	N/A
Hops (dried cones)	Soil directed or band/33.7-38.4 kg a.i./ha	118-135	0.02	0.021	N/A

Commodity	Application Method/ Total Application Rate	Preharvest Interval (days)	Residues (ppm)		Experimental Processing Factor
			Min	Max	
Peppermint, spearmint	Broadcast postharvest/6.7-6.9 kg a.i./ha	228-283	< 0.01	0.01	0.4 (oil)
Potato	Broadcast, band- PPI, lay-by and/or postemergence/ 2.24- 13.45 kg a.i./ha	30-196	< 0.01	0.03	N/A
Sweet potato	Layby/3.4-6.7 kg a.i./ha	72-138	< 0.01	0.01	N/A
Sugarcane	At planting/2.24-16.8 kg a.i./ha	243-406	0.02	N/A	N/A

kg a.i./ha = kilograms of active ingredient per hectare

Following the review of all available data, MRLs as proposed in Table 1 are recommended to cover residues of ethoprophos. Residues of ethoprophos 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.