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Proposed Maximum Residue Limit

PMRL2023-18

# Cyantraniliprole

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## Purpose of consultation

Maximum residue limits (MRLs)<sup>1</sup> are being proposed for the pesticide cyantraniliprole, as part of the following application for Canadian use, under submission number 2020-1811.

Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) is proposing acceptability of the requested application to add the new commodities of crop group 6 (legume vegetables) to the product label of Minecto Pro, containing technical grade abamectin and cyantraniliprole, to control various mites and insect pests. The specific uses approved in Canada are detailed on this product label, *Pest Control Products Act* Registration Number [33023](#).

The evaluation of this cyantraniliprole application indicated that the end-use product has value and the human health and environmental risks associated with the new uses are acceptable. Dietary risks from the consumption of foods listed in Table 1 were shown to be acceptable when cyantraniliprole is used according to the supported label directions. Therefore, foods containing residues resulting from this use are safe to eat, and MRLs are being proposed as a result of this assessment. A summary of the field trial data used to support the proposed MRLs can be found in [Appendix I](#).

## Dietary health assessment

In assessing the risk of a pesticide, Health Canada combines information on pesticide toxicity with information on the degree and duration of dietary exposure to the pesticide residue from food. The risk assessment process involves four distinct steps:

- 1) Identifying the toxicology hazards posed by the pesticide;
- 2) Determining the “acceptable dietary level” for Canadians (including all vulnerable populations), which is protective of adverse health effects;
- 3) Estimating human dietary exposure to the pesticide from all applicable sources (domestic and imported commodities); and
- 4) Characterizing health risk by comparing the estimated human dietary exposure to the acceptable dietary level.

Before registering a pesticide for food use in Canada, Health Canada must determine the quantity of residues that could 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 (Steps 3 and 4 above). If estimated human exposure is less than or equal to the acceptable level (developed in Step 2 above), Health Canada concludes that consuming residues resulting from use according to approved label directions is not a health concern. The proposed MRL is then subject to consultation to legally specify it as an MRL. An MRL applies to the identified raw agricultural

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<sup>1</sup> A maximum residue limit (MRL) is the maximum amount of residue that may remain in or on food when a pesticide is used according to label directions.

food commodity as well as to any processed food product that contains it, except for certain instances where different MRLs are specified for the raw agricultural commodity and its processed product(s).

Consultation on the proposed MRLs for cyantraniliprole is being conducted via this document. Consultation on the proposed abamectin MRLs is being conducted under a separate PMRL action. Health Canada invites the public to submit written comments on the proposed MRLs for cyantraniliprole in accordance with the process outlined in the Next steps Section of this document.

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](#).

## Proposed MRLs

The proposed MRLs, to be added to the MRLs already established for cyantraniliprole, are summarized in Table 1.

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

| Common name      | Residue definition  | MRL (ppm) <sup>1</sup> | Food commodity  |
|------------------|---|------------------------|---|
| Cyantraniliprole | 3-bromo-1-(3-chloro-2-pyridinyl)- <i>N</i> -[4-cyano-2-methyl-6-[(methylamino)carbonyl]phenyl]-1 <i>H</i> -pyrazole-5-carboxamide | 2.0 <sup>2</sup>       | Edible-podded asparagus beans, edible-podded Chinese longbeans  |
|                  |   | 1.0 <sup>3</sup>       | Dry asparagus beans, dry Chinese longbeans, dry crowder peas, dry field beans, dry sweet lupins, dry white lupins, dry white sweet lupins |
|                  |   | 0.2 <sup>4</sup>       | Succulent shelled crowder peas, succulent shelled sweet lupins, succulent shelled white lupins, succulent shelled white sweet lupins      |

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

<sup>2</sup> The 2.0 ppm MRL currently established for edible-podded legume vegetables (crop subgroup 6A) is proposed to be extended to edible-podded asparagus beans, and edible-podded Chinese longbeans.

<sup>3</sup> The 1.0 ppm MRL currently established for dried shelled pea and bean (except soybean) (crop subgroup 6C) is proposed to be extended to dry asparagus beans, dry Chinese longbeans, dry crowder peas, dry field beans, dry sweet lupins, dry white lupins, and dry white sweet lupins.

<sup>4</sup> The 0.2 ppm MRL currently established for succulent shelled pea and bean (crop subgroup 6B) is proposed to be

extended to succulent shelled crowder peas, succulent shelled sweet lupins, succulent shelled white lupins, and succulent shelled white sweet lupins.

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 geographic locations of the crop field trials used to generate residue chemistry data.

Table 2 compares the MRLs proposed for cyantraniliprole in Canada with corresponding American tolerances and Codex MRLs.<sup>2</sup> 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 proposed Canadian MRLs, American tolerances and Codex MRLs**

| Food commodity  | Canadian MRL (ppm) | American tolerance (ppm)  | Codex MRL (ppm)      |
|---|--------------------|---|----------------------|
| Edible-podded asparagus beans, edible-podded Chinese longbeans  | 2.0                | 2.0 (Vegetable, legume, edible podded, subgroup 6A)                 | Not Established      |
| Succulent shelled crowder peas, succulent shelled sweet lupins, succulent shelled white lupins, succulent shelled white sweet lupins      | 0.2                | 0.2 (Vegetable, legume, succulent shelled, subgroup 6B)             | 0.3 (Beans, shelled) |
| Dry asparagus beans, dry Chinese longbeans, dry crowder peas, dry field beans, dry sweet lupins, dry white lupins, dry white sweet lupins | 1.0                | 1.0 (Vegetable, legume, dried shelled, except soybean, subgroup 6C) | 0.3 (Beans, dry)     |

## Next steps

Health Canada invites the public to submit written comments on the proposed MRLs for cyantraniliprole 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).

<sup>2</sup> The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

Health Canada will consider all comments received and a science-based approach will be applied in 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

Previously reviewed residue data from field trials conducted with cyantraniliprole in/on legume vegetables (crop group 6) were reassessed in the framework of this petition.

#### Dietary risk assessment results

Studies in laboratory animals showed no acute health effects. Consequently, a single dose of cyantraniliprole is not likely to cause acute health effects in the general population (including infants and children).

Chronic dietary (food plus drinking water) intake estimates indicated that the general population and all population subgroups are exposed to less than 96% of the acceptable daily intake, and therefore there are no health concerns.

#### Maximum residue limits

The recommendation for maximum residue limits (MRLs) for cyantraniliprole was based upon the previously 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 legume vegetables (crop group 6).

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

| Commodity                                   | Application method/<br>Total application<br>rate<br>(g a.i./ha) <sup>1</sup> | Preharvest<br>interval<br>(days) | Lowest average<br>field trial<br>residues<br>(ppm) | Highest average<br>field trial residues<br>(ppm) |
|---|--|----------------------------------|--|--|
| Edible-podded<br>beans                      | Foliar/447–460   | 1                                | 0.105  | 0.730  |
| Edible-podded<br>peas                       | Foliar/444–458   | 1                                | 0.275  | 0.778  |
| Succulent shelled<br>beans                  | Foliar/452–455   | 1                                | 0.010  | 0.024  |
| Succulent shelled<br>peas                   | Foliar/451–460   | 1                                | 0.019  | 0.100  |
| Dried shelled<br>peas (except<br>soybeans)  | Foliar/446–457   | 6-7                              | 0.015  | 0.505  |
| Dried shelled<br>beans (except<br>soybeans) | Foliar/446–460   | 7-8                              | 0.010  | 0.161  |

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

Following the review of all available data, the MRLs proposed in Table 1 are recommended to cover residues of cyantraniliprole. Dietary risks from exposure to residues of cyantraniliprole in these crop commodities at the proposed MRLs were shown to be acceptable for the general population and all subpopulations, including infants, children, adults and seniors. Thus the foods that contain residues as listed in Table 1 are considered safe to eat.



## References

None.