

Your submission to APP204199 - reassessment of diazinon, fenamiphos and methamidophos

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Reference no: 9

Clause

What is your position on the application?

Position

I neither support or oppose the application

Notes

Clause

All submissions are taken into account by the decision makers. In addition, please indicate whether or not you also wish to speak at a hearing if one is held.

Position

No I do not wish to speak about my submission at the hearing

Notes

Supporting documents from your Submission

EPA_submission_fenamiphos_and_methamidophos.docx

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Reasons for submission

MPI welcomes the opportunity to provide feedback on this application to extend the phase out date of diazinon, fenamiphos and methamidophos.

Use for incursions

The application refers to the putative use of diazinon and methamidophos during a BMSB incursion, in particular that there is "reasonable likelihood that methamidophos or diazinon will be an important tool for immediate use/response". The current MPI BMSB Operational Specification does not currently list these two insecticides as likely options in a response, only bifenthrin is identified. The risk assessments performed by EPA identified high risks to both operators (even while using full protective equipment including a respirator) and to bystanders during the application of methamidophos on maize (both ground-based and aerial application, scenario Maize 8, 9 and 10 [in this document](#)). Diazinon has low to high risks for operators and negligible to medium risks to bystanders ([this document](#)). Given these health risks, it is unlikely these two active ingredients would be the preferred options for the treatment of BMSB.

Use in biosecurity

Fenamiphos and methamidophos are chemical treatment options in the MPI Standard: Treatment Requirement: Approved Biosecurity Treatments (ABTRT) for clearance of goods at the border. Diazinon is not an approved treatment option in the ABTRT.

Fenamiphos

Fenamiphos is recommended for use on dormant bulbs, root divisions, corms, tubers and rhizomes against nematodes (treatment code NST8). The treatment is also sometimes applied to plants roots as no nematicide option exists in the ABTRT. The treatments using fenamiphos are as follows: hot water at 44°C for 3 hr (pre warm at 24°C for 2 hr) + immersion in fenamiphos, 2 g a.i./L for 1 hour or fumigation with methyl bromide for 2 hours (different concentrations available depending on temperature) followed by immersion in fenamiphos, 2 g a.i./L for one hour. Research is currently under way to find alternatives to fenamiphos, given its phase out due date. The results of this research are not yet available so whether alternatives will be available in the future is unknown. Fenamiphos is therefore the only current option against nematodes and is of critical use. Fenamiphos is not approved in Europe and is banned in several other countries including China, therefore the treatment often must be performed onshore.

Based on data on treatments from 2014 to 2021, consignments are rarely directed for treatment with fenamiphos. After contacting nurseries conducting treatments, it appears fenamiphos is used rarely (one nursery indicated one to ten treatments per year, another one treatment out of 11, two reported not using it). According to one nursery owner, the identification of pests before treatment is increasing and as a result the number of treatments is expected to decrease, as currently some treatments are not necessary (if the pest is not a regulated or quarantine pest). One of the main treatment providers conducting treatment on nursery stock was terminated early 2021, as a result most nurseries now provide treatment under the Treatment at MPI Approved Facilities-PEQ facilities programme and are audited and verified by MPI Inspectors. These facilities are also approved for post-border treatment only for their own imported nursery stocks.

The previous EPA reassessment focused on the use of fenamiphos and methamidophos in agricultural settings, however it is likely that an extension of the phase out period would also affect their biosecurity uses. In the 2013 reassessment, risks to operators using fenamiphos as a dip treatment was medium, with a risk quotient at 20 even while using full protective equipment, including a respirator (see [this document](#), scenario biosecurity 5). The use of a 48-hour re-entry interval was also recommended.

Based on the feedback of two nursery owners who use fenamiphos, personnel conducting treatments were very aware of the health and safety requirements associated with the use of fenamiphos and indicated only one certified handler wearing full PPE including a respirator was allowed in the facility while performing treatment, excluding all other personnel from the facility, and then venting for a day before personnel were allowed back in the facility. Border staff inspecting treated plants are aware of the health and safety risks associated with

organophosphates and only inspect dry plants while wearing P2 masks, glasses and gloves but no respirator as this restricts vision.

Fenamiphos is important to maintaining the biosecurity of New Zealand from regulated nematodes. While the current volume utilising this treatment is deemed low, the commodities requiring treatment are defined as high risk to MPI. Identification of suitable alternatives is still an area of active research, and as such, MPI supports the application to extend the timeframe for phasing fenamiphos out.

Methamidophos

Methamidophos is recommended for use on fresh flowers and foliage against insects (treatment code FNS7). The treatment is as follows: plants are to be immersed completely in a solution containing one contact insecticide (dichlorvos, permethrin, pirimiphos-methyl or tau-fluvalinate) and one systemic insecticide (acephate, dimethoate, methamidophos or imidacloprid) for 15 minutes. Of the contact insecticides, only half of them are still registered in Europe (permethrin and tau-fluvalinate); of the systemic insecticides, none are currently registered in Europe. anymore, therefore it is likely that the treatment has to be done on arrival in New Zealand. It is noted that methamidophos is listed on the Rotterdam convention Annex III (pesticides and industrial chemicals that have been banned or severely restricted for health or environmental reasons) by 77 countries (including the European union as one entity and excluding New Zealand).

Based on data on treatments from 2014 to 2021, consignments are rarely directed for treatment with FNS7, and if they are, methamidophos was not the option chosen. None of the nurseries contacted reported using methamidophos, one respondent indicated that the most common choice was acephate and synthetic pyrethroids, they also noted that some retailers no longer accept nursery stock treated with neonicotinoids, further restricting treatment options.

It is unclear whether a human health assessment for the use of methamidophos for biosecurity purposes was performed by the EPA, a risk assessment was performed for use on ornamentals using a knapsack, with a risk quotient at 24 even while wearing full protective equipment including a respirator (see [this document](#), scenario Ornamentals 8). The use of a 48-hour re-entry interval was also recommended.

The use of methamidophos in biosecurity is less critical than the use of fenamiphos because multiple options exist.