

## Feedback form for the Preliminary Consultation for the reassessment of selected Synthetic Pyrethroids (APP203936)

December 2023

This form is intended to be used as a guide for providing information about the following eight synthetic pyrethroids (SPs): bifenthrin, cypermethrin, alpha-cypermethrin, deltamethrin, cyfluthrin (including beta-cyfluthrin), lambda-cyhalothrin, tetramethrin, permethrin) and SP-containing substances.

While use of this form is optional, the Environmental Protection Authority (EPA) recommends completing any questions that are relevant to you. We also welcome any additional information that you feel we should take into account as part of our reassessment.

The associated preliminary consultation guidance document can be found [here](#)

Please complete and return your feedback form to [reassessments@epa.govt.nz](mailto:reassessments@epa.govt.nz) by **5:00pm, 30 April 2024**.

Contact details	
Name (required)	Karin Kos, CEO
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Responder description (required, please select any that best describe you or your organisation).	<input type="checkbox"/> Importer <input checked="" type="checkbox"/> User <input type="checkbox"/> Supplier <input type="checkbox"/> Kaitiaki <input type="checkbox"/> Retailer <input type="checkbox"/> Iwi <input type="checkbox"/> Professional applicator <input type="checkbox"/> Hapū <input type="checkbox"/> Other - affected/ interested, please specify:

# Important information when providing feedback

## How the EPA will use this information

We will review the information from this preliminary consultation and use the feedback we receive to help us refine our evaluation of aquatic risk, human health endpoints and inform the wider SP reassessment. This information will help us determine how SP-containing substances should be managed in the future.

## Confidential details

The EPA may publish or otherwise make available, all or part of, your response in accordance with section 55 of the HSNO Act. This may include your name but not your private contact details. We acknowledge that some information may be commercially sensitive or be otherwise regarded as confidential. If you believe any of the information you are providing should not be made publicly available, please clearly identify the sensitive information within your response. Please provide the reasons why you believe this information is confidential, so we can make an informed decision whether or not to publish.

## Privacy

The Privacy Act 1993 establishes certain principles with respect to the collection, use, and disclosure of information about individuals by various agencies, including the EPA. Any personal information you supply when providing feedback will be used only in relation to the matters covered by this document. We may also use your contact details for the purpose of requesting your participation in customer surveys.

You have a right to access and correct any personal information held by us by contacting the EPA ([Contact information, EPA](#)).

You may request that your personal information (such as your name or address) be withheld from publicly available information.

## Official Information Act

The Official Information Act 1982 (OIA) establishes principles with respect to the disclosure of information held by government agencies, including the EPA. Any information you supply in the course of providing feedback will be subject to the OIA and may be disclosed, upon request, to members of the public.

Please advise if you consider that the information provided by you would fall within the grounds for withholding information under the OIA.

If the EPA receives an OIA request that involves information marked confidential or commercially sensitive, we make every effort to contact you to advise you that we have received an OIA request and to give you an opportunity to let us know if you consider that there are grounds under the OIA to withhold the information.

# Background

We are preparing an application for the reassessment of selected synthetic pyrethroids (SPs).

We are working to assess the risks for eight SPs used in Aotearoa New Zealand alpha-cypermethrin, cypermethrin, deltamethrin, cyhalothrin, bifenthrin, lambda-cyhalothrin, cyfluthrin (including beta-cyfluthrin), and permethrin.

As part of our ongoing assessment, we have derived hazard classification endpoints for human health and the environment for eight SPs. We have also conducted an aquatic risk assessment for the six SPs used in a wide-dispersive manner in commercial agriculture and horticulture.

We are releasing our draft documents in this area. As expected, based on their high aquatic toxicity, high risks to the aquatic environment from spray drift were identified. These risks cannot be managed by risk mitigation measures. It is important we seek further information to refine our aquatic risk assessment.

We have published the following draft documents for comment:

- [Agricultural uses aquatic risk assessment science memo](#)
- Hazard classification and endpoint memos for selected SP active ingredients
  - [Bifenthrin](#)
  - [Cypermethrin](#)
  - [Alpha-cypermethrin](#)
  - [Deltamethrin](#)
  - [Cyfluthrin \(including Beta-cyfluthrin\)](#)
  - [Lambda-cyhalothrin](#)
  - [Tetramethrin](#)
  - [Permethrin](#)

For more information on the work that has been undertaken on selected SPs, please refer to the Preliminary Consultation Guidance document.

# Seeking information

We are seeking feedback on the proposed hazard classifications and selected endpoints for eight SPs alpha-cypermethrin, cypermethrin, deltamethrin, cyhalothrin, bifenthrin, lambda-cyhalothrin, cyfluthrin, and permethrin. We are also seeking feedback on the aquatic risk assessment of the six SPs used in a wide-dispersive manner alpha-cypermethrin, cypermethrin, deltamethrin, bifenthrin, lambda-cyhalothrin, and permethrin.

We did not assess the risks of cyhalothrin or cyfluthrin to the aquatic environment as they are not used in a wide-dispersive manner. Hence, we are not seeking feedback or higher tier information on these two active ingredients with regard to their risk to the aquatic environment.

Should the conclusions of our risk assessment remain unchanged (i.e., high risks to aquatic environments), we are unlikely to propose retaining all wide-dispersive agricultural uses for SPs. Further input from stakeholders at this stage of the assessment is important to verify our modelling and conclusions.

To get the information we are looking for, we have prepared a set of questions to help us complete our hazard classifications, endpoint derivations, and aquatic risk assessment.

Please note that in the upcoming reassessment application, the EPA intends to publish the concentrations of SPs contained within in-scope substances.

## Identify and describe critical uses

We ask that industry and users identify uses they believe are critical to retain.

It is preferable that these critical uses:

- provide a significant benefit **and**
- be able to be applied with suitable mitigation measures to reduce the risk to aquatic environments to an acceptable level.

However, we understand that some critical uses may not have suitable mitigation measures that would reduce the risks to the aquatic environments to an acceptable level. We would still like to receive information on these uses that you believe are critical to retain.

Critical uses can be identified in standard tables for uses (Good Agricultural Practice (GAP) tables provided) that detail:

- application rate(s)
- application method(s)
- frequency of application(s)
- application interval(s)
- crop type(s).

In addition to the above, we request that you provide specific information that may not be present on the label but is important for our risk assessment, such as:

- all relevant growth stages of crops (including identification of the most critical)
- droplet sizes used for spraying
- boom height used for spraying (low boom (50 cm) and/or high boom (127 cm)).

Remember that a critical use must provide a significant benefit that can be supported by verifiable evidence. The uses (as defined by the above parameters) must deliver effective control and be safe for the environment with any risks managed with controls.

We also want to know which non-wide-dispersive uses are considered critical. This may include uses such as transplanting seedlings or greenhouse use with recovery systems. You do not need to send us any information if you have already provided it to us as part of our call for information.

## Endpoints used for hazard classification

In our risk assessment we use the results of laboratory and field studies known as endpoints. Endpoint values can be used to define the characteristics of a substance, e.g., toxicity or persistence. We are seeking feedback on the endpoints selected for use in our hazard classifications (both human health and environment) and aquatic risk assessment.

## Higher tier refinements

Aquatic toxicity endpoint values are very low (indicating very high toxicity) for all the SPs assessed, particularly for aquatic invertebrates. These very low endpoints are the key factor driving the high-risk outcomes reached in our assessment.

The following higher tier refinements can be used to refine aquatic toxicity endpoints and risk assessment:

- species sensitivity distribution (SSD) approach
- geomean approach
- provision of micro-/mesocosm studies.

We would like to receive higher tier refinements for us to consider in our aquatic risk assessment. The EPA notes that micro-/mesocosm studies are highly specific to a particular product and use pattern. Where micro-/mesocosm studies are submitted, these must be provided to the EPA with:

- an analysis of how the micro-/mesocosm study or studies can be used in support of specific formulations and for which specific uses (e.g., applicability to the EPA's risk assessment, validity of the study, defined endpoints)
- conduct of an appropriate higher tier risk assessment
- evidence of right to use the information (indicating no data protection concerns).

Without the ability to refine the aquatic toxicity endpoints, risk estimates for many wide-dispersive uses of the SPs modelled are unlikely to substantially change.

## Risk assessment and mitigation

Buffer zones are minimum distances from an at-risk area which a product must be applied. As part of our agricultural aquatic risk assessment for agricultural and horticulture use patterns, a minimum buffer zone is calculated. The minimum buffer zone determines how far a user must be from the water source to mitigate risk and takes into account whether the waterbody is downwind.

We want to know if our modelled spray drift buffer zones are feasible for users. We also want to understand how users would manage larger buffer zones.

We also want to hear if there are other feasible mitigation measures to reduce risk.

## Important date

Please complete and return your feedback form to [reassessments@epa.govt.nz](mailto:reassessments@epa.govt.nz), no later than **5:00pm 30 April 2024**.

## Responding is voluntary

Responding to this preliminary consultation is voluntary. You can respond to any questions you feel you are able to contribute to.

# Questions

## Part 1: Critical use pattern information:

1. Our risk assessment modelling indicates high risks to the aquatic environment from wide-dispersive agricultural use synthetic pyrethroids (SPs). If this assessment does not change, we are unlikely to propose retaining SPs with this type of use. We would like industry and users to identify uses that they consider critical for us to retain.

We would like the industry and users to provide information on application method(s), spray droplet sizes, crop types, growth stage and season, and boom height of SP-containing products used for these critical patterns.

- 1.1 Do you have any further information on the application method(s) for SP-containing products?

Yes       No

- 1.2 Do you have any further information on the spray droplet sizes used for applying SP-containing products?

Yes       No

- 1.3 Do you have any further use information on the crop types and seasons SP-containing products are used on?

Yes       No

- 1.4 Do you have any further information on the growth stages that SP-containing products will be applied?

Yes       No

- 1.5 Do you have any further information on what boom heights are used to apply SP-containing products?

Yes       No

1.6 If your answer is “yes” for any of the above questions, please provide the information in the GAP table (Table 2). Please include any known off-label uses and note this in the “remarks” column. Please attach any product labels if applicable.

For any applicable studies you would also like to submit, we recommend using the following template (Table 1). Please include a summary of the study. You may attach this as a separate document if you wish.

**Table 1: Template for submitting applicable studies (add additional lines to table if necessary)**

Serial num	Reference to studies/reports	Summary/ key points	Comment
	<p>Colony Loss Survey 2023 link  <a href="https://www.landcareresearch.co.nz/discover-our-research/environment/sustainable-society-and-policy/nz-colony-loss-survey/">https://www.landcareresearch.co.nz/discover-our-research/environment/sustainable-society-and-policy/nz-colony-loss-survey/</a></p>	<p>Apiculture NZ, notes that the EPA Good Agricultural Practice does not include any mention of the use of permethrin or deltamethrin to control wasps.</p> <p>In the 2023 Colony Loss Survey wasps were identified as causing 4.6% of Autumn hive losses. They have always been in the top 5 causes of bee colony loss.</p>	
		<p>There are a number of ways to control wasps;</p> <ol style="list-style-type: none"> <li>1. Using baits which include toxins, which the wasps take back to the nest. eg VESPEX. This product contains fipronil.  <a href="https://www.merchento.com/products.html">https://www.merchento.com/products.html</a></li> <li>2. A spot application where the product is applied directly to the wasp nest entrance. eg NO WASPS ELIMNATOR (HSR101044). This product contains 24 g/kg permethrin. Kiwicare provides this product in small and larger packs for beekeepers.  <a href="https://www.kiwicare.co.nz/product/no-wasps-eliminator/">https://www.kiwicare.co.nz/product/no-wasps-eliminator/</a></li> <li>3. A directed spray at the insect and on surfaces the insect maybe visiting. Kiwicare offer two products for this use. No Wasps Total Protection Spray RTU (HSR101157) and No Wasps Total Protection Spray Concentrate (HSR101155) both containing permethrin.  <a href="https://www.kiwicare.co.nz/product/no-wasps/">https://www.kiwicare.co.nz/product/no-wasps/</a></li> <li>4. No Bugs Super Protective RTU spray (HSR100765) and No Bugs Super Protective Concentrate (HSR100764), both containing deltamethrin.</li> </ol>	



		<p><a href="https://www.kiwicare.co.nz/product/no-bugs-super/">https://www.kiwicare.co.nz/product/no-bugs-super/</a></p> <p>5. Petrol can also be used as an insecticide, poured directly into the wasp nest.</p> <p>Apiculture NZ is concerned that if the EPA bans substances such as permethrin and deltamethrin based on an analysis of when they are solely used in a wide dispersive manner that those same active agents will not be available for spot applications as described for the control of wasps.</p>	
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**Apiculture NZ Submission**

ApiNZ outlines its key points in the table above, noting that the EPA Good Agricultural Practice does not mention the use of permethrin or deltamethrin to control wasps.

**Apiculture NZ is concerned that if the EPA bans substances such as permethrin and deltamethrin based on an analysis of when they are solely used in a wide dispersive manner that those same active agents will not be available for spot applications as described for the control of wasps.**

**Table 2: GAP table (add additional lines to table if necessary)**

HSNO Approval	Trade name(s) of product using this approval number	Active ingredient(s)	Crop and /or situation	Purpose of application	Application rate (g ai/ha)	Application frequency	Application interval (days)	Application method(s)	Growth stage (BBCH) & season	Boom height (low boom and/or high boom)	Spray droplet size (fine, medium, coarse)	Remarks

## Part two: Human Health endpoint values:

2. Our toxicologists determined the endpoint values used to define the characteristics of the SPs. We proposed GHS hazard classifications and risk assessment inputs based on these endpoint values. A full description of the selected endpoints and applicable hazard classifications of the eight SPs are provided in the hazard classification and endpoint memos:

- [Bifenthrin](#)
- [Cypermethrin](#)
- [Alpha-cypermethrin](#)
- [Deltamethrin](#)
- [Cyfluthrin \(including Beta-cyfluthrin\)](#)
- [Lambda-cyhalothrin](#)
- [Tetramethrin](#)
- [Permethrin](#)

We would like to receive feedback on our human health endpoints derived in the hazard classification and endpoint memos. Please refer to the endpoint memos and provide feedback in the space below.

Apiculture NZ has no data on human health end points derived by the EPA analysis.

## Part three: Feedback on aquatic risk assessment

3. The aquatic risk assessment was conducted assuming the most favourable application circumstances. This approach was taken due to the high aquatic toxicity of the SPs.

A high risk to aquatic environments from spray drift was concluded, despite the input of best-case use patterns being selected for modelling to show the best-possible risk assessment outcome (i.e., lowest environmental exposure). Best-case use patterns include the lowest application rates identified, coarse droplet quality (medium in some specific cases) and modelling a range of potential growth stages to consider crop interception as a refinement.

We are aware that some of these assumptions may not be realistic from an efficacy point of view. We would like feedback on our aquatic risk assessment modelling assumptions. Please provide your feedback on the following questions. Information and/or supporting evidence can be provided in the space below the question. Relevant documents can also be attached to your response. If you are supplying studies, please provide a summary (Table 1).

3.1 Can you provide supporting evidence that the application rate and number of applications modelled for the selected SPs achieve the required product efficacy?

Yes       No

Enter text here.

3.2 As insecticides typically require application with smaller droplet sizes to obtain adequate coverage of the target, can you provide the spray droplet size category or categories<sup>1</sup> that are used to apply SP-containing products?

Yes       No

Enter text here.

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<sup>1</sup> As defined by the American Society of Agricultural and Biological Engineers (ASABE) Standard (S572)

3.3 Are there any additional crops to which the synthetic pyrethroids are applied that were not included in the aquatic risk assessment?

Yes       No

Please provide evidence including filling out the GAP table (Table 2).

For the control of wasps. Both permethrin and deltamethrin are used for this application.  
See Page 8 of this submission.

3.4 Are there any other methods of application used in Aotearoa New Zealand that were not included in the aquatic risk assessment?

Yes       No

Please provide evidence including filling out the GAP table (Table 2).

- 1) Dusting of insecticide into wasp nest entrances.
- 2) Spraying insecticide on to surfaces wasps feed on or remove wood fibre from.

#### **Part four: Spray drift (downwind) buffer zones**

4. The risks identified from spray drift are a critical part of the aquatic assessment. We considered a 50 m threshold (maximum) as the workable spray drift (downwind) buffer zone distance in the aquatic risk assessment. Where spray drift (downwind) buffer zones were  $\geq 50$  m, we concluded that the high risk to the aquatic environment from spray drift could not be mitigated.

For detailed information on how we conducted our modelling and the outcomes, please see Appendices B to G – Tier II runoff modelling of the aquatic risk assessment document).

We would like feedback on this maximum spray drift (downwind) buffer zone distance.

Please provide your feedback on the following questions. Information and/or supporting evidence can be provided in the space below the question. Relevant documents can also be attached to your response. If you are supplying studies, please provide a summary (Table 1).

4.1 Can you provide evidence that a spray drift (downwind) buffer zone distance of  $\geq 50$  m is practical or feasible to manage risks to aquatic environments?

Yes       No

Enter text here.

4.2 In addition to those considered in the aquatic risk assessment, can you provide evidence of other spray drift reduction measures that can be used as effective controls?

Yes       No

Enter text here.

### Part five: Higher tier aquatic risk assessment refinements

5. As well as identifying critical use patterns, due to their very high aquatic toxicity, higher tier refinements to the aquatic risk assessment will likely need to be considered.

Higher tier refinements that can be used to refine the risk assessment include:

- species sensitivity distribution (SSD) approach
- geomean approach
- performance of micro-/mesocosm studies

Please provide your feedback on the following questions. Information and/or supporting evidence can be provided in the space below the question. Relevant documents can also be attached to your response. If you are supplying studies, please provide a summary (Table 1).

5.1 Do you have any information on higher tier refinements conducted on products containing the selected SPs that could be considered in our aquatic risk assessment? Please ensure you are the owner of this data or have requested permission from the data owner to provide this information.

Yes       No

Please provide a list of studies provided and a short summary of the study using the template in Table 1.

5.2 Do you think there is any other information that would help us refine our aquatic risk assessment and propose best possible outcomes to manage SPs in the future?

Yes       No

Review discussion on Page 8 of this submission.

### **Summary**

Apiculture NZ member beekeepers are already major users of flumethrin for the control of varroa mites in beehives. We recognise that this pyrethroid is not part of this review.

The use of pyrethroids for the control of wasps came about when carbaryl was banned for use by the EPA.

Our major concern is that as a result of the EPA's investigation of wide dispersive use of pyrethroids that there may be consequences for other uses such as the control of wasps. The EPA should be including this aspect in their review.