SUBMISSION

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To: reassessments@epa.govt.nz

Submission on: [OBJ] **Preliminary Consultation for the reassessment of selected Synthetic Pyrethroids (APP203936)**

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Submitter: [OBJ]

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Introduction

The Animal and Plant Health Association of New Zealand (Animal and Plant Health NZ) welcomes the opportunity to provide feedback on the Preliminary Consultation for the reassessment of selected Synthetic Pyrethroids (APP203936).

Our organisation represents both veterinary medicines and crop protection members who import and manufacture synthetic pyrethroids (SPs) to or in New Zealand for their insecticidal properties for ectoparasiticides in veterinary medicines and agricultural/horticultural pests.

The purpose of this submission is to endorse that submission submitted by Hort New Zealand, particularly in respect to the conclusion that the hazard classification and risk modelling used in forming decisions proposed by the Environment Protection Authority (EPA) needs attention; and provide a perspective regarding the use of SPs in Animal Health. Some veterinary medicines contain SPs as the active ingredient, we have provided some comments from an animal health perspective noting the critical importance of their use as ectoparasiticides for animal welfare.

Animal and Plant Health NZ supports.

1. Retaining Synthetic Pyrethroids for Crop Protection purposes

Animal and Plant Health NZ supports the Horticulture New Zealand (Hort NZ) submission, particularly the conclusion that the hazard classification and risk modelling used in forming decisions proposed by the Environment Protection Authority (EPA) is conservative.
In the *Briefing to the incoming minister,* the EPA[1] had noted that its modelling (Page 8) is no longer supported technically and is limited in the number of environmental scenarios specific to New Zealand. This casts doubt on the reliability of the models used by the EPA in this reassessment case.

Some of the concerns are highlighted below:

1.1 Modelling and clarity of modelling

a. Unrealistic Modelling

The EPA's risk assessment methodology is restricted, and an outdated modelling tool (as noted by the EPA) has been used in some of the modelling work for the SPs. The issues are compounded by the tier-based approach taken (Tier 1 to Tier 3), where initial screening in Tier 1 has led to more conservate levels in subsequent tiers.
Hort NZ provided an example of this using spray drift in Tier II, where the model assumed there was 100% spray drift exposure to waterbodies, therefore maximum toxicity level exposure, resulting in assessing SP concentrations above their stated solubility. Therefore, the modelling is not realistic.

b. Modelling clarification

The SP Science Memo level of concern for the non-threatened species acute risk assessment (listed in Appendix K) reported an equivalent safety factor of 2.

[1] Some of the ecotoxicological models we use are over 20 years old and have limitations. Our models are no longer supported technically, do not fully address a number of organisms and environmental scenarios specific to Aotearoa, and cannot be accessed by applicants to then incorporate the results into their applications.Briefing-to-the-Incoming-Minister-for-the-Environment-December-2023.pdf (epa.govt.nz)

Appendix K: Levels of concern used by the EPA for the aquatic environment

Consideration	Level of concern (LOC)	Equivalent Safety Factor
Aquatic (fish, invertebrates, algae, aquatic plants) – non-threatened species		
Acute RQ	< 0.5	2
Chronic RQ	≥ 1.0	1
Aquatic (fish, invertebrates, aquatic plants) – threatened species		
Acute RQ	≥ 0.05	20
Chronic RQ	≥ 0.1	10

In Table 9 of EPA Risk Assessment Guidance document 2022 has a different factor.

Table 9 Levels of concern

Receptor	Acute or chronic exposure?	RQ at LOC (normal)	RQ at LOC (threatened species)
Human health (operator, re-entry worker, bystander)	All	1	N/A
Aquatic (fish, invertebrates, algae, aquatic plants)	Acute	0.1	0.05 [a]
	Chronic	1	0.1 [a]
Sediment dwelling organisms	All	1	N/A
Soil organisms (earthworms)	Acute	0.1	0.01
	Chronic	0.2	0.02
Terrestrial vertebrates (birds)	Acute	0.1	0.05
	Chronic	0.2	0.1
Bees	Acute	0.4	N/A
	Chronic	1	N/A
Terrestrial invertebrates	All	2	N/A
Non-target plants	Acute (based on EC_{25})	1	-
	Acute (based on EC_{50})	0.2	-
	Acute (based on NOEC or $EC_{50}/10$)	-	1

a. Excludes algae

There is no explanation or justification for the reporting difference. Is this an error or a change in policy that has been justified elsewhere?

Animal and Plant Health NZ would recommend that the EPA reconsiders the modelling tools used in the assessment of SP's and reruns the modelling using other internationally accepted modelling tools; and discuss the outcome with industry to arrive at reassessments that are realistic. Industry is keen to work with EPA to ensure the modelling used is realistic and the decisions that evolve from modelling and/or micro-/mesocosm studies are substantiated by scientific evidence.

2. Retaining Synthetic Pyrethroids for Animal health purposes

Animal ectoparasiticides are an important tool for supporting animal welfare in New Zealand, as they help protect animals from flystrike, lice, tick, and other external parasite infestations.

Ectoparasiticide products containing SPs are an important component of chemical rotation strategies to manage resistance and are safe and effective for their intended purpose in mammals. Farmers use a "chemical rotation" strategy to help prevent chemical resistance development in ectoparasites for each chemical class. Currently, New Zealand has a limited number of chemical classes available to be used as a part of rotation strategy to control ectoparasites. It is important that access to SPs is retained for animal health use to help farmers prevent parasite infections and rotate chemical classes, to manage resistance.

Animal ectoparasiticides containing SPs have low risk to the environment and waterways as most are applied directly to animals as pour-ons, with minimal subsequent run-off or rinse-off of the SP actives.

About Animal and Plant Health NZ

We are the peak industry association representing more than 85 multinational and New Zealand based companies that manufacture, distribute, and sell crop protection and animal health products that keep our animals healthy and crops thriving. Our mission is to protect and enhance the health of crops, animals, and the environment, through innovation and the responsible use of quality products and services.

Our objectives are to:

- Strive for effective and sustainable animal health and crop protection technology through industry leadership and advocacy.
- Achieve a balanced and science-based regulatory environment that gives members freedom to operate and grow in New Zealand.
- Enable farmers and growers to supply high quality food and fibre into domestic and global markets.
- Create an environment that encourages competition through innovation.
- Promote stewardship and responsible use of products.
- Support the health and wellbeing of pets, livestock, and people.