pī·ā·ora BEES GIVING LIFE | APICULTURE NEW ZEALAND

11 September 2023

Environment Protection Authority
Private Bag 63002
Wellington 6104
New Zealand
via email: reassessments@epa.govt.nz

To whom it may concern,

Re: Call for information on use of aquatic herbicides (APP204572)

Thank you for the opportunity to provide information for the call for information on use of aquatic herbicides (APP204572) following significant new information on their effects becoming available.

Apiculture New Zealand (ApiNZ) is the national body representing the apiculture industry in New Zealand covering the full range of sectors, from hobbyist and commercial beekeepers to honey exporters, packers and suppliers. ApiNZ aims to support and deliver benefits to the New Zealand apiculture industry by supporting a thriving long-term future for New Zealand honeybee products and services, including having a strong bee health and biosecurity position.

Bees collect pollen and nectar from any plant within a reasonable flying distance and pollinate many valuable crops. Research has shown that, for example, in the case of some formulations of glyphosate, it is the surfactants and other co-formulants that are the problem rather than the herbicide itself.

ApiNZ understands that the EPA holds use information for four of the active ingredients mentioned in this application as a result of the decision for APP201365. The control in Section 6.7 of the decision for this application required that a "person must not apply or otherwise use this substance onto or into water, unless that person first obtains a permission from the Authority under section 95A of the Hazardous Substances and New Organisms Act 1996". This information should be used in the assessment for APP204572. We also request that the EPA provides a summary of this information for each of the reports they have received since the APP201365 decision.

Apiculture NZ has also repeatedly asked that the EPA follow through on recommendation 7.1 from the decision for APP201365 "to examine the risks to the environment associated with the adjuvants/surfactants that maybe tank mixed with pesticides and applied in a wide dispersive manner into the environment". As the EPA has not conducted this examination yet, we ask that this application (APP204572), does not extinguish the recommendations in APP201365. We expect a full EPA examination of the use of surfactants in the environment.

Yours sincerely

Karin Kos
Chief Executive
Apiculture New Zealand

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Environmental Protection Authority
Te Mana Rauhī Taiao

New Zealand Government

Call for Information on use of aquatic herbicides (APP204572)

19 April 2023

Please provide your information in this form.

Response to Call for Information on aquatic herbicides	
Name (required)	Karin Kos
Organisation name (if responding on behalf of an organisation)	Apiculture New Zealand
Postal address (optional)	P O Box 10414 Wellington 6140
Telephone Number (required)	+ 64 4 471 6254
Email (required)	CEO@apinz.org.nz
Responder description (required, please select any that best describe you or your organisation.	☐ Importer ☐ Supplier ☐ Retailer ☐ Professional applicator ☐ User ☐ Permission holder ☐ Kaitiaki ☐ Iwi ☐ Hapū ✓ Other - affected/ interested, please specify: Industry peak body

The Environmental Protection Authority (EPA) intends to prepare an application for reassessment of herbicides used in aquatic environments, following significant new information on their effects becoming available. We are calling for information to inform the preparation of our application (APP204572).

There are grounds to reassess hazardous substances used as aquatic herbicides containing the following active ingredients:

- diquat dibromide
- metsulfuron-methyl
- haloxyfop-R-methyl
- imazapyr isopropylamine
- triclopyr triethylamine

Please submit your form in Word format to reassessments@epa.govt.nz no later than 28 June 2023.

- endothall dipotassium.

Under section 6 of the Hazardous Substances and New Organisms Act 1996, the EPA is required to consider many factors when reassessing hazardous substances, such as public health, the intrinsic value of ecosystems, and economic benefits. An important requirement is to understand whether the use of aquatic herbicide products affects the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, valued flora and fauna, and other taonga. We must also consider any impacts on Māori rights accorded under Te Tiriti o Waitangi (The Treaty of Waitangi). The questions in this response form are intended to draw out relevant information to allow a comprehensive assessment of risks and benefits associated with availability and use of these substances as aquatic herbicides. The form is structured to capture information that will be considered in the reassessment:

- Part 1 manufacture and import information (including packaging, labelling, volumes)
- Part 2 use and application information
- Part 3 environmental exposure mitigation measures
- Part 4 scientific and technical information
- Part 5 cultural impacts
- Part 6 the existence of alternatives
- Part 7 other relevant information.

Information we are looking for

This is an opportunity for you, as interested parties and/or stakeholders, to provide information on herbicide products containing the substances listed above that are available in Aotearoa New Zealand, and how those products are used in aquatic environments. Our objective is to protect Aotearoa New Zealand's environment and taonga, in accordance with tikanga. We are looking to receive any relevant information relating to the current use, practices, and benefits of aquatic herbicide products. This includes any information relating to the effects of the products, positive or adverse; on the relationship of Māori and Māori culture to the environment; toxicology; ecotoxicology; environmental fate studies; or monitoring results.

All herbicide products containing the substances listed above, except for diquat dibromide, currently need permission before you can use them in aquatic environments in Aotearoa New Zealand. Here is a link to more information on permissions:

Permission to use certain hazardous substances | EPA

(https://www.epa.govt.nz/industry-areas/hazardous-substances/making-an-application/permissions/)

The current permission holders are local and regional councils, as well as the Ministry for Primary Industries, Department of Conservation, Land Information New Zealand and Landcare Services Limited, in the plant pest control and biosecurity sectors. From permission holders for aquatic herbicides, we are keen to get a better understanding of:

- the effectiveness of the current requirements in managing risks to human health and the environment
- what measures are implemented to manage risks to human health and the environment
- whether alternatives to the current herbicides have been considered, and the basis for any decision made
- how the plant pest control and biosecurity requirements align with regulatory requirements under different pieces of legislation (e.g., Hazardous Substances and New Organisms (HSNO) Act 1996, Health and Safety at Work (HSW) Act 2015 and Resource Management Act 1991).

Important date

Please complete and return your feedback form in Word format to reassessments@epa.govt.nz, no later than 28 June 2023.

Feedback form

We have produced this feedback form to assist you to provide information to inform our analysis. When providing information, please provide your comments under the relevant headings, and attach any evidence or supporting information as applicable. As this is an opportunity to provide us with your relevant information, please focus on the areas that are of relevance to you. We encourage you to submit additional information such as product labels, study data, scientific literature, or technical reports as separate documents. If you choose to submit separate documents, please briefly identify these in the relevant section of the feedback form.

It would be helpful if you can complete the questions as comprehensively as possible and provide additional comments where appropriate. This information will be useful to ensure use scenarios are accurate and applicable to the substances in the reassessment.

Responding is voluntary

Responding to this call for information is voluntary.

You are entitled to respond to whichever questions to which you feel able to contribute.

Important information when providing feedback

How we will use this information

We intend to use this information in the preparation of an application for reassessment, to determine whether the EPA should undertake a modified or full reassessment of herbicide products used in aquatic environments containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium, and to inform that reassessment process. Interested parties will have an opportunity to make formal submissions on our assessment and proposal once a reassessment application has been lodged.

Where it is lawful to do so, the EPA may also use the information to undertake its regulatory role, including by sharing the information with other agencies.

Your information may be made publicly available

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 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, and give the reasons, so we can consider this before publishing any information.

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 details available here).

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

Official Information

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.

Part 1: Manufacture[1], import, sale, and packaging information

1a) Do you have any information on quantities of aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium that are manufactured in or imported to Aotearoa New Zealand?

☐ **Yes** ☒ **No**

1b) If your answer is yes, please provide information relating to the quantity of each product imported and/or manufactured annually in the space below or as a separate attachment. For each product, please tell us the trade name and HSNO approval number.

1c) Do you hold any New Zealand sales data for aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium?

☐ **Yes** ☒ **No**

1d) If your answer is yes, please provide the sales data in the space below or as a separate attachment. For each product, please tell us the trade name and HSNO approval number.

1e) Do you have any information on the packaging of aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium?

☐ **Yes** ☒ **No**

1f) If your answer is yes, please provide information relating to how the products are packaged for sale/distribution (for example, into ready to use containers), the available pack sizes of the product, and the type of packaging used. Please use the space below or provide as a separate attachment. We also recommend using Table 1 on the following page to assist in answering Part 1 questions.

[1] manufacture, for the purposes of this question —

(a) means make, prepare, produce, label or pack (including packing into a container); and

(b) includes repacking or relabelling

Table 1: Trade name and packaging information (add additional lines to table if necessary)

Product identifier HSNO approval #	Trade name(s) of product using this approval number	Active ingredient	Concentration of active ingredient	Pack sizes	Packaging type	Any additional information relating to packaging
e.g., HSR000XXX	*e.g., AQ Weed*	*e.g., diquat dibromide*	*e.g., 200 g/litre*	*e.g., 500ml, 1L, 5L, 20L*	*e.g., HDPE container*	

Please submit your form in Word format to reassessments@epa.govt.nz no later than 28 June 2023.

Part 2: Use and application information

2a) Do you have any information on how aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium are used in Aotearoa New Zealand?

☒ **Yes** ☐ **No**

2b) If your answer is yes, please provide this information in the space below. We also recommend using Table 2 on the following page to assist in answering Part 2 questions. Please include any known off-label uses and note this in the remarks column. Please feel free to also attach any product labels.

It is really important that the details included here on use are accurate as this information will inform our assessment.

ApiNZ understands that the EPA holds use information for four of these herbicides as a result of the decision for APP201365. Modified controls were applied by the EPA in the Decision of APP201365. Significantly the control in Section 6.7 of the decision required the following: "A person must not apply or otherwise use this substance onto or into water, unless that person first obtains a permission from the Authority under section 95A of the Hazardous Substances and New Organisms Act 1996". It is our understanding that the EPA has these Section 95A permissions and there a broad understanding of how, where and when these 4 herbicides were applied over water. Reference Decision APP201365 section 6.7 page 20 of 112.

Section 6.21 requires those applying these four products onto or into water to provide the EPA with an annual report by 31 July each year. In particular the Section 6.21 control requires the EPA to be notified of the following details; "Details of the spray operation by location, including application method used, quantity of the substance applied, rates of application, frequency of application and the dates of application".

Apiculture NZ requests that the EPA provides a summary of this information for each of the reports they have received since the APP201365 decision.

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

HSNO approval number	Trade name	Active ingredient (a.i.)	Name of water body & region	Target plant pest	Area treated (m^2)	Area of water body (m^2)	Quantity applied (kg a.i.)	Application method	Parties notified	Notification method	Parties consulted	Detail of consultation	Remarks:
(a)		(b)						(c)		(d)		(e)	(f)

Remarks

(a) The HSNO approval number (HSRXXXXXX)
(b) Active ingredient, for example diquat dibromide
(c) For example, helicopter spraying or knapsack or vehicle spray unit
(d) For example, email or telephone call or newspaper
(e) For example, draft spray plan for review or hui
(f) Remarks may include remedy taken to address any concerns received following notification and or consultation

Please submit your form in Word format to reassessments@epa.govt.nz no later than 28 June 2023.

Part 3: Exposure mitigation measures

3a) Do you have information on how exposure risks associated with the use of aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium are managed/mitigated?

☐ **Yes** ☒ **No**

3b) If your answer is yes, please provide examples of exposure mitigation measures that are implemented for safe application of each product. You can use the space below to describe these measures for each product or attach copies of labels or guidance documents that contain this additional information. For each product, please tell us the trade name and HSNO approval number.

3c) Do you have information that indicates how effective the exposure mitigation measures are in regard to management of adverse effects arising from use of aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium?

☐ **Yes** ☒ **No**

3d) If your answer is yes, please provide this information in the space below. Please feel free to also attach any product labels.

Please submit your form in Word format to reassessments@epa.govt.nz no later than 28 June 2023.

Part 4: Scientific and technical information

4a) Do you have any studies or technical reports on the **toxicology** (i.e., human health) of aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium (either published or unpublished reports)?

☐ **Yes** ☒ **No**

4b) **If your answer is yes, please provide these as attachments**.

4c) Do you have any studies or technical reports on the **ecotoxicology** (i.e., environmental effects) of aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium (either published or unpublished reports)?

☐ **Yes** ☒ **No**

4d) **If your answer is yes, please provide these as attachments**.

4e) Do you have studies or technical information on the **environmental fate** (e.g., persistence, bioaccumulation) of aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium (either published or unpublished reports)?

☐ **Yes** ☒ **No**

4f) **If your answer is yes, please provide these as attachments**.

4g) Do you have any environmental monitoring data relating to the presence of aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium?

☐ **Yes** ☒ **No**

4h) **If your answer is yes, please provide these as attachments**.

Part 5: Impacts on Māori associated with use of aquatic herbicide products

5a) As local Māori, have you been consulted and/or notified about the use in your rohe of aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium?

☐ **Yes** ☒ **No**

5b) If you answered **yes**, please provide information regarding the consultation and/or notification in the space below or as a separate attachment. Please include any details about the application, the location and name of waterbody, trade name of herbicide, what information was provided and how, and any concerns raised or issues.

5c) If you answered **no** to 5a, please provide any information related to this in the space below or as a separate attachment. Please include any details about the application, the location and name of waterbody, trade name of herbicide, and any concerns raised.

5d) Do you have any information regarding the impacts of aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium on the environmental, economic, social, and cultural well-being of Māori? This includes any impacts on taonga such as culturally significant species and resources, and the Māori values, practices, uses, and beliefs associated with these taonga.

☐ **Yes** ☒ **No**

5e) If you answered yes, please provide information regarding impacts on Māori in the space below or as a separate attachment.

Please submit your form in Word format to reassessments@epa.govt.nz no later than 28 June 2023.

Part 6: Benefits and alternatives information

6a) Do you have any information on the benefits of using aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium in Aotearoa New Zealand?

☐ **Yes** ☒ **No**

6b) If you answered yes, please provide information on each product in the space below or as a separate attachment. Please tell us the trade name(s) and HSNO approval number(s).

6c) Do you have any information on the possible effects of aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium becoming unavailable or significantly restricted in Aotearoa New Zealand?

☐ **Yes** ☒ **No**

6d) If you answered yes, please use the space below to detail for each substance these possible effects. Please tell us the trade name(s) and HSNO approval number(s).

6e) Do you have any information on the availability, relative cost, effectiveness, and safety of any alternative that could be used if aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium became unavailable in Aotearoa New Zealand?

☐ **Yes** ☒ **No**

6f) If you answered yes, please use the space below to provide this detail for each product. Where relevant, please tell us the trade name(s) and HSNO approval number(s).

Please submit your form in Word format to reassessments@epa.govt.nz no later than 28 June 2023.

Part 7: Any other pertinent information

7a) Do you have any other pertinent information, not covered by the questions above, related to aquatic herbicide products containing the substances diquat dibromide, metsulfuron-methyl, haloxyfop-R-methyl, imazapyr isopropylamine, triclopyr triethylamine or endothall dipotassium?

☒ **Yes** ☐ **No**

7b) If you answered yes, please use the space below to detail this information. Feel free to include any further pertinent information as additional attachments. Where relevant, please tell us the trade name(s) and HSNO approval number(s).

Bees collect pollen and nectar from any plant within a reasonable flying distance (usually up to 3 kilometres but can be up to 12 kilometres) from their hive. Bees pollinate many valuable crops. They turn the nectar and pollen they collect from these plants into honey.

Two research papers show that surfactants and other co-formulants are toxic to bees. Straw et al (2021) [2] evaluated two Roundup™ products, and another product with the same active ingredient, glyphosate. The researchers concluded that the active ingredient, glyphosate, is not the cause of the problem, that it is surfactants and other co-formulants. Roundup™ products caused considerable matting of bee hair, and this incapacitated the gas exchange system of bumble bees. In essence, the bees were asphyxiated.

Goodwin and McBride (2000) [i3] evaluated the toxicity of surfactants applied topically and orally to honey bees (Apis mellifera L.) using laboratory bioassays. Eleven surfactants (Citowett®, Pulse®, Boost®, Codacide oil®, Contact®, Raingard®, Peptoil®, Sunspray®, Ethokem®, Multifilm® and Uptake®) were applied topically to anoxiated bees. Anoxiating bees and spraying them with water had no significant effect on their survival. Four surfactants (Citowett®, Pulse®, Boost® and Ethokem®) were toxic when applied topically. Ethokem® and Boost® also showed oral toxicity.

The decision for APP201365 made 3 recommendations, see Section 7. Apiculture NZ has repeatedly asked that the EPA follow through on Recommendation 7.1.,"… to examine the risks to the environment associated with the adjuvants/surfactants that maybe tank mixed with pesticides and applied in a wide dispersive manner into the environment…" To date the EPA has not conducted this examination.

Apiculture NZ asks the following:

[2] Attachment 2

[3] Attachment 1

1) That this application (APP204572) does not extinguish the recommendations in APP201365. We expect a full EPA examination of the use of surfactants in the environment.

2) That the public and end users should be aware of the environmental safety of adjuvants/surfactants when used in a wide dispersive manner.

3) That it is the tank mixture that often causes environmental problems, not what is in the chemical package.

Please submit your form in Word format to reassessments@epa.govt.nz no later than 28 June 2023.