



**APICULTURE**  
NEW ZEALAND

# SUBMISSION

**The regulation of inhibitors used in agriculture.**

**MPI Discussion Paper No: 2020/01**

Date; 5<sup>th</sup> April 2020  
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The following submission is presented by Apiculture New Zealand on behalf of its Science and Research Focus Group. Members of this Focus Group include;

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## **Submission on the regulation and use of nitrogen inhibitors**

Thank you for the opportunity to submit on MPI Discussion Paper 2020/01 – The regulation of inhibitors used in agriculture. This submission has been prepared by the Apiculture NZ Science and Research Focus Group.

### Introduction

The Beekeeping industry in New Zealand has contributed to the major growth of New Zealand's primary produce exports. MPI's own summary data published in the Situation and Outlook for Primary Industries (SOPI) June 2019 showed a substantial jump in honey exports to \$348 million year ended June 2018. This is significant growth for a single specialty food product, which \$100 million more than the Arable sector. Significantly MPI is forecasting more growth for honey exports in the 2019 year and beyond.

Beekeepers are also actively engaged in supporting the horticulture (kiwifruit, avocados, pip fruit etc.) and arable specialty seeds industry with pollination services, which are also significant exporters. Beekeepers contribution to NZ export trade in primary products is significant.

Honey bees are foragers of pastoral land, gathering pollen and nectar from flowering pasture plants such as clover. They contribute through pollination to pasture renewal. Therefore Apiculture NZ is very much interested in the application of any chemical that may adversely affect bees whilst foraging (bee safety) and or compromise honey or pollen or propolis with residues (food safety).

This submission will follow only some of the questions in the submission template form provided by MPI. We have omitted questions we cannot answer.

### Questions on problem definition

It is acknowledged that MPI has a definition problem about what is an inhibitor and how it is regulated. It is important that a definition is given as without it this call for public submissions may have to be repeated.

It appears that MPI is trying to determine the definition and regulatory mechanism in just one discussion document. This may be seen as rushing the issue through a consultation process.

### Questions on definition of an inhibitor

Apiculture NZ supports the objective of this review which is two parts;

1. The purpose of inhibitors is recognised;
  - Mitigate agriculture greenhouse gas emissions
  - Reduce nutrient leaching

Our submission supports these objectives as they benefit all society not just farming.

2. The Safe use of inhibitors is also recognised;
  - Minimise all risks to plant and animal health;
  - Minimise all risks to food safety
  - Minimise all risks to trade.

Our submission asks MPI to recognise the above are all key issues for apiculture in NZ.

- Honey bee safety and health when foraging.
- Ensuring that bee products consumed as food are safe
- Ensuring that exported bee products are free of residues when traded.

The problem with the two definitions proposed is that we have very few examples of the compounds and their mechanism of action to make a clear choice of the proposed definition. The other issue is how are these inhibitors going to be applied? And does application method change the product description.

Beekeepers are concerned about the following issues with any inhibitor in use;

- Broadcast applications, especially broadcast spraying when foraging bees are present. This can be by physical knockdown or acute and chronic toxic effects on foraging honey bees.
- Dosed water supply treatments are of concern as bees often gather water for the hive from water troughs on farms. This water is used to cool the hive and/or is mixed with honey.
- Systemic properties of the inhibitor. Can the plant absorb the chemical in its roots and translocate it to the flowers? Does it or its metabolites express themselves in flowers and pollen, which is gathered by honey bees and taken back to the hive?
- Inhibitor chemical effects on the nervous system, the brain and the well-being of the bee. Low rates of some chemicals can adversely affect natural bee behaviour. e.g. Bee navigation, brood development.
- The use of spray tank adjuvants with a product can change the toxicity of the product to bees – example; herbicides when mixed with organo-silicon surfactants become toxic to bees.

We have seen Agrichemical companies use their size to make significant changes to the description of their products to not fit specific definitions that academics may have given them.

**Example;** Dow AgroSciences described sulfoxaflor as a sulfoxamine and not as a neonicotinoid. They created a new class description so their product would not be associated with the neonicotinoids. This was not challenged by any regulator and clearly shows that the agrichemical industry defines what type of chemical their product is.

The Apiculture NZ Science and Research Focus Group supports an outcomes based definition.

### Questions on transitional period

Apiculture NZ Science and Research Focus Group asks MPI to disclose how many products are already in the market place and how many are about to be released.

Does MPI have this data?

Only then can a transitional period be decided.

If chemical companies are already following a product stewardship programme (Option 2), they should already be addressing the beekeeping issues detailed on page 2 of this submission. They therefore do not require a transition period.

### Questions on the proposed options

Disclosure: Apiculture NZ does not import, manufacture or sell inhibitors for use in agriculture.

Apiculture NZ Science and Research Focus Group wishes to comment on the three options.

#### **Option 1 – maintain the Status Quo**

It is surprising MPI has suggested that this is an option. The reason we are submitting today was that the detection of residue levels of the nitrification inhibitor dicyandiamide (DCD) detected in milk in 2012 caused adverse customer reaction in overseas markets.

It is concerning that MPI has taken 8 years to reach this point with respect to regulating inhibitors.

Apiculture NZ is not aware if honey from the 2011/12 season was tested for DCD residues. Our position is that residues of any compound applied to pasture is not acceptable in honey. Apiculture NZ is not in favour of Option 1.

#### **Option 2 – Industry increases management of inhibitors**

This would require industry to develop their own stewardship programmes for inhibitors.

Apiculture NZ is concerned about the poor product stewardship record of the chemical industry especially the non-regulated products that are exempted from the ACVM Act oversight such as surfactants and foliar nutrient products.

Examples of poor industry led stewardship:

- a. Rio Tinto not accepting stewardship of the stored Ouvea Premix for fertiliser stored in Matura during the recent floods. Their waste product was proposed for end use as a fertiliser. It is clear that Rio Tinto paid someone to deal with their problem waste. This is not clearly not good enough and illustrates how MPI's lack of oversight of the fertiliser industry is going to cause future problems. Fertiliser is a

product that can be regulated under the ACVM Act, but MPI chooses not to.

- b. Surfactants are self-managed by the chemical industry. Ask any supplier for their ecotoxicological data for their organo-silicone products and they have none. Apiculture NZ has argued for regulation of these surfactants which kill bees but MPI still stonewalls all discussion. Surfactants can be regulated under the ACVM Act but MPI chooses not to. These suppliers are not demonstrating any stewardship of their products.

MPI talks about a stewardship programme, but have not defined it or put up a protocol for discussion by industry. It would be helpful to understand what this stewardship programme would look like.

Is it possible that MPI would audit industry to ensure that the programme is compliant and achieves its objectives?

The Ministry for the Environment already has a Product Stewardship definition<sup>i</sup> which may be acceptable to this programme.

Apiculture NZ is not in favour of Option 2

### **Option 3 – Change the regulation of inhibitors**

The major concerns for beekeepers is that inhibitors used in pasture are;

- a. safely applied to protect honey bees when out foraging;
- b. correctly used to label instructions, which should contain a warning to protect honey bees;
- c. that there are no sub lethal effects that may adversely affect bee behaviour;
- d. not made toxic to honey bees by the adding spray tank adjuvants;
- e. free of inhibitor residues in plant nectar, pollen, water and or propolis gathered by honey bees. Are these chemicals systemic within the plant?

In recent years beekeepers have had their international trade affected by the recent detection of glyphosate residues in honey. Overseas customers demand non detectable residues. Beekeepers were surprised that this occurred, and equally surprised that MPI's residue surveillance programme had not detected this over many years of testing, after all glyphosate has been on the NZ market since the 1980s.

Beekeepers have very little control over what their honey bees gather from plants treated with agricultural chemicals. Example; we cannot yet state how glyphosate is being widely collected in NZ honey and why phthalates are being detected in propolis. Therefore it is important for the label to communicate this risk to the user of the agricultural chemical that applying a product could cause honey to exceed the default MPL.

Apiculture NZ believes that manufacturers, importers of inhibitors should meet the same standards of all other agrichemical manufacturers with respect to; risks to plant and animal health; risks to food safety; risks to trade. And that should include testing for honey bee safety.

Apiculture NZ supports Option 3

We are prepared to take part in any public meeting or discussion on the submissions made to MPI on the labelling of Agricultural Chemicals.

Thank you for considering our submission.

Yours

Barry J Foster

Chairman

Apiculture NZ Science & Research Focus Group

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<sup>i</sup> <https://www.mfe.govt.nz/waste/we-all-have-role-play/responsible-product-management/about-product-stewardship>