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[submissions@epa.govt.nz](mailto:submissions@epa.govt.nz)

Environmental Protection Authority of NZ  
Private Bag 63002  
Wellington 6140

## **Submission on Application to release two new biocontrols to combat wasps**

Apiculture New Zealand (APINZ) represents the interests of beekeepers and honey bees in New Zealand. Beekeeping is now one of New Zealand's fastest growing export enterprises and presently supplying the world with high value honey products

The value of the apiculture industry to the NZ economy includes honey exports (\$425 million year ended August 2020), as well as an overall industry value of \$5 billion derived directly from honey and other bee products, and indirectly through pollinating horticultural and agricultural crops

1. Wasps are a significant pest for the beekeeping industry particularly in certain geographical areas. The annual colony loss report run by Landcare research (<https://www.mpi.govt.nz/protection-and-response/readiness/beebiosecurity/bee-colony-loss-survey/>) shows that wasps are the cause of death for between 9.6 and 12.1% of managed honeybee hives in recent years). The 2019 NZ Colony Loss Survey reported the loss of 81,965 honeybee colonies. Wasps accounted for 9.6% of those losses (~7869 colonies) and is ranked the third or fourth highest cause of loss in these surveys.
2. Based on the number of hives killed by wasps in 2019 (~7869 colonies) the value of lost production and replacement of beehives lost to wasps is estimated based on current hive values and returns for honey to cost the industry close to 4 million annually. This does not consider lost production due to the effects of wasps on bees leaving the hive or foraging in the general environment resulting in reduced honey production or pollination.
3. APINZ supports this application to import two new biocontrol's (*Volucella inanis* and *Metoecus paradoxus*) for vespula wasps. This is due to the likely positive benefits to the apiculture industry and the industries that it supports. While the current use of other controls such as Vespex have been used by beekeepers, a more widespread suppression of wasp populations through the introduction of these biocontrol's would be beneficial to the health and production of beehives therefore increasing profitability. This would be through:
  - a. Decreasing total hive deaths potentially by 12% (based on colony loss survey data)
  - b. Increasing productivity of hives for both honey production and pollination by reducing attack by wasps due to lower requirement for bees to defend hive.
  - c. Reduction in hive management required in high wasp population areas to prevent robbing.
  - d. Reduction in pest control costs to beekeeper e.g. baiting with Vespex
  - e. Improvement to the general foraging environment of honey bees particularly in beech forests and river beds.

4. Based on the risk assessment provided in the application document we see limited adverse effects to the health of honey bees through the introduction of these biocontrol's into New Zealand. One consideration is the potential competition with honeybees for food resources by *Volucella inanis* where the adult feeds on nectar and pollen. Based on the risk analysis this is unlikely to have a significant effect on beehive health and production due to limited population size of the biocontrol and the fact that there are already a number of introduced and native hoverfly species present in New Zealand.
5. Thank you for considering our submission. We do wish to make an oral submission.

This submission is presented by Apiculture New Zealand on behalf of its Science and Research Focus Group. Members of the Apiculture New Zealand Science and Research Focus Group include:

Barry Foster (Chair)

Dr Oksana Borowik

Dr Mark Goodwin

Martin Laas

Don MacLeod

John Mackay

Dr John McLean

Dr Pike Stahlmann-Brown