



OIA number: 17-E-400 – DOC-3157921

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Naomi Pond <<mailto:fyi-request-6502-a53102bo@requests.fyi.org.nz>>

Dear Naomi

Thank you for your Official Information Act request to the Department of Conservation, dated Friday 1 September 2017. You requested the following: Regarding aerial 1080, given that 1080 poison was developed as an insecticide, I am concerned about the effect on bees; 3 questions: 1. what is its effect on honeybees? 2. what is its effect on bumblebees? 3. what is its effect on our native bee?

Your questions and our responses to them are listed below:

*Regarding aerial 1080:*

1. *What is its effect on honeybees?*

As you point out, 1080 can also be used as a toxin in insecticides. However, aerial 1080 is not designed to target bees and ill-effect of aerial 1080 on honeybee colonies is unlikely.

The Department's specific technical information relating aerial 1080 to honeybees is quoted below from the *Sodium fluoroacetate Pesticide Information Review* which is attached with this letter:

"Although 1080 is toxic to honeybees, baits used in pest control are generally not attractive to honeybees. However this may not always be the case if honeybees are particularly hungry, so beekeepers should always be notified of operations".

The following information about honeybee feeding can also be an assurance: Honeybees seek floral resources and feed by drinking nectar, honeydew and water and by gathering pollen. Aerial 1080 uses two kinds of baits. These baits are made from cereal or from carrots. Cinnamon oil is usually on the bait to lure possums and mask any toxin odour. In bait trials, cinnamon is shown to generally deter insects rather than attract them (Spurr & Drew 1999).

2. *What is its effect on bumblebees?*

Aerial 1080 is not designed to target bees, including bumblebee species. Ill-effect of aerial 1080 on bumblebee colonies has not been reported and is unlikely. Bumble bees in New Zealand feed on the same floral and honeydew resources as honeybees except that they are known as 'long tongue bees' and can obtain nectar from a wider range of flowers than honeybees.

3. *What is its effect on our native bee?*

Aerial 1080 is not designed to target bees, including the many native species. Ill-effect of aerial 1080 on colonies of native bee species has not been reported and is unlikely.

Bee species native to New Zealand are in three families, Colletidae, Halictidae and Megachilidae. All species of bee in the superfamily Apoidea seek floral resources as described above for honeybees and bumblebees.

Donovan (2007) is a useful and downloadable resource about bees in New Zealand and is found at <http://www.landcareresearch.co.nz/publications/books/fauna-of-nz-series/extracts/fnz57>.

#### References

B.J. Donovan (2007) Apoidea (Insecta: Hymenoptera). Fauna of New Zealand 57, 295 pages.

E.B. Spurr and K.W. Drew. (1999). Invertebrates feeding on baits used for vertebrate pest control in New Zealand. New Zealand Journal of Ecology 23(2): 167-173.

Yours sincerely,



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