Agriculture Victoria is responsible for regulating agricultural and veterinary chemical use in Victoria. As part of this role, we investigate instances of suspected bee poisoning.

DO YOU SUSPECT BEE POISONING?

The first and most important thing to do is to collect a sample of the bees. Desiccation of bees can occur quickly during summer. This will have an impact on the success of chemical residue testing, therefore collecting samples as soon as possible is very important.

If poisoning of bees is suspected, contact Agriculture Victoria immediately on 136 186.

Sampling

There are three different types of samples that can be taken:

- Dead bees from outside the hive;
- Dead bees and comb from inside the hive; and
- A swab sample from the outside of the hive.

Samples should be collected using clean tweezers and/or gloves whenever possible. If possible, sterilise equipment (such as tweezers, hive tools, knives for cutting out comb) before use.

If clean, unused and closeable containers aren’t available when collecting a sample, any other sealable vessel, such as a clean, unused zip-lock bag, is sufficient.

Samples need to be placed into a freezer as soon as possible to prevent chemical residues from breaking down.

If a freezer is unavailable, the sample should be placed on ice (i.e. in an insulated container with ice packs) and transported to a freezer as soon as possible.

Samples of dead bees are preferred for a suspected poisoning. The other sampling methods mentioned are more difficult and more likely to be collected by an Agriculture Victoria officer if required.

Dead bees from outside the hive

This is the most common and preferred sample type. Samples of dead bees should be as close to 300 bees as possible (enough to fill a 100ml cup).

Once collected, the sample should be placed into a clean, unused closeable plastic (ideally) or glass container, labelled and stored in a freezer.

The sample should be labeled (at a minimum) with the following:

- Your name;
- The date and time the sample was collected;
- Location of the hive (e.g. “123 Smith’s Road, Jonesville”); and
- A sample number (which should also be marked on the affected hive).

Ideally, the sampled bees should be part of the largest group that appear to have been poisoned and not taken from differing sites. This will ensure the sample is representative of what has happened to the hive.

If you have been provided with a ‘sugar shake kit’ by Agriculture Victoria as part of the Varroa mite surveillance program, the cups included in these sample kits are 100ml and fit approximately 300 bees.

Comb samples from inside the hive

Sampled comb should be at least 10cm x 10cm in size and be placed into a clean, unused and closeable plastic (ideally) or glass container, labelled and stored in a freezer.

Swab samples from the outside of the hive

Swab samples should be taken using a clean tissue or cotton-wool ball from across an area of approximately 20cm x 20cm on the side of the hive that is believed to have been in contact with the chemical. This should be placed into a clean, unused and closeable plastic (ideally) or glass container, labelled and stored in a freezer.
Notes and photos
It is also important to make notes about what you have observed, including:

- How many hives are affected;
- When you observed the symptoms (date and time if possible);
- What you suspect might be the cause;
- Was spraying occurring in the immediate area and do you think you know who was responsible?; and
- Have you spoken to this person and if so, what was their response?

It is also recommended that you take photos of the bees and hives (both close up and at a distance) to provide Agriculture Victoria investigating officers with information about what else is going on in the immediate area.

NEXT STEPS

Agriculture Victoria administers the Agricultural and Veterinary Chemicals (Control of Use) Act 1992 (“the AgVet Act”). The AgVet Act states that it is an offence to undertake agricultural spraying which:

- injures any plants of economic value, or stock outside the target area;
- injures any land outside the target area so that growing plants or keeping stock on the land may result in contamination of any produce derived from the stock or plants, or the stock themselves;
- contaminates any stock outside the target area; or
- is likely to contaminate any agricultural produce derived from plants or stock outside the target area.

It is also an offence under the AgVet Act for a person to use chemicals in contravention of prohibitive label statements, such as ‘DO NOT’ statements. Many agricultural chemicals, particularly insecticides, contain statements under the Protection of Livestock section of the label that relate to bees.

The AgVet Act is in place to protect primary producers from inappropriate chemical use and enhance Victoria’s reputation as a producer of clean, fresh produce.

The guidelines in this document aim to provide the information necessary to allow you to take a representative sample. Samples are best analysed by a National Association for Testing Authorities (NATA) accredited laboratory. This provides confidence that the results are a true indication of the residue status of the sample and ensure that decisions are based on accurate information.

REFERENCES


FURTHER INFORMATION

National Association of Testing Authorities (NATA)
(Melbourne Head Office) phone: (03) 9329 1633
To locate an accredited laboratory visit: nata.asn.au

Agriculture Victoria Chemical Use website: agriculture.vic.gov.au/chemicaluse

ACCESSIBILITY

If you would like to receive this publication in an accessible format, please telephone Department of Economic Development, Jobs and Transport on 136 186.

This document is also available in PDF and/or Word format at www.agriculture.vic.gov.au

Photo: Dead bees outside a hive, which are suspected of having died as a result of spraydrift.

Cover photo: Bee on almond blossom.