

SHAKE, INSPECT, CALL IF YOU SUSPECT

Early detection of exotic pests is essential for Australia to have the best chance of eradicating any incursions

Under Section 3.2 of The **Australian Honey Bee Industry Biosecurity Code of Practice**, beekeepers must check one hive in each apiary for arthropod pests – including Varroa and Tropilaelaps mites and Braula fly – at least twice per year. We recommend testing in autumn and in spring (April and October). The 'sugar shake' is a simple method for checking for external parasites, which does not harm the bees. Alternatively, beekeepers may test for arthropod pests using an alcohol wash or drone uncapping.

Required equipment



Credit: Hornsby Beekeeping Supplies

- Sugar shaker: Lidded jar (approx. 500g size) with a lid containing lots of 3–5mm holes (drilled or gauze)
- Paper for collecting bees (e.g. newspaper)
- Icing sugar, at least 1 tablespoon
- Small bucket or tub with clean water
- Magnifying glass
- Bee suit and smoker

What to look for



Braula fly (top):
Hairy, red-brown wingless fly with six long legs; 1.5mm long.

Varroa mites (right):
Red-brown, oval-shaped mites; 1.1mm long and 1.5mm wide.

Tropilaelaps mites (bottom):
Brown, oval-shaped mites; 1mm long and 0.5mm wide.

Source: Food and Environment
Research Agency (FERA).
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Learn more about your obligations under The Australian Honey Bee Industry Biosecurity Code of Practice the Code by visiting beeaware.org.au/training.



Scan the QR-code or visit
[youtube.com/watch?v=48vomY-lf2Q](https://www.youtube.com/watch?v=48vomY-lf2Q)
to view a video of the sugar shake method

The National Bee Biosecurity Program is funded by the honey bee industry through a component of the Agricultural Honey Levy, with state governments contributing in-kind resources. Plant Health Australia manages the program on behalf of the Australian Honey Bee Industry Council.

1. Collect bees



Collect worker bees from a brood frame, preferably from a weak hive, by shaking onto paper.

2. Fill shaker



Scoop or pour about 300 bees (approx. 1/2 cup) into the jar and quickly fasten the lid.

3. Add sugar



Add one tablespoon of icing sugar through the gauze in the lid. Add more if needed to thoroughly coat the bees.

4. Roll, rest, roll



Roll the jar for 2 mins to coat bees in sugar. Let the bees **rest** in the shade for 2 mins. **The rest is crucial – it's when mites release from the bees!** Gently **roll** the jar again. Take care not to lose any sugar while rolling.

5. Shake out sugar



Vigorously shake out all the sugar (and possible mites) into the container of water, leaving the bees behind in the jar. The sugar will dissolve in the water, making any mites visible.

6. Return the bees



Release the bees in the hive or on the ground close to the hive entrance. Other bees will clean sugar off the shaken workers.

7. Inspect sugar, shaker



Credit: Jessica Helgen, University of Minnesota Bee Squad

Take time to thoroughly inspect the sugar water and empty jar for mites with a magnifying glass.

8. Record results



It is important to keep records of your hive inspections. Note down the date, hive ID and test results – even when you don't detect any pests.

9. Report anything unusual

EXOTIC PLANT PEST HOTLINE
1800 084 881

If you detect any mites or Braula fly, immediately call the Exotic Plant Pest Hotline on 1800 084 881 and notify DPIRD - padis@dpiird.wa.gov.au

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Credit: Jessica Helgen, University of Minnesota Bee Squad

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