

# Sugar shake and varroa mite



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Department of  
Primary Industries

# April is Sugar Shake Month

## Bee Alert!

**CHECK YOUR BEES USING THE  
SUGAR SHAKE TEST  
HELP DETECT AN EXOTIC PEST  
INCURSION EARLY**

External bee parasites such as  
varroa, tropilaelaps mite and braula fly  
have not been detected in NSW



Braula fly (top), varroa mite (right),  
tropilaelaps mite (bottom)



Braula fly on the thorax of a queen bee



Varroa mite feeds on a bee pupa

**SHAKE, INSPECT**

**CALL IF YOU SUSPECT**

**IF YOU NOTICE ANYTHING UNUSUAL CALL THE EXOTIC PLANT PEST HOTLINE 1800 084 881  
FOR MORE INFORMATION VISIT [WWW.DPI.NSW.GOV.AU/BIOSECURITY-BEES](http://WWW.DPI.NSW.GOV.AU/BIOSECURITY-BEES)**



Amateur  
Beekeepers  
Association  
NSW



# What do I need?

List of equipment for sugar shake inspection.

- Sugar shaker : Jar with a mesh lid
- Pure icing sugar kept in a plastic bag or an hermetic container.
- Spoon
- Bucket (white) with a minimum of 10 cm depth of water
- A plastic laminated placemat, or a sheet of newspaper or anything you can think of that is flat, foldable and strong enough to shake the bees on.
- Reading glasses or magnifier lens
- Camera or phone to take pictures



# How to proceed? (1)

- Sugar shake has to be done on one hive of each apiary.
- Choose the hive and smoke the entrance.
- Open the hive, remove super(s) and queen excluder.
- Check the queen excluder for the queen.
- Choose a brood frame near the center.
- Check for the queen: if you see her change frame or place her back in the hive. Do not put the queen in the sugar shake!
- Place a laminated place mat in front of the hive and shake the frame on top of it.
- Quickly pour the bees inside the opened jar: you need around 300 bees: that's around half a cup and close the lid.
- Put the remaining bees inside the hive.
- Add a tablespoon of pure icing sugar through the mesh of the lid: it will break any icing sugar cluster.

# How to proceed? (2)

- Then gently roll the jar for 2 minutes to coat the bees with the sugar.
- Wait 2 minutes then roll again for 2 minutes.
- Then gently shake the sugar through the mesh lid into the bucket of water (or a sheet of white paper) until most of the sugar is through.
- The sugar will dissolve in the water and debris, including varroa or other external mites will float atop of water.
- Free the bees in front or on the landing board.
- Take a picture of them.
- When free of bees, look inside the jar to search for mites.
- Look thoroughly for anything suspect floating.



# What to look for?

The main suspect here is obviously varroa mites

## [How to ID varroa mite?](#)

- Varroa are about 1.1 mm long and 1.5 mm wide.
- Flat crab shaped with 4 pairs of legs
- Reddish color for the female
- Males are smaller (0.8mm) pale yellow and never venture off cells

## [BeeAware fact sheet](#)

**If you suspect something call The Exotic Plant Pest Hotline 1800 084 881 immediately**



Tropilaelaps mites are only present in Asia, but can cause similar damage to European honey bees as the varroa mites

## [BeeAware fact sheet](#)

Other external mite: Tropilaelaps mite



Different stages of varroa mite



Varroa relative size  
Varroa relative size

# Thank you



*20. maj* **SVETOVNI DAN ČEBEL**  
*20 May* **WORLD BEE DAY**



**Merci**