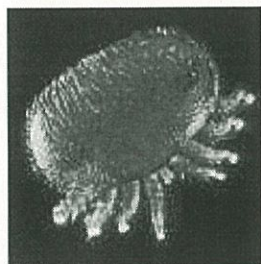


## Varroa Mite

Varroa destructor



Varroa Mite

**Legal Status:** Notifiable and Unwanted Organism

**Status in New Zealand:** Controlled

**Organism:** Micro-organism

This pest is established in the North Island and as far south as Canterbury and the West Coast in the South Island. It is possibly present throughout the South Island.

Given the above, there are reasonable grounds for believing that varroa is present or may be present through out the whole of New Zealand. Therefore, in terms of section 46 of the Biosecurity act 1993, there is no longer a requirement to report its presence or possible presence to a chief technical officer of the Ministry of Agriculture and Forestry.

The MAFBNZ funded South Island varroa response programme ceased on 30 June 2009. This decision was made after varroa was found outside of the South Island Controlled Area in September 2008 making controls to prevent the further spread of varroa in the South Island unfeasible because of the number of beekeeping operations affected, the geographic spread of operations, and the duration varroa has likely been present in Canterbury.

To help them manage varroa in their operations, beekeepers are encouraged to maintain contact with and share information on varroa with national offices and local branches of industry organisations – the National Beekeepers' Association and the Bee Industry Group of Federated Farmers, and with neighbouring beekeepers.

Links to the industry organisations:

- <http://www.fedfarm.org.nz/ourpeople/industrygroups>
- <http://www.nba.org.nz/>

## Description

Varroa is an external parasite of honey bees. Adult female mites are fairly large about 1.1 x 1.6mm. They have a hard reddish to dark brown body that is flattened and oval in shape.

Varroa mites are transferred to new bee colonies on adult bees. The mite will then leave the bee and crawl into a brood cell. Once in the cell the mite submerges itself into the larval food at the bottom of the cell and start feeding on the prepupa. The mite will then lay its eggs. The eggs will hatch and go through two juvenile stages before becoming adults. The adult mites will leave the cell when the bee emerges.

## Impact

The varroa bee mite is reducing the number of bees in managed hives as well as feral or wild

colonies. This has an impact not only on the beekeeping industry, but it is also potentially damaging for crop pollination and pollination of pasture legumes. The apicultural industry's major contribution to the New Zealand economy is the pollination of plants, which is worth many times the value of honey and other bee products. It is estimated that one third of the food we eat relies on honey bees for pollination, and the area of crops reliant on bees for pollination is increasing.

## Spread

Varroa is widely distributed throughout the entire North Island, including many offshore islands in the Hauraki Gulf, and South Island as far south as Canterbury and the West Coast. It has not been detected on Chatham or Stewart Islands.

## Management

Beekeepers in affected areas should monitor the mite levels within their hives and treat before numbers rise to damaging levels. Varroa cannot be eradicated, but can be controlled using various organic and inorganic miticides and possibly by selecting bees for tolerance to the mite.

Visual examination of adult bees is not an effective way to monitor for varroa. However, infested hives may show the following signs:

- Unexpectedly low bee numbers
- A patchy brood pattern
- Small reddish-brown mites on the bodies of bees, and on uncapped drone or worker pupae
- Crawling bees near the hive entrance, often with damaged wings or no wings
- Sudden population crashes, especially in the autumn when hives may have honey stores but no bees.

MAFBNZ advocates 'best practice' management of varroa to avoid miticide residues and delay the emergence of resistance in mites to chemical treatments.

The recently updated Varroa Control Manual contains detailed information on varroa management. The manual is available through the National Beekeepers Association (<http://www.nba.org.nz/node/437>).

Page last updated: 30 June 2009