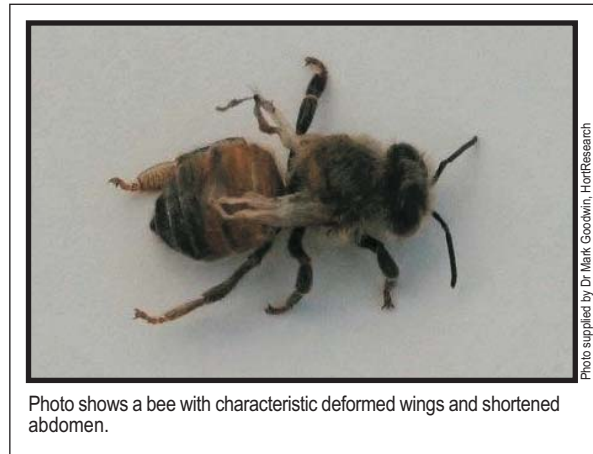


DEFORMED BEE WING VIRUS

Hives on two properties in Northland and Waikato were found to be affected by deformed bee wing virus in March 2007.

The virus is a cosmopolitan infection of honeybees. It is normally present as an inapparent infection in beehives, but manifests itself in the presence of varroa mite infestation, when the hive is weakened. Bees exhibit malformations including stunted or deformed wings and body malformations. The virus is not an environmental or human health risk, and is unlikely to affect exports of bees or bee products.



MAF Biosecurity New Zealand is working to determine the distribution of this virus and the implications of it before making further decisions.

What is deformed wing virus?

Deformed Wing Virus (DWW) is a virus which affects honey bees. It was first isolated from a sample of symptomatic honey bees from Japan in the early 1980s and is common around the world.

The virus is spread vertically - from the queen to offspring, and horizontally - from bee to bee. Varroa is also believed to induce the virus, affect bee immunity, and also inoculate it directly into bee larvae. Clinical signs associated with the virus (disease) occur when hives are infested with varroa mite.

What are the clinical signs?

In healthy hives, DWV tends to remain in low levels in the bees and exists as a symptomless, low-grade infection. However, when the bees are infested with varroa and the virus concentrations rise, bees emerge from the pupa stage with a variety of deformities such as stubby, useless wings, shortened, rounded abdomens, miscolouring and paralysis. Typically, the individually affected bees will be driven from the hive. They survive less than 48 hours. Depending on the developmental stage they become infected, and the dose of virus, affected bees can also appear normal, but be less productive.

THE THREAT

Deformed bee wing virus becomes apparent in beehives that are already under stress or weakened. So long as beekeepers appropriately manage the impacts of varroa mite in their hives, and ensure good colony nutrition, this virus is unlikely to be a significant problem.

March 2007



www.biosecurity.govt.nz/pest-and-disease-response/pests-and-diseases-watchlist/deformed-bee-wing-virus