What pests and diseases affect bees?

No pest or disease of bees affects humans or domestic animals.

Honey bees and native bees are impacted by pests endemic to Australia. Also there are pests which are present in other countries but have not yet entered this country. One of these – varroa mite – would impact drastically if it did enter Australia.

A detailed account of diagnosis and management of pests and diseases is beyond the scope of this book. For help regarding these aspects we refer you to the following :

FOR MANAGEMENT IN QUEENSLAND

• The Bee Book - Beekeeping in Australia
Peter Warhurst and Roger Goebels / 3rd edition 2013
Email : warhurst@sctelco.net.au

FOR RESEARCH AND MANAGEMENT IN AUSTRALIA

• Biosecurity Manual for the Honeybee Industry
Plant Health Australia • www.phau.com.au • Phone 02 6215 7700

• Queensland Beekeepers' Association website
www.qbabees.org.au/pests_diseases

VALLEY BEES DOCUMENTS

Go to the Mary River Catchment website
• www.mrccc.org.au and go to LINKS to download the free PDFs :
– Small Hive Beetle – Asian Bee – Myrtle Rust

Generally, the control of these pests and diseases involves the maintaining of strong hives, and practising strict hygiene when handling the bees, equipment, boxes and hive products. A good understanding of the diseases and their required procedures is essential.

Beekeepers develop strategies to control or minimise the impact of pests on their hives. These strategies develop from an understanding of the pest or disease and from creating conditions which minimise their impact on the bees.

IMAGES FROM CLEMSON - HANDBOOK OF SHB

Small Hive Beetle

Article by Athol Craig, from the book ***'Nature's Gifts'***

The pests which have impacted most on our apiaries in South-East Queensland follow :

Small Hive Beetle… This pest arrived from South Africa in 2002 and spread rapidly throughout mainland Australia. This small brown beetle invades the hive in numbers, and the bees harass them into nooks and corners. If the beetle numbers become overwhelming, if the bees are under stress or diminished in numbers, or inspection disturbs the system, then the female beetles are freed-up to lay eggs. Each female can lay 500 eggs.

These eggs hatch into larvae which burrow through the hive eating pollen, brood, honey and wax. They leave a yeast trail. The result is a slime-out which has destroyed the bee colony and necessitates a messy clean-up. Make sure to wear a mask when cleaning a slime-out to avoid inhaling the yeast.

A STRONG HIVE CAN BE DESTROYED IN JUST TWO WEEKS!

The SHB has added considerably to management costs and procedures, and the consequent loss of production. Effective traps have been devised to control numbers in the hive and research into alternative strategies is on-going. Some beekeepers have developed design features built into their boxes to enable the bees to better control and manage the beetle numbers.

American Brood Disease… *(Or American Foul Brood, AFB)*

This is a bacteria that infects the bee larvae that dies in the cell, resulting in decline of the swarm and eventually a dead-out. The spores of the bacteria persist up to 40 years and are very difficult to destroy – gamma irradiation being the most effective treatment of hive components. SHB is a vector of AFB and spreads AFB from hive to hive.

Chalk Brood… The honey bee larvae are susceptible to this fungal disease. The infected larvae turn grey/white and harden into chalk-like mummies. These are cleaned up and ejected by the bees from the front of the hive. Chalk brood reduces the number of bees in the hive and results in a loss of production over a long period.

Effective control can be attained by assisting the bees with their *'housekeeping'* - clean up the mummies on the bottom board and in front of the hive. Also use queens specially bred to house keep.

Wax Moth… This moth lays its eggs in the hive and the larvae feed on the wax, pollen and waste material in the hive. A strong hive keeps them under control, but they can destroy combs in weak or abandoned hives and also destroy combs stored in an apiary shed. The comb tends to have a greyish, web-like structure to it, with moths and large white grubs. To combat this pest maintain strong hives and store combs in a sealed cool place. Combs with little damage can be restored by bees in a strong hive.

In natural balance they destroy the remains of the nest in abandoned nesting hollows. These hollows are then free of old combs and disease, so a new swarm can re-inhabit that hollow and remain healthy.

We once serviced a hive that was weak from disease. It was left unattended, and was 'destroyed' by wax moth. A swarm then recolonized and rebuilt the nest, and remained very strong and healthy over a long period.

Maybe they are the bees' friend,
but the beekeepers' problem!