

VARROA MITE INFESTING HONEY BEE COLONIES

Ric Bessin, Extension Entomologist

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The Varroa mite has spread to and become a major pest of honey bees since their introduction into Florida in the mid 1980's. They were first reported in the Bluegrass Region of the Commonwealth in 1991 and now occur throughout the state.

Varroa mites are external parasites that attack both honey bees and brood. They suck the blood from both the adults and developing brood, especially drone brood. This weakens and shortens the bee's life. Emerging brood may be deformed with missing legs or wings. Untreated infestations of varroa mites will increase and may kill colonies. If the colonies are not examined for mites, losses may be mistaken for winter mortality or queenlessness.

The adult female mites have eight legs and reddish-brown flattened oval bodies about 1 to 1.5 mm across. They are large enough to be seen with the unaided eye on the bee's thorax or abdomen. Their flat shape allows them to fit between the bee's abdominal segments. This mite is often confused with the bee louse. However, the bee louse, an insect, has only six legs. Its body is more circular and slightly larger.

Mites develop on the bee brood. A female mite will enter a brood cell about a day before it is capped so it is sealed in with the larva. Immature mites that emerge from the eggs she lays feed and develop on the maturing bee larva. By the time the adult bee emerges from the cell, several of the mites will have become adults, mated, and are ready to begin searching for other bees or larvae to parasitize. Inspection of the drone brood in their capped cells will often indicate whether or not a colony is infested. The dark mites are easily seen on the white pupae when the comb is broken or the pupae are pulled from their cells.

Mites spread from colony to colony by drifting workers and drones. Honey bees can also acquire these mites when robbing smaller colonies. It is best to isolate captured swarms, package bees, and other new colonies from older colonies and examine them for mites before placing them in an apiary.

Early detection of low levels of mite infestation is key to successful management. It is easier to detect infestations that are well-developed than those that are just getting started.

Apistan is a product available that will kill the mites and cause the mites to drop from the bees. Two strips should be hung in the brood nest area of the colony for about 4 weeks. This is to be used with sticky paper and a fine-mesh screen on the bottom board of a colony to capture any mites that may have been present. A considerable amount of cell cappings and other debris will also collect on the sticky paper so it is best to inspect the sticky paper carefully for mites after its removal. This method is able to detect low level infestations. Apistan strips, which contain the miticide fluvalinate, are available from most large beekeeping suppliers and can be used both for detection and treatment of varroa infestations.

If an infested colony is found, all colonies at the site should be treated with Apistan strips in the same manner. The strips **are not to be used during honey flow, or when there is surplus honey present in the colony that may be removed later for human consumption.** Therefore, late fall, after removal of surplus honey, or early spring, prior to honey flow, are the best times to treat for varroa mites.

Always carefully follow all label instructions with regard to the storage, use and disposal of pesticides.

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ALWAYS READ AND FOLLOW LABEL DIRECTIONS FOR SAFE USE OF ANY PESTICIDE!