

GOT MITES ?

Well, your bees certainly have them. They almost always do.

The question becomes how many and are there enough to harm the bees significantly or make it economically practical to deal with them at the present time.

Bees can tolerate low levels of infestation but if left untreated the mites can cause the colonies to collapse.

Keeping the Varroa mite under control is job one and may be the beekeeper's most important concern. It is at the top of my list of beekeeping concerns.

Mites are probably the single most important cause of hive mortality and is causing more harm to our bees than any other single stressor.

If a beekeeper does not keep the mites under control, one way or the other, his/her hives will get progressively weaker until they die.

WHY TREAT FOR MITES?

The Varroa mite lays eggs in the cells along with the bee larvae. As the mite develops it feeds on the blood of the larvae and weakens the developing bee causing leg and wing deformities, stunted growth and undernourished adult bees.

The adult female mites (phoretic) are the ones you can see living out of the cells and on the bees. They spread bee diseases, viruses and feed on the bees which weakens them and their immune system.

The Israeli Acute Paralysis Virus, IAPV has been implicated in Colony Collapse Disorder (CCD) and other colony losses. This disease is known to be spread by the Varroa mite.

Colonies have a difficult time building up and surviving when burdened by a high infestation of mites.

NON CHEMICAL INTERVENTION

- Use a screened bottom board. It is one of the easiest ways to get rid of some of the mites.
- Insert a frame of foundation embossed with drone cell dimensions and remove and destroy capped drone brood. Mites favor drone brood for laying eggs.
- Use queens that have genetically based hygienic qualities. It is difficult to find truly mite resistant stock.
- Sugar dusting will cause some phoretic mites to drop but those will soon be replaced by others as they emerge from the cells. A single dusting is not of much value.

TESTING FOR MITES

Many beekeepers don't bother to test for mites in the fall of the year because we know that our bees have a heavy mite load and a treatment is necessary so we do it as soon as we remove our honey supers. There are times when a mite treatment is also necessary in the spring but testing should be done to determine this.

There are two common ways of testing for and estimating the number of mites in our colonies.

One is a sugar roll and the other is an ether roll.

The sugar roll does not kill the bees and the other does.

Both tests are outside of the purview of these comments.

CHEMICAL TREATMENTS FOR MITES

It is good to keep in mind that MITICIDES are PESTICIDES and do we really want to put any of these in our hives? NO, we don't want to but we probably need to. Our bees are insects and pesticides kill insects. So, pick your poison and do it carefully!

The miticides delivery systems are designed to give a lethal dose of pesticide to the mites and a sub-lethal dose of pesticide to the bees.

THERE ARE SOME THINGS THAT WE SHOULD CONSIDER

- Beeswax is a sponge for contaminants such as the pesticides that we put into the hive and the ones that the bees bring in.
- Some of the common miticides are lipophilic which means that they will be absorbed into the wax and other common miticides are not lipophilic and will not be absorbed into the wax. Knowing the difference helps in deciding which miticide to use.
- Two pesticides in contact to the bees are more than twice as lethal than just one. A mix of pesticide residues in the wax really gets deadly. Old comb usually harbors pesticides, and residues of miticides from previous years. Seriously consider gradually getting rid of the old dark comb. The bees will stay healthier.
- The adult female mites, living on the outside of the bees are vulnerable to most miticides when they are in this phoretic stage because the miticide cannot penetrate under the cell capping and kill the breeding and developing male and female mites. These miticides require several brood cycles or about 42 days to work. It takes this long for the mites to reach the phoretic stage where they are vulnerable.
- There are miticides that can penetrate the cappings and kill the developing and phoretic mites. These miticides can be effective in as little as a week.

When deciding which miticide to use, the following are some things that we should to consider:

- How many days does the treatment take?
- What is the range of temperatures in which it can be used? Is it temperature dependant?
- Can it be used with honey supers on?
- What are the chances it will hurt the queen or cause her to stop laying? If so for how long?
- Will it harm the brood? How much and for how long?
- Is the treatment placed in both hive bodies or just one?
- How quick and easy is it to administer?
- Will it contaminate the wax comb?
- Will it kill the Tracheal mite as well as the Varroa mite?
- Does it require special shims or other equipment?
- Will the mites develop a resistance to it?
- Can I feed my bees while applying this miticide?
- Have I been using my present miticide for a long time and has a resistance to it developed?
- Do I need to provide more or less ventilation for the hive when applying the treatment?
- How dangerous is it to handle this pesticide?
- How soon can I put my honey supers on after this treatment is out of the hive?

There are some additional considerations but these are the main ones.

Yes, there are these things to be aware of but treating for mites is actually very easy and you probably should do it if you want to be a beekeeper for more than one or two years.

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