

2026 Stahlman Bee Notes

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As I pointed out with the last issue, honey bees follow a pattern of behavior that has existed for millions of years. Things begin to happen within the hive as days get shorter and foraging prospects diminish.

- The brood nests shrink in size.
- The bees emerging from their cells are going to carry the colony through the winter.
- There is a smaller population of drones and eventually in coming weeks there will be none.
- Bees are saving food for survival. Robbing is typical and weak hives are targets and the bees are more defensive.
- Bee populations are also declining. The summer bees have done their job.

As September temperatures cool, and daylight hours get shorter, the bees are fully aware that conditions outside the hive are changing and they are preparing for that change.

What can you do to help them?

I spoke at a bee meeting this past week and the number one issue was mites. Treatment for mites is important, but there are a number of issues that we need to look at for colony survival. Based on past experiences, I would say a beekeeper wanting colonies to survive needs to consider the following:

- Colony health which includes a number of things:
 - Brood needs to be protected from cold weather. Moving brood frames around only defeats what the bees are doing naturally to prepare for winter.
 - Evaluate varroa mite populations in the hive. This is an extremely important job. Remember that varroa mite populations have increased as bee populations have declined.
 - Check bee populations and the amount of brood.
- Evaluate colony strength:
 - Make a decision on a colony making it through the winter.
 - Don't assume that everything is fine if the colony has a lot of bees and honey stores! Check brood frames for all stages of bees being raised (eggs, larva, and capped brood).

- It is extremely important that winter bees have plenty of food present and clear proof that honey is stored above and around the brood nest.
- Remember, the bees emerging now will make up the bee population during the winter season.
 - They must have fat-body reserves to produce and conserve heat. They do less brood rearing because the queen will lay fewer eggs and for a period of time, lay no eggs at all. Thus, **the colony should have a good supply of pollen (bee bread) to feed young larvae.**
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A complete inspection of a colony is a must. Maybe the hardest of all is to determine if the queen in the hive is functioning well and if the colony is healthy.



It is essential to have a good productive queen in a hive about to overwinter. Over the next 180 days, a colonies survival depends on an adequate bee population in the hive. A queen not laying adequate amounts of eggs to provide for the future bee population is a sure bet that the colony will not survive.

At the beginning of September, one should still see eggs in worker cells and bees in the larval and capped brood stages. There is still time to replace a poorly performing queen. Trying to let the bees raise a new queen is a poor choice because the brood break and lack of drones is not natural for bee development at this time of the year. The arrival of cold weather is a factor in drone populations.

I am going to share a few photos that will illustrate good queens and poor queens. By the way, young queens in spring are more likely to produce a greater amount of honey for the beekeeper, thus offsetting the cost of a queen now. If a colony does not have a large bee population at this time of the year, it might be a good idea to combine it with a stronger hive rather than requeen it. If the stronger colony survives the winter, a split might be made in the spring. Thus, the loss of one colony in the fall is made up in the spring.

This is a photo of a frame taken from a hive in late August. Note:

This frame has a compact brood pattern. Honey is being stored in the upper corner cells.



This indicates the queen is doing a good job of producing bees that will carry the colony through the winter. You want a colony building its fall population rather than shutting down prematurely. It is normal to see a reduction in the number of frames containing brood at this time of the year and now is not a good time to move brood frames in the brood nest. The nature of bees in the wild is to store honey above the brood. Thus, consider the brood nest as an area in the hive reserved for brood and frames, and like this

will have honey and pollen stored in an arch above the brood.

Signs of a poor queen!



There is something in beekeeping called **supersedure**. When a queen begins to fail, the bees recognize that she must be replaced. This usually takes place without the beekeeper being aware that anything is wrong. The problem with late supersedure of a queen is the new virgin queen must mate but the drone population for good mating may not exist. Often the beekeeper will find two queens in a hive. Don't cut down a queen cell such as the one shown. Once the new virgin queen has mated and begins to lay eggs, the old queen will disappear from the hive. Some suggest

that the bees quit feeding the old queen but I am not sure what happens other than -- she disappears. I have seen this a number of times with old marked queens being replaced. In this case, the bees in strong colonies usually solve the problem.

The following picture indicates something wrong. The queen is still laying eggs and the bees that result might possibly survive the winter. However, signs are present that the queen is not doing a great job of producing brood. As a beekeeper, this is decision time. I would replace her or combine this colony with a stronger colony, if this was one of my hives!



This is an interesting frame.

The brood pattern is not compact. Some would call this a shot-gun pattern. Although this colony seems to have a large population of bees, the bee population is not being replaced with numbers to carry the hive through the winter. The brood produced over the next months are called winter bees. This is very important. Winter bees must be well fed – note that this frame is almost bare of food sources. Some research I did,

indicate **winter bees have a different physiological**

condition than summer bees. They must have fat-body reserves to produce and conserve heat. They do less brood rearing because the queen will lay fewer eggs and for a period of time, lay no eggs at all. And bees must live for the next 180 days. This is a reason why many hives fail.



This is what happens to a colony with a failing queen. This is not starvation! Note the honey available on each side of this small dead cluster of bees should have provided food for them.

Something other than food caused this colony to die! It could have been caused by several things.

1. The colony might have had a small population of bees to start winter.
2. Mites could be suspected.
3. The colony did not produce healthy brood for the colony to survive.

There are other factors that I will explore with you in upcoming issues. These will include:

- Varroa Mites
- Robbing
- Colony strength
- Winter prep

Do not judge a queen by just looking at her. Look at bee populations and check for a solid healthy brood nest.