

Stahlman Beekeeping

Notes For 2022

Spring Objectives and Varroa



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If you are like me, you are swimming thru the sea of beekeeping with your head barely above water. I work with a few new beekeepers each year and manage about 30 hives of bees.

Getting hives in peak condition and keeping hives from swarming is challenging. At this time of year many new beekeepers are trying to start figuring out what they got themselves into. Even beekeepers in their second year are finding the second season as different from season one.

Getting hives into peak condition and swarm management are my major concerns right now.

One question keeps popping up at bee talks I give: "How often should I inspect my bees?"

Several suggest that I publish a schedule for inspecting hives. I have struggled with an answer to this question.

Each season in the beekeeping year has certain things that must be done. Putting together a calendar with precise dates to do this or that are available. However these calendars will vary from region to region. What tasks are required here in Raleigh vary considerably from someone keeping bees in Florida or Michigan.

Package bees are still being sold here in the Raleigh area. I would assume that people in Ohio will be getting packages up into May.

Management for newly started hives will vary from getting swarms to buying packages to starting with a nuc! It is pretty hard to put a schedule together that will fit all.

The second year beekeeper is dealing with all new issues. Making splits to prevent swarming, controlling population growth to get some honey, signs for various health issues and all kinds of issues with hive management such as adding supers, use of queen excluders etc. Some will even seek how to raise queens and grow a business selling nucs.

I note that some try to separate bee management into Level 1 and Level 2 of advanced beekeeping.

Rather than group the readers of these notes, I will try to identify the issues of spring management that all should be concerned with.

Let me begin with a perfect schedule – Check your bees every 9 days. I like this number because if something is going wrong within a hive, somethings can be done to reverse the problem.

- When I open a hive (you do have to pull frames from the brood chamber), I check for evidence that the queen is doing her job. With a hive (package or nuc, split or established hive) I want to see eggs and larva. This is evidence that the hive has a queen. This question is quickly determined – either the hive has a queen or there is the question of what is going on! (*It is important to identify situations or conditions that are not normal*). It is important to know the normal development times of the honey bee. Egg – 3 days, capped brood by 9 days and emerging worker brood 21 days.
- I look for evidence of queen cells. If I see queen cell cups – do they have eggs or larvae in them? Even beginning beekeepers need to be on the look-out for queen cells when they buy nucs! Queen cells can indicate a number of things going on within the hive. See last week's notes on queen cells. The 9 day inspection time is critical to determine the management needed. Once queen cells are firmly developed (capped over) it is almost too late to prevent the hive from swarming. Keep in mind that queens take 16 days from egg to emergence. It takes 9 days from egg to the cell being capped over. Swarms leave before the new queens emerge.
- There are a number of signs if the hive is facing a problem with pests, disease or pathogens. Do you see tunnels lined with silken threads? (Wax moth problem); What about bare dirt and some scratch marks on the front of the hive? (Might be a skunk visiting your hive and maybe you find the hive being somewhat aggressive); Large numbers of dead bees below the landing board? (Maybe someone is using insecticide near where your bees are located); little black bugs running along the inner cover or frames? (Small hive beetles); The bees have deformed wings? (Varroa mites); Spotty brood – sometimes called shot-gun brood pattern? (Failing queen); Cells with cream colored larva? (Maybe European foulbrood); Dark sunken cells with pin holes and when opened the larva looks like brown pools of slime? (American foulbrood) Call in your bee inspector immediately!!!!
- There are some issues that clearly indicate that the beekeeper has missed the signs or did not do inspections. **Problems do not just happen overnight.** Swarming, absconding bees, starvation are issues that could have been prevented.

The biggest concern I have is with a hive that becomes queenless! A wait of 20 days or more before this condition is discovered can result in the hive having laying worker bees. Quite frankly, I consider a laying work hive as worthless. I would not spend the \$40.00 required to put a new queen in it! My solution would be to place the hive with laying worker bees above a strong hive. I would remove the top cover and inner cover from the strong hive and set the laying worker hive minus its bottom board on it.

I don't worry about the fighting that will occur as the strong hive sorts out the laying worker bees. Two weeks later I don't have to find the queen to make up a new split. I simply move the strong hive to a new location.

I set a bottom board and empty hive body where the strong hive was located. I then pull several frames of brood from the strong hive and shake all of the bees off the frames. Back at the old hive location, I place these brood frames without bees and add frames to fill the box. I then introduce a new queen protected in her queen cage. All the field bees return to the old hive stand and fill the new box with bees. These bees will care for the brood and accept the new queen. This works almost 100% for me.

The old bee foraging population returning to their home site will almost equal the size of a swarm. They will have new emerging bees taken from the old hive and they will have a new queen ready to lay eggs. This hive will build its bee population quickly and become a productive hive in the bee yard.

The strong hive does lose its foraging bee population but recovers quickly.

If another method had been used – for example the bees in the laying worker hive would have been taken some distance away and shook on the ground. Then they would have to fly back to their hive and a new queen introduced. This assumes that laying worker bees cannot fly and return to their hive. This does not work with great success. I have heard that introducing a queen cell is effective 60% of the time but the colony will remain weak for a 6 to 8 week period. It takes a hive started with queen cells about two weeks for the new virgin queen to mate and start laying eggs. Then it takes another 21 days for the first eggs to emerge as worker bees and then another 20 days or so to forage although it may require some bees to start foraging earlier than they normally would. In the meantime all the older bees are dying and the bee population is slow to recover.

The split hive on the old hive stand will have an immediate foraging population to gather required honey stores, a queen that is released usually in two days and starts laying immediately. With a large bee population, the queen can lay eggs maybe 1500 to 2000 a day, the young larva will be fed well and this hive will thrive. There will be a great possibility that this split can gather just about as much honey as other hives in the beeyard.

One last word:

If you find a hive with the following characteristics, what would you say is going on in that hive?

- Varroa mites are present
- The brood pattern is spotty (not solid)
- Bee population declining
- Some bees have deformed wings

Answer: Your hive has a problem with:

Varroosis. Varroa mites feed on the fat bodies of adults and larvae, causing weakened immune systems, decreased body weight, and a shortened lifespan.

Frequent hive inspections looking for the presence of Varroa mites and checking bees on the frame as well as brood patterns can help one discover if this is a problem in your hive or hives.

If all these are present this hive will easily be identified shortly as “Colony Collapse Disorder” because in no time at all it will be dead.

Treatment for Varroa mites.

I have tried almost all the products sold for treating mites. I cannot make any recommendations. I use a variety of products rather than depend on one. I used Formic Pro and brood interruption last year. I still lost bees. I have used selected queen stock and I still have lost bees.

The one thing is to start early treating for Varroa mites. Check often (at least once a month).

Mite populations are at the lowest in our hives right now. Brood production is growing. But the time is coming when bee populations peak out and begin to decline. At that point the bee hive is in trouble because -- the ratio of mites to bees is increasing. Treating for mites even if you don't see them is important. Include in your inspections just a few extra minutes to see the bees – not just look at them. Just one mite is a problem. One mite becomes three and three become 9 and nine become 27 and so it goes.

From Wikipedia, the free encyclopedia

Varroa destructor (*Varroa mite*) is an [external parasitic mite](#) that attacks and feeds on the [honey bees](#) *Apis cerana* and *Apis mellifera*. The disease caused by the mites is called **varroosis**.

The *Varroa* mite can reproduce only in a honey bee colony. It attaches to the body of the bee and weakens the bee by sucking [fat bodies](#).^[1] The species is a vector for at least five debilitating bee viruses,^[1] including [RNA viruses](#) such as the [deformed wing virus](#) (DWV). A significant mite infestation leads to the death of a honey bee colony, usually in the late autumn through early spring. The *Varroa* mite is the parasite with possibly the most pronounced economic impact on the [beekeeping](#) industry. *Varroa* is considered to be one of multiple stress factors^[2] contributing to the higher levels of bee losses around the world.