

Stahlman n beekeeping ing notes for 2021

Issue # 21 May issues – End of the honey flow, and hive problems

I just read an article about some research being done to "create the first flying robot capable of sensing and acting as autonomously as a bee rather than just carrying out a preprogrammed set of instructions.

It is hoped that the mechanical bee can pollinate crops and have artificial intelligence. Maybe they may work on language skills as well.

As one quote from Roy Williams goes, "Daggum" honey bees. Really? I can't imagine a flying drone replacing my honey bees. We humans are so smart!

Another question about tax breaks for those who raise bees. As I understand it, most states require a person operating bees to be a bona fide agricultural operation. This means "good faith commercial agricultural use of the land".

Some will require proof of income from bees but the land owner benefits – not the bee keeper. Expect to prove and show income statements. Many local taxing districts have a board that determines the use of land taxes -- Hobby or commercial. If interested, check local tax laws. I am asked this by mostly new beekeepers who have heard they can get a tax break if they have bees. If one establishes a business, pays taxes, and meets the requirements of a bona fide agricultural operation and owns land, they can usually get the agriculture tax rate for their property. I am not a lawyer and this is just what I have been told by those who tried to get tax breaks.

Now to some really important stuff!

There are bees in so many stages of growth right now.

1. Hive maybe three weeks old installed with packages.
 - If one has been feeding a colony, expect brood comb to be built out on almost all of the deep frames – maybe the outside frames have not been drawn.
 - It is time to add a second hive body to the hive and feeding the hive will ensure that the comb/frames will be drawn. What looks like honey in the sealed cells is mostly a sugar/nectar combination. This is not pure honey!
 - On examination of frames, the beekeeper should be seeing full frames of drawn comb with capped worker cells as well as cells with eggs and larvae.
 - The brood should be well centered on the comb and solid. A frame may hold all three stages of honey bee development. As young adult worker bees

emerge from their cell, those cells will be cleaned and the queen will return to lay another egg there.



A critical Examination of the brood nest should be made every week during this growth period to determine if a problem does occur.

Problems:

- If there are no eggs observed during the first week, a new beekeeper is at the dangerous point of thinking a hive has no queen. A magnifying glass and a strong flashlight to see the bottom of cells is helpful. New eggs take three days to hatch. However, a package may be sold with a virgin queen. Virgin queens are hard to find and can usually be found running across the comb surface. Virgin queens are smaller than mated queens. Should a virgin queen exist in the hive, the bees will kill any new queen placed in the hive! A virgin queen will need to take a mating flight and eggs will not be seen until she begins to lay. This may take up to an extra week of waiting to see eggs.
- Week two – eggs and larvae should be seen in cells and some capped brood should also be observed 10 days after eggs were laid. This is a sure sign that the queen was mated and is doing what we as beekeepers expect of a queen.

Remember that the bee population delivered in a package will have some old bees in it. These bees will begin to die and the population of the hive will decline a little each day. It is only after eggs develop into fully adult honey bees that the bee population in the hive will begin to recover the loss of these older bees. At the end of the third week, the bee population will increase rather dramatically if the hive has a good queen.

A full deep frame of capped brood can produce up to 6,000 new bees to the bee population.



What happens if there is a queen problem? No eggs, no larvae, no capped brood!

At the end of the second week – if no eggs are observed, a hive is in trouble. (This applies to any hive – just started, overwintered, package or nuc hives.)

(No Eggs – No Queen) A high possibility the hive has no queen.

- **Things are not going to go well with the colony unless the beekeeper takes action.**

Actions that should be taken:

- **If the beekeeper has a second hive, the first step might be to take a frame with eggs and young larvae from it to place in the hive with a problem.**

This solves several problems:

- 1) **It will provide an answer to the question "Does the hive have a queen?"**
If a queen is in the colony, the bees will not build emergency queen cells, but if the hive is queen-less the bees will build queen cells over worker cells by raising a new queen from the larvae on the frame given to them.
 - a) **Let the bees raise a new queen. This takes time and the effect on the hive will result in a slow recovery.**
 - b) **Cut down the emergency queen cells – maybe removing the frame from the hive.**
Get a new queen to install into the hive. Remember, if the beekeeper leaves just one queen cell in that hive and introduces the new queen, the bee will kill the new queen.
- 2) **Another issue may occur if the hive is queen-less for more than 20 days. This is called a laying worker condition. If a hive has an unmated queen, she also will lay eggs that are not fertilized. In both cases, the result is that eggs laid in the cells by worker bees or a queen will become drones.**



A laying worker or a drone laying queen is a serious problem and often results in the decline of the hive and eventual death of the bees.

I don't think much of the practice of carrying the frames some distance from the hives and shaking the bees off and then introducing a queen to the drone hive – The problem is laying worker bees can still fly back to the hive.

One practice that has a chance of succeeding with a new queen introduced to a hive of laying workers follows:

The laying workers must be eliminated from the hive population. One idea mentioned to me by one of my students (Cary), is an idea he heard from another beekeeper:

Switch the location of the laying worker hive with a strong hive with a lot of foraging bees. This is often easy to carry out and the foraging bees returning to their hive location will find this new hive occupied with laying worker bees. The foraging bees will dispatch the laying worker bees quickly and a new queen can be introduced.

I learned early in my beekeeping experiences that there is another way to take care of laying worker bees.

My grandfather simply would set the entire laying worker hive above one of the strongest hives in the bee yard. With a queen already accepted by the bees in the strong hive, the workers from that hive will kill the laying worker bees. The strong hive bees always win in this situation.

Why pick the strongest hive in the apiary?

The bees in that hive need room for expansion and if given a frame of brood, many nurse bees will move up into the hive boxes just placed on their hive.

A week or two later, he would take the laying worker hive box off the strong hive. This box would have a new queen introduced to it. It is important to point out that some of the bees in the box will return to the strong hive when it is relocated in the same beeyard. Thus, to create a really strong replacement hive, another hive in the bee yard is moved, the bottom board is placed where this hive was located, and the former laying worker hive is placed on the bottom board to collect all the foraging bees from the old hive in that location. Then a new queen is introduced. What had been a hive in decline now becomes a strong replacement hive.

A hive is saved!

Beekeepers need to develop their own style of beekeeping. How you keep bees in the future will depend on the trials and errors made this year. Even mistakes are learning experiences.

Coming up! Disaster ahead for weak hives!