Stahlman beekeeping notes for 2021

Issue # 42 Fall Beekeeping -- Dead out hives

There is an old saying, "One for all and all for one." Honey bees fall into that category. A colony of bees is considered a unified unit. In other words, being a colony means that the success or failure of the colony depends upon all inhabitants. Many things can happen to a colony of bees:

- **Mismanagement by a beekeeper. [Making splits too late in the season, taking too much honey from the colony or failure to follow accepted management practices.]**
- **Internal issues such as: [the failure of the colony to replace a failing queen, pest or diseases.]**
- **External issues such as location of a hive. [Lack of foraging possibilities, over population of colonies in a specific location, or predators.]**
- **Weather conditions [Natural weather phenomena – hurricanes, blizzards, droughts.]**

I have kept bees for many years and I can honestly say, I have lost a number of colonies for various reasons. I am not a novice – I do what I can and should – but still colonies of bees die on my watch! I make mistakes and hopefully learn from those mistakes.

It hurts to find a colony of bees dead! But there is a side of this issue that reminds me that all is not lost. Beekeepers spend a lot of money on equipment. The colony using that equipment can be replaced easily. A hive is somewhat like rental property. One family is replaced by another family when the dwelling is available.

The previous tenant of our hives do something that tenants normally do not – they add value to the equipment. They leave behind drawn comb. Each frame with drawn comb will give a new colony of bees a head start toward using less energy and resources (comb building) than having to build new foundation. Next year when a new package of bees is introduced to drawn comb, they are capable of doing what most new hives started with new foundation cannot do – get a honey crop.

I do not see a dead out hive as a total loss.

- **The equipment [boxes, top covers, inner covers] can be safely reused.**
- **Winter clean up allows for time to repair and refurbish equipment.**

- **Drawn comb may be examined for future use – Old dark comb frames can be recycled by melting the wax from the comb -- frames with issues such as drone comb or pest damage can be dealt with in the same manner.**

I recycle most frames when the comb becomes dark brown. It takes a frame used in the brood chamber about 5 years to reach the replacement point. Many beekeepers will date all frames built with a code for the year it is put in a hive. Thus, it is easy to spot a five year frame – however, in practical use a frame may still be pretty good after five years of use if it has not been used as a brood frame.

Reasons to replace frames in five year cycles.

- **Old brood comb is a combination of beeswax, cocoon silk, propolis and environmental contamination and possible disease pathogens.**
- **Wax moth and varroa mite prefer old comb.**
- **Studies show the advantage of comb replacement in either spring or fall. [AFB, Chalkbrood, Nosema, viruses] Studies show marked improvement for survival when old frames are replaced by new.**
- **Old comb acts like a sponge. Most hives contain pesticides in wax and stored pollen.**
- **Some will argue that old comb cells will be smaller because of silk build up in each brood cell over time.**
- **When only one or two frames are replaced each year in a hive, the colony is not impacted as reported by Tom Seeley's estimate that it would take 16.5 pounds of honey to rebuild a brood nest.**
- **Some frames are filled with pollen. It might be best to remove any frame completely filled with pollen. Pollen doesn't get better with age and it is most likely to contain a high level of pesticides. In the spring, I like to move frames with the current years pollen next to young brood (Larva). I have resisted buying pollen patties because they seem to be perfect bait for small hive beetles. I have nothing against pollen patties but find my bees storing extra pollen.**
- **I do not put old comb in my wax melter if it has been exposed to American foulbrood.**
- **It is possible to get the AFB comb radiated but that can be costly. It is far better to burn the frames with comb.**

My solar wax melter is a valuable tool for melting down old comb. After the solar wax melter has recovered much of the wax, the slum-gum (old comb made up of silk cocoon and some wax can still be rendered to capture the remaining wax). Slum-gum can provide some use as a soil additive, fire starter and other unique things. However, burning it is wise because it most likely is very contaminated.

Several other issues for October are:

- **Cooler weather is not favorable for wax moth development. Cool weather conditions are not wax moth proof, but as temperatures fall into the 50 °F range, wax moth will become less of a problem for the storage of supers. Just remember that warm and dark are conditions for wax moth development.**
- **I have seen a number of mice droppings in my stored hive body area. I checked boxes but found no evidence of nest building quite yet but it is time to set traps.**
- **If you are using queen excluders, it is time to remove them.**
- **Any frames with empty cells or those that contain foundation not drawn are of no benefit to a hive about to overwinter.**
- **Many hives in single deep hive bodies over winter well if they have food stores. Food above and around the brood nest is critical for hive survival in cold weather.**
- **One should observe drones being ejected from the hive by worker bees.**
- **I also think it is wise to manipulate all the frames in a hive. Over time the frames are glued together making it hard to remove them.**

Most chores with hive management should be completed by this time. Bees are entering the fall mode cycle of survival. Bee populations are declining and brood production is reduced. If beekeeper has:

- **Treated for mites**
- **Made sure the hive has plenty of winter stores**
- **The bees have a well ventilated/dry hive**
- **Protection against mice and wind**
- **The queen has a large population of young bees**
- **No hive management when the temperatures are below 60° F.**

There is very little more that the beekeeper can do. Check to make sure that after "weather events" the hive is okay and maybe lift the top cover from time to time to make sure the bees are alive.

It is best to leave them alone. From this point on, emergency management for unexpected events are the only task a beekeeper might have for opening a hive and pulling frames.