STAHLMAN BEEKEEPING NOTES FOR 2025

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Woe is the drone!

I am not sure anyone spends much time thinking about the philosophy and practice of keeping bees.

- If you have noticed, I have been preaching that colony populations must be large and enter winter with a large number of young bees.
- Queens going through the winter must be young and prolific. Brood patterns can easily be judged and queens failing to meet brood production standards must be replaced.
- Adequate honey stores – not only by weight of the hive but the location where honey is stored.
- Pollen should be available in brood frames. Egg laying will begin as early as Christmas in the south. Feeding pollen might be an option in late winter.
- Moisture is poison to a colony of honey bees. Ventilation is important to move moist air out of the hive. In the north, an upper entrance might avoid snow blocked entrances and help with moisture reduction.
- Colonies should be located and protected against cold air. In the north, wrapping a hive is a common way to prevent wind chill.
- In my opinion, every colony has the potential of having a few mites. However, good management during the bee season should have a positive goal of reducing mite populations.

- Culling weak hives well before cold weather begins is important. As reported in last weeks notes, combining hives and using double screen boards will provide some protection for colonies that otherwise would die during the winter season. This is a picture of a queen and a few bees that survived last year up to January. This is all that remained of a colony with three frames of bees. Note some capped brood cells and the lack of honey in cells around the bees. This is the result of a weak colony of bees left on their own to survive the winter.

I have turned to "**The Life of the Bee**" by Maurice Maeterlinck to share what he had to say about the Life of honeybees.

Maeterlinck by the way was highly regarded and this book was considered a classic study in bee behavior. We have learned a lot about honeybees but what was known and thought over 100 years ago still remains true.

He wrote" The bees are in the hands of a power capable of annihilating or modifying their race, of transforming their destinies; the bees thralldom is far more definite than our own. Therefore, none the less they perform their profound and primitive duty."

I decided to read a bit of modern information about drones. They serve only one purpose in a colony of bees and **The Hive and Honey Bee** refers to them as "just little mechanistic robots." And from the 2018 publication of "**The Hive and Honey Bee**" page 303 I found this information.

> In summary, the love life of a drone is perhaps the shortest for any species on earth – about 3 seconds to find, woo, and complete the mating act! And the queen may be the most promiscuous, earthly female – Mating with up to 15 males in one or two minutes."

Factually, the drone during the winter season requires food to survive and honeybees (females) are genetically programed to reduce unneeded mouths to feed. Thus, if you see any drones from this point forward during the winter season, it is a good assumption the bees are aware of a problem. The drones must be needed. I am always reminded that drones are required for the future of a colony of bees but not during the winter season. If a queen fails during the winter season, it is almost always fatal to the colony. Even if the bees could raise a queen, she must be able to mate. And without drones, eggs go unfertilized.

Let's take a close up look at this drone I found this morning wandering below the bottom board entrance.

At this time of the year, drones are being forced out of the hive. It is normal to see a number of dead drones either at the hive entrance or on the ground in front of the hive.

I have noticed almost no drones in hives for the last month, but a few were still around. Finally, I see the bees forcing the drones out of the hives.

A strong hive getting ready for winter – no drones present

It is normal to see a large bee population and flight activity at the hive entrance. I have observed bees returning to the hive with pollen. We will still be seeing some days with temperatures in the 70's and 80's. Winter has not yet arrived!

This poor drone is giving me some information that I did not expect. This colony has had a low threshold of varroa mites this year. But I have not done a check for them for over 6 weeks.

This drone looked pretty normal to me when I picked it up but look just behind the eye and front leg. This colony is going to need my help.

While bee populations have been declining, Varroa mite populations have been increasing.

I am not sure to believe all the reports about winter losses. Some put the figure as high as over 65 %. When I was growing up – 1949 I had my first bee yard, losses were expected to be in the 5 to 10% range and anything higher was an indication that the problem had to do with hive management.

It is amazing that varroa mites kill the very insect that provides them with life. When a colony dies, the varroa mites die. Only good thing about that is the equipment is still usable. Now may be a time to clean up equipment and store it for next year.

Today, one thing really stands out – several causes are at work causing bees to die. Don't get me wrong – hive management is still very important. Feeding bees short of winter stores, providing winter breaks, and treating so colonies are disease free is still resulting in high colony losses.

But one issue stands above all others! Varroa mites have been in the United States since the late 1980's and a great deal of research, new products etc. have not stopped the damage done by varroa mites. Beekeepers can treat and new products are always available year after year but still the high losses.

It is also a fact that bees moved south for the winter benefit colonies. This is done on a large scale by commercial beekeepers – in fact, some spend a great deal of money moving bees south or they place colonies in special storage buildings to prevent freezing temperatures.

There is no shortage as far as I can see of package bees being available in the spring. The cost for packages has gone up but so have all other prices. Thus, let me share my philosophy on this subject:

- Buy the best stock available. Those queens coming in package bees are mass produced in the south and warm area states. Open mated queens all depend on a viable drone population and it is hard to predict how mating can be controlled if other bees exist anywhere near where the mating yards are located. Ask those queen producers if they are using any chemical treatments to prevent colonies from dying. If they are using chemicals – it is almost impossible to produce bees resistant to Varroa mites even if they are using artificially inseminated queens.
- I am a hobby beekeeper. I can afford to have a colony die. There are a number of advantages during the bee season to make sure queens are evaluated prior to the cold fall weather. Good strong colonies can die but usually because of mismanagement --such as keeping bee hives in an area over populated by other hives of bees (nearby hives loaded

with mites or small hive beetles are not good for any near-by colony even if your bees are treated.)

- There are a number of beekeepers following the path of not treating bees with chemicals. Their success rate may be a bit lower than those that treat but consider this:
    - The Darwin Principle of beekeeping is that the bees can evolve without treatment (but good bee management must be practiced).
    - When a colony of bees dies, the equipment if taken care of can be used over and over.
    - Honeybees are available and sold every spring. Cost could be an issue, but those commercial beekeepers moving bees to California and those producing package bees in the south are still able to provide bees for those who are replacing dead colonies.
    - Continuing education is a must. Knowledge of where to keep bees and how to keep bees is important. Knowing how many colonies a particular location will support is important. I am alarmed by the number of students bee that schools will admit and the subject of success is almost assured to all that take the class. There is no screening for admission. Many taking classes want to save the bees, and really don't have time or interest in managing bees once the equipment is purchased and the bees installed in their hives.

Just remember that most of our errors are due to inexperience and the lack of time to care for bees. Now is the time to read – reading will not guarantee that one can become a good beekeeper but it expands the knowledge base required to keep bees. I look forward to the time I will be able to read this winter. One is never a master without knowing what is happening with the current state of affairs – thus, bee magazines, research and new products must be studied and new information applied to bee management.