Stahlman Beekeeping Notes For 2022

Management for Colder Weather

Leaves are falling

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It is interesting how I look back to the past. I lived in northern Ohio in my youth and remember the task of getting bees ready for the winter. My father wrapped hives with tar paper and my grandpa went even further by having me rake up leaves to pack boxes for the hives to winter in. If I can remember, the boxes were cleverly designed with hinges. It was a lot of work to put boxes up to protect hives from the winter cold. In some areas such as Paulding County, Ohio – the lay of the land provides almost no wind breaks. The northwest part of Ohio is referred to as the great black swamp area of Ohio and is as flat as a pancake. It is now a place for wind mills from Eastern Indiana thru mid-Ohio. In fact, the flat land in these northern states have become wind mill farms.

If you have put your bees away for winter realize that the battle for the bees survival is half won. I have a collection of Gleanings in Bee Culture going back to 1900. I still like to open an old book – in this case, a volume from 1915. What were beekeepers in 1915 doing to get bees ready for winter? Let me share four of the methods in the cold regions of the U.S. back then.

1) **Putting bees into a cellar.**
2) **Hives were "heeled in". This method involved making an entrance at the top of the hive. Straw was piled up at the entrances to hives set in rows as near together as possible. Dirt (soil) was "heeled in" closing up the entrance and bottom board.**
3) **Hives were lined up in double rows with straw packed between each hive and covered over with about 2 feet of straw so as to shed the rain and snow.**
4) **Winter packing cases. This was a box holding hives. It was packed with planer shavings and saw dust or leaves.**

Generally it was recognized that hives needed a top opening. Beekeepers often bore a hole in the top box for bees to have an upper entrance. They used something called an escape board to protect the entrance. A beekeeper of that time reported that his losses were practically nothing but losses were heavy when stormy weather occurred after hives were exposed. One beekeeper who used all four methods reported the following: The cellared bees wintered the best of all; next the bees in the winter cases and the heeled in hives were the worst. He described the heeled method as one he would never use again. "I shall not practice heeling in (Banking up with dirt) anymore; loss too heavy; bottoms wet and soggy; combs more or less moldy."

Beekeeping is learned by making mistakes. Any of us keeping bees for very long learn what not to do. The beekeeper in 1915 with the "heel in" bees reported a loss of 27 ½ %.

The message for many beekeepers using cellars or packing boxes was to not take them out of packing too early. Another point was made by the author of this 1915 article: "There seems to be a fundamental principle that hive entrances for colonies in winter quarters should be at the bottom, primarily to hold the warmer stratum of air that naturally rises to the top, and is confined because it cannot escape." Another problem with setting hives close to each other is (bees have a tendency to drift) – (Drifting is a bee flying from its hive often ends up in a hive near-by.)

A good practice was to reduce the entrance so bees can fly from the hive on warm days but also keep mice from entering the hive. Beekeepers have always faced the problem of rodents and roaches finding a hive a good place to spend the winter season.

Commercial beekeepers in the west and Canada still over winter in building designed to keep the temperatures cool – hives do not experience the rapid changes in outside air temperatures. If you want to read about big mistakes, get a copy of A.I. Roots autobiography in which he shares his experience of building a building for his bees to overwinter.

We as humans think human! It is not a good idea to place a heating pad in a hive of bees to keep them warm. If you want to kill your bees with kindness, provide warmth! Bees need a dry well ventilated dwelling protected from the shifting winds and temperatures. Bees survive in Alaska type weather.

If exposed to warmth on a very cold day, bees have a tendency to think it is okay to fly from the entrance of the hive. When a bee hits frigid air it is unable to continue to fly. However, there are days during the winter season that are warm enough for bees to take cleansing flights. I have seen bees kept in an observation hive die out because the observation hive was in a warm room. The bees could be seen on the snow (dead) outside!

If one is concerned about the welfare of the bees – make sure they are dry, well supplied with winter stores and are queen-right. If the mite and small hive beetle problems have been addressed, a hive should be able to survive with a good population of winter bees!

Moisture in a hive is a death sentence to a colony of bees. It is about time to switch from liquid feeding to dry methods of feeding. Remember heat rises and honey above the winter cluster is more valuable than honey stored against the sidewall of hives.

In times past, quilts were used above an inner cover to capture excess moisture. I often recommend to my new beekeeper friends that the wood top Miller feeder design is very useful during winter to provide an insulating effect from cold weather. Filling the feeder with any dry substance (straw, popcorn, paper, cloth such as burlap, saw dust, etc.) will absorb excess moisture and prevent moisture from falling back on bees below. They can be turned over and cleaned easily if they become moisture bound.

At one time bee supply companies sold inner covers made of plastic. Plastic is a poor insulator and moisture will collect and drip down on the bees below. Thus, beekeepers found plastic inner covers caused more damage than good.

I have found that it was not necessary for me to wrap my hives or put them into insulated boxes. I tried using Styrofoam sheets cut to fit my hives at one time, but I saw no significant advantage over hives that were protected by good hive equipment and protected by a wind break of some type.

Hive jackets or wraps are still available for a beekeeper to place on hives in cold regions. Those living in areas with temperatures dipping into negative temperature ranges often wrap hives and still put bees into protective box structures.

An interesting hive wrap was created by Nina Bagley, a beekeeping friend from Ohio.

Nina B.'s Bee Hive Cover -- This is one of the few I have seen made out of heavy water repellent canvas material.

Another is called "The bee Cozy Winter Hive Wrap. And there are others available. Use a google search or links below to find them.

My father used tar paper to wrap hives. I copied this from a search on Tar paper wrap for bee hives. I don't like plastic because it doesn't allow the hive to breathe. The black tar paper will **absorbs the sun's heat. Affix the tar paper to the hive with a staple gun, and use a utility knife to cut the paper away from ventilation holes at the top and bottom. On a sunny day, it will allow bees to respond to warmer air temperatures and bees can take cleansing flights. It is unlike an insulated hive which prevents warmer outside air from allowing the cluster a chance to respond to the warm temperatures outside.**

I use inner covers on my hives. The inner covers I use have a one inch notch in the rim which serves as an upper entrance. This allows for moisture to escape with the hot air moving up from the cluster. By moving the top cover back, the upper entrance is closed off. If the hive cover is moved forward, the notched entrance is available for bees to fly from the hive if snow covers the bottom entrance.

Some links to winterizing bee hives: Wrapping hives in black tar paper to successfully over-winter them ... ; Winterizing My Bee Hive - Tar Paper Wrap & Granulated Sugar Feeding ... ; tar paper insulated bee hives for winter | Bee keeping, Bee, Honey; 24"X48" Tar Paper Hive Wrap - Deseret Hive Supply

There are so many references on how to keep bees during the winter season in old bee magazines. But I can testify to some of the things written:

1) **Bees in a hive wrapped in black tar paper fly on cold warmer mornings faster than any other hive.**
2) **Bees will fly in temperatures below 50 degrees F. Most likely the sunshine helps keep up the bee's body temperature.**
3) **A colony in shade will lose many more bees in a winter flight than one in the sun.**
4) **Bees need to fly during winter confinement. I have seen bees defecate on top bars of hives when held for long periods of cold weather.**

Those keeping bees in the south rarely see weather that would keep bees confined for four to six weeks at a time. Those of you living in the north can only dream of the day when bees can fly without brutal winds and sub-zero temperatures. In your case, a fall task is to prepare your hives using indoor storage or individual wrappings.

I am also aware of the damage to Florida bees from an article in Bee Culture Magazine. If you are not getting a beekeeping magazine, now would be a good time to begin. Many northern commercial beekeepers move their bees south for the winter. I can share with you that overwintering bees in the south allows for more flexibility in when and how to manage bees.

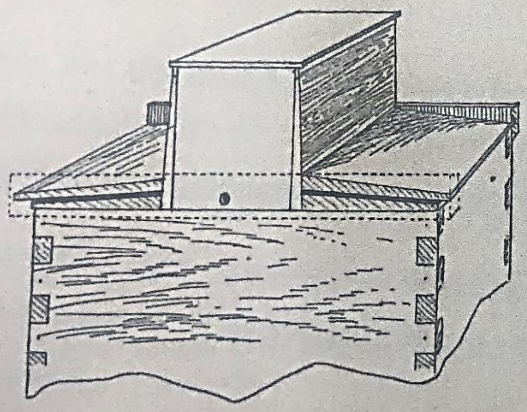
I will be covering the topic winter feeding in a later issue.

Below is an article in a November 15, 1915 issue of Gleanings in Bee Culture Magazine. Beekeepers are always looking for a better way to keep bees.

A NEW WRINKLE IN HIVE-COVERS

BY E. M. CROW

The accompanying illustration shows a device which I am using with a great deal of satisfaction in my beeyard. For want of a better name it might be called a combination hive-cover and nucleus-box.



The box is made of two pieces of 5½-inch bevel siding 20 inches long (½-inch stuff of even thickness would be better), and two end blocks ⅞ x 5 x 5⅝ inches deep. It will hold three shallow extracting-frames. Projecting from the lower edge of the box on either side is a double cover made of two pieces of bevel siding 20 inches long, held apart by three ⅜-inch cleats. This makes a cover just right for a ten-frame hive. A ⅞-inch board, 6 inches wide and 20 long, makes a good cover for the nucleus-box part.

The uses to which this appliance may be put are varied. In the first place it is a No. 1 hive-cover for hot or cold weather; and if kept painted it will last as long as any other cover. Should you wish to requeen a colony, put a frame of brood and bees with a ripe cell in the box over the doomed queen, with a wire cloth between, and the flight-hole open to the rear. When the new queen has mated, and is laying, quietly remove the old queen and the wire cloth, and there you are with no time lost.

Do you wish to feed a colony? You have but to place four pepper-box feeders in the box directly on the brood-frames, and the work is done. Queen-rearing can be carried on in almost any kind of weather by the use of these boxes over a strong colony with wire cloth between.

The use of the bevel siding for the roof part gives a good pitch to the upper surface while the under side is held level by end cleats.

De Soto, Mo.

As we advance thru the winter, I will be adding things like this to the bee notes. Beekeeping never really changes. Ideas are shared and like everything else, we can reject or accept any idea. That is why we have so many hive types even though the Langstroth hive has stood the test of time.