

Stahlman beekeeping notes for 2021

Planning for 2021 – The Weather

Issue # 1

While many new beekeepers are looking to begin keeping bees, there are a number of individuals who have completed a year or more and do not need the information provided to those who are just getting started. The purpose of these notes is to fill the gap in beekeeping knowledge acquired by experience. There are many books on beekeeping – in fact new books are published each year to address the “Art of beekeeping.” The wise beekeeper keeps up with all the new information published in the major beekeeping Magazines [The American Bee Journal and Bee Culture Magazine].

Personally, my experience covers a vast number of experiences with bees. I was born into a commercial beekeeping family. In my early years that was a curse! Now in my 80's I can look back and wonder why I ever took up beekeeping after I left home and went to college. The beekeeping bug got to me! Times have changed – big changes that just making keeping bees a little more difficult than in the past.

I welcome comments and suggestions on what I include in these notes. Generally, they are built around a seasonal topic. They are not meant to replace beekeeping beginner classes, club meeting with Zoom presentations, or other beekeeping sources of information. The opinions I expresses are my own view and as you most likely know, many beekeepers express different points of view on a given topic.

I still see that Almanac's are sold in the grocery stores and newsstands. At one time farmers paid a lot of attention to them. But beekeepers have a more efficient way to plan for bee activities. I visit www.weather.com and check out the various maps they display on their web site. Since my newsletter (notes) encompass readers from different regions of the country, I check to see what is going with the weather here in Raleigh and also other places. I can remember a cute gimmick “the weather rock” that could give an immediate report on the weather. One only had to set it on a window ledge and check it from time to time. If it was wet – it was raining or had rained. If it had snow on it – it was snowing or had snowed. You get the idea. It did not forecast weather!

All that has changed with satellites and radar. For us here in the Raleigh area, we can say that July is on average the warmest month of the year and January on average is the coolest month of the year. That same can be said of almost any other state in the U.S. Southern states are warmer in the winter than northern states and the length of winter varies considerably from north to south. This has an impact on beekeeping practices. When to start beekeeping is an often asked question. Beginning beekeeping usually starts with a bee school in late winter and the actual arrival of bees comes from southern beekeepers who can shake bees from hives in

March to late April and early May. Queen rearing begins in Florida, Hawaii, and the southern tier of states from Georgia to California even a bit earlier.

What we as beekeepers must do is consider abnormal weather conditions. It is nice to know the average dates for the arrival of frost and the beginning of frost free days. Remember that “weather rock”. We can better predict periods of bee population growth by actually opening a hive and check to see if the bee nest is expanding or contracting. Honey bees are good weather predictors. When I was working with a large number of colonies, the bees could tell me if a rain was coming well before I could see clouds. When I would observe an extra ordinary number of bee returning to hives, not long afterwards wind would kick up and the rain soon to follow. They also became very defensive.

Weather warnings are usually issued well before a major change is to occur with the weather. High wind warnings should cause beekeepers some concern. In the north, windbreaks from westerly winds are helpful with wind chills temperatures very hard on bees. In the south hurricane winds need to be dealt with. Flooding is another concern every beekeeper should take into account regardless of regional conditions. Local terrain is a key to shielding hives from wind. Again, a new beekeeper may be asking where I should put bees. Most are limited in the choice. We often suggest that the front of hives face south to get the early light when the sun comes up and heats the front of the hive. But in reality, one may decide to face hives in other directions. Typically, one does not want to face hive entrances directly in the direction of a prevailing wind. Wind blowing directly into a hive entrance during very cold weather is hard on the bees inside the hive. Entrance reducers are worth more than gold in those situations.

If one were to have a view of the horizon and mark a dot on a window facing southwest, one would note in real terms where the sun rises each morning. It moves northward on the horizon as daylight hours increase and the reverse as daylight hours are reduced.

No bee year seems to repeat exactly the same year after year. This past spring the Raleigh area was extremely wet. But the area has in past years had drought periods especially during the summer season.

I learned early on that a beekeeper cannot depend on any one particular honey crop. In Ohio, Locust honey (a very light almost water white and good tasting honey) might come on once or twice in a five year period. Usually rain would interrupt the flow. The same applies to sourwood honey flows, Tulip popular, golden rod or any other usually dependable honey source. But when weather conditions are ideal, those flows are tremendous. Plant blooming periods are usually pretty uniform. As beekeepers, we can adjust our beekeeping practices to the time certain plants such as apple trees come into bloom.

Those of us that have hives of bees can inspect the entrance of our hives to determine if bees are bringing pollen into the hive. If only a few bees returning to the hive have evidence of pollen on their legs, we may ask where it is coming from. Often trees (usually trees) show no

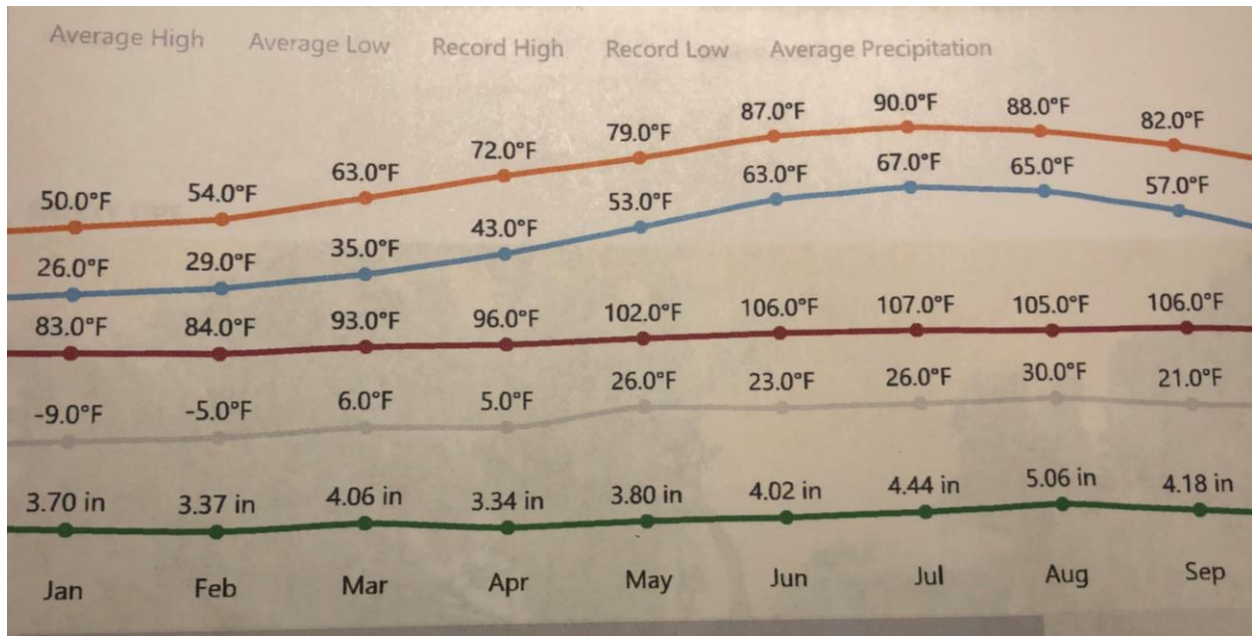
sign of blooming. If curious, one can collect a bee or two and remove the pollen from a leg. Examination under a microscope can reveal the source.

But when a hive shows great activity (almost all bees are returning to the hive with pollen on their legs) a good thing is happening in the hive. It is a sign that the hive is actively gathering pollen and most likely requires a great deal of pollen for new brood.

While new beekeeper are just starting hives, the over-wintered hives are well on their way to crowding the brood nest to the point that the queen has fewer cells in which to lay eggs, and many of the younger bees find themselves without something to do. One can easily see bees crowded out of the hive and collecting on the bottom board or front of the hive.

So let's take a look at a weather map showing the temperature ranges for Raleigh, North Carolina. This chart shows the average high, low, the record high and low, and the average precipitation for the period from January thru September.

In the graph below the colors used on the graph show: Average high is orange line, Average low is blue line, Historical high is red line, historical low is the grey line, rainfall/precipitation average is the green line and below all is the name of the month.



A beekeeper can find a lot of useful information from this site. All that is needed is to enter the site, type in the zip code or location you want information for and click. The amount of information on weather is at your fingertips (current temperatures, U.S. Doppler radar maps, 24 hour temperature change map, the heat index, dew point, wind chill and wind speed). Alerts for weather related issues well in advance of their appearance are available. I usually check out the 10 day forecast and the monthly calendar of past weather months which can give historical weather information.

As I write this Christmas Eve 2020 the temperature at 2:19 p.m. is 67 degrees F. and the bees are flying. The forecast for tomorrow is a high of 35 degrees F with a low of 20 degrees F.

While I could work my bees today, it is definitely not going to be possible tomorrow nor for the next week with rain forecasted and temperatures well below average. We have a winter storm blowing in from the west. In fact, it indicates that I might do less harm if I don't work my bees until the weather is more settled. The only exception I can think of is feeding colonies that are light on food and that should have been done well before now!



The forecast for Christmas Day in Raleigh shows possibilities of rain and high winds. The upper mid-U.S. show snow storms and high wind coming off the Great Lakes. This storm is bringing low temperature to all the states shown.

This brings to life the difference we see in how we manage our hives of bees. I can remember my partner, Billy Engle sharing with me his good weather while in Ohio I was freezing my toes off. My bees were too!

Weather differences show up as a person travels from south to north or the reverse. Many northern commercial beekeepers move colonies of honey bees south for the winter.

The advantage of moving bees south are:

- 1) A much earlier start on the bee season.
- 2) Bees build up quickly in southern Georgia. That allowed me to raise queens and make up package bees for customers in Ohio. That is a very profitable business. Often honey flows created a problem in hauling bees back to Ohio because the bees would gather too much honey. The added weight of hives for the return trip to Ohio reduced the number of hives that could be loaded on my truck.

- 3) In addition to the package bee business, I could make up splits -- to replace dead-outs in Ohio. Honey crops were a bonus to my business. I was able to get three honey crops from my bees. One in Georgia and two back in Ohio.

Moving bees south is not practical for hobby beekeepers and as I look at it, the price paid for a package of bees to replace bee population in hives is far less expensive than driving to Georgia to pick up packages at the wholesale price charged by package producers. The prices have risen almost every year. This year packages are being sold for around \$140.00 for a three pound package. (Just to give you an idea of how prices have grown). As late as 2004, a package of bees sold in the Georgia bee yard for \$35.00 (3 pound package). The retail price was something in the mid \$40.00 range. Queens were selling for \$10.00 retail and we were selling them for \$7.50. The cost of equipment has also grown considerably from that period of time. But remember gasoline prices were less than a dollar a gallon. My truck could get only 9 miles per gallon and the trip was 700 + miles.

An added note – I still know a few northern beekeepers that take bees south. One from New Jersey does custom pollination work. He brings his New Jersey bees south in late December to take advantage of the early spring build up along the Atlantic coast. His goal is to make splits for pollination contracts on blueberries and other crops back in New Jersey. He usually travels 95 as far south as Northern Georgia. He started visiting possible bee yard locations well before he retired from his regular job so that each year, his relationship with landowners allow him to place bees on their properties for about three months prior to heading back to New Jersey. In talking with him, he realized that there were other possibilities by selling bees to hobby beekeepers and he often buys package bees from other beekeepers for resale to hobby beekeepers in New Jersey to pay for his travel expenses rather than drive an empty truck back to New Jersey. His truck makes the trip south when he does his yard management. He tries to limit his drive south to about 10 hours down and 10 hours back.

That may be a good idea to investigate for any beekeeper with time on their hands. If I were younger, I most likely would be tempted to do it myself.