



B-PLUS

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Michigan Beekeeping Future: Or More Work...But More Honey

During the Holidays, friends and family asked me the usual question, "How is the bee business?" Then after I have spent the next 20 to 30 minutes explaining the problems of varroa mites, imported honey, price supports and more, they are ready to switch to any other topic -even politics! For me the exercise was good as it helped me to verbalize things that I hadn't put together before about the future of beekeeping. I made a joke, at the mite quarantine hearing in Lansing, about the fact that I said that I was going to retire when the varroa mites came, unfortunately the mites arrived sooner than I expected. Enough of the doomsday talk. Let me say what I think will be the experience of Michigan beekeeping during the next few years.

A couple of facts about varroa mites. First is, that up to now, no colonies in the north have survived without some kind of chemical treatment. The other is that no country has been able to get rid of them once they have been found. This means that if the mites continue without any treatment most of the bee colonies will die. For the beekeeper this means that pesticide applications will have to be applied to reduce the population of varroa mites within the colony. (More on acaricides and breeding bees for resistance in a later B-Plus.) This chemical application will probably have to be done on a yearly basis. Certainly that will mean more work for the beekeeper as well as expense for the chemical(s) used for control of the mites. These treatments will have to be done to each colony with accuracy of amount, and probably with careful timing.

We have now covered the "more work" part of my sub-title, what about the more honey? The silver lining may be in that statement that I made above, that all colonies **not** treated will probably die. That means that all wild (feral) colonies will die. We don't really know how many colonies that may be, but some data from other states indicate that as many as 50 percent of the colonies are feral ones. The implications to beekeeping and to crop pollination may be staggering. Certainly if your colonies did not have to share the available nectar with those wild colonies they should have more surplus. It may not be 100 percent more honey but that level is not out of the question. I suspect most of you would accept that increase as a suitable reward for treating your colonies for control of varroa mites.

As for crop pollination, no longer will many crops be pollinated free by feral bees, and growers will have to pay beekeepers to move colonies into fields and orchards to have a successful crop. There should be higher prices for pollination services.

The problem of no price support is a bit tougher when looking into the future. However, if the economic analyses that I have done are at all correct, the prospects may not be all bad. In order to be successful you need to decrease the cost/colony or increase the yield. The break even point (yield/colony) will have to go up to pay for the pesticide treatments. (These costs may be quite high - up to \$10/colony with certain pesticide chemicals.) However, if yields go up even 50%, the price you need for your honey, in order to be profitable, is actually lower.

When is all of this increase in honey and pollination service going to happen? No perfect answers. If the experience of Europe with varroa mites can be used as an example, then it will be 3-5 years before the mites become common enough to kill feral colonies and bring on the scenario that I have outlined above. The years in between may be rather tough, but I think the long term outlook may be very good. There may be clouds for a while, but eventually they WILL have silver linings.

Varroa? - Queens, Packages or Divisions?

The first problem that comes to mind with the presence of varroa in several states is where can you purchase queens and packages? I can not tell you at this time (early January), but I expect that the Michigan Department of Agriculture will make decisions based upon information given to them by the particular states involved in queen and package production. Some states may not be quarantined for this year, so you will be able to purchase the queens and packages (or nucs) that you need. The problem of which states you may receive queens or packages from may not be resolved until near the shipping season.

So what can you do? You can make up your loss, or make increase, by the use of divisions. The problem is can you make divisions early enough? Can you produce queens? There are problems and trade-offs in the use of divisions, so lets talk about them.

In the past I have always thought of divisions in essentially two ways; 1) for increase without honey production in the year that they are established, and 2) for increase with honey production. In the first case the division produces its own queen and in the latter the beekeeper provides a queen produced in the south. With the advent of varroa the answer may be that we want increase in the number of colonies and yet want honey production with the division raising their own queen. Is that possible? Yes, but with some reservations, as I do not think you can produce the same amount of honey as when you supply a queen to the division. Below are things you will need to do in order for this technique to be successful.

1. Stimulate brood rearing in the winter cluster by feeding pollen supplements. This is done by putting the pollen patties onto the winter cluster about the last of February or the first of March. The patties are made of the right kind of soybean flour and brewers yeast (3:1) made into a bread dough consistency with heavy sugar syrup (Write to me if you need instructions on making and feeding pollen patties.) These patties will make those colonies surviving the winter much stronger and they will have more brood at division time.

2. Divisions need to be started early yet queens need to be mated so late April or May 1st is about the right starting date. It is risky to expect to mate queens in Michigan much before the 15th of May as there just are not the drones that are mature before that date. Divisions can be started a little weak as additional brood will be added later. By keeping the parent colonies stronger they will be able to supply extra brood at the next inspection.
3. Two weeks later check to see that the queen has emerged (properly opened queen cell), and check the divisions for food (honey AND pollen).
4. June - check to see that the new queen is laying, and add more brood at this time from the parent or overwintered colonies. These added bees will be foragers (honey gatherers) in two weeks, or approximately at the start of the honey flow.
5. June - Colonies may be equalized at this time, e.g., by changing positions of strong colonies with weaker ones. It is possible to do this earlier, but there is some risk with killing the young queens.

You won't make up all of the honey that you might have made by using purchased queens from the south for your divisions. However, you also save on the expense of the queens, and thus there is this balancing of pluses and minuses. In this case hopefully we know that there are no varroa mites introduced to your apiaries.

In the long term the planting of honey plants that would bloom later in the season would also be helpful in making these divisions more productive since they will have peak populations at a later time.