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# **STAHLMAN**

## **BEEKEEPING NOTES**

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### **Hot Weather Beekeeping Continues**

I spent Monday and Tuesday morning visiting the bee yard owned by the Cary Garden Center. I was invited to teach a few queen rearing techniques to the staff. It is always interesting to see and talk to individuals the public may see or not see at a business selling bee supplies and bees.

The garden center promotes and gives a lot to the Cary community as well as supports involvement in the North Carolina College of Veterinary Medicine. The garden center sells bee supplies but that business is pretty much a break-even proposition for them. Behind the scenes a lot is going on. Long range planning requires work before ideas and plans can be carried out. With the topic on the importance of pollination for human survival getting the attention of the general public, there would no better place than an established garden center to promote honeybees and native pollinators plants. The Cary Garden Center goes even beyond.



And the idea of raising queens brought me back to to the topic what some beekeepers might do. The cost of raising a queen is low if one already has some equipment. Actually the bees raise queens – the beekeeper just manages how the bees are kept to get them to raise queens. In early spring (swarming season) beekeepers might take a frame from a hive that started swarm cells and move the frame with queen cells to a nucleus hive. As summer gets hot and long, the opportunity for the bees to raise queen cells diminishes to almost nothing. Bees produce fewer drones to mate with virgin queens and we all know that a virgin queen unable to mate will never lay fertilized eggs.

But the bees will (if they think they are queenless or if the queen is failing) begin to build queen cells. The goal of raising a queen is to raise docile queens that produce enough honey surplus for the beekeeper and have resistance to varroa mites.

We have entered summer when brood production is being reduced by bees. They are right now building up stores of honey to survive this coming winter. Most bees in North Carolina at this time have stopped making honey except for those lucky beekeepers that took their hives to the mountains to get some sourwood honey or are located where cotton is growing.

Creating a better queen isn't simple. As I learned many years ago, when honeybees are open mated even the best mated queen will produce bees that revert to a vast mixture of genetic characteristics. In today's world, beekeepers are looking for "survivor queens." The funny thing is that any queen that carries a colony thru the winter is a "survivor queen!" The selection of drone mothers is just as important as selecting a queen mother to graft larvae. There are pitfalls to raising queens. As I discussed with the individuals this week, a bee yard with a vast number of drones mate generally from 10:00 in the morning to 3:00 p.m. It is important to remove bee hives with aggressive or other bad traits from the mating yard to produce gentle queen stock.

Often drones from hives with bad traits are better competitors in the mating process and pass the genetic code of their mother into future generations of bees. Buyers of queens do not want to contend with angry bees. Aggressiveness is a trait passed when queens are mated. When brood emerges from worker cells they are already programmed to carry traits of both the mother and father. All the good traits of a mother queen can go out the window when her virgin daughter mates with a mediocrity of drones or drones with aggressive traits.

Just because a queen is alive and caged when purchased is not a sign that that queen will be a good queen. Her daughters carry her traits as well as the drones she mated with. Yes, she mates with multiple drones.

I am enclosing a queen rearing document I created 20 years ago for local beekeepers wanting to raise their own queens. It is important for me to make a few increases during the summer months. Hives are filled with honeybees usually with little to do. Some will still have drones. The queen rearing document enclosed shares various methods a hobby beekeeper can raise queens. Moving frames with young larva into a nuc well supplied with queen-less bees and food is the easiest method. For most beekeepers, one or two stand-by nucs are all that is needed.

I call extra queens resources. If a queen in another hive fails, one has a queen to replace the failing queen immediately and with queens costing \$35.00 or more, it saves some money. I also find that later this summer, I can combine the nucs into standard hives for increases. This is like an insurance policy. Or I can combine a nuc with a weak hive. It just makes the odds of getting bees through the winter higher. One can make five frame nuc boxes easily. They don't have to be pretty.

Work early in the morning or later in the afternoon. Mid-day temperatures are times to avoid working bees. Hot weather is stressful to bees. They are working hard at staying cool – some even hanging outside the hive to open up ventilation pathways within the hive. Working bees add stress especially in hot weather. Don't expect them to be gentle.

I want to start talking about summer feeding in upcoming issues. I still see bees flying in good numbers from hive entrances. They are gathering water to help cool the hive. Some may even be seen returning with some pollen on their legs. These bees need food just like winter bees.

One bee activity we should be checking for is robbing. Any unusual activity such as a large number of bees flying in front of a hive is a red flag. It is important to find out why a particular hive has all this activity. Next week I will share some pictures of robbing activity and orientation

**flight activity. I generally just take a look at my hives in a walk around each morning. They are in my backyard so I can do that.**



**One summer piece of bee equipment one might consider to help bees in this heat is a screened inner cover as shown here. It can also be used as a moving screen if you need to move a hive in this hot weather.**

**I know some beekeepers in the south use them both summer and winter. I have them on my hives now but will switch them out with traditional inner covers when weather cools.**

**I hope the queen manual will be of some help to anyone thinking they cannot raise queens.**