

BEEKEEPING PROBLEM SOLVING IN THE SPRING TIME

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SPRING TIME BEEKEEPING SUPER BOWL – Spring time is when bees make the majority of their honey. In Middle TN, the nectar flow needed for honey making begins on average in late April, continues through May, & is over by Mid-June. The beekeeper's spring time goal is to have their bee hives in peak, honey making condition by tax day, April 15th. This means all spring feeding & any medications have been administered and finished, all hives are queen right (have a healthy laying queen), there are plenty (60K) of bees, & the first honey super is on the hive ready to receive that beautiful nectar. Addition of a queen excluder is optional. Some beekeepers use them & some don't. If these conditions are not met, we miss the boat on making a good honey crop for us and the bees.

NUTRITION, NUTRITION, NUTRITION – Good nutrition is an important factor in honeybee survival. Loss of habitat & the modern prevalence of pesticides use has degraded honeybee forage to an alarming degree. Nutrition is a year round issue to the beekeeper & bees.

WINTER HIVE HONEY REQUIREMENT – In Middle TN, a hive should begin the winter in November with 60 # of honey. In order to assure our bees survival through winter, we check our hives in January on a warm & windless 50-55 degree+ day. If the bees are on top of the frames of the top honey super, we add bee fondant to the top super.

In February & March we check the bees again for food. The end of winter is near & bees can easily starve during this period. The queen has started laying in late January & is beginning to ramp up laying for spring.

MARCH – Elm and maple trees start their bloom. You can see the elm & maple pollen in the bees' pollen baskets when they return to the hive. This indicates a laying queen.

On a warm (60 degree+), sunny, windless day in March, break down your hive(s) and check for eggs, capped brood, & a solid laying pattern. If the bottom board is filled with debris, clean it. That's one less housekeeping task for the bees. If I see eggs (they look like a tiny grain of rice at the bottom of a cell) we know the queen is there. We don't have to see the queen if there are eggs.

Spring Time Stimulatory Feeding: When night time temps are above freezing, start feeding sugar syrup that is 1 part water to 1 part sugar. Pour 5 # sugar into a gallon jug and fill the jug with hot tap water for 1:1 sugar syrup. Do not add boiling water because this caramelizes the sugar & makes the bees sick. Stimulatory feeding will cause the queen to speed up egg production.

WHAT IF THERE IS NO QUEEN? YIKES!! This is a serious problem. No queen, the hive will die.

- Solutions:**
1. Take a frame of 1-2 day old eggs from another hive & put in queenless hive. The bees will make another queen from these eggs. It takes approx. 30 days from day 1 as an egg for a new queen to emerge, mate, and begin egg laying. There will not be sufficient drones in the area for successful mating until approx. April 1st.
 2. Using the newspaper method, merge the queenless bees with another hive.
 3. Buy a queen. Problem – Queens won't be readily available from producers in March. Call the queen producers but they may not have any available this early.

LATE APRIL – EARLY MAY, QUEEN RIGHT HIVE, LOTS OF BEES – WHAT CAN GO WRONG NOW? BEE SWARM!!

In order to make a good honey crop, the bees must stay home & bring in nectar. In order to perpetuate their species, a healthy hive wants to swarm. This means a large portion of bees leave the hive with the old queen in tow. It is a wonder of nature to see a swarm of bees filling the air. You also know there goes a significant portion of that hive's honey crop.

When the swarm is out, it will probably settle nearby for a brief period. This could be minutes, it could be a day or two. It is now the beekeeper's mission to **CATCH THAT SWARM! Don't be afraid.** Swarming bees may look like a tornado of bees but this is when they are at their least aggressive. They have no young to protect and their sole interest is finding a new home with their queen.

HOW TO CATCH A SWARM: You will need a minimum of an empty box and a bee brush. Depending on where the swarm lands you may also need the following: a pruning lopper & hand pruner, empty hive & drawn foundation, white sheet, ladder, tie down straps, queen catcher, turkey feather for gently moving bees to look for queen, sugar syrup in spray bottle

When the swarm lands (this will be on a tree or shrub branch, fence, maybe even just in a clump on the ground) spray it with sugar syrup. This will calm the bees & make them less likely to fly. The idea is to sweep, shake, or coax the bees into a box or best of all, into a hive with foundation in it. Drawn comb is a wonderful lure for swarming bees. You must also make sure you have the queen. If you leave the queen, the bees will not stay in your hive. Be sure to wear your bee veil, gloves, leather boots, long pants & long sleeves. Swarming bees may be at their least aggressive but they will still sting. When you get your prize home, put on some wax foundation & feed 1:1 sugar syrup to stimulate wax production. If swarming happens early enough in the spring, you may still get a super of honey & a new hive.

CAN SWARMING BE PREVENTED?

Swarming occurs when the brood area becomes overcrowded &/or the bees decide there is insufficient queen pheromone being passed around. There are a number of ways to address this:

1. In early spring, when the night temps warm to 50+ if the bee cluster is in the top super, switch the boxes. Bees move upward and this will give them more room to expand. Ideally, do this every couple of weeks.
2. Remove frames of capped brood from a strong hive to supplement a weaker hive & replace the frames with empty drawn comb or wax foundation.
3. Swap hive location of strong hive with that of a weak hive. The foragers will return to their old location & boost the weak hive.
4. Shake bees from strong hive into a weak hive. Make sure you have identified the queen & assure you do not shake her into the weak hive.
5. Make splits. If you open a hive and see multiple queen cells, it is time to make a split & increase your hives. Take a frame with a queen cell, add a frame or 2 of capped brood, plus a couple of frames of honey & pollen & install in a 5 frame nucleus hive (a nuc). Leave the nuc at the old location & move the old hive with the queen to another location. Conventional beekeeping wisdom is that this should be moved 2 miles or more away. We have been successful moving it to another location within the same bee yard but we close it up for 48 hours. When the bees come out after 48 hours, they have forgotten the old location. They orient to the new one & all is well.
6. Cut out queen cells. This rarely works because the bees are good at hiding queen cells or they just make more.

THE NECTAR FLOW IS ON, MY BEES STAYED HOME, NOW WHAT?

As the bees fill the honey super with nectar, check every few days. When the top super is covered in bees & there is nectar in 6 or more frames, add an empty honey super. Bloom (new white wax) is another sign the bees are busy. Hopefully, you have drawn comb from last year for this. Don't stack multiple empty honey supers on all at once. This is an invitation for small hive beetles & wax moths to set up housekeeping in areas the bees are not policing. We use 2 oil traps per honey super in opposing corners to combat small hive beetles.

EXTRACTION – It's July. The nectar flow is over. The bees have made their crop & it's time to harvest honey. Here are some tips:

1. Before extraction, moisture content must be 18% or < or the honey will ferment in the jar. Measure with a refractometer.
2. Don't take off more supers than you can extract the same day. When the bees aren't there to police the honey, the small hive beetles & wax moths will invade.
3. You will need: fume board, Bee-Quick, extra outer covers for bottom & top of robbed supers, a strong back, enclosed extraction area to keep bees out, capping knife & scratcher, capping's tub, extractor, sieve, 5 gallon food grade honey bucket(s) with gate, jars & lids for bottling honey, labels if selling honey that contain weight in grams & ounces/pounds, your name or bee yard name, address, & phone #.
4. Do not cut honey with corn syrup or other additive & sell as pure honey. This is not legal.
5. After extraction of honey super is complete, return it to hive on top of inner cover for the bees to clean up the wet super. Remove it within 24 – 48 hours, freeze for 48 hours, then wrap in a commercial grade garbage bag & seal with duct tape to store for winter.