

It seems that with most beekeeping chores, what you face today is a direct result of what you did or didn't do in the preceding months or year. For instance, if you picked up the phone last year and ordered nucs or packages, you are probably anticipating their arrival this April or May. If you didn't order nucs, packages, or early queens, good luck finding them now! Each year, I sell nucs, and, usually, I'm sold out by Christmas. Yet, it pains me when an enthusiastic newbie calls in February, so very excited to have made the decision to start her own beehive, and I have to be the one to shatter her dream: "I'm so sorry, Sarah. I've been sold out of nucs for months now, and the back up list to my back up list is overflowing. But, don't give up. Keep looking. If you don't find anything now, there will hopefully be late season nucs and packages available in the Summer."

If you want bees or queens, the earlier you order them, the better, especially if you want a March/April delivery. At the UGA lab, when we know that we'll need bees or queens for a research project much earlier than we're able to produce them, I order in March of the previous year to ensure a delivery in the following March. Crazy? The delivery of bees in early Spring takes planning from several months to a year ahead.

When I first decided to start selling nucs, I thought about how easy it would be. Bees make more bees. So, each year, I'll just sell off the surplus to pay for my hobby and, as long as I'm dreaming, that mansion in the mountains, overlooking the ocean, with a crystal-clear waterfall flowing in the backyard, surrounded by a tropical lush forest . . . Ok, I'm back to reality now. But, in the beginning, I truly thought that a self-sustaining enterprise wouldn't be that big of a deal, and, in theory at least, it isn't. However, I quickly learned that selling nucs isn't the cakewalk that I expected.

In the beginning, I had to buy equipment. So, I ordered the woodenware for my first 100 hives from Brushy Mountain Bee Farm. To save a little money on delivery, I decided to drive my F-150 the five-hour trek north to Moravian Falls, NC. Just outside of town, Steve and Sandy Forrest have built their bee supply empire over the decades with a lot of sweat and tears. They are now known worldwide. I was lucky to have a few friends along for the journey: Bill Owens, the Georgia Master Beekeeper Program's only Master Craftsman, a firefighter, and the owner of a honey bee removal company, as well as the one and only, Kim Flottum, who needs no introduction. Bill just wanted to visit with our Brushy friends, Steve, Sandy and Shane, and Kim, of course, wanted to tag along in the hopes that there might be a story for *Bee Culture* magazine.

It was late Winter, and the forecast was for continued cold and snow. I had had the questionable judgment of attaching my F-150 to a 13' trailer that had no axle brakes. The trailer belonged to Bill, and I was just grateful to have something to accommodate the load from Brushy. As we were about to pull out of Athens, I asked Bill if he had any rope. He assured me that there was plenty. "Are you sure, Bill?" I asked, "Shane said there are going to be four pallets of stuff, and they will need to be secured for the journey down the mountain." Once again, he reassured that there was plenty of rope and no need to concern myself.

We headed north. Now, I've been to Brushy several

SELLING NUCS

Jennifer Berry

times before. Steve and Sandy have been gracious hosts over the years. But, for some reason, I made a wrong turn going up the mountain this time. I could've sworn that we were on the right road because I thought that I recognized certain hairpin turns and cliffs. So, we continued up and around the mountain until, all of a sudden, the pavement disappeared. We found ourselves on a single-lane, mud road with a steep mountain cliff rising straight up to our right and a 1,000 foot drop to the left. As soon as the truck and trailer slid in the mud trying to get up the mountain, it became crystal clear that we were not on the right road.

It was extremely desolate in this neck of the woods. We knew that we needed to turn around, but, before we could find an adequate space to do so – boom! We were confronted, head to head, by a huge cement truck coming the other direction. Where in the world did this guy come from? We're up here in the middle of nowhere! I thought for sure we were about to tumble our way down the side of the mountain as we crawled past each other with barely an inch to spare. But, we made it. As my companions began to loosen their white-knuckled grips on the arm rests, I decided that now was a good time to call Steve. "Oh yeah, you guys turned onto the wrong mountain," Steve explained, "Just turn around, come



Steve and Sandy Forrest, and Shane Gebauer of Brushy Mountain with the author.

back down, and, at the creek, take a left, not a right.” Oh sure, turn around, I thought to myself, but where? A Segway couldn’t turn around up here, let alone a pickup hauling a 13-foot trailer. Eventually, we came across a small house and were able to maneuver the reversal by backing the trailer into the driveway. I suspected that Kim, being a Yank and all, was a bit uncomfortable in the backwoods of the Appalachians. Bill must have had the same idea when he joined me in a whistling rendition of “Dueling Banjos” from Deliverance. In retrospect, that might have been a little bit insensitive. Sorry about that, Kim. *wink*

After a few days among friends, it was time to drive back down the mountain and head home to Georgia. Four heavy pallets of equipment were loaded onto the truck and trailer. When I asked Bill for the rope to tie down the load, he pulled out a section of lightweight rope no more than six feet long. Ok, maybe I’m exaggerating a bit, but it was in no way close to being long enough or strong enough to hold three pallets on a flat bed trailer. I think everyone but Bill stood there looking at that pitiful rope and laughing for at least five minutes. Bill was not amused. After gaining our composure, Shane disappeared for a few minutes before reappearing with several serious ratchet straps. The load was securely tied down. In the photo, on the ground left to right, there’s Steve, Sandy and Shane Gebauer, the Brushy Mountain general manager. I am on top, celebrating the first load for my business, and Uther, my red and white dog, is just always happy. At this moment though, I was completely unaware that it was about to be a very long ride home.

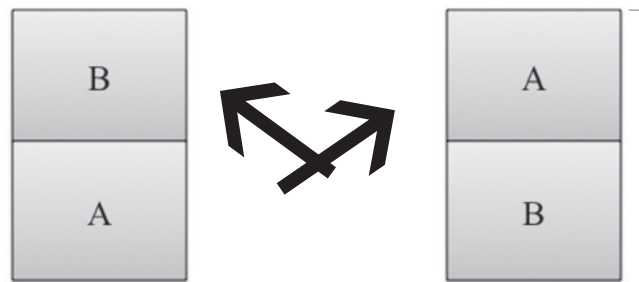
Finally, we were on our way. According to the radar, we were definitely going to hit some rain. Thankfully, though, there would be no snow. I’m sure you’ve seen what happens when the south gets an inch of snow. It ain’t pretty! Now, if you’ve ever driven a trailer this size, loaded down, and without brakes, then you may understand this next part. As we were coming down the mountain, there was a stop sign. I was driving pretty slowly, but as I pressed down on the brakes to stop, the weight on the trailer just pushed us right through the intersection! I was on the edge of my seat for the rest of the way home, but we made it without incident.

As I mentioned earlier, beekeeping is a yearlong process. We must always be one step ahead of the bees if we want to be successful beekeepers. Anticipation and planning are very important. It’s the same when making nucs.

We begin preparations for the next year’s batch as we watch the last of this season’s nucs ride off into the sunset with their happy new owners. Our first order of business is picking up the pieces by assessing the mother colonies. Queen quality is the first thing we look at. Queens that didn’t make the cut are given one more chance, but, if they don’t pass muster, they will be replaced with queen cells. Other important goals during the spring are to grow colony populations and to have hundreds of frames of new comb drawn. In my area of Georgia, we have about a three-month window during which the bees draw comb; so, we have to be ready with plenty of assembled frames with foundation, or we will miss the boat.

The only frames in our operation that are over three years old are the shallow frames used to collect honey. As new deep frames are introduced to the colonies, the

Hive Reversal



current year is written on the top bar. This helps us to know when those frames were drawn. We keep an eye on the dates and cull frames after they’ve been in service for three years. We used to put the date on the frames as we built them, but that didn’t always work because some frames didn’t get used that year. Then, we would forget to scratch out the old dates. As testimony, I have frames of foundation in my bee barn with drawn comb dates of 2010, 2011, and 2012 that have still not been corrected. We have tried other methods, such as dating the frames once they’ve been drawn, but, on a busy day in the apiary, we tend to forget, not have a permanent marker, or not remember what year it is. Plus, top bars quickly accumulate waxy build up that often makes writing on them, after the fact, ineffective. But, it is a good practice to date frames – especially brood frames – so you know how old they are. Why do we use a three year window? Well, over time, wax comb sequesters all sorts of contaminants: pesticides, heavy metals, and fungal and disease spores. Plus, if the comb is used to rear brood, the cells become darker and smaller over time due to foot traffic, as well as fecal matter and cocoons deposited by developing larvae. If you’re interested in reading more about this, my masters research paper compared old comb to new comb: www.ent.uga.edu/bees/publications/effects_comb_age.pdf.



Evaluating colonies in early Fall.



Business partner Bob Luckey.

Once Spring turns into Summer, we just let the bees be bees. We continue to evaluate queens, make splits, collect data on breeder and drone mother colonies, determine mite populations, and rear queen cells to replace poor quality queens. Nectar flows are coming to an end. So, any undrawn frames are removed. Drawn frames are inspected along with brood patterns. Weak colonies with poorly performing queens are combined and requeened.

To ensure proper mating for any late rounds of queens in the fall, drawn drone foundation is placed into drone mother colonies at least 50 days prior to when the virgin queens will be flying. Again, you have to be thinking in May about what you will be doing in August. If not, there may be an insufficient drone density in the environment for optimal mating. Poorly mated queens have crappy patterns and are susceptible to erratic supersedure, which can result in a queenless nuc.

Now, as Fall rolls around, the number of nucs that will be available for sale next year are determined. Therefore, plans consequently solidify for how many colonies are going to be necessary to fulfill those orders. I always include a 20% surplus of colonies going into the winter to buffer against unforeseen circumstances. Lots can go wrong between August and the following April. To this end, colonies are split and queen cells inserted. Another chore for this time of year is feeding. There are always those colonies that didn't make enough honey.

In mid to late Fall, we do evaluations on the queens, look at brood patterns, and check mite loads one more time.

By late Winter, we are usually still feeding a few colonies here and there, building and repairing equipment, and contacting customers. But, mainly, we're just waiting for Spring to arrive. There are usually days warm enough to start performing hive body reversals. Throughout the Winter months, the bees are slowly moving up into the stored honey supers. And, typically by February, they're at the top of the hive bumping their little heads against the inner cover. Other things have started as well: the queens have been laying eggs, and the brood areas are expanding. These are good things. The bees emerging now will support the plentiful production of bees in April. This is why reversing hive bodies as soon as possible is critical. It immediately provides empty, drawn comb for the queen to move into and lay eggs. Days in the 50s to 60s, with little to no wind, are perfect for doing reversals. I prefer not to work bees until temperatures reach the upper 50s. At lower temperatures, the outer bees in the cluster are still chilled, and, if they fall to the ground, they will be unable to crawl back into the hive and into the cluster.

Reversing hive bodies is a simple yet very effective method of taking empty boxes from the bottom and reversing them to the top just above where the bees are clustered. But, only do this if there is NO brood in the lower box. Otherwise, you will separate (split) the brood into two different locations, and the bee population may not be strong enough to cluster over both areas. Hence, unprotected brood will die (see Figure 1).

Spring time for nuc, package, and queen producers can be extremely nerve wracking; I hear it in their voices – including mine – starting around February. By this point, there is not a bee to be bought. Everyone in the southeastern portion of the country has completely sold

out. So, if something goes wrong and you can't deliver, your customers will be without options. They're relying on you to keep your promises from the prior year. Yet, weather can wreak havoc on a timeline. From experience, I know to tell customers that I'll have their nucs ready in April. I've come to realize that promising nucs earlier usually doesn't pan out. By the 2nd or 3rd week of April, the bees are usually ready to move to their new homes.

Every nucleus colony that is sold out of my operation must have three to four frames of brood covered in bees and one or two frames of honey/pollen covered in bees. All combs must be completely drawn with solid brood patterns encompassing most of the frame. Cold, wet Winters, like the one we're having now, really put a damper on brood production. Sluggish Winter brood rearing results in fewer early-Spring foragers, which yields less early honey and pollen stored, which, in turn, extends the handicap of a lower workforce population well into the nectar flow season. Arrrrrgggghhhhh! When this condition is pervasive, calls are made to delay nuc pick-ups for at least another week or two. And, trust me, customers become very anxious. I, too, become anxious to get them delivered. There's a tremendous amount of pressure building each day that the nucs are still in my possession. What if they swarm? What if they're stolen, attacked by bears, or fall victim to tornadoes, falling trees, fires, locusts, or meteorite showers? I'm telling you, it's a minor miracle to even be able to fall asleep at night in such circumstances!

It's February and snowing in Georgia as I write this article. They're predicting more snow and ice for us here in Athens and Atlanta over the next two days. I just hope we don't have the catastrophic ice storm that we did 14 years ago. Some folks were without electricity for two weeks. I also worry about tree limbs falling, knocking over hives, and exposing bees to frigid weather. There's always something to worry about when you're a beekeeper or farmer for that matter. My hope is that all of our preparations taken last year have ensured that the bees are numerous, toasty warm and with full tummies now. Remember, it's all about being prepared.

Be good to you and your bees!

See Ya! **BC**