



Fall Feeding

Jennifer Berry

If your bees need feeding, there's lots of right ways to go about it.

During the month of October it's great to be in Georgia. The days are cooling down and the evenings are just splendid. Plus, it's enjoyable working colonies once again. The steamy hot and humid (did I mention hot) days of July, August and sometimes September are gone. The days of wilting attitudes and heat exhaustion are just a bad memory. It's rough working colonies in Georgia during the Summer, especially the latter part (even though as I write this article it has been the coolest and wettest week in years thanks to the left over remnants of tropical storm Fay).

During the Summer the bees, at least in the Athens area, have nothing to do other than collect water to keep their colony cool. Very little is blooming so thousands of bored, frustrated, little foragers are stuck in the hive. And trust me they aren't happy about it and let you know each time you open that lid. Here's a typical August morning in a Georgia beeyard. By 8:30 a.m. you're completely soaked so the bees just stick to you, you can't see because the sweat is pouring in your eyes, the supers weigh a ton, honey is dripping everywhere, bees are popping you left and right, robbing becomes a huge concern, there's not a breath of air, chiggers are eating you alive, ticks on every blade of grass and there's snakes and black widows under every colony. I know some of you are shaking your head saying, "yep, been there, done that"!

But it's no longer August, it's October. Soon the leaves will begin showing off their magnificent colors and the sunsets will match the hues of the horizon. Fall is a spectacular time of year. But with Fall comes the end of many of our Summer pleasures. Gardens are rapidly cranking down and all those over abundant tomatoes, squash, cucumbers, cantaloupe, okra, and peppers you couldn't give away a few months ago, will once again become a precious commodity. Now is the time to plant our Winter gardens. It is also time to prepare our colonies for colder temperatures since they are just around the corner.

You can start by combining weaker colonies with stronger ones. If a colony has been limping along all

Summer, what is the point of keeping it around? Pinch the queen, and combine it with another colony, preferably one that needs a slight boost. Re-queening is also an option for queens that are past their prime. Older queens will stop laying too soon. You need a viable, young queen to continue laying into mid-November to insure a proper Winter population for survival. Also, check their pollen supplies. To enhance the queen's egg laying performance you will need fresh pollen coming in. If you don't see pollen coming in the front door add pollen patties. There are numerous pollen substitutes on the market. We tend to use natural pollen mixed with a pollen substitute and honey. The bees consume it quickly probably due to the presence of the honey.

Colony food supplies also need to be assessed this time of year. Here in the south we can experience a modest golden rod flow this time of year, depending on location. But my experience with the golden rod in the Piedmont region has been minimal to none. Don't rely on golden rod to supply your Winter needs (even in the



Plastic hive top feeder.



Pail feeder.



Plastic baggie feeder.

north). Colonies lacking in the amount of food required to survive the Winter need to be fed. If your colonies need a substantial amount of food you must start feeding today! Once the temperatures drop the bees won't be able to break cluster to collect the food. All the syrup in the world will be useless if the bees can't get to it.

Average sized colonies in this part of the country require a full *medium* super for Winter survival. If a colony is in need of this feed them roughly five gallons of 2:1 sugar syrup. I wouldn't recommend feeding the five gallons all at once because sugar syrup tends to go bad, especially in warmer temperatures. But feeding one to two gallons at a time has not been a problem for us.

Over the years I have tried practically every type of feeder available on the market and some not. I definitely have my favorites but every beekeeper or beekeeping situation is different. In the past we got into the habit of pulling most of the honey off our colonies in order to sell it on campus. Then we would have to feed in order for them to build up enough stores for the Winter. Yet, after doing the math it just wasn't adding up. By the time we set up the extracting equipment, pulled supers, uncapped, extracted, bottled, labeled, bought sugar, mixed up the sugar syrup, drove to all the apiaries and fed, plus paid for labor, it just didn't add up. Now, at least two medium (or shallow) supers are left on each of our colonies. Remember our nectar flow is over by June therefore each colony needs to endure nine months with little to nothing coming in the front door before the next flow arrives. To our north and south it is a different situation. Both regions experience a Summer and sometimes even a Fall nectar flow. But now the question at hand is how to deliver the feed necessary for their survival.

There are several different feeding options available to beekeepers: top feeders, buckets, zip-loc baggies, entrance feeders, and division board feeders. We have used them all but definitely prefer some to others. Most of the bee supply companies carry different versions of the same type of feeders but they all pretty much work the same.

Hive top feeders, as the name conveys, fit on top of the hive. To install all you do is remove the lid and inner cover, place the feeder directly on top of the upper super,

fill it with the appropriate amount of syrup, put the lid back on and walk away. There is little to no disturbance to the colony because you don't have to dig around inside manipulating frames. The bees will crawl up the hardware cloth from the super below and down to the syrup pool. They are made to fit a standard 10 frame hive body but there are ones available to fit nucs. Most now have a self enclosed, plastic unit holding one to five gallons of sugar syrup depending on the brand. These feeders tend to work the best, because they prevent leaking. You can also make your own top feeders (which we did once) but again, beware of leaking. If you need to put on a large amount of feed in a short amount of time this is a good option for you.

Years ago we made 50 hive top feeders out of plywood and such. The design was similar to the ones sold today with one exception; instead of a plastic insert we painted the interior with polyurethane. This lasted about a season, maybe two depending. Slowly over time they began to leak. And trust me this was a problem in our over crowded apiaries, especially in August. The slightest amount of sugar syrup that leaked outside the colony drew in bees by the thousands. Even the strongest of colonies were overwhelmed once clouds of bees forced their way inside. Another problem we experienced with the hive top feeders was the number of drowned bees (and yellow jackets) floating in the syrup. The bees were able to squeeze their way through the smallest of openings and under the inner cover/lid or they slide in-between the narrow openings in the wire mesh and outer wall. The newer hive top feeders have tried to eliminate this issue by making the feeders flush with the super and leaving no space for the bees to enter the syrup chamber. Finally there is the issue of cost. If you have more than one colony to feed the cost goes up considerably. I eventually got rid of all 50 of our hive top feeders.

Buckets are another way to apply large amounts of syrup at a time. The suppliers usually sell two gallon buckets with a removable plug in the center. You fill the buckets with syrup and turn it upside down with the plug intact. Vacuum suction keeps the liquid from pouring out. But be careful! If the seal has been compromised or



Boardman feeder.



Division board feeder.

the plug isn't inserted properly, the syrup may pour out all at once. Not a good idea to drench your colony with two gallons of sugar syrup. When feeding we bring a five-gallon bucket with us to the yard. Just prior to setting the bucket onto the colony we turn it upside down over the five-gallon bucket and let it drain. It's also best not to let it spill onto the ground around your colonies. It will attract robbers, ants, the beloved yellow jackets and other sugar seeking, hungry critters. Once syrup is no longer dripping we place it onto the colony. By the end of the day, depending on how many hives were fed, we may collect a gallon of syrup.

If your colony is close to starvation, place the opening of the bucket directly on top of the cluster. This allows the bees to use minimal effort to collect the syrup. Besides the syrup pouring out, there are other issues to consider when using buckets. One, the bees will propolize the metal grid attached to the plug which needs to be cleaned periodically. Second, you need an extra empty deep super per colony. Some beekeepers avoid this practice by placing the bucket directly over the opening of the inner cover and then laying the outer cover (lid) on top of the bucket, but I fear this approach. A good wind gust and both the lid and bucket will be tossed aside leaving an opening into your colony. However, I know several commercial beekeepers that use this method and have never had a problem. Plus, if your colonies are in the back yard this may be option worth considering. There is a way to avoid this all together. Cut a hole directly into the lid and add a plug. Then when you're ready to feed just pull the plug, place the bucket and walk away. This eliminates extra equipment needs plus the concern about weather affecting the woodenware.

The above two methods are the best for getting a good bit of syrup on at one time. But say you just need to get a few frames worth of honey into a colony. The past couple of years our method of choice has been to use zip-loc gallon baggies. We take the baggies, fill them with eight cups of syrup, smoke the bees off the top-bars, lay them on top of the frames, cut a four-inch slit (making sure not to slice into the bottom of the baggie), put an empty super on, add the inner cover and lid and move to the next colony. There is minimal cost involved, it's simple and there's little to no hive manipulation.

But as always there are a few problems associated with

this method too. If you are not extremely careful you can puncture the baggie (like placing it on the ground). You may not securely tighten the "zip-loc" allowing syrup to leak out the sides. Nails poking up through the top bars will puncture the plastic (happens while building frames). To check this run your hand or hive tool across the surface of the top bars where you plan to place the baggie. Trust me they are sharp enough to puncture the plastic. Also make sure the baggie is laying flat otherwise the syrup will leak out quicker than the bees can consume. Finally, environmentally speaking, the baggies can't be re-used again.

My least two favorite feeder options are entrance feeders and division board feeders but they do have their finer points. Entrance feeders are great for convenience. All you do is fill a quart jar, push the holder into the entrance, and plop the jar on. Easy enough and you can see when it is time to re-fill the jar. And again, you don't have to enter the colony. However, you are feeding only one quart at a time (although bigger feeders are available). This method could take months before you have any substantial amount of stores built up. Another problem is robbing (my favorite). The odor of the syrup will draw unwanted neighbors right to the front entrance, but if you only have a few colonies this may not be an issue. Finally, you can not use these during periods of cold weather.

Division board feeders eliminate the problem of robbing since the food is directly in the colony however you have to enter the colony and remove a frame in order for this to work. In addition to hive manipulation bees will drown, sometimes by the hundreds. In the past we added a piece of 8" hardware cloth cut to length and then folded and placed it into the feeder. This reduces the risk of bees drowning plus it helps keep the integrity of the feeder intact and open. Again you can't use it during cold weather because the bees are unable to break their cluster. Finally, during a nectar flow if you are not diligent about keeping syrup in the feeder they will fill it with comb. Best advice is to remove the feeder once a nectar flow is occurring.

Sometimes our bees just need a little assistance but just think what they give back in return.

Have a wonderful Fall.

See ya! **BC**