

It's Time To... Prepare for Winter

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Three things are required for winter survival.

One Queen to lay eggs. A colony needs a queen for worker production starting in August to build up the worker population. A strong colony in the fall has a good chance of surviving the winter. The queen will stop laying in late fall as the days get shorter and cold weather arrives, then start laying again in January. The brood is raised in batches in January gradually changing to continuous egg laying after a month. The queen lays no more eggs than the workers can incubate. A large population of workers enables the colony to grow strong prior to the main nectar flow in the spring.

12,000 to 20,000 workers to make heat. The number of workers required is vague and varies with races of honey bees. The workers must be healthy too. If there are many sick or diseased workers their reduced longevity results in the colony failing during the winter when workers die young and the cluster becomes too small to make enough sustaining heat. Requeening using the Coweta Beekeeping Method's Summer Queen rearing method reduces mite loads during the summer and fall resulting in a healthy worker population in the fall and worker longevity during the winter.

30 pounds of honey to be consumed to make heat. The piedmont of Georgia has mild winters compared to Ohio or other areas further north. In Ohio a colony needs a deep super of honey to survive the winter. All the beekeeping books are written in the north for norther beekeepers and teach beekeeping with two deep supers, one for the cluster and one for honey. We only need a deep for the cluster with a shallow or medium super of honey for winter survival. This configuration works with nectar management too. A shallow super of honey contains about 25 pounds of honey with more honey stored in the deep super.

Winter preparations

Winter preparations start in August if not started earlier. Feeding in August with syrup at a 1:1 ratio by weight creates an artificial nectar flow encouraging the queen to lay eggs and increase the worker population. (A 2:1, sugar to water ratio, is recommended by many books however the honey made from 2:1 syrup may crystalize in the comb as reported by Bob Binnie) On August first there are three months before cold weather arrives, plenty of time to complete the task. All winter preparations must be complete by the end of October. After October the syrup is too cold to be consumed by the bees.

The colony has found little or no nectar since May requiring them to consume the honey left in the hive after harvesting. A shallow super of honey in May could be gone by September. Do not rely on a

fall nectar flow. The piedmont of Georgia has little or no nectar in the fall. Goldenrod and aster start blossoming about September 15 and cannot be relied on to produce a honey crop. Don't get caught in October finding low honey stores in your hives and not enough time to feed risking starvation during the winter.

Feed fast, not slow.

Feed each colony using a feeder that encourages quick syrup consumption. Feeding slowly will nourish the colony but not leave much to be made into honey. Feed gallons of syrup. A gallon of 1:1 syrup contains about 5 pounds of sugar. A colony with little honey stores will need more than six gallons of syrup to make 30 pounds of honey.

A Boardman feeder in the entrance will not get the job done. Three Boardman feeders in the entrance of a ten frame hive will feed fast and leave enough room for the bees to use the entrance. Keep the jars full. I like hive top feeders better and pails best.

My method using pail feeders.

I place two 3/8 inch wooden strips on top of the frames of the top super to keep the pail above the frames. I invert the feeder pail of syrup over a 5 gallon syrup storage pail letting the syrup drain until it stops. After the feeder pail stops draining I place it on the two wooden strips. An empty deep super is placed on the hive then the inner cover and telescoping cover on top to keep the weather out. I use either two of the one gallon or one of the two gallon pails on each hive. Both pails cost about the same making the two gallon pail cheaper per hive.

[Brushy Mountain 1 gallon pail](#)

[Better Bee 2 Gallon pail](#)

Continue feeding until the hive has 30 pounds of honey minimum. The shallow or medium super should be full and more honey should be stored in the deep super. When there is enough honey in the hive or the end of October arrives remove all feeders and install a mouse guard.

The goal of fall feeding is to supply the colony with everything it needs to survive winter and build up strong starting in January preparing for the nectar flow in April.

Fall workers should be well nourished and fat preparing them for the cold winter ahead.

Inspections start in late January or early February on a warm day. One of the most important parts of late winter inspections is to check for adequate honey stores. Colonies with low honey stores must be fed to prevent starving. Colonies with adequate honey stores should not be fed. Feeding too much or too long in late winter enables the colony to swarm.

Feeding in the fall should eliminate the need to feed in late winter reducing the potential of swarming.