

Spring Management

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Wintered honey bee colonies should be checked in early or mid-March to assess the amount and position of honey stores. Lift the outer cover and note the position of the cluster. In moderate temperatures, strong hives will often have bees present on the inner cover, chewing and/or drinking collected water. In cold temperatures, the cluster should be in the center of the hive body beneath the escape hole of the inner cover. The amount of honey stores can be estimated without removing the inner cover by tipping the colony slightly on its edge. If the weight is sufficient and the cluster is centered in the second hive body or situated in the lower hive body, close the hive and check it again in two or three weeks.

Hives that have the cluster positioned along the hive body wall should be centered. On a day with no wind and temperatures near 40 degrees, remove two or three empty frames from the center of the hive and move the remaining honey and cluster into the gap. Try to move the clustered bees using minimal disturbance. This is best accomplished by sliding two or three frames along the frame rest (at a time) using the hive tool as a pry bar against the hive wall or adjacent frames. Place the remaining frames of honey in the newly created void.

Colonies that are low on honey stores with large bee populations should be fed to prevent starvation. In late winter/early spring it is best to feed frames of honey to populous hives that was saved from the previous year or obtained from dead hives (provided it is free of American foulbrood and other disease). Individual frames of honey are positioned on either side of the cluster, whereas a hive body or super filled with honey is stacked above the cluster. Do not stack hive bodies or supers with only a little honey above the cluster because the bees may move into these partially filled boxes and starve.

If honey isn't available, the best feed during late winter/early spring is sugar candy or commercially prepared fondant. Candy boards are constructed from $\frac{1}{4}$ inch plywood or Masonite cut to fit on the top of the hive with a $\frac{3}{4}$ -1 inch wood rim fastened to the perimeter. The candy board looks like an inner cover without the escape hole. The candy slurry is poured directly into the candy board and once hardened is fed to hives by replacing the inner cover with it (sugar side down) beneath the outer cover. The candy slurry can also be poured into pie tins or cookie sheets $\frac{1}{2}$ - $\frac{3}{4}$ inch thick that will fit into the inner cover rim after hardening. Grease the tin with vegetable shortening and line it with wax paper before pouring the candy slurry for easy removal and storage. Hives that are fed candy should be rechecked every 7-10 days and fed as needed.

Following are several recipes for sugar candy:

1. Boil 1 pint of water, add 5 lbs granulated sugar and heat to 240 degrees. Stir the solution frequently in order to prevent burning or caramelizing the sugar. The solution will eventually clear during the boiling process as the temperature approaches 240 degrees. Remove the sugar solution from heat and cool to approximately 180-200 degrees and pour into the molds or onto the candy board.
2. 12 lbs sugar, 1 ½ lbs liquid glucose, 1 ¼ quarts water, ¼ tsp. cream of tartar. Boil to 238 degrees, cool, pour.

Note- Higher boiling temperatures result in a harder candy.

In emergencies, granulated sugar can be fed to hives. The granulated sugar can be fed above the inner cover or situated on newspaper directly on the frames.

Beekeepers should visit colonies again during the later part of March or in early April on a day that is at least 50 degrees. A quick check of the brood pattern will give an indication of the queen's performance and colony condition. All stages of brood should be present and uniform in appearance. Symptoms of queen failure include: drone brood in worker cells, spotty pattern, or the absence of brood. The amount of honey stores should also be estimated since honey consumption will increase with brood rearing. Hives that are light on reserves should be fed a 1:1 (water: sugar) syrup. Feed the syrup from above the cluster via an inverted jar or pail above the inner cover escape hole and protected with an empty hive body. Miller (hive top) feeders also work well during the spring. Avoid using entrance feeders in cool temperatures. The bees will not use them while clustered. If the weather permits, bottom boards can be cleaned during this inspection. Do not reverse brood chambers at this time and keep entrance reducers in place.

Hives that require feeding must be checked frequently and syrup should be replenished as often as needed. If syrup is fed in 1 or 2-gallon containers, a weekly check is usually enough. Typically, bees will stop feeding on supplemental feed at dandelion bloom since the bees are able to forage for nectar. As soon as the nights start getting warmer (usually around red maple, dandelion, and fruit tree bloom), unwrap colonies. If the queen is still in the top hive body and the bottom hive body is empty, reverse the hive bodies to encourage population buildup. Keep the entrance reducers in place until late May or early June, when the nighttime temperatures moderate.