



PREPARING FOR WINTER

Last Ditch Efforts Before Winter Arrives

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Do you have a queen?

Inspect your bees (look inside) and make certain that the Queen is there. The easiest way is to find eggs. One egg per cell means the Queen is present. Be sure to look for eggs, not larvae. Finding eggs means the Queen was there two days ago. Larvae could be three to eight days old, so finding larvae is no guarantee that you have a queen. If you wait too late in the season, you will discover that eggs and larvae are few and far between in the autumn. In that case, the surest method is to actually find the Queen. Be patient, and look carefully.

Do the bees have enough honey?

Your bees need plenty of food (capped honey) for the winter. Make certain that the upper deep hive body is full of honey. It is essential for their survival. It is the fuel for their stove. Without it they will certainly perish. The hive will need about 60-70 pounds of honey going into the winter.

Feed your bees

The colony will accept a 2-1 sugar syrup feeding until the weather is too cold for them to leave the cluster. The bees form a loose cluster at 57° F and as the temperature drops the cluster contracts and tightens. Feeding is useless after the cold weather contracts them into a tight cluster. Keep feeding them until they stop taking the syrup, or until the temperature drops and puts them in cluster. A hivetop feeder works best.

Fight the mites

Help the winter bees fight the mites. When winter bees die there are no replacements to make up for the attrition. It is unlike the summer growing population with a Queen laying 1200 eggs daily.

Acarapis Woodi, the internal, invisible Tracheal Mite can be controlled with the use of Menthol.

Varroa Jacobsoni, the external mite, requires the use of Apistan®, a chemically treated plastic strip that controls the spread of this predator of honeybees. Two such strips inserted next to the brood, one strip on each side, for 42 days stops this blood-sucking mite in its tracks.

Honey used for Human consumption must be off the hive when any medications are used.

More about the winter cluster

The winter cluster is started in the brood chamber when ambient temperatures reach 54 to 57 F. When cold weather comes, the cluster is in the center of the two hive bodies. It covers the top bars of the frames in the lower chamber and extends over and beyond the bottom bars of the frames in the food chamber. The organization of the bees is such, that they touch honey on the outer edges of the cluster.

Provide adequate ventilation

The temperature at the center of the cluster is maintained at 90-93 degrees. The warmer air from the cluster rises and hits the inner cover that is much cooler. The moisture that forms from condensation drips down upon the bees as ice-cold water. The outer bees of the cluster form an insulating shell of one or two inches. Their temperature holds at about 45 degrees even though air temperature in the hive may be down to zero! These are the bees that bring with them, the honey they are touching, as they rotate position with the bees inside the cluster. A sort of share-the-warmth movement. That dripping ice water can really have a negative effect upon this

delicate exchange of food and warmth. Avoid the problem completely with proper ventilation and keep the colony dry. Place the inner cover on the top deep body, flat side down---regardless of what you may have read elsewhere. The oval hole in the flat part should be left half open, never totally close it. It can be left completely open. The open hole in the ledge in the front of the cover should also be left open for ventilation. If you have a home-made inner cover without an opening in it's front ledge, I suggest that you put one there.

When you place the outer cover over the inner, be certain to push it forward (standing behind the hive), so that the opening in the ledge of the Inner, though protected, will not be closed by the Outer. You actually can close the ledge opening by simply pulling the outer cover toward the rear of the hive, should it ever become necessary to close it again (for example if you had a robbing situation).

Finish the ventilation job with 4 postage stamp sized pieces of wood from the thin end of a wood shingle or any other very thin piece of wood. Glue these to the four corners of the inner cover's flat underside. This will make an air space between the top edge of the upper deep hive body and the inner cover. The space between the two pieces will be one sixteenth of an inch or less. This little caper will function only if the outer cover is put on carefully. Try to place it on the inner cover equal-distant from side to side. You can feel it with your fingers when you stand behind the hive. This causes a gentle flow of air to carry off the moisture from the underside of the inner cover. The colony will remain dry.

Feed and medicate

- Medicated Syrup. Mix 10 lb. Sugar to 2½ qts of water (this makes 1 -1/3 gallons syrup). In a separate small jar half filled with luke-warm water, add one teaspoon each of Fumidil® and Terramycin®. Shake the jar until dissolved. Stir the jar's contents into the COOLED syrup. Feed at top of hive using a hivetop feeder. This is a treatment for Nosema and Foulbrood.
- Apistan®. Place 2 Apistan® strips into the hive. One strip goes between frames 3 and 4 and one strip goes between frames 7 and 8. Leave them in the hive 42 days minimum...52 days max. This is a treatment for Varroa mites. NOTE: DO NOT LEAVE APISTAN STRIPS IN THE HIVE OVER WINTER.
- Menthol. A prepared bag containing 1.8 oz of menthol crystals should be placed on the top bars toward the rear of the hive. Set on a small piece of aluminum foil to prevent the bees from chewing holes in the bag and carrying it away. Leave in hive for 14 *consecutive* days when the outdoor temperature is ranging between 60-80°F. This is a treatment for Tracheal mites.

Tracking Strips: This detection device may be used at all times except when honey is on the hive for human consumption. Spread about 1 tablespoon of slurry* on a thin 3 by 24 inch plastic Plexiglas strip. Place the strip in entrance of hive bottom board at a diagonal (so the strip covers the bottom board from the front right corner to the left rear corner of hive. Leave strip in place for 3 days. Remove and examine. Varroa mites can be seen as coppery red or brown spots with the naked eye. Clean and reapply until you do not see any mites. The strip will kill some mites but other treatment is necessary. This should be considered as a detection tool, not a treatment.

*Slurry for Tracking Strip:

- Vaseline® petroleum jelly -- standard size jar is 13 oz.
- 1-tablespoon wintergreen oil (approx. 1/2 oz.)

Mix wintergreen oil into petroleum jelly. Use this slurry to spread on tracking strips.

For medication supplies and best-quality hivetop feeders, please visit www.bee-commerce.com.

Happy beekeeping!