Late Summer to Early Spring Activities

Late Summer

Ventilation - This is a year round issue but it is especially critical during cold months. Even in winter the center of the bee cluster will be around 95°F. Warm air rises, consequently the inside temperature at the outer cover may be even higher. The cluster gives off substantial amounts of respiratory humidity. As a result, condensation collects on the inside of the cover. High levels of moisture trapped inside the warm interior for extended periods produces an environment perfect for fungal and bacterial growth.

If your inner cover has a notch cut into it's outer frame, this will probably provide adequate ventilation. Some of mine don't. On those, I place a small piece of wood (like a paint stirring stick) on top of the inner cover frame at the rear of the hive. When the telescoping cover is put on top, this stick raises the back edge slightly, creating a small ventilation gap.

Weak Colonies - This too, is a year round activity. Combine weak colonies with stronger ones. There's nothing to be gained by trying to overwinter a weak colony. It probably won't survive and if it does, in the spring you will almost certainly still have a weak colony.

Queen - You need a healthy, vigorous queen to produce overwintering brood. In late summer check that your queen is producing good worker brood. If the capped brood pattern is spotty or there are a significant number of drone cells, it is time to replace her. Many beekeepers replace their queens annually as a precaution.

Varroa - Check and treat (if necessary) while your colony's population is high. If you wait until they are producing winter brood, you may be too late. Brood production declines as winter approaches. At the same time the Varroa population is at its peak. A larger proportion of brood cells will be infested and multiple foundress mites will more likely enter each cell. The result is that a greater percentage of new brood will be compromised and the damage to each more severe. Many strong summer colonies that seem to 'mysteriously' die during the winter are often a result of Varroa infestation.

You can estimate the level of infestation by placing a 'sticky sheet' and screen on your hive's bottom board for 24 hours. A mite count above 60 - 190 indicates that the colony should be treated.

From my soapbox:

With all pesticides…..Read and follow the label instructions….not only to be safe, but they are Federal law.

Apistan and Checkmite - Easy to apply, conventional pesticides. Two strips are placed in each 10 frame brood box and left for a period of 42 - 60 days (depends on which product….read the directions), then the strips are removed. The active ingredient in Checkmite is an organophosphate. There is considerable pressure on agriculture from the FDA to eliminate or reduce the use of organophosphates. Apistan uses a synthetic pyrethroid and has been the 'gold standard' of Varroa treatment for a number of years. Overuse of both of these products by commercial beekeepers has resulted in substantial mite resistance to them. I don't use either of these products in my hives.

ApiLife-Var - This is a thymol-based insecticide. It is somewhat labor intensive. It requires 3 treatments spaced 7 - 10 days apart. You must cut saturated wafers into 4 pieces and enclose each in screen mesh. These four pieces are placed on top of the brood box frames. Various studies seem to rate its effectiveness from 60 to 90%. Don't plan to use it during high temperature periods. Above 90ºF it can cause brood problems. It is promoted as 'safe' but can be very hazardous to handle. It is a corrosive and can cause 'irreversable eye damage' as well as other problems if handled carelessly. I'll repeat again…as with all pesticides…..read and follow the instructions….not only to be safe, but they are Federal law.

Sucrocide - This is a sugar ester compound that acts like an insecticidal soap. It is mixed with water to produce a concentration that is toxic to the mites but not the bees. It is applied with a garden type sprayer. Each hive must be completely disassembled and every frame sprayed….the idea is to wet as many of the bees as possible. The product must come in contact with the mite to kill it. This process must be repeated 3 times at 7 - 10 day intervals for maximum efficacy. Studies have shown that when properly applied this product is very effective…over 90%. Unfortunately, it is also the most labor intensive to use.

Fall

American and European Foulbrood - Although I don't do preventative antibiotic treatments for these diseases many experienced and knowledgeable beekeepers do. If you are so inclined, an application of Terramycin in the fall and another in spring should do the trick.

Tracheal mites - Again, I don't treat for this disease as a preventative, but many others do. If you choose to you can make up 'extender patties' by mixing sugar and Crisco shortening. Place a patty on a piece of wax paper and put it on top of the brood frames. You can use these throughout the year.

Honey stores - It has been estimated that a typical colony of bees in Georgia will consume between 30 and 50lbs of honey during the winter. There are a lot of variables. During a colder winter bees will consume more than during a mild one. The same bees located in south GA will consume less than if they were in the colder climate of the north GA mountains. The number of overwintering bees as well as their genetic makeup also enters into the equation.

I overwinter my bees with a deep 'Langstroth' brood box and a medium super. I want to see the super full of capped honey at the onset of cold weather. Early in the winter, usually in late November or early December I remove the queen excluder. The cluster of bees will move upward in the hive as they consume the stored honey. If the cluster moves completely above the excluder, the queen won't be able to join them and she will perish. By late winter, usually beginning in January I will periodically check my supers to be sure that there is still honey remaining. I pick up a corner of it and if it is light I know they are getting low.

Winter

Winter feeding - If your colony gets short on food during the winter, you must be prepared to feed them. I use a 2:1 sugar to water solution. I prefer to use hive top type feeders. During cold weather the bee cluster will move upward in the hive seeking food. They might have a full entrance type feeder but since it is lower in the hive they may not find the food. If you use a division board feeder you must expose the bee cluster when you access it. During cold weather this exposure can be deadly to a colony of bees already near starvation. With top style feeding you don't have to directly expose the bee cluster and they are likely to find the food.

Swarm control - In our area (the GA piedmont) it is a good idea to begin checking for swarm cells in early March. If you don't thoroughly go through your brood frames and remove all of the swarm cells, you will lose much of your spring foraging force….take it from the voice of experience. Look those frames over closely. Some of these cells are concealed in corners and along foundation edges and are easily overlooked. A single remaining swarm cell will result in the colony swarming. You should do this at least every 10 days until the end of May. It’s a major nuisance, but much better than the losses from a swarm.