Originally written for beekeepers in New York state, with a slight adjustment in time frame, this article is a very nice, concise description of areas of focus for beekeepers as the end of winter approaches. Please note that it was written before it was common knowledge that our honey bees had developed resistance to varroa mite treatments such as Apistan™ (fluvalinate) and CheckMite™ (coumaphos) and the American Foulbrood treatment, terramycin.

There is now a fairly easy test to determine if your honey bees are resistant to either fluvalinate or coumaphos. A description of the Pettis Resistance Test (this bioassay was developed by Jeffrey S. Pettis, Research Entomologist at the Bee Research Laboratory in Beltsville, MD), can be found at the Midnite Bee website (http://www.mainebee.com/articles/Pettis.php).

Finally, it should also be noted that bears have been quite a problem in New Jersey this winter. Bear activity increases around April 1st with hungry bears casting about for food as the weather warms. Honey bee brood is very attractive—if you're in a bear area, make certain your electric fencing is in good working order. For more information on the black bear in New Jersey, see the NJ Divison of Fish & Wildlife website (http://www.state.nj.us/dep/fgw/bearinfo.htm).

Thank you author Fred Ludewig (fludewig@nycap.rr.com), a retired beekeeper now living in Saratoga Springs, NY, for permission to post this article on the New Jersey Beekeepers Association (NJBA) website. Thank you, also, to NJBA Past President Dan Kurela for bringing it to the webmaster's attention for posting.

SPRING MANAGEMENT FOR THE BEEKEEPER

Prepared for

SOUTHERN ADIRONDACK BEEKEEPER ASSN.

by Fred Ludewig

During the winter months beekeepers do their dreaming of the season to come. They also have the opportunity to build new equipment repair old equipment and make plans for the coming year. Meanwhile, the bees are clustered in the hive keeping themselves warm by eating honey.

Winter generally provides a nice warm day with bright sun and near 50 degrees. This brings the bees out of the hives for cleansing flights. Beekeepers are given an opportunity to observe which hives are alive and active. In February the queen should be starting to lay and there should be a small brood section in the center of the cluster.

Flights should be more frequent in March. As March progresses, the days will be warmer, the queen will gradually increase her laying, and by the end of the month the bees will be bringing in pollen from poplar and pussy willows. Mid to late March is the time to insert Apistan strips for Varroa mite control. This is also the time to put in Terra patties or dust with Terra powder for AFB and grease patties for Trachael mite control.

Near the end of March or beginning of April, on a day when the sun is shining and the temperature near 60 degrees, the beekeeper can make the first inspection of the hive. This inspection is primarily to determine the amount of honey remaining. A minimum of four frames of honey per hive should be present for raising brood during the month of April. With the increased brood rearing stimulated by warmer weather and pollen flow, a good deal of honey is needed to feed the developing brood. Many hives starve in April.

When the inner cover is removed, the majority of the bees will be in the center 4 to 6 frames. The outside two frames on other side should contain honey. Unless the temperature is above 65 degrees, the examination of the brood is not recommended at this time. If the hive does not have sufficient stores, feeding should be started. Frames of honey are the best feed; however, sugar syrup (1 part water and 1 part sugar) is also a

good feed at this time of year. The syrup should be fed by a feeder above the inner cover or a division board feeder. Entrance feeders are not recommended for this early in the season

If during this early inspection a hive is dead, an effort should be made to determine the cause of death. If there is no honey in the hive, and there are a lot of dead bees with their heads in the cells, the hive probably starved to death. If there are very few dead bees and there is honey and an excess of pollen (several frames full), the colony was probably queenless the previous fall. In either of the above cases, capped brood is not present. The above two conditions used to be the most common cause of winter loss of the colony. Now, mites are a more likely cause. A large pile (several quarts) of dead bees in front of the hive is generally due to Tracheal mites. The hive will be empty of bees and generally well stocked with honey and little or no dead brood. Similar conditions with less bees outside and spotty capped broad may indicate loss due to Varroa mites. Dead mites may be detected on dead bees or in the bottom of hive.

Another cause of colony mortality is from dysentery. This can be caused by prolonged cold weather which prevents cleansing flights or by Nosema disease. The bees are forced to defecate inside the hive which causes dysentery. Normally, a large number of dead bees will be in the hive. There will also be honey and brood remaining. The top bars of the frames will be covered with large brown to black spots (1/8 to 1/4 inch diameter). Thee hive will have a strong odor. The outside of the hive around the upper entrance will have a solid coating of fecal material.

If the dead colony has a moderate number of dead bees and capped brood, it is suspicious of disease. Further examination should be undertaken to determine if American Foul Brood is present. If AFB can not be recognized, a sample of comb with dead brood can be sent to USDA in Beltsville, MD.

Regardless of the cause of death the dead hive should be removed from the bee yard. The frames from the queenless, starved, mite-killed hives or dysentery hives can be reused. However, determination of the type of disease will dictate whether the equipment can be re-used or must be burned.

About the middle of April, if the weather is dry and warming up, the wrapping on the hives may be removed. The entrance cleat can be removed to allow raking out any dead bees on the bottom board. The entrance cleat should be replaced after cleaning the bottom board. The weather can tm cold in the end of April and the queen is starting to lay m the lower hive body. Skunks are actively raiding bee hives during April since other sources of grubs and insects are not yet plentiful. Skunk damage can be prevented by attaching mesh chicken wire at a slant in front of the hive so the skunk cannot reach the hive entrance.

During the first week of May, dandelions should be in bloom. This is the first major nectar flow for the bees. This is also the time for the first complete inspection of the hive. Again, warmer days are preferred. The brood nest should be inspected. Things to look for are:

1. Disease (American Foul Brood, European Foul rood, Chalkbrood, etc.). If disease is found, appropriate corrective measures should be taken.

2. Brook pattern- There should be several frames nearly full of brood in upper hive body and some brood in the top of frames in lower hive body.

3. Upper hive body should be full of bees. If population is low and/or brood pattern is poor and no disease present, requeening is required.

4. This is the time to remove the Apistan strips and any unused Terra patty.

5. If colony is free of disease and has a large bee population, the hive bodies should be reversed. This will tend to prevent swarming.

6. At the same time the hive bodies are reversed, a super should be added. If queen excluders are used, one should also be added at this time. The queen excluder should be placed below the super.

7. If the hive is strong i.e., the upper hive body has 6-8 frames of brood and the lower hive body has 4-5 frames of brood, the colony may swarm even if the hive bodies are reversed. Therefore, additional control must be taken. This is a good hive to use to make a divide or start nucs. If increase is not desired, 3 or 4 frames of mostly capped brood can be placed in the center of a third hive body above a queen excluder. Frames with drawn comb should be used to fill up the space in the hive body from which the frames of brood were removed. Nurse bees will move up and care for the brood, and when it batches, the cells will be filled with honey. In the meantime, the queen has the frames below the excluder for egg laying.

Additional supers will be required as the season progresses. However, this early May inspection and management is probably the second most important part of the beekeeping year. The most important is the control of the Varroa mites by proper use of Apistan strips in the early spring and fall.