

This bulletin covers beekeeping management from about mid-June until mid-August. Colonies should be inspected about every two weeks until such time that the nectar flow is well underway and honey supers getting heavy. The inspection of the colony should focus on five key conditions:

## 1. Brood and Queen

- Learn to recognize eggs and brood in various stages of development. Single eggs situated in normal position in the cells confirm a laying queen.
- Brood (eggs, uncapped larvae, capped pupae) should be on several frames. Each brood frame should be about two-thirds filled with brood. In August, it is normal to have a decrease in brood production.
- The brood pattern should be solid, ie. not a mixture of capped and uncapped brood in the same area. Check on the availability of stored honey and pollen since poor brood patterns can result from food shortages.

Queens that fail to produce a good volume of brood or spotty brood will not produce a populous colony. Alternatives are:

- Replace the queen with a newly mated queen.
- Kill the queen and allow the colony to produce emergency queen cells from which new queens will emerge. One queen survives and mates, but such a colony will not likely produce a honey crop but it will develop sufficiently for wintering. At this time of the year, there is little chance of swarming providing there is sufficient space.
- If wintering is not considered, kill the queen and unite the colony with another (see instructions below).

## Drone Layers

Drone layers are queens that are no longer laying fertilized eggs due to age, insufficient matings, injury or other causes. All the brood emerging from worker cells are small drones. The unfertilized eggs look normal and are properly placed in the cell, but the capped brood is dome shaped and spotty. Such a queen must be removed and destroyed. The colony should be requeened or united with another hive of medium strength.

## Laying Workers

Laying workers are found when a colony is without a queen for some time. Some workers will assume pseudo-queen roles be fed a rich protein diet that enables them to lay a few eggs. Finding multiple eggs in each cell or on the sides of cells is a key indicator of laying workers. Such a colony is usually weak in population and it is best to shake the bees onto the ground several meters away. The workers will seek another hive while the laying workers will be lost.

## 2. Food

In parts of BC, colonies are managed from early spring to take advantage of a single floral nectar source. The management cycle is geared to build up the population as fast as possible to ensure a large field force of foraging bees. Near the start of the nectar flow, these colonies are often placed with little or no food reserves. When the single nectar source doesn't materialize due to inclement weather, drought or other cause, the colonies will face starvation. Lack of food reserves will lead to rapid decline of brood production. Close monitoring of food reserves is essential.

## 3. Disease

Learn to recognize brood disease symptoms when checking for queen performance and food. In case brood disease is detected, remove the affected frame(s) and destroy. Apply antibiotics promptly. To prevent residues and honey contamination, the use of antibiotics can't extend beyond mid-June at the latest (refer to Bulletin #205 – Honey Bee Disease Detection and Bulletin #204 - Antibiotics for Control of Bee Brood Diseases

#### 4. Space

An increasing population of bees will require additional comb space before the main nectar flow begins. Add supers as required. Adequate space is one of the keys in swarm prevention.

#### 5. Swarming

Refer to Bulletin #404 - Swarming for information about swarm management.

#### Other Considerations

- **Uniting Colonies.** A queenless or weak colony may be united with another. Place the weak colony on top of the medium strength colony. Remove and kill the most unsatisfactory queen in one of the two hives to be united. Place a sheet of newspaper over the stronger hive, cut a few slits in the paper with a hive tool, and place the weaker hive on top.
- **Queen excluders.** Queen excluders are used between brood chambers and honey supers to prevent the queen from laying eggs in the honey super. The queen cannot pass through the excluder while worker bees can. Queen excluders are some hindrance to the free vertical movement of workers in the hive. When an excluder is used, it is usually placed above the second brood chamber at the time the third 'box' or first honey super is put on. The recommended procedure:
  - Reverse the two brood chambers, as described earlier;
  - Place the excluder above the new second; then place a super of drawn combs above. Do not put a queen excluder over a second brood chamber that is plugged with honey or has a wide rim of capped honey above the brood. If such a situation is present, reverse the brood chambers first.
  - Do not place a honey super of foundation directly above the queen excluder. Foundation should be put on in the fourth 'box' (second honey super) or intermingled with other combs in the hives for best results.
- **Mid-Summer Supering.** Know when the nectar flow takes place in your area. Don't over super the colony when the flow comes to an end. Remove and extract honey promptly when most is capped.

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