

NORTHERN ASSOCIATION OF COMMUNITY COUNCILS

General Beekeeping Schedule and Information

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General Beekeeping Schedule and Information
From Bruce McLean (Western Sky Apiaries)

Here is an outline of annual treatments and hive manipulations with rough dates which will vary from year to year:

Late March to Mid- April

- Check hives at this time to estimate winter survival. Weaker hives are often lost in early spring when hive population can dwindle
- Some beekeepers will begin to feed in late March but unless the hives are very low on honey it is better to start feeding in late April
- Best to keep hive wrapped up until early May

May (busiest month for beekeepers)

- Early in the months:
 - Clean bottom boards
 - Remove winter wraps
 - Apply medication
 - Extra brood boxes may be given to the hives with large population
- Last week in May (when dandelions are blooming):
 - Best time to split the hives either using mated queens or letting them raise their own queens
 - Weak hives may have problems with the queen and she may need to be replaced

June

- When the dandelions have finished, there are 2-3 weeks when not much nectar is coming in. Hives need to be fed sugar syrup during this time, especially since they are using a lot of resources to feed brood and build their populations
- As soon as the frames begin to whiten with new wax, it is time to begin adding empty supers
 - By the end of July most hives will have 3-5 honey supers placed above the brood boxes. Excluders may be used to restrict the queen to the brood chambers

July- August

- The first removal of honey supers will usually take place the last week of July or first week in August
 - It is best to wait until the honey frames are at least 1/3 capped with wax. If they honey is not ripe (ie. Contains too much moisture) it can ferment after it is extracted and put into containers, but this is rarely a problem in Manitoba
 - Usually two empty boxes are put back on the hives as the full ones are taken off

- If these fill up, then more empty boxes can be added or a second extraction of the honey can be made. Followed by the final extraction in September

September

- If the alfalfa bloom continues the bees can produce a significant amount of honey in the first half of September
- The last and final extraction
- Then it is time to remove the last honey supers and excluder (if it is being used) and then apply antibiotic and mite control treatments, followed by pails of sugar to prepare the hives with food supplies for the long winter ahead

October and November

- In late October or early November hives should be prepared with winter insulation. At some point when there is enough snow hives can be completely covered and this will greatly improve winter survival
- Nothing more to be done until April

Extra Notes

Feeding hives

- In the fall, hives are fed with sugar: water in a 2:1 ratio by eight (ie. mix with 5gals (50lbs) of water is 100lbs (90kg) sugar)
- In the Spring, the queen is stimulated better with a more nectar-like concentration of 1:1 sugar to water
- In spring a hive might use 2 to 3 gallons of feed whereas in the fall it will require at least two large pails (5 gallons)

Excluders: Prevent the queen from laying eggs in the honey supers. Many beekeepers don't use excluders. They will reduce honey production when used above the second brood chamber, so are mainly used when hives are managed in single brood chambers

Brood chambers: Hive health and wintering success is improved when the frames in the brood chamber don't have too much drone comb and when new comb is added to the mix every year.

Disease and Medication

There are three main diseases that can be damaging to hives:

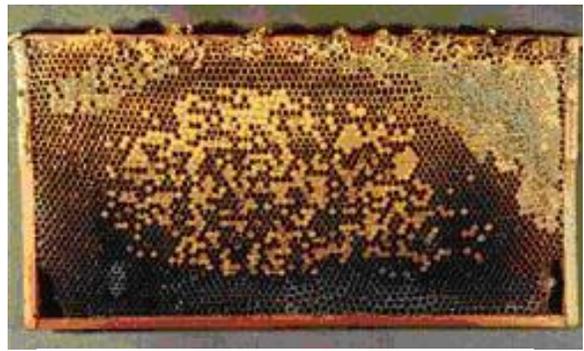
1. **American Foulbrood (AFB)**- the most serious and damaging brood disease of honey bees. This disease is caused by a spore forming bacteria, *Paenibacillus larvae* specific to honey bee. It is highly contagious and will weaken and in most cases kill a honey bee colony

- **Symptoms:**

- Spotty brood pattern, perforated sealed brood with coffee brown larvae inside, sunken sealed brood, coffee brown larvae sunken to the bottom of the cell.



Healthy larvae: white and neatly curled at the base of their cells

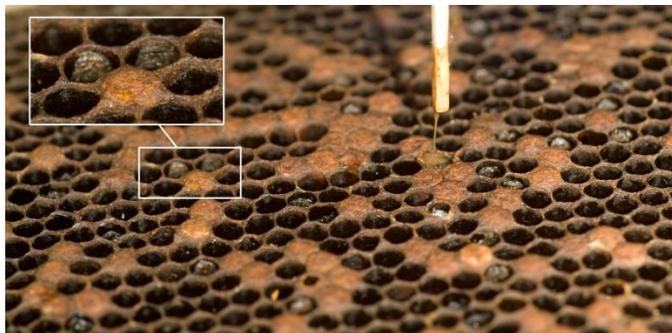


Unhealthy larvae: comb showing an irregular (scattered) brood pattern.

- - Larvae and pupae infected with AFB can exhibit a characteristic foul smell similar to dead fish (hence the name "foulbrood"). The intensity of the smell varies considerably, depending on the number of infected larvae and pupae present and factors such as temperature

- **Diagnosis**

- Field test: touch a dead larva with a toothpick or twig. If sticky and "ropy" (drawn out) with a string of least 2cm that your hive is infected with AFB



- **Treatment:** Prepare a mix of oxytetracycline (Terramycin) antibiotics with icing sugar
 - Ratio depends on the strength of the antibiotic

- Provide 3 tablespoons of the mix with a hive tool to the top bars at the back of the brood chamber on every inspection visit (3 or 4 times in total with 2-3 times in the fall)

2. **Varroa mites**- are external honeybee parasites that attack both the adults and the brood, with a distinct preference for drone brood. They suck the blood from both the adults and the developing brood, weakening and shortening the life span of the ones on which they feed. Emerging brood may be deformed with missing legs or wings. Untreated infestations of varroa mites that are allowed to increase will kill honeybee colonies. Losses due to these parasitic mites are often confused with causes such as winter mortality and queenlessness if the colonies are not examined for mite

- **Diagnosis: Visible to naked eye**- Please see attached resource for instructions on how to test for mites



- **Treatment:**

- Most common treatment is to use Apivar Strips applied to each hive in September as a preventative method. Also can be used in early spring if mites are present then. Some organic treatments are also available but are usually less effective



3. **Nosema** - is a disease of the digestive tract in honeybees. It effects adult bees only and is highly infectious. The disease occurs primarily in late winter and early spring. Nosema is troublesome in temperate areas and especially in long periods of bad weather where bees are confined to the hive and are unable to leave on cleansing flights thereby more spores accumulate in the rectum. The disease is less readily spread in warm climates with mild winters. Nosema has negative effects on the bee colony. It increases the mortality of adult bees and the death of some colonies during winter, reduces honey yields, further causing poor population build up because the bees are unable to produce enough royal jelly to feed the brood. If a queen becomes infected, her ovaries degenerate and her egg laying capacity are reduced due to atrophy of the eggs. The severity of infection varies among colonies.

- **Treatment:**

- Not usually a problem but preventative treatments using the medication Fumagillin are applied annually by some bee keepers



Parts of a Bee hive

