

New Westminster Beekeeper's Association

19 Things to Know about Beekeeping

## **Module 1 - Management of Overwintered Colonies**

This session was prepared for members of the New Westminster Beekeeper's Association and are intended to be augmented by a hands-on experience in the bee yard.

Overwintered colonies need to be assessed in mid to late February so that the beekeeper can determine the following:

- Did the colony die over winter? If so, why? What do I do with the dead out equipment?
- Did the colony survive, but is weak? If so, why is it weak and how do I care for it?
- Did the colony survive and appears to be strong? If so, how do I assess if it is truly healthy and how do I care for it so that it produces honey and survives the season?

### **Key Factors**

- Do not break up the brood nest for more than 10 seconds unless the ambient temperature is above 15 Celsius. You can peek to see if there is healthy brood, but you cannot remove the frames without risking killing bees in the pupae stage.
- Frames from very weak colonies with little pupae, can be moved to stronger colonies (refer to the following details)
- Although there are exceptions, most colonies that die over winter, die from a varroa infestation or from a poor queen.

### **Supplies needed:**

- Smoker, smoker fuel, hive tool, bee brush
- 1:1 sugar syrup in spritzer bottle
- 1lb pollen patty per colony
- 4 litres syrup per colony

### **Four Scenarios**

1. Colony is dead.
2. Colony is alive but has less than 1 frame of bees.
3. Colony is alive but has only 1-2 frames of bees.
4. Colony is alive and has 3 solid frames of bees or more.

### Scenario 1: Colony is Dead

- Determine why the bees died.
- Decide what to do with the unoccupied frames.

Causes of Death over Winter:

	
<b>Varroa – Small Cluster with Queen in Centre.</b>	<b>Starvation – Dead bees in cells. Lots of dead bees in bottom of hive.</b>
	
<b>Failed Queen – Drone Brood Only</b>	<b>Failed Queen – Unhatched Queen Cells. Small amount of Chilled Brood</b>

Check equipment for AFB/EFB. If no sight of bacterial disease, brush off dead bees and reuse the equipment.

Mold is fine. Just scrape off the surface of the mold and use the frames.

Frames with pollen and honey are valuable and should be fed to survivor colonies.

**Scenario 2: Colony is alive but with less than 1 frame of bees.**

Check for EFB/AFB. If none, pinch off queen and shake bees onto landing board of any hive with 2 frames or stronger.

If bacterial disease. Remove colony at night and shake bees off frames where there are no colonies. Burn frames with signs of bacteria. Extract honey and eat it. Irradiate frames and box before using again.



**Scenario 3: Colony is alive but with only 1-2 frames of bees.**



Check brood pattern.

If good brood pattern, transfer frames with honey into insulated nuc box and feed. Transfer back to Langstroth box when 4 frames have brood on them (about 6 weeks). Do not feed syrup – only frames of honey or sugar cake or fondant. Add pollen patty.

If not good brood pattern, pinch queen, combine with another colony.

Combine methods:

1. Shake all bees onto one frame. Spritzer all bees with 1:1 sugar syrup and place into colony with 3-5 frames of bees. Place the frame between first and second ***brood*** frame of stronger colony.
2. Place on top of strong colony with newspaper separation. Make sure there is honey in the top box so the bees do not starve. Remove newspaper 7 days later.

**Scenario 4: Colony is alive with 3 or more frames of bees.**



Move the bees to the feeder.

Place pollen patty directly above brood nest.

Feed syrup

Feed every 7-10 days until dandelions are in full bloom or bees stop taking it.

End.