

# Honey Bees and Pollination

## What's the Buzz Newsletter

### February 2018

We hope 2018 is off to a good start for you and your bees! The fall of 2017 was relatively warm for certain parts of the Maritimes and some beekeepers are concerned whether their hives have enough honey stored to get them through the winter. See below for information on winter emergency feeding.

## Spring Management Guide

Our spring management guide can be found here: <http://www.perennia.ca/wp-content/uploads/2016/04/Spring-Management-Guide-2018.pdf>

## Winter Management (a re-cap from Feb. 2017 newsletter)

If you are overwintering colonies indoors, here are some safety reminders:

Check on temperature controls and exhaust fans. Exhaust fans can prevent moisture and carbon dioxide levels from building up within the facility by bringing in fresh air. Depending on the weather, a cooling system may be needed to keep the facility around 5°C. Although unlikely, a heating system may be needed during cold periods.

If the temperature is higher than 5°C, bees become very active and consume valuable food stores. Below this temperature, it becomes more difficult for the cluster to regulate an adequate temperature.

Helpful information on overwintering indoors can be found through the [Canadian Association of Professional Apiculturists](#) (CAPA) website.

### *Risk of Starvation*

Starvation is a major concern over the winter, but steps can be taken to check for starvation and intervene if necessary. Signs of starvation during spring dead-out inspections include bees headfirst into cells, searching for food, and very small cluster.

A colony may starve over the winter if it runs out of food stores – either there were insufficient food stores in the fall or the colony is very active and growing, using up stored honey. The risk of starvation increases during long cold spells, as the colony will increase honey consumption to keep warm.

A colony can starve even with adequate food stores still present. As the cluster dwindles in size, it may not be able to move even a couple of inches to the nearest food frame.

Through careful observations during the winter, intervention is possible to save the colony. If you gently lift the hive and find it to be very light, emergency feeding is likely necessary. [**This is the same lift test as for checking hive weight during fall management – [more information](#)**]. On warm, mild days, you may be able to listen to the cluster buzzing or slightly crack the hive to check for food stores.



Listening to the hum of bees.

### ***Emergency Feeding***

If you notice your colony requires emergency food stores, there are several options.

If there are still honey frames remaining in the hive but the cluster is too small to access them, you can move the honey frames adjacent to the cluster for a close, accessible food source. Be careful to not disturb the cluster.

If there are no honey frames left, you can place a division board feeder next to the cluster (only if warm, mild weather allows- do not risk opening the hive during cold conditions). If you stored frames of honey over the winter and they are free of pests and diseases, they can also be added to the hive if weather permits, and this practice is often more successful than feeding sugar syrup.

Pollen patties can be placed directly next to the cluster for a quick protein source.

Fondant or ‘bee candy’ is a common starvation intervention method during the winter. Bee candy provides an accessible sugar source to the cluster, and can be placed on top of the frames or on the inner cover, reducing disturbance to the colony during winter conditions.



Bees feeding on fondant sugar.



Bees feeding on granulated dry sugar.

There are many different types of fondants and bee candy (commonly used with candy boards), hard candy made into bricks put in the top bars, hard candy with pollen, and even just granulated sugar (Mountain Camp Method).

Sometimes using the “baggie” feeder method is a way to get some syrup to bees when it is still too cold to use frame feeders since the bags are placed almost over the cluster and have a smaller volume so they warm up faster. Simply fill a plastic bag with a sugar syrup solution, place on top of frames near the cluster, and make a couple of slits in the bag with a knife to allow bees access to the sugar syrup.

Recipes for bee candy can be found online, such as: <http://beehivejournal.blogspot.ca/2009/01/bee-fondant.html> or in *The Beekeeper’s Handbook* by D. Sammataro and A. Avitabile.

## What we’ve been up to

ATTTA attended the Nova Scotia Bee Symposium in Truro on January 9<sup>th</sup>.

ATTTA recently released its varroa management guide, and the link to this report can be found here: <http://www.perennia.ca/wp-content/uploads/2016/04/varroa-mite-management-options.pdf>. This guide includes information on available products and how to use them, and options to create a comprehensive management plan for varroa.

## On the Horizon

We are working with provincial beekeeping associations in the Maritimes to participate in the upcoming annual general meetings. Stay tuned for exciting guest speakers, educational sessions, and the opportunity to engage with your provincial beekeeping community. We will also be attending provincial wild blueberry association meetings as the spring progresses.

We have a number of research projects planned for 2018. We will continue our pollination stocking density trial in lowbush blueberries, and also add a queen rearing case study. Work with miticides continues to be important, and we plan to continue to test new products and monitor for resistance. Nosema spore levels will continue to be recorded throughout the Maritimes as we dig into treatment efficacy and seasonal levels of nosema spores.

## Well Wishes and a New Face

Cameron Menzies, an apiculturist with the Atlantic Tech Transfer Team, has accepted a position as the Provincial Apiculturist in Prince Edward Island. We are sorry to see him go, but wish him all the best in his new position and know he will make a big difference there!

To help fill the gap, Sawyer Olmstead will be replacing Cameron until the end of our current contract (March 31). Sawyer has been working with ATTTA since the beginning, has a strong science background in apiculture, and is also a commercial beekeeper himself. Welcome, Sawyer!