

# FCBA NEWS

Franklin County Beekeepers Association

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## Club Upcoming Scheduled Events

**Winter meeting:** February 17, 2022 – 6:00 pm,  
Location: Ag Heritage Bldg., 185 Franklin Farm Ln.,  
Chambersburg, Room 7-8. Speaker will be Robert House

**Beginner Beekeeping Basics Classes:** March 3, 10, 17,  
24 - Time: 6:30 – 8:30 - Location: Ag Heritage Bldg., 185  
Franklin Farm Ln., Chambersburg, Room 7-8

## FCBA Officers

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## Happenings

If you missed it, at the Fall Business Meeting board elections were held. We are **pleased** to welcome Kristina Sempowski as our very capable Vice President and both Galen Stouffer and Nathan Wingert as valuable board members.

Don't forget club dues. You can mail dues to: FCBA, P.O. Box 341, Chambersburg, PA 17201 or pay as you visit the Winter Meeting. Dues are still only \$10 year.

## Winter in the Hive

The bees are in their winter cluster, except for very warm and sunny days (roughly 50°F and above), when they might leave the hive for a cleansing flight. Queens may lay a few eggs, in which case the cluster will need to keep the brood warm. Dead bees may pile up on the bottom board; on warm days, the bees may remove the bodies, and other bees may fly off to die. Dead bees scattered on the snow outside the hive are therefore a good sign.

## Winter Inspection

When inspecting a colony in winter, it is not necessary to open it. Do a quick external inspection, visual and auditory, to check the cluster. Listen for the bees with your ear directly on the upper part of the hive; if you do not hear anything, tap the outside of the hive and the bees should respond. You can open the hive if it is relatively warm and windless outside, but do not pull frames or break open the cluster if it is below 50°F. If you open the hive, check for moisture around the inner or outer covers. If the cluster is far to one side of the food stores, you can move frames of honey closer to it. Nutrition Check if the colony is light on

food stores (you can tell by gently hefting the hive) ... If so, use dry sugar, fondant, or a candy board on a warm day.

### Equipment

**O** rder any replacement bees (packages, nucs, or queens) as soon as possible; producers generally run out fast. Check any stored equipment for pests such as wax moths. Take inventory. Fix, clean/sterilize, purchase, assemble, and paint equipment as needed.

### Yard maintenance

**E** nsure that the hive cover is properly secured. Check for evidence of critters living in the nice, toasty hive. Remove ice blocking the hive entrance, to give the colonies better ventilation. Don't worry about snow around the entrance or hive body; it allows enough airflow and may help insulate the bees. A few dead bees or a small amount of fecal matter outside the hive is nothing to worry about, especially after a warm day; this is a sign that they are still alive inside.

### Education and outreach

**D** on't forget to renew your membership in your local beekeeping club and get their meetings on your calendar.

### Feeding Your Bees

**I** t's not an uncommon practice for beekeepers to feed their bees dry sugar, sugar water, pollen patties and or high fructose corn syrup (HFCS). Why do they do this? There could be several reasons: 1) Their bees are starving due to lack of forage or workforce 2) They want to give their bees an artificial boost prior to spring 3) They took all the bees' honey and need to replace it by feeding. So, you understand feeding, let's go into some more detail about how a colony's natural foods compare to substitutes and why they may cause problems in your hive.

Bees feed on nectar (when ripened it becomes honey) and pollen. Nectar/honey is their carbohydrate source. It gives them energy to fly to and from, build and warm their hives. Pollen is a protein source and is tied to brood production. So, you can think of it this way: honey=energy and pollen=babies. Nectar and pollen are collected from a variety of flowers and each source may vary in quality and quantity which is why you see bees tend to prefer certain flowers over others. As a beekeeper, you may notice that even among bee-friendly flowers that contain a superior quality and quantity of nectar or pollen, individual colonies will have preferences. That's because aside from sugar and water, nectar also contains a small percentage of other ingredients such as amino acids, vitamins, enzymes, organic acids, alkaloids, phenolics, glycosides, terpenoids, metal ions, and other volatile oils. These other components can vary greatly based on the type of floral source and scientists have found that certain nectar ingredients can help ward off parasites and boost the bees' immune system. In fact, bees may seek out certain nectar sources that contain anti-parasitic properties only when they are infected with parasites and not at other times when they are healthy. Pollen also has a wide variety of chemicals that seem to have similar links to bee health. We still don't understand all of the components of nectar or pollen and how bees might use it, but I think it's safe to say that the bees do.

### Also Consider pH Balance

**A** nother consideration is pH levels. A beehive isn't just a sterile box with only bees in it. There's a whole community of microorganisms (yeast, bacteria, fungi) living together in balance with the bees. Some of these microbes are harmful, some beneficial and some are benign. This is true of both the colony as a superorganism and the body of individual bees (think microbial gut diversity). Now, what microorganisms can thrive and survive depends largely on the pH levels. For

reference **the pH of honey is 3.2 – 4.5, while the pH of sugar water is 6.0.** Michael Bush has stated that many honey bee maladies such as Nosema, Chalkbrood, EFB, and Varroa all thrive and reproduce better at pH levels closer to that of sugar water and his study cited that, “bees are thought to protect food stores and inhibit pathogenic microbes by lowering pH levels”. So, there seems to be some connection between colony health and a low pH and there is a discrepancy between the pH level of the bees’ natural food and the man-made version. In response to this, **some beekeepers will lower the pH of their sugar water mixture.** You can so do by adding either vitamin C (powdered), lemon juice or cream of tartar. PH test strips or a meter are helpful here to get the PH correct, you want it to be around 4.5.

## Feeding Sugar

In the past, I have cooked for my winter bees. I have made fondant, semi-hard sugar cakes, hard as rock sugar cakes, candy boards, and pollen-laced patties. I have stood over a witches’ cauldron of bubbling, boiling syrup, stirring and measuring and timing. I have used thermometers and cool water tests. I have added Honey-B-Healthy, essential oils, vinegar, lemon juice, and pollen substitutes. I have burned myself, created massive stickiness throughout the kitchen, ruined pans, bent spoons, and smelled up the house with all manner of strange oils. But not anymore. Not on your life.

Every year I’ve made it simpler and simpler, and every year the bees thrive on it. My current method is sugar mixed with very small amount of water, place in loaf pan to dry for a day or two. Wa-la, easy sugar cake for above frames.