



Long Lane Honey Bee Farms  
www.honeybeesonline.com  
(217) 427-2678

## BASIC BEEKEEPING LESSON 80

### How To Feed Your Bees *David Burns, Master Beekeeper*



Hello friend, we are David & Sheri Burns from Long Lane Honey Bee Farms in central Illinois (where it has been very hot lately)!

farm house built in 1876, so it doesn't have central air. A window unit here and there has kept things tolerable. When our house was built, a 4 lb bag of sugar cost 28 cents. A dozen oranges were 50 cents. A house of our size sold for \$700. Honey was 10 cents a pound. In Wayne County Tennessee 168 farms produced 13,000 pounds of honey. Ten years earlier in 1860, 150 farms produced 17,000 pounds of honey. But enough reminiscing.

Sheri and I produce STUDIO BEE LIVE, a beekeeping podcast. In addition to this podcast, I am now hosting a nationwide (world wide) beekeeping podcast called "Save The Bees". This podcast has existed for some time through the Wild Life Pro Network and I just recently became the new host. What's so fun about this podcast is that it is recorded LIVE on the internet. You can actually call in to the live recording and ask me questions or just shoot the breeze about bees. It's low-key, home spun fun. In fact, I really need you to call in to make the show interesting! You can call in with any question you'd like to ask. They are recorded live each third Thursday of the month. Our next one is coming up September 16 at 7pm Central Time.

The bees have been working hard to keep their hives cool by hauling in water. They use water in the hive by evaporating it as a cooling mechanism. We can't complain...it's August.

We live in an old

I will be talking about equipment used in beekeeping, specifically about specialized equipment, like queen castles, slatted bottom racks, cloake boards, smokers, hive tools and more!

Here's how you call in to join me. Our podcasts start at 7 PM CENTRAL TIME and can be reached by dialing directly into the show at 1-724-444-7444. An automated voice will ask you to enter the show's ID followed by the # sign on your phone. Our podcast ID is 16456#

Please put it on your calendar to join me. It will make the show much more livelier and interesting. Remember, September 16 at 7pm CTD and enter our show's ID 16456.

Today I want to talk about feeding bees and more specifically, to look at the more common ways to feed bees. Our next lesson will be on the subject of a very common enemy to bees this time of year, the wax moth. But before that, let me tell you about three important items.

First, please make sure you have a good queen going into winter. If not, you need to requeen NOW, ASAP! August-September is a great time to requeen and we have plenty of queens, so give us a call to order your queen. 217-427-2678. It has been shown that a newer queen will improve the odds of a hive surviving the winter because she will lay like a spring queen, and these newer bees haven't worn themselves out over the summer. So check your queens.

Secondly, we are offering our popular fall Basic Beekeeping Course Saturday OCTOBER 23rd. Sheri and I are looking forward to this course. We have designed this one day beekeeping course to cover topics on basic beekeeping. And this course is of an even greater value now since I am an EAS certified Master Beekeeper :) Those interested in becoming beekeepers as well as those who have kept bees for a few years will benefit from this class. Mark the date now! Saturday October 23rd. We have a maximum registration so register as soon as you can to reserve your spot! It will likely be held at our honey bee farm located near Catlin, Illinois. However if attendance is large it is likely to be held in a fully equipped Forrest Preserve facility about 5 miles south of interstate 74 half way between Champaign, and Danville, Illinois. (Central Illinois). Get a few friends to come along with you! Registration cost is \$89 and includes lunch, a hive tool and outlines from the teachings. Also, why not save shipping cost and purchase all your hive equipment on this day? This course is team taught by David & Sheri and you'll have a great day learning about beekeeping. Don't let distance keep you away. We've had people from California to Louisiana come on over, so don't be shy! [CLICK HERE FOR MORE INFO ON THE OCT 23RD BASIC BEEKEEPING CLASS](#) Anyone having paid and attended any of our previous classes can register for this class at 50% off, (\$44) but call in to register to obtain your discount. 217-427-2678

Thirdly, join us for our most recent beekeeping Podcast by [CLICKING HERE](#). We are going to

roll out another good one this weekend. Please tell others about these lessons and our podcast.

## LESSON 80: FEEDING BEES

[CLICK HERE TO VIEW OUR FEEDERS & CANDY BOARDS](#) For Purchase

It is difficult to fully understand the complexity of the nutritional requirements of the honey bee. While we know bees require nectar and pollen as their main food source, it is important to understand that a variety of pollen and nectar sources is essential. Bees lacking a variety of pollen and nectar may have insufficient amounts of important minerals needed for hives to reach their full potential.

Bees live on the combination of carbohydrates (nectar/honey) and protein (pollen). While bees are quite capable of meeting the day to day demands of the colony as well as providing stored resources for periods of dearths and overwintering, sometimes bees can benefit greatly by having additional food.

Here are some of the reasons for feeding bees:

- 1) Installing packages in the spring. New packages have no comb and consequently no stored resources. If it rains for 3 days the bees will be unable to fly out to gather food.
- 2) To assist colonies in drawing out comb. As young bees consume nectar their wax glands are more able to produce wax for drawing out the frames.
- 3) To add to the total of stored food going into the winter.
- 4) To add medication to a hive. Some medications are added to sugar water such as Fumagilin-b.
- 5) To build up smaller colonies such as swarms or nucs.

6) For queen rearing starter and finishing colonies.

There are several types of feeders used to feed bees.



The entrance feeder has been used throughout the decades as a good spring

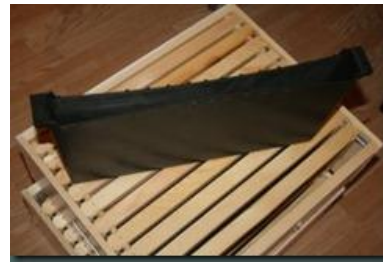
feeding system. A small tip of the feeder slides into the entrance of the hive and a mason jar screws down into the cap with holes in it. Vacuum prevents the contents from leaking out, allowing the bee to use its proboscis to draw out the sugar water. Normally, spring sugar mixture is 1:1, which is one part water and one part sugar by weight. If you use a 4 lb bag of sugar, then you'll add 4 pounds of water.

Usually refilling these entrance feeders is not a problem, but occasionally guard bees will show their disapproval. Entrance feeders used during a dearth or in the fall can cause bees from other nearby colonies to rob.



Top Feeders are also used.

Sometimes referred to as Miller feeders because it was invented by Dr. C.C. Miller. It is placed on top of the hive and is a large reservoir that holds 1-2 gallons of liquid. The bees can access the feed by staying on the underside of the white panels in the photo, or some use screen. This keeps the bees out of the liquid to prevent drowning. The



benefit is that it holds more. Disadvantage is that it can leak or mold.

Division Board Feeder,

sometimes called a frame feeder, is similar in size to a large frame but made of wood, metal or plastic. As in the photo, the center is a reservoir



which holds the liquid. It is placed in the brood nest in place of a frame. Usually it is important to add material that can float on top of the liquid to prevent

drowning. The frame feeder will not promote robbing and can be used in colder climates as the cluster temperature can keep the liquid from freezing.

A pail Feeder is when you place a feeder over your inner cover hole or directly on the frames. The feeder can be a large plastic pail or a smaller mason canning jar as shown in the picture. It is important to experiment outside the hive and poke holes in the pail so that when it is upside-down the syrup does not run out. It is best to mix a heavy syrup such as 2 parts sugar and 1 part water and wait until the syrup has cooled. Warm syrup can flow too quickly. The ideal pail feeder does not allow the syrup to drip out, but the bees use their proboscis to draw out the syrup.

When you place a pail feeder in your hive you then surround it with an empty deep hive body and place your top cover on top. The empty deep hive body simply gives the spacing you need for the pail feeder. It is best to feed through the inner cover hole so that the inner cover can help hold the heat down. CAUTION: Your empty deep spacer can easily be blown or knocked off. Use heavy rocks to keep it down.



Open Feeding. Commercial beekeepers often feed bees in large 55 gallon

barrels with sticks placed in the barrel to reduce drowning. Some fear that open feeding bees can prompt robbing. However, I have discovered that open feeding is very good in the fall and actually prevents robbing, provided that the feeding station is placed well away from hives. When beekeepers are entertaining guests out of doors, they can worry about their bees bothering their guests, and sometimes during a fall dearth the bees will be scouting around for food. By open feeding, the bees find the location and are quickly drawn to it and stop searching and robbing. I use entrance feeders or chicken waterers with screens in the mouth of the jar to prevent the bees from crawling up into the feed. These work great for me during the fall. There is no need to open feed when there are flowers.

#### Candy Boards



Last year we discovered candy boards. They have been around for a long time, but

have lost popularity with beekeepers over the last 50 years, probably due to the fact that it is time consuming to make. However, I believe they are one of the most effective feed sources for overwintering colonies. You can also add pollen patties into the candy boards as seen in the picture above. The board is placed on top of whichever hive body box the cluster is located in.

In a previous lesson I provided the exact receipt for making candy boards, but we do sell them and now would be a good time to stock up. You should have them on your hives no later than December 22. [CLICK HERE TO VIEW OUR FEEDERS & CANDY BOARDS AVAILABLE FOR PURCHASE](#)

#### Pollen

We've discussed several liquid feeding methods, but what about protein? Honey bees desperately need pollen. It is from pollen that bees obtain minerals, vitamins and other important nutrients. There are several ways we can feed bees pollen.

1) Pollen trapping. This is a piece of beekeeping equipment that we sell which captures a percentage of pollen from the bee's pollen basket as they fly into the hive. Once the pollen trap is filled, simply freeze and store it to feed later. One disadvantage is that you don't really know what's in the pollen. It could be laced with insecticides from sprayed crops. Also, when you are capturing it, you are reducing your hive's ability to store what you are trapping. Pollen trapping is usually used to trap

pollen that is used for human consumption.



2) Pollen Substitute. This is the most preferred method and is accomplished

by either making your own pollen patties or purchasing prepared patties. Most pollen patties no longer contain pollen but a soy based substitute. They have proven to be very beneficial to bees, especially for overwintering colonies or for colonies in early spring prior to

when natural pollen occurs. You can see in this photo how the bees have consumed over one half of the pollen patty.

#### QUICK TIP SUMMARY:

- Entrance (boardman) feeders are most effective in the spring or in open feeding locations away from the hives in the fall. Cannot be used when the temperature drops below 50 because the bees will not break cluster to go to the feeder.
- Top Feeders can be used any time until the temperature drops below 50 because the hive begins to cluster and cannot go up to feed.
- Frame (division) Feeders can be used all year, but keep in mind that you will have to open the hive to re-fill it. This can be a problem during the winter.
- Open feeding can work well during a dearth to help reduce robbing and to prevent bees from bothering crowds. Use feeders that will not allow bees to drown. Can only be used when temperatures are warm enough for bees to forage.
- Candy boards are a huge benefit to overwintering colonies.
- Pollen patties are beneficial to add protein and other important nutrients when pollen sources are low.

Most beekeepers are seeking better overwintering results. More and more beekeepers are having success overwintering bees in 5 frame nuc boxes. Since we had success with overwintering more nucs last year, we're trying more this year. If you'd like to order a nuc, [CLICK HERE](#). Each year more and more beekeepers overwinter in nucs.

#### QUICK TIP FOOD SUMMARY:

Feed bees 1:1 sugar water in the spring. This stimulates laying and causes foragers to bring in more pollen.

Feed bees 2:1 sugar water in the fall. This makes it easier for the bees to increase their winter honey stores.

Thanks for joining us today, and we'd like to ask you to share these teachings with a friend. Also, you can sign up to have these sent directly to your email, FREE.

Until next time, remember to BEE-have yourself!

David Burns  
EAS certified Master Beekeeper

*Copyright (c) 2010 by Long Lane Honey Bee Farms All Rights Reserved - This information may not be copied in whole or in part without written consent.*