

Over Wintering Nuc Workshop

This is a workshop on creating nucleus colonies in the summer that you over winter and use to replace dead outs or increase the number of colonies. This is an intermediate class for beekeepers with at least one year's experience keeping bees.

The workshop will be both a class and hands on workshop where you will assemble the wooden ware nucs and specialized bottom boards. You will take home:

- Two nucleus boxes with lids
- A specialized bottom board that will support the nucs and sit on top of an existing hive
- Information on instruction on how to prepare and overwinter nucleus colonies.

You will make up the nucs around the end of July. Here is what you will need:

- Two strong hives to donate bees, or a weak hive that is not doing well.
- Two summer queens – we will list places to get queens
- Four or more frames of drawn comb.
- Six frames of foundation. Fewer if you have more than four frames of comb

Date May 19th

Cost aprox. \$80

Limited to 15 students

Purpose:

The goal is to provide early spring strong nucleus colonies from hearty stock at a low cost. This is the direction New England beekeeping is going. Our northern climate prohibits raising queen in the spring, so making splits in the spring requires us to use southern queens. However northern raised queens are available in the summer months. Also we face a nectar dearth in August. This technique takes advantage of these conditions to produce inexpensive but robust colonies. You can use this technique to increase your number of colonies or make up for winter losses. This technique should pay for itself in the first or second year and does not require a lot of work.

What is it:

In late July you are going to make up two nucleus colonies from your current hives and purchase two queens (\$25/ea). These colonies will grow and establish themselves during the months of August and September so they are strong enough to survive the winter. In addition, in November you are going to place the nucs on top of a "host hive" which will supply warmth to the nucs. The nucs are arranged on a special "bottom board" that lets the two small colonies to huddle together as one colony providing extra protection for the winter. Survival rate should be equal or better than your traditional colonies. In the spring these colonies come on very strong and you should be prepared to place them in deep boxes when the dandelions bloom.

Timing- Late July

For Eastern Mass the best time is late July.

August is too late because the bees don't have enough time to organize their hive the way they need for winter and build up the appropriate number of bees for winter.

You can do this sooner, but the problem will be that the bees buildup and either swarm or they will be too many bees for the box. If you are in this situation, you can steal a frame of brood and bees from the nuc to reduce the population. You can also put another nuc on top to handle the extra bees.

Where are you getting your bees & brood from?

Think about which hives will be the donor hives. Good candidates are:

1. A weak hive that just is not doing well this summer. It probably won't ever do well until it is requeened. Since that is exactly what you are going to do (requeen this colony) it is a good candidate. Next year at this point it should be a great hive.
2. A very strong hive that is on the verge of swarming. By removing brood and bees from this strong hive you will reduce the swarming urge. Also at this time of year you are going into a nectar dearth, so cutting back on the population is less of a problem. This will also reduce the mite count.

3. Last choice is two medium hives. This will set them back and will reduce the fall honey harvest.

Making up the Nuc:

Making up the nuc boxes is the single hardest part of the processes. On the other hand, you will be done in a pretty short time. Suit-up well and make sure your smoker is going strong. Here is the trick, you want to use minimum smoke so the bees don't run off the frames, but you have to go deep into the brood chamber. Try to work smoothly without banging things around. If the bees get really angry, blow some smoke in the air. Make sure you are organized before you start. Nuc boxes out and on the bottom board, have all the entrances screened up to keep them in the nuc. Know where you are going to place the frames, have the replacement frames ready (you need five frames for each nuc). I tape screening over the openings of the nuc boxes to keep the bees in. I like to lightly smoke the hive, but put smoke in the air. If you have honey supers on the donor hive, take them off and leave the inner cover on top to help keep the bees inside. Place the supers on top of the upturned outer cover. I also like to have a flat piece of sign board to place over the open hive to keep the bees in. I slide it slightly open to remove a frame and then cover the box up until I need the next frame. When you get the brood chamber, look down between the frames to see where the bees are hanging out. This is usually the top brood chamber. Two main points about taking the frames; go slowly taking the bees with the frames and **make sure the queen is not on the frame**. Start with an outside frame. This may be your honey frame; you want a full deep honey frame. Put that in the nuc (on the side that will be closest to the other nuc. (see diagram). Go through the frames looking for a frame with lots of pollen. The pollen is often at position 2 or 3. Take a frame of pollen and put it in the nuc. Look for the queen and take the bees with the frame. Now look for a frame of brood. You want a frame that has open brood, with brood on both sides (see picture). If the brood frame is not wall to wall brood, then take a second brood frame. This is also the frame most likely to have the queen on it. Again you want all the bees to go with the frame. If you are not going to move the nuc boxes to a new location, shake an additional frame of bees into the nuc. Remember to look for the queen first. The reason for the additional bees is because the older bees will fly back to the donor hive.

Add open comb frames to back fill the donor hive and fill out the nuc box. Close-up the nuc box and the donor hive.

Repeat the above for the second nuc.

Rehearse this process in your mind before you start.

If you have another location, a mile or so away, move the nucs to that location, so the bees don't fly back to the donor hive. Then you can remove the screened opening.

If you do not have a remote location, you should shake in an extra frame of bees, and leave the nuc screened up for the night.

Review

For each colony add the following:

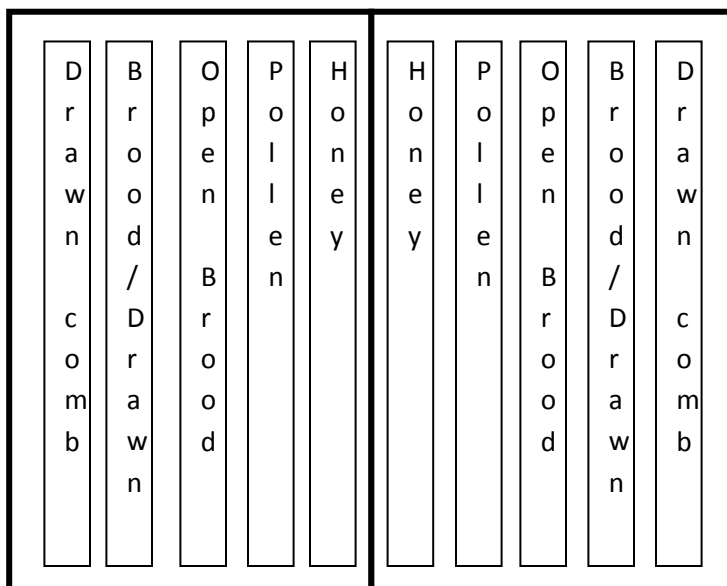
- One frame of honey
- One frame of pollen
- One frame of wall to wall brood. If the frame is not solid brood, take a second frame of brood
- Two frames of drawn comb (one frame if you used two frames of brood).

You can take these frames from a strong colony, realizing you are going to set that colony back a bit. That may be OK, since this is the summer death.

This is a perfect amount of brood. There should be some open cells of larvae which help keep the young bees from leaving the colony. The bees will not abandon open brood. Also note there is bee bread around the edge. Be sure not to take the queen.



Frame Placement



Adding the Queen:

This is just like a package. If it is convenient, wait a couple of hours after making up the nuc before adding the queen. This will give the bees time to settle down and discover they are queenless. Add the queen cage in a way that the screen is accessible to the bees. Summer queens will not have an aluminum strap on the cage, so suspend the cage by gently squeezing it between two frames. Leave a frame out if there is not enough room. You can either leave the corks in the cage and manually remove the queen in five days, or remove the cork exposing the candy. Do not poke any holes in the candy. You want a SLOW release. Just like a package don't disturb them for five days. Then go back and make sure the queen is released. Check again in two weeks for eggs or open brood. Any open brood after 10 days is from the new queen.

Where are you going to get Queens?

You will need to contact a supplier ahead of time to be sure you can get a queen at the right time. Some suppliers will reserve a queen for you. You can store a queen for a few days in a queen cage. Add a drop of water on the screen twice a day and keep in a cool dark place. **Not** on top of the refrigerator.

1. It is best if you can get northern raised queens. These are from stock that has adapted to our climate conditions. They will be available at this time of year (July). This is one of the main reasons for doing the overwintering.
2. Many supply houses sell Queens.

Queen Suppliers:

Alan Holmberg

[101 Lebanon Rd](#)

[North Franklin, CT 06254](#)

(860) 235-0624

<http://www.fullbloomapiaries.com/contact.html>

"Connecticut Carniolan" Mated Queens

Dan Conlon Warm Colors

2 South Mill River Road

South Deerfield, MA 01373

Northern Queens Russian must be reserved well ahead of time

Paul & Claire Desilets Their first year for Northern Queens.

Barnstable County

508- 888-2304

Rick Reault

NEEBEES

Tyngsboro, Ma.

Always has queens, may not be Northern queens

Summer Management:

Place the nucs on their bottom board somewhere where they are out of the afternoon sun. It is hard for bees to keep a nuc cool in the hot sun. Get them up off the ground away from snakes, skunks and other predators. For the first four weeks feed 1:1 sugar syrup, to stimulate the bees. This is important because there will be nectar dearth during August.

Peek in the hive every week to see how they are doing. You will find the nucs are easier to work than full sized hives making them excellent learning tools. The two things you are looking for is a failed queen or the opposite, the hive has built up rapidly and is ready to swarm. If the nuc looks swarmy you can add another nuc box on top or you can remove a frame of brood (make sure you do not remove the queen). You should see a nice frame of new brood by mid-August.

Fall Management:

Once the cool weather of September sets in they should not swarm. You do want a lot of bees though. Each box needs about a two frames of honey for the winter. The cluster size should be about the size of a football. In mid-September, if the box looks light, feed 2:1 syrup. Use either a rim board and plastic

bags, or add a second super and use an inverted pail feeder. Assuming a normal fall, there should be plenty of Goldenrod pollen.

Over Wintering:

Early November is the time to prepare for winter, where you are going to place your nucs on top of a “host” hive. Thanksgiving Day is the deadline. If you are moving the bees within the same yard, pick a day, before a cold/rainy snap, to keep the bees from flying. This will get them use to the new location and less likely to go back to the original spot. Since you will not be able to go into this host hive until spring, select your strongest hive to be the host hive that has good stores. You should have already done any mite treatments or feeding of this hive prior to this time. Remove the outer cover of the host hive and put the inner cover in the winter position. Make sure the host hive has an upper entrance for ventilation and enable cleansing flights. Move your nuc boxes on top of this hive. Add one inch insulation boards on top of the frames of each nuc and cover with migratory covers. I like to form a little roof by draping tar paper over both nuc covers. This keeps the snow from lying directly on the nuc covers. (See the diagram down below)

Close down the nuc entrances to about 1 ½ inch. Leave one of the upper vents open.

What is between the host hive and the Nucs?

There is a controversy about whether you should allow air to flow up from the host hive into the nuc.

The NO philosophy: No, completely separate the air flow for the two hives. The host hive generates a lot of moisture which can be a problem for the smaller nucleus hives. Don’t risk it!

The Yes Philosophy: Yes, this is the whole point of putting them on top of a host hive. The heat from the host hive arrives as warmer air to the nucs.

If you want air to flow up through the nucs, eliminate the inner cover between them. Just makes sure the host hive has an upper entrance, by drilling a 3/4 inch hole near the top of the hive body. Your nuc bottom board will need to be double screened (screen on both sides the board). This separates the bees so their tongues don’t touch and they consider themselves as two different colonies.

If you do not want the air to flow up through the nuc make sure the inner cover on the host hive has a flat side up, so it seals off the air flow. Notice there are inner covers that are not flat on one side. You have to replace them with an inner cover that is flat on the top side. It should also have a ventilation notch.

FYI, I am a “NO” person, because I figure it is the safer of the two.

Spring Management:

Congratulations, your bees made it! The task now is to get the bees into deep hive bodies, but you also don’t want them to return to their original location. There are a couple of techniques you can use.

1. Early April on coldish day that the bees are not flying, move the nucs to a new location (a mile more away) somewhere up off the ground. Then when the dandelions bloom move them into deeps and place them where you want. You will want to screen them in at night and move them during the night.
2. In early April move them into deep hive bodies that are screened shut and put them in a dark place, like a garage or basement for four or five days, so they get acclimated to the new home. Then move the deep to where you want and remove the screens.

Make sure you get them into deep boxes early, because they are going to come on strong... way ahead of any packages. These bees are going to perform as well as your regular wintered hives.

