

Making Up a Honey Bee Nuc

By John Johnson

DEFINITION: The word "Nuc" as used here means a newly assembled colony of honey bees with queen, bees, brood, combs and woodenware which together make up a single story colony of bees. When weather conditions are favorable a nuc will usually produce a honey crop in the year it is started.

In Iowa nucs are usually established during April or early May in a single hive body or nuc box. They are usually "made up" from combs, bees and brood that were over wintered or available from some source. If nucs are "made up," queens which will be introduced to the nucs must be obtained from some source, usually a southern queen breeder. The queens to be used in April or May should be ordered in January or February.

Equipment needed:

- bottom board
- entrance reducer
- hive body or nuc box
- 10 frames of drawn comb or foundation for hive body or 5 frames for a nuc box
- inner cover
- outer cover
- an overhead or division board feeder
- sugar syrup or liquid honey for feed.

One of the challenges in "making up" a successful nuc is getting the bees to accept a new queen. Experience has shown that a relatively weak nuc with no more than 2 or 3 frames of brood will accept a new queen more readily than one with 4 or more.

Follow this process to make the nuc:

- Select a day when the temperature is 55° F or warmer and preferably when it is sunny,
- Remove 4 frames from the hive body or nuc box that is to receive the combs of sealed brood and bees and the new queen.
- Gently smoke the over-wintered colony or colonies from which combs of sealed brood with adhering bees will be taken.
- Find the comb on which the hive queen from the over-wintered colony is located. Remove the comb with the queen from the colony and put it in a safe place. Do not be concerned about the queen flying away. She will not leave her bees and brood unless something physically removes her. But, do be careful not to damage her.
- The colony from which the queen has been removed is now queenless.
- Count the number of combs with capped brood in the queenless colony. Leave 2 or 3 frames of capped brood and bees in the queenless colony. Any additional capped brood and bees may be removed and used for making nucs. (NOTE: Combs that are part capped brood and part newly laid eggs or uncapped brood must be left in the parent colony. If one uses these kinds of combs in the nuc the bees will usually destroy the new queen when she is released from her cage.)
- Remove 2 or 3 frames of capped brood with adhering bees and place them in the hive body or nuc box which will house the nuc. Combs of brood and bees which make up the nuc may come from several different over-wintered colonies if you have them.

- After combs of capped brood have been removed from the over wintered colony, place the comb with the queen back into the hive from which she was removed.

Introducing the queen

The queen is shipped from her place of origin in a small rectangular cage with screen wire over one side and a hole in each end of the cage. Both holes are plugged with a cork which fits snugly into the holes. Inside the cage and in contact with the cork at one end of the cage is a white appearing material which is called candy. It is made mostly of sugar and is food for the queen while she is confined inside the cage.

Make the nuc and install the new queen as soon as possible after she arrives. If you must keep the queen for a day or two before installing her in a nuc, place a few drops of clean drinking water on the cage screen a couple times each day. Store the queen in a safe place with good air circulation and a temperature of 65 to 75°F. And, shade her from bright light.

To install the queen, use a nail or the tip of a knife blade and carefully remove the cork from candy end of the cage which houses the queen. With a nail or stiff piece of wire, carefully poke a hole in the candy. (NOTE: If you receive a queen cage that does not have candy under the cork, insert a piece of marshmallow in place of the candy. Do not poke a hole in the marshmallow.)

Now, tightly wedge the queen cage between two frames which contain sealed brood and adhering bees. Make certain the screen on the queen cage is situated so the screen on the queen cage faces either the front or back of the hive. This ensures the loose bees in the nuc will have contact with the queen and will feed her. If the screen is placed flat against a comb and bees do not have access to it, the queen might die before she is released.

Provide supplemental feed (sugar water or honey) to the nuc and close it up. Ensure the entrance reducer is in place. Leave the nuc undisturbed for 5 days. After that check to see if the new queen has been accepted.

Several days after one observes acceptance of the new queen you may give the nuc an additional frame of sealed brood from an over wintered colony, if that is available. Do that by shaking most of the bees off the comb back into their original hive and placing it alongside the combs of brood within the nuc.

Continue giving supplemental feed to the nuc until it has 2 or 3 combs of stored feed in the hive.

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