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## Purchasing Nucleus Colonies

Some beekeepers prefer to purchase nucleus colonies (nucs) instead of package bees. A nucleus colony is a self-sustaining split made from a larger colony. This split is composed of bees, brood, honey, perhaps an empty comb and a laying queen. A nuc is a functioning mini colony ready to grow into a big one. The advantage to starting with a nuc is that a nuc is essentially three weeks, or more, ahead of a package of bees in terms of establishment.



Nucs are sized and sold by the number of frames they contain. Nucs usually contain three to five frames, with the most common size being the five-frame nuc. Typically speaking, nuc producers sell only the frames/bees and charge more money to beekeepers wanting to purchase the accompanying nuc lids, bottoms, and hive bodies. Many nuc producers will require a deposit for the nuc lid, bottom, and hive body. The

beekeeper is given his/her deposit back if he/she returns the nuc hive parts to the nuc producer. Some nuc producers will supply or transport nucs to the buyer in nuc boxes made of corrugated cardboard or plastic which typically become the property of the buyer.

Nucs do have a higher potential for problems since the buyer is also acquiring the brood frames. Brood frames have the potential to harbor certain diseases that can be very detrimental and potentially spread to other colonies the purchaser may have. In addition, some producers will utilize their old, crummy frames for making up nucs. Therefore, we strongly encourage buyers of nucs to ask a lot of questions of the nuc producer and inspect the nucs if possible prior to taking possession of them. Following are some questions that buyers should ask their nuc producers.

- What is the configuration of the nuc (e.g. how many frames of brood, pollen, honey)?
  - A typical 5 frame nuc will consist of two or more frames of brood in all stages of development, from eggs to capped brood, one frame of honey and one or more frames of honey and pollen.
- How many seams of bees are there?
  - A full seam of bees is approximately 1 pound of bees. A seam is the gap between the combs of two adjacent frames. There needs to be enough bees in the nuc to adequately cover the brood in cooler temperatures.



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Two full seams of bees is typically adequate in a 5 frame nuc, more is better.

- What treatments, if any, have been used on the bees?
    - Most commercial producers will have a regimen that they follow regarding treating for varroa mites. Ask what mite treatments they are using. Also ask about their integrated pest management (IPM) practices. There are specialty nuc producers who may be treatment free and/or use small cell foundation in their operations.
    - There are additional treatments that some nuc producers use, such as antibiotics to suppress or control brood diseases such as American foul brood and European foul brood. As of 2017 it is more difficult for a beekeeper to prophylactically use antibiotics on bees.
  - Is the queen caged?
    - Some nuc producers will cage the queen prior to transport. This is done to prevent the queen from inadvertently being squashed or injured if the frames shift in the nuc box during transport. If the queen is caged, she will need to be released upon installation of the nuc into a hive.
  - Approximately how old is the queen?
    - As a buyer, you want to have a young queen, less than one year old. In some cases, the producer will have made up their nucs with spring or early summer queens. Some will create nucs with queens that were raised late the previous summer and overwintered.
  - Is the queen marked or are her wings clipped?
    - It is not common for a producer to mark queens nor is it common for them to clip a queen's wings. Marking is done primarily to assist the beekeeper in locating the queen and to assist the beekeeper in tracking queens. Clipping is done to prevent swarming but is not a proven technique.
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  - What is the suggested method of installing the nuc into a hive?
    - There can be different approaches with regard to installing a nuc. Some will suggest placing the nuc on the bottom board of the permanent hive's location and leaving it for a day or two before transferring the frames. Others will recommend immediate transfer.
  - Is a nuc box deposit or a frame exchange required?
    - Some producers using wooden nuc boxes have a box deposit. Some require a frame exchange. Ask upfront so you know the terms of your deal. Also ask what the timeline is for return of the nuc box if required.
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