

Nucleus Splits (description version 1.0)

© 2022 Beekeeping at Five Apple Farm Podcast

Context

You have a healthy robust queenright colony that you want to split. Your season is right for splitting: plentiful flying drones and hopefully, stable warm/sunny flying weather over 60F. Ideally, you have made sure that there are at least a few frames with light soft wax within the broodnest.

You have a nuc box set up to receive the older queen and her staff. You can use an actual nuc box or a regular hive box set up as a nuc (a follower board is nice to provide coziness). Just size the nuc to the number of bee covered frames you put in it. More on that below.

You have your goal in mind for the split (ie whether you are planning to attempt to get multiple new queens/nucs from it – or whether your aim is one young replacement queen to head the hive). In either case, this split will also prevent swarms if completed fully.

Recipe Overview

- Find queen and pull her and appropriate frames (with clinging bees) to a nuc box. Add generous shakes of bees.
- After making sure the original hive does NOT have active swarm cells, leave it to draw emergency queen cells. Split day is Day 1
- On day 10 after split, either a) cull the queen cells down to one, or b) leave one queen cell in the original hive, and pull additional frames with queen cells (and generous staff/stores) to a queen castle or individual nucs to serve as mating nucs. This step is VITAL to prevent swarms.
- On day 30ish after split, check the original hive (and any mating nucs you made) for the presence of a new broodnest indicating the new queen was mated well.
- If original hive was not successful with a queen, either recombine (via newspaper method) it with the retirement nuc or one of the other nucs you made that was successful.

Detailed How To:

Locate the current queen in the original hive. Remove her to the "retirement" nuc box you have ready nearby, usually by setting the whole frame she is on into the center of the nuc box. Make sure there are no charged/active queen cells on this frame.

The retirement nuc: original queen + staff + stores: Fill out the rest of the nuc box with the things she will need to complete a nucleus, i.e. a mini-colony: Frame with good amount of open nectar pollen; Frame of emerging brood. Don't put too much brood as it's hard for this little colony to keep them warm/fed unless they are brood just about to emerge. Look over all these frames for queen cells. Add shakes of bees depending on the size of your nuc container and your placement plan. If you are moving this nuc to a yard more than 3 miles away, a couple of generous shakes of bees in addition to the clinging bees on the frames is usually enough in a nuc box. If you are keeping the retirement nuc in the same apiary you will need several generous shakes of bees since at least half (the foragers) will fly back to the original hive. This is important. It's wise to peek in the retirement nuc the next day to make sure she has plenty of staff. Remember the retirement nuc won't have any flying bees for a while till they mature so make SURE they have food and robbing protection.

The Original Hive Site: Check through the original hive brood nest area for charged (active) queen cells. Replace the missing frames in the original hive with drawn comb or foundation, depending on what you have available. Close up

the original hive per usual. Count the day you do this split as day 1 Mark your calendar or set alarms in your phone for the dates you calculate based on the notes below.

On Day 4 knock down fully capped cells; leave queen cells still open at tip. This is optional. It's the 'walk-back' option to eliminate queens made too fast with older larva. I like to place all frames with queen cells in the center of one box and mark the frames with a push pin for easy retrieval but all that is optional too. Don't shake any frames with queen cells! Handle those frames very gently.

Days 7-9 try NOT to open, jostle or mess with any hive/nucs that is requeening. Sensitive developmental time for the growing queen.

On Day 10 there should be multiple queen cells. You ***MUST*** do one of the following to make sure only ONE new queen emerges in the original hive. If not, the first (and 2nd and 3rd) virgin to emerge is likely to decide to swarm because the population and stores are plentiful in this hive. In this method, the day 10 operations **MUST** be done rain, wind or shine. If it's rainy, be sure to wear full bee protection gear. Count ahead on your calendar to make sure you are going to be able to work bees that day!

Option A: Goal is ONE replacement queen for this hive

Choose the largest, best looking queen cell to save. Knock ALL the rest down. To make sure about this you will need to shake bees off the other brood frames to find them all. Of course you will NOT shake your chosen cell! (set that frame aside for safety. Handle very gently.

Option B: Goal is more than one queen/nuc from this process

(Beginners: be careful with this one– I'd suggest this option after a few years experience successfully working bees.) Make up a number of mating nucs (or queen castle compartments) that you can either move to 3 miles away OR you can GENEROUSLY stock with staff bees/stores since flying bees will again be lost back to the original hive if nucs are set up in same yard or less than 3 miles away.

Set up and stock mating nucs or queen castles. You will gently place one frame with queen cell/cells and clinging bees inside each of those (in the warmest position). Add frames of open nectar and stores (and/or set up to feed). Shake in generous shakes of bees from original hive to each nuc. Mating nucs are very vulnerable to robbing so reduce entrance to about one bee size. However do NOT use any type of robbing screen as the returning mated queen cannot find her way inside those. You will leave one frame with ONE queen cell in the original hive.

In both options,

New queen will emerge on day 11ish after the split. About a week after that she is likely to be going on her mating flight. About a week after that she is likely to start laying. Try to avoid opening the hive till about days 21-30 unless in emergency.

On day 30ish after split, check the original hive (and any mating nucs you made) for the presence of a new broodnest indicating the new queen was mated well. That way she has had time to settle into laying AND there should be at least a small patch of capped brood by that time. Not only is it easier to see, you can also make sure it is good worker brood and not drone brood from a poorly mated queen.

If original hive was not successful with a queen, either recombine (via newspaper method) it with the retirement nuc or one of the other nucs you made that was successful.

Hope this give you ideas to try!

Leigh © 2022 Beekeeping at Five Apple Farm Podcast