

April Hive Management in St. Louis

Spring in St. Louis offers the hobbyist beekeeper a variety of approaches to managing colonies.

Introduction

The first section of this handout discusses five common spring colony conditions, and the range of options for responding to each condition. The second section discusses alternative approaches to dealing with colonies with excess bees, the most common healthy springtime condition. While intended primarily for hobbyists and sideliners, the principles underlying the approaches discussed in this handout are based on honeybee biology, and will apply to any type of beekeeping operation.

The quantity and health of the colony's bees, brood, honey, and pollen govern what may be done with the colony. Accordingly, the beekeeper should first closely inspect the colony to assess its resources and decide what actions are appropriate, much the way a doctor examines a patient. The beekeeper's success with the approaches discussed below will depend on whether the beekeeper's observations are timely and accurate. Inspection skills develop with study, practice and experience.

You may wish to refresh your knowledge of how to inspect a colony, and what to look for, by reading *Beekeeping Basics*, pp. 23-27, <http://pubs.cas.psu.edu/FreePubs/pdfs/agrs93.pdf> or other reference materials you have acquired.





I. Common Conditions

The colony in the first week of April will probably display one of the following conditions:

A. Deadout. You will have to make a split from another colony, or call around for bees to start over. This is not a total showstopper, even if the wax moths destroyed your comb. Rebuild! Get some new frames. Check local sources for nucs, the club website has a section for classified ads where club members list bees and equipment they would like to sell. As of March 23, 2015, the Kelley Beekeeping Company still had packages and nucs for sale. Do not give up!

B. Queenless. There are some bees, but no brood. You cannot find a queen, there is no worker brood; the colony will die without your intervention. As soon as possible, add a frame of open brood with adhering bees and a frame of capped brood with adhering bees taken from another colony, or, if you do not have another colony, call a Club friend, or go online to the Club website Discussion Forum and offer to buy a couple of frames of brood for \$12- \$15 each. Make up a portable nuc (see below), and go get the brood frames you need. The bees will make a queen from frames of young brood, or you can buy a queen from a national, local supplier or check the club website under classified ads. If you intend to install a queen after adding frames of open brood, you will have to cut queen cells when your queen arrives.

C. Honey-Bound. A laying queen and cluster with more than four frames of bees and brood are in the bottom hive body; the upper hive body is solid honey. You are "honey-bound" in the top hive body, and thus prone to swarming. In this case, remove and store 2-3 frames of honey from the center portion of the upper hive body, and replace the frames with frames of open comb, or make up another hive body with five frames of comb, or if you do not have comb frames, use 5 frames of foundation, and four frames of honey, and place it between the hive bodies. When queens arrive, make a divide, and introduce a queen. Alternatively, make a nuc now, as in II B, below.

D. Just Right. There are four frames of bees and brood, and four full frames of honey in the upper hive body. The lower hive body contains frames of empty comb and a few frames of pollen. Congratulations! You have the optimum condition. Your spring management should be easy. All you need to do is clean the bottom board, reverse your hive bodies, make a nice nest for your bees, and super early. This is how.

After you have removed the hive bodies from the bottom board, clean the bottom board of debris (leave the wax “ladders”), and place the hive body that was on the top containing the brood, on the bottom board. The hive body that was on the bottom is now to the side, and what was the top box is now on the clean bottom board holding the brood nest. Leave the brood nest as you found it (maybe push it to the center of the hive body, but keep the frames with the bees together). If there was brood in both hive bodies, consolidate it with the brood that is in the lower hive body. Add a frame of open comb from the other hive body to both sides of this brood nest. This will allow for expansion of the brood area. Now place frames of pollen and honey to the outside of the open comb. Two frames of honey in the bottom hive body, on the side walls, is sufficient.

Place the “empty” hive body on top of the lower one. Position your best open combs in the center, pollen frames, if you have any, beside the open comb, and at least one frame of honey on each side wall. Pull out any “bad” frames from what is now the top box and replace them with foundation placed to the inside of the honey frames. Four full frames of honey distributed in the bottom and top hive bodies, on the outside walls, is perfect for this time of year. Super the colony with one or two supers when the dandelion and fruit trees are in bloom, or when you see bees between five or six frames in the upper hive body. The surplus nectar flow is often going strong by May 1, and you want to super well before then.

E. Excess Bees. If you have a good queen and more than four or five frames of bees and brood in the hive in the first week of April, you have an excess of bees. An excess of bees means there is a good chance the colony will swarm later unless you do something to prevent it. Dealing with this condition is the beekeeper’s perennial springtime challenge; it is also the source of much of the joy of beekeeping, and the principle subject of this handout.

If you have more than one colony, it is recommended that you “equalize” your colonies as a routine part of spring management (whether you have excess bees or not). Clear instructions for equalizing and spring management may be found at Caron, *Beekeeping Basics*, pp. 26-30, and Delaplane, *Honey Bees and Beekeeping*, Chapter 9, and pp. 41-42. You may find that after equalizing you have reduced the excess in your colonies, and you have just the right amount of bees to prevent swarming and make honey. Or, you may find that you have “left over” frames of bees and brood you can use to make a divide, or offer for sale on the Club website.

The discussion that follows in section II considers options available for pursuing three different, but common beekeeping goals in the spring, when you are faced with an excess of bees.

II. Approaches to Working with Excess Bees in April in St. Louis.

A. Prevent Swarming without Making Increase. If you do not wish to make a divide, or to equalize your colonies (you may have only one colony), you may try to prevent swarming by simply reversing the hive bodies,

as described above, and supering early. You could also contact members of EMBA on the website Discussion Forum, to let them know you have bees and brood to sell. (Remember that you will need a frame of comb or foundation for each frame of bees and brood you remove from your hive. Your buyer may have the frame you need when she makes room for your frames of bees.

Pros:

- Simple
- No additional colonies created.
- No additional equipment needed.

Cons:

- Increased swarm potential.
- No colony increase.
- Will need to requeen later in the season, or next spring.

B. Prevent Swarming and Rear a Queen, With Temporary or Permanent Increase. If you want to raise a queen, or make a new colony for honey production, then, provided there is a good quantity of drones in the area, equalize the number of adult bees and brood frames in your colonies, make nucs to prevent swarming, and let the bees raise a queen in the nucs. Requeen the parent colony with the nuc after the honey flow, or grow the nuc to a production colony. See Connor, Increase Essentials.

Pros:

- Prevents swarming by relieving congestion in parent hives.
- Increase may be either permanent or temporary. The nuc may be reunited with the parent colony after the honey flow, thus requeening the parent colony with a young queen and maintaining a stable number of colonies. No additional equipment needed.
- Provides a new colony that may make honey this year.

Cons:

- Interrupts brood production in nuc for thirty days (helps with mite control, however).
- Requires additional equipment and space.
- Uncontrolled mating environment may produce poorly mated queen or queen lacking desired characteristics.
- Queens produced under these "emergency" conditions are often inferior, compared with queens produced from swarm cells.

C. Prevent Swarming, and Obtain a Professionally-Bred Resistant Queen, With Temporary or Permanent Increase. If you want to control your stock with professionally bred queens, and accomplish the goals in B, above, then equalize, make a nuc and introduce a queen bred from resistant stock, such as Minnesota Hygienic, New World Carniolan, or Russian.

Pros:

- Prevents swarming without losing bees.
- Provides nucleus colony with desirable characteristics from well-bred queen.

Cons:

- See B2(a) and (b), above.
- If the divide is not made until around April 18, the beekeeper must employ

- Provides nucleus colony with minimized interruption of brood rearing.
- Provides nuc to requeen parent colony later in season.

swarm prevention in the meantime, such as repeated equalizing, reversing, or adding foundation over the brood nest while there is a nectar flow

III. Equipment and Supply Requirements for Spring Management.

A. The methods described above will require some additional equipment. A divide or nuc will require a four or five-frame nucleus hive ("nuc"), with frames of comb or foundation, or a single-story hive with a ten – frame hive body and frames of comb or foundation. Additional hive bodies and frames should be available. The nuc will grow throughout the summer. Be prepared to add a hive body, super, or remove bees and brood from the nuc in order to prevent swarming.

B. If you intend to relocate the divide to another yard, you will need to make a portable hive that does not "leak" bees. The key is to maintain adequate ventilation, while preventing bees from escaping. To make your hive portable, you will need to:

- 1 Use a 10-frame hive body, or 4-5 frame nucleus hive body;
- 2 Attach the hive body to the bottom board with hive staples, screws, or duct tape;
- 3 Close the entry with material that keeps the bees in but allows air flow through the hive by using either:
 - a) 3" x 14 ½" piece of 8 mesh galvanized hardware cloth, bent into a V shape, and inserted in the entry not more than ¾" (bees can escape if the wedge is pushed in past the front wall of the hive body); or
 - b) 6" or 8" wide, 8 mesh fiberglass soffit screen, taped in place over the entry (escape proof) ;
- 4 Tape a moving screen to the top of the hive body, or use hardware cloth or fiberglass soffit screen to close the hole in the inner cover. Tape the inner cover to the hive body. Do not cover with telescope cover while moving.