



The Managed Mentoring Program on getting started in beekeeping.

Managed Mentoring



Managed Mentoring

Introduction to Splitting Colonies

Lesson | Intro to Splits



What is Covered in this Module

What is a Split?

Split Requirements

Augmentation Split vs. Traditional Split

Pulling a Split

Split Variations

Relocating the Split

Caring for Colonies

Splits for Mite Management



What is a Split (aka Divide)?

□ There are several reasons to split

- *Apiary Growth: More Hives*
- *Swarm Prevention*
- *As part of a Nucleus production business*
- *Splitting off bees as a supply to rearing queens*
- *Replacing losses*
- *Weakening a strong colony:
Strengthening a weak colony*
- *Introducing New Genetics
with a Split and Combine*
- *As a practice in mite
management*
(Ex: Introduction of a brood break, etc)

Terminology

Split: The term split is used to describe dividing a honeybee colony into one or more parts as part of a management practice.

Terminology

Divide: A common term for a split.



Split Candidates

□ Robust Queenright Colonies

- *A logical candidate to split includes a colony that is:*
 - Healthy and with many bees
 - Contains enough resources (food, comb, and bees) to support the original hive after it has been split as well as the second colony that comes of the split
 - One that contains at least one queen, and has a means to support a new queen or raise one
- *A colony that when split, can reconstitute itself (and its split) in time for overwintering*



Equipment Requirements

□ Provisions for the split and beyond

- *Logically if you are pulling a split, you will require additional equipment to place the split off colony*
 - The equipment required is predicated on the type of split you are performing
 - Options include a full Nuc setup if you are making Nucleus hives
 - Optionally you might need an entrance reducer, hive strap and other miscellaneous equipment
 - Additional bottom board, inner cover, and roof for a walkaway
 - A spare box and queen excluder for a Demaree style procedure
 - You may need provisions to secure a hive for transport



Timing

- **Preformed where the bees can become operational**
 - *Think of a split is like a starter hive.*
 - No matter the type of split you perform, the split itself needs time to coalesce and if required build out to be self sustaining
 - The best time to set them up for success is during a nectar flow
 - *The procedures should not be taken at a time where the bees involved would not have a path to survival*



Split Objectives

□ Standalone vs. Augmentation

- *At times, a different objective might be in play*
 - The common practice of splitting a hive is often for the purpose of making a new colony
 - Sometimes however you would split resources out of a hive for the purposes of equalization
 - This would be the practice of borrowing from a strong hive to prop up a hive that could benefit from additional resources.
 - The process of augmenting the weaker hive will make it greater in size and improve its capabilities

Definition

Augmentation: the act of adding in a way that makes it bigger or better.



Pulling a Standalone Split

□ Basic Premise – Make a New Colony

- *You will pull a specific set of resources to create a hive in miniature*
 - **Queen** <conditional>
 - Determine up front if you are going to source the queen (artificial swarm) or if you are pulling resources to start a colony with a supplied queen
 - Whatever you choose to do, ensure that the plan is solid for the origin hive
- *You will need a complement of frames that will recreate a brood nest with the requisite resources:*
 - **Drawn comb, brood (open and/or capped), pollen, honey and/or nectar**



Imitate Nest Structures

- **Arrange the brood nest in the split to mimic a typical structure:**
 - *Open and closed worker brood in the center*
 - *Pollen on both sides of the nest*
 - *Nectar on both sides of the pollen*
 - *Honey to the outside*
 - *A frame of drone brood in the brood area (if including)*



Isolating the Queen

□ Finding the queen can be difficult

- *If your plan is to move the queen out of the origin colony, you will need to locate her and move her to the new colony being established*
 - If you have a large colony, occupying two boxes and 20-frames, sometimes origin colonies have so many bees that finding the queen is difficult
 - One option that you might employ is to place a queen excluder between the boxes
 - The premise is that you divide the space in half and whichever box shows eggs being laid has the queen.
 - This divides the space to look for the queen in half



Moving the Queen

□ Move the queen, or move the frame

- *One dilemma for novice split makers is moving the queen*
 - If you are making a split, you need to decide if you are comfortable with the prospect of picking the queen off the frame and place her into the new colony
 - The good news is, often you can simply move the entire frame the queen is on into the new colony and forgo having to pluck her off the face of the comb



Splitting with Queen Cells instead

□ Sometimes the queen is not in play

- *It is not out of the question to simply harvest split resources and leave the queen in the mother colony*
 - This is an option where a beekeeper might pull several frames that have charged queen cells along with the resources and let the split raise a queen
 - This is not a traditional swarm management recommendation, but it is an alternative
 - You could pull all frames with charged queen cells, lots of resources, bees and leave the mother colony with a small footprint. The colony seeing how many resources will carry on with the existing queen and may not swarm given the transformation caused by the manipulation



Introduction of a new queen

□ A split without queen resources

- *There is another alternative split format – no queen provision*
 - This equates to moving resources sans the queen from the origin hive, queen cells, and/or brood that is viable for the bees to make a queen
- *When you move resources without queen provision – **the colony is hopelessly queenless***
 - This is a colony that can be supplied with a queen that will be readily accepted
 - You can pluck a queen from another place and post it into the new split or even supply it a caged queen and let the colony work on releasing her



Moving splits out of the apiary

□ Move the workforce elsewhere

- *A sound, and common instruction, is to relocate the split*
 - If you move bees out of an origin colony, and leave the split in the apiary...
 - It is highly likely that some of the bees you moved will leave the split and fly back to the origin colony
 - Once you complete the split process, close it and relocate it to keep the bees intact
 - You would move it ideally far enough away that the foragers would not recognize the landscape to find their way back to the origin hive
 - The common instruction is a distance greater than 3 miles



Move the Origin, Replace with Split

□ An Alternative Tactic to Relocation

- *One alternative some beekeepers consider is a switch*
 - To perform this approach, you pull the origin hive off the hive stand and move it elsewhere in the apiary
 - You place the split on the stand
 - Forager are oriented to that spot, and they will continue to come back; moving into the split instead of the origin hive which has been relocated.
 - The origin colony will reorient
 - The origin bees once moved will recognize the change and reorient
 - Some foragers, might leave the origin and go into the split – which will make it stronger



Making the Split and Stabilization

□ How to make a split – Instructions

- *We will be providing a separate lesson that walks through a step-by-step instruction*
 - The simple process explained is to setup the received equipment next to the origin colony, smoke and inspect the origin, and move resources from one to another based on the structure described earlier.
 - As you pull frames, consider what you are stripping from the hive and consider how you would rearrange the remaining resources in the origin colony
 - For every frame you pull, you will need to put in a replacement
 - You could optionally scale the origin hive down to smaller equipment



Feed and Protect

□ Protect from Robbers

- *Ensure you close the entrances*
 - Small colonies near larger colonies can quickly become a target for robbing
 - Consider locating farther away – and place entrance reducers so the entrance can be defensible

□ Feed the new colony

- *Feed both to support the colony as they establish, and to stimulate growth and brood rearing*



Stay On Top of your Splits

□ **Move Plan** (if located offsite)

- *Schedule the time (and place) to move your split back into your apiary*

□ **Splits Grow Quickly**

- *Vigorous colonies that establish young queens can grow quite quickly*
- *You must build a specific management plan to stay ahead*
 - Have equipment in the ready and stay ahead of the space required for the colony to grow
 - Ensure you have frames prepared and ready for deployment



Consider Drones

□ Account for Drones if required

- *If you are moving charged queen cells, or letting a colony raise its own queen, then you will need to account for drones*
 - This does not mean putting drones in with the split.
 - It means that the timing of your split has to occur when colonies in the surrounding area are producing drones
 - Virgin queen require drones in the environment for mating



Aiding Colony Mite Burdens by Splitting

□ Splits provide a small measure of benefit

- *The origin colony will lose some of the mite population to the split*
- *The colony without a queen will see a brood break*
 - A brood break means the queenless will not be producing brood for a period
 - This colony will age out any brood in progress
 - With no brood being produced, mites are not able to reproduce (no developing larvae cell to produce in)

Incidentally, this condition provides a mite knock down opportunity



Splits for Mite Control

- ❑ **One of the colonies experiences a brood break**
- ❑ **The mite load in a single colony is divided by two**
 - *This provides some temporary benefits for both colonies*
 - *If done in the height of the season new bees are produced while mites are at a lower volume in the population.*
 - *For the other colony, they have a brood break and beekeepers can take measure to further reduce the mite burden when a split is starting out with a new queen and there is limited brood*
 - Less brood being reared means fewer cells for the mites to reproduce in. They remain static for a period due to the brood break



Closing Comments

- **Customary Close**
 - Where we stand, where we are going...
 - *This lesson focused on an introduction to splits*
 - *Our next few lessons are more specifics about splits*
 - How to perform a Traditional Split
 - How to perform a 'Walkaway' Split
 - The basics of a Demaree Procedures
 - And then we turn to Hiving Swarms and Swarm Traps



Q&A

- **What Questions did we not anticipate?**
 - If you have feedback, you can leave a constructive comment; but be nice.
 - You could also send an email to comments@managedmentoring.com
 - *Please refer to this video in the subject so we know what the reference is.*

