

How to make a cut-down split

A cut-down split is a special technique often used by comb honey producers. The purpose of a cut-down split is to maximize the number of foragers that are bringing in nectar by minimizing the amount of brood a colony has to care for.

With little brood to feed, foragers concentrate on bringing home nectar rather than pollen, and nurse bees without brood responsibility soon become foragers as well. The result is lots of honey in a short period of time.

Timing of a cut-down split is important. To be effective, the cut-down should be completed just before the start of a main nectar flow. No matter how well you organize the split, it won't produce more honey if there is no nectar to collect.

To make a cut-down split:

- Find the queen.
- Place the queen and nearly all the open brood, honey, and pollen in a new hive. Make sure these frames are covered with nurse bees to care for the open brood.
- Leave the capped brood, one frame of eggs, and a small amount of honey and pollen in the old hive. At the same time reduce the number of brood boxes in this old hive by one and add empty honey supers. (So if there were three brood boxes, cut back to two. If there were two brood boxes, cut back to one. Add supers after cutting back the brood boxes.)
- Place the new hive in a different location so all of the foragers return to the old hive.

After you are set up, this is what happens:

- The old hive won't swarm because it doesn't have a queen or young brood. The colony will raise a new queen from the eggs, but by the time the colony is strong, swarm season will be mostly over.

This old hive has many more foragers and nurses than are needed to care for the one frame of eggs. In addition, all the capped brood will soon hatch and replace the nurse bees.

Because the hive is now crowded (due to the reduced number of brood boxes) many of the newly hatched nurse bees will move into the supers and start building comb—even in comb honey supers.

The old nurse bees will also become foragers, but since there is little brood to care for, pollen needs will be low. So the huge crop of foragers will collect nectar like crazy and make a lot of honey in a very short time—which they will store in the newly build comb.

- The new hive won't swarm because there are no foragers. It will take several weeks to build up a foraging force.

I know this is confusing, so try this:

Old Hive in Original Location:

No queen

Capped brood

One frame of eggs

Nurse bees to cover

Small amount of pollen

Small amount of honey

All the foragers

Reduced number of brood boxes

Increased number of honey supers

New Hive in New Location:

Old queen

Uncapped brood

Remainder of eggs

Nurse bees to cover

Most of pollen

Most of honey

No foragers

Normal number of brood boxes

Normal number of supers

How to make a walkaway split

In contrast to a swarm-control split where you need to know the whereabouts of your queen, a walkaway split can be made without having to find the queen. The steps for setting up a walkaway split are easy:

Examine the brood nest of the hive you want to split and look for eggs. Split the brood nest between the new hive and the old hive, making sure each hive has many eggs, both capped and uncapped brood, and enough nurse bees to cover the entire brood nest.

As in any split, arrange the frames so the brood nest is in the center flanked by pollen and then honey. If there is insufficient honey, add a sugar syrup feeder.

Close up the hives and walk away.

The queen-less hive will soon begin to raise a queen of their own from very young larvae. Since eggs will be hatching over the next three days, they will have many new larvae to choose from and several days to get it all done. The queen-right hive of the split will continue on as before.

The downside of this type of split is that it takes a long time to establish. Rather than raising a queen from a maturing queen cell, the workers are raising her from a newly hatched larva. You have to wait an additional week before you start looking for fresh eggs. So instead of checking for eggs after three weeks, you should start checking after four weeks.

This type of split can be done before you see any swarm cells.

However, if you start too early in the season the split could fail for the following reasons: Nighttime temperatures may be too cold for a tiny split. Remember, you have a relatively small number of adult bees and a large number of brood cells. Nighttime temperatures must be fairly moderate to avoid chilled brood.

Remember that the virgin queen will need drones with which to mate. Don't try raising queens in any type of split until drones are plentiful.

If you see swarm cells in any of your hives you usually don't have to worry about the temperature or the drones because the bees don't start building swarm cells until conditions are right for swarming. If you are unsure of your timing, let the bees guide you.

How to make a swarm-control split

Hives can be split for many reasons. A beekeeper may split a hive in order to increase the number of hives, to raise queens, to increase the number of workers, or to keep a hive from swarming. There are dozens of ways to do a split, depending on what you are trying to do and when. What follows is the method we use to make a swarm-control split.

Before you can think about splits, you need to think about equipment. This may seem obvious, but it's a helpless feeling to discover your colony is ready to swarm and you don't have a place to put a split. So first things first: make sure you go into swarm season with some extra boxes and frames.

Once queen cells appear on the bottoms or sides of your brood combs, swarming is imminent. You can either move the swarm cells out of the hive or move the queen out of the hive to make the split.

I prefer to move the old queen into a new box and leave the swarm cells where they are because this simulates actual swarming. So here is what I do:

1. Catch the queen. You don't have to actually confine her, but it makes things a little easier if you do. In any case, you have to know where she is.
2. Divide the frames between the old hive and the new hive. For example, if you have 10 frames, put 5 in each hive. Try to equalize brood, pollen, and honey so both hives have some stores. However, make sure the old hive has at least one swarm cell and the new hive has the queen.
3. Arrange the frames so that brood is in the center of the box, just outside the brood put frames containing pollen. Add at least one frame of honey.
4. Fill out the rest of the box with frames of empty comb or foundation or starter strips.

Now you have two five-frame colonies, one with a queen and one with a queen cell. Each hive now "thinks" it has swarmed. The nurse bees in each hive will stay with the brood, but the foraging bees will return to the old hive. So, for a few days, the old hive will appear very busy compared with the new one. The new one will get busier as young bees hatch and nurses become foragers.

Since it will be a few days before lots of stores are brought into the new hive, make sure it has plenty of honey and pollen. One way to speed things up is to make sure the new hive has mostly capped brood—it will hatch much sooner than uncapped brood.

To prevent this new hive from swarming it is best to not to use any remaining swarm cells. Again, this simulates a true swarm because there would be no swarm cells in a newly colonized hive.

More than one swarm cell in the old hive is okay. Again, it simulates actual swarm conditions where several swarm cells are left in the original hive. The first virgin queen to emerge will most likely kill the others.

Once the queen cells are capped in the old hive it can take up to three weeks for the queen to mature, mate, and start to lay eggs. If you don't see eggs after that time, you may have to provide a queen, a queen cell, fresh eggs, or very young larvae to keep the colony alive.