

How to do Splits

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What is the desired outcome?

I would choose my method for doing a split depending on what you want for an outcome.

Reasons for doing a split:

- To get more hives.
- To requeen.
- To get more production.
- To get less production (for people who don't want too many hives or too many bees).
- To raise queens.
- To prevent swarms.

Timing for doing a split:

As soon as commercial queens are available, or as soon as drones are flying depending on if you want to buy or raise queens you CAN do a split. It depends again on what you want for an outcome.

There are an infinite variety of methods for doing a split. Many of these are because of the desired outcome (swarm prevention, maximizing yields, maximizing bees etc.) Some of the variations are also due to buying queens or letting the bees raise queens.

The simple version is to make sure you have some eggs in each of the deeps and put them facing toward the old location. In other words put a bottom board on the left facing the left side of the hive and one on the right facing the right side of the hive and put one deep on each and maybe an empty deep on top of that. Put the tops on and walk away.

There are an infinite number of variations of this.

The concepts of splits are:

You have to make sure that both of the resulting colonies have a queen or the resources to make one (eggs or larvae that just hatched from the egg, drones flying, pollen and honey, plenty of nurse bees).

You have to make sure that both of the resulting colonies get an adequate supply of honey and pollen to feed the brood and themselves.

You have to make sure that you account for drift back to the original site and insure that both resulting colonies have enough population of bees to care for the brood and the hive they have.

You need to respect the natural structure of the brood nest. In other words, brood combs belong together. Drone brood goes on the outside edge of the brood and pollen and honey go outside that.

The old adage is that you can try to raise more bees or more honey. If you want both, then you can try to maximize honey in the old location and bees in the new split. Otherwise most splits are either a small nuc made up from just enough to get it started, or an even split.

Kinds of splits

An even split. You take half of everything and divide it up. Face both of new hives at the sides of the old hive so the returning bees aren't sure which one to come back to. In a week or so, swap places to equalize the drift to the one with the queen.

A walk away split. You take a frame of eggs, two frames of emerging brood and two frames of pollen and honey and put them in a 5 frame nuc, shake in some extra nurse bees (making sure you don't get the queen), put the lid on and walk away. Come back in four weeks and see if the queen is laying.

A typical split. Same as above, but you either introduce a queen you bought or walk away and let them raise their new queen. If you introduce a queen they will be three weeks ahead of the hive that is raising their own, so you will have to put them in a larger box than a nuc to start with.

Swarm control split. Ideally you want to prevent swarming and not have to split. But if there are queen cells I usually put every frame with any queen cells in its own nuc with a frame of honey and let them rear a queen. This usually relieves the pressure to swarm and gives me very nice queens. But even better, put the old queen in a nuc with a frame of brood and a frame of honey and leave one frame with queen cells at the old hive to simulate a swarm. Many bees are now gone and so is the old queen. Some people do the other kinds of splits (even walk away etc.) in order to prevent swarming. I think it's better to just keep the brood nest open.

A cut down split.

Concepts of a cut down: The concepts of a cut down are that you free up bees to forage because they have no brood to care for, and you crowd the bees up into the supers to maximize them drawing comb and foraging. This is especially useful for comb honey production and more so for cassette comb honey production, but will produce more honey regardless of the kind of honey you wish to produce.

This is very timing critical. It should be done shortly before the main honey flow. The purpose is to maximize the foraging population while minimizing swarming and crowding the bees into the supers. There are variations on this, but basically the idea is to put almost all the open brood, honey and pollen and the queen in a new hive while leaving all the capped brood, some of the honey and a frame of eggs with the old hive with less brood boxes and more supers. The new hive won't swarm because it doesn't have a workforce (which all returns to the old hive). The old hive won't swarm because it doesn't have a queen or any open brood. It will take at least six weeks or more for them to raise a queen and get a decent brood nest going. Meantime, you still get a lot of production (probably a lot MORE production) from the old hive because they are not busy caring for brood. You get the old hive requeened and you get a split. Another variation is to leave the queen with the old hive and take ALL the open brood out. They won't swarm right away because the open brood is gone.

Confining the queen. Another variation on this is to just confine the queen two weeks before the flow so there is less brood to care for and free up nurse bees to forage. This also helps with Varroa as it skips a brood cycle or two. This is a good choice if you don't want more hives and you like the queen. You can put her in a regular cage or put her in a #5 hardware cloth [push in cage](#) to limit where she can lay. They will eventually chew under the hardware cloth cage, but it should set her back for a while.

Cutdown Split/Combine. This is a way to get the same number of hives, new queens and a good crop. You set up two hives right next to each other (touching would be good). Two weeks before the main flow you remove all the open brood and most of the stores from both hives, and the queen from one hive, and put it in a hive at a different location (the same yard is fine, but a different place). Then you combine all the capped

brood, the other queen, or a new queen (caged), or no queen and one frame with some eggs and open brood (so they will raise a new one) into one hive in the middle of the old locations so all the returning field bees come back to the one hive.

Frequently Asked Questions about splits

How early can I do a split?

It's very difficult for a split to build up unless it has an adequate number of bees to keep the brood warm and reach critical mass of workers to handle the overhead of a hive. For deeps this is usually five deep frames of bees with three of them brood and two of them honey/pollen in each part of the split. For mediums this is usually eight medium frames of bees with five of them brood and three of them honey/pollen. I'd say you can split as early as you can put together nucs that are this strong. Later in the year when it's not frosting occasionally at night, you could get by with somewhat less, but you'll still do better with this much.

How many times can I split?

Some hives you can't do any splits as they are struggling and never get on their feet. Some hives are such boomers that you can do five splits in a year, although you probably won't get a honey crop.

How late can I do a split?

What you really need to ask yourself is "when is the best time to do a split". By the bee's example that would be sometime before the main flow so they have a flow to get established on. However this tends to cut into your harvest, so you could do them right after the main flow and probably still have time to build up for the fall, if you make them strong enough and give them a mated queen.

I'm in Greenwood, Nebraska. In a year with a good fall flow, I can do a split on the 1st of August that may build up enough to overwinter in one or two eight frame medium boxes. But if the fall flow fails they may not build up at all.

How far?

The question often seems to come up, how far away to put the split. You need to account for drift if it is less than 2 miles. In 36 years of beekeeping I've never taken a split 2 miles away unless that's where I wanted to take them anyway. I just do the split and shake in some extra bees or do the split and face both hives to the old location. In other words where the old hive was is where both of the new hives face. Returning bees have to choose. Sometimes I swap those after a few days if one is a lot stronger. Usually the one with the queen is stronger.

I say all of this, mostly because it's "the right thing to do", but really since I went to eight frame mediums and since I expanded to 200 hives, I just split by the box and I do nothing about drift. I put two bottom boards where ever there is room on the stand and "deal" the boxes like cards. "One for you and one for you." I add as much empty room as I have boxes full of bees (in other words I double their actual space). So if there are three boxes full of bees on each stand I add three empty supers with frames.

Sometimes it's worded like this: "how close can I put them?" To which I say "one inch will do." There is no difference between one inch and one and a half miles. At two miles you have no drifting to speak of.