You've got to know when to hold 'em
Know when to fold 'em
Know when to walk away
And know when to run.

-- Kenny Rogers, The Gambler

Anyone who has been keeping bees for any length of time knows the value of making splits to increase their number of hives. A few brood frames and bees from a strong hive are removed and placed in a new hive. They are either left to raise their own new queen or are given a store-bought one. Now you have two hives instead of one. In beekeeping lingo, this is called "making increase".

Given Murphy's Law, things happen and we lose hives. So by making increase every spring, we create an insurance policy so bad luck doesn't spell tragedy. For example, if we like keeping three hives, we can make a fourth or fifth one in the spring; that gives us a two-hive cushion so we can be pretty sure we'll still have three at the beginning of the next season. The insurance hives can either be full sized hives or nucs ("nucleus colonies").

But this article isn't about making increase. That topic already gets lots of attention and excitement. I don't have angst or emotional gridlock over making increase.

What I don't do well is make *decrease*. When I do bite the bullet and decide to act, I often don't do it in a timely or effective way.

Why would a beekeeper want to *decrease* the number of hives she/he owns? There are at least two basic reasons, one happy and one less so:

1. The beekeeper has made so many successful splits that she/he wants to sell them for big bucks to other beekeepers (woo hoo!)
2. The beekeeper has some hives that are limping along and don't have a high probability of long-term success.

If your hives are in the first category, hurray for you! I encourage you to sell those surplus

colonies in order to contribute to the whole concept of locally-raised stock. I'm not convinced that locally-raised bees are inherently better creatures than imported ones, but I do believe that "buying local" is a good thing, whether it be honey bees, tomatoes or hula hoops. Locally-oriented suppliers must be attuned to local markets to be successful, and that usually results in better service and better advice as well as a better local economy. Additionally, it is in our best interest for North Carolina to become self-sufficient with respect to supplying our own beekeeping needs. In doing so we can greatly reduce our risk of being at the mercy of other peoples' problems.

My concern, however, is more typically with hives in the second category. Each year I invariably end up with some hives that are superstars, some that are so-so and some that are a disappointment or even worse: a looming failure. In my apiary, these last hives aren't diseased; they are just losers.

Where losers often come from

How can loser hives exist in a healthy, well managed apiary? Research at NCSU looks at the causes of colony malaise and failure. Aside from disease, "queen events" are a major factor. This term encompasses all types of queen failures/losses and the subsequent success or failure of the hive's attempt to requeen.

In my experience, I have had many hives languish after "queen events". Some examples include:

1. A split just didn't "take"; the new queen wasn't very productive and as the midyear dearth wears on, the hive doesn't build up enough to have a good chance to overwinter.
2. A hive swarms and fails to successfully requeen itself, resulting in laying workers
3. A hive requeens itself but the new queen just doesn't deliver
4. A hive swarms late in the season and despite its best efforts doesn't have time to recover before winter
5. A late-season cut-out doesn't build up properly

So what should we do when we have hives like the ones mentioned above that just limp along? Logically there are at least three options:

1. Invest lots of time, effort and resources to nurse the hive along even though experience says that it won't get any better
2. Use a "live and let die" approach and leave the hive to its own fate
3. Combine the weak hive with a strong hive to create a beefed-up strong hive

If we view our hives as pets, then option #1 is very difficult to resist. But take a deep breath, think of the long run and don't do it. Invest your emotional energy and resources on winners, not losers. If you had a car that was rolling downhill, headed for an abyss, would you want to make sure it was washed, waxed and full of gas?

Option #2 has popular appeal too. Some people erroneously think that allowing a weak hive to die somehow improves the gene pool. It is true that preventing a weak hive from reproducing is probably a good thing, but that doesn't mean that all of its resources should be discarded as a total loss. The bees, brood, wax comb and stores can be assimilated into another colony, turning loss into value.

Suppose you had two 1957 Ford Thunderbirds: one a creampuff and the other an old wreck. Would you take the wreck to the crusher or use it as a source of parts for the creampuff? Common sense suggests that if you really are serious, the second approach is extremely useful.

With bees, this analogy implies that if we have a hive that is "worthless", we can salvage value from it by combining it with a decent colony. We will of course want to do this while there is as much value left in the loser as possible. Once the handwriting is on the wall, don't procrastinate before taking action.

An important caveat to this discussion is that at the right time of year, a hive that is suffering from the ill effects of a queen event can be restored by introducing a new queen. However if the colony has begun accepting laying workers as surrogate queens or if there isn't enough time left in the season for a new queen to produce an adequate number of bees for overwintering, that option is probably a waste of time and money.

How to combine colonies

There are many ways to combine colonies. Regardless of the technique, one axiom is that we always want to add the weak colony to the strong one, not the other way around. Another is there isn't any point in combining two weak colonies – the result would just be a large weak colony. The fundamental problem (e.g., an unproductive queen) would still remain.

Newspaper method:

The newspaper method is a tried-and-true, time-honored technique. It reliably works.

1. Remove the inner and outer cover from the strong hive.
2. Place a sheet of newspaper over the top of the hive so that all of the frames are covered.
3. Use your hive tool to cut a few slits in the paper. This will encourage the bees to mingle.
4. Place the brood boxes from the weak hive on top of the newspaper so that they are now supers on the strong hive.
5. Replace the inner and outer covers.
6. Leave the bees alone.

Before long, you'll be able to hear the sound of bees munching on the newspaper. The

upper bees and the lower bees slowly mingle together as the barrier disappears. Depending on the strength of the hives, the process will be complete in a matter of hours.

Some beekeepers remove the weak queen from the upper colony before combining. Others don't bother, relying on the bees themselves to recognize the difference between a winner queen and a loser and subsequently dispatch the loser.

Shake-out method:

I have used the shake-out method on laying worker colonies with great success. Don't do this at a time of year when robbing is an issue, but it works fine in the spring when all the bees are busy and happy.

1. Take the weak hive several feet in front of the target hive.
2. Remove each frame and give it a single, strong, up-and-down shake. The bees will lose their footing and fall into the grass.
3. An alternative to shaking is to grasp the middle of the top bar of a frame very firmly with your left hand. Give the back of your left hand a firm whump with your right hand, as if your right hand were a hammer and your left a nail. The jolt will dislodge the bees.
4. Repeat the shaking or whumping until every frame is empty.
5. Note that open brood can be dislodged by a vigorous shake or whump. Use a brush to remove bees from frames with larvae.

The dislodged bees will be confused for a moment but then they'll stream into the nearest hive. It looks like WalMart during the opening moments of Black Friday. The bees in the receiving hive have no choice but to let the newcomers in. The newcomers aren't robbers or usurpers; they aren't interested in harm or mayhem. So things settle down fairly quickly.

Shuffle method:

As with the shake-out method, the shuffle method probably shouldn't be done when robbing is an issue and the bees are on high alert and easily irritated. Otherwise it works fine for me.

1. Open the strong hive as for a normal inspection, smoking it as usual.
2. Remove frames from the weak hive and insert them into an appropriate place in the strong hive, e.g. brood frames go into the brood nest, honey frames go up top.
3. The result is that frames and brood are shuffled up in the new mega-hive.

Clean up

With any of these methods, it is important to clean up the site of the no-longer hive. Remove stands or other items that may have home-marking (Nasonov) pheromone on them or serve as landmarks. Otherwise some of the bees from the now-combined hive may revert to the old spot and hang around morosely.

After combining, you'll likely have surplus frames with drawn comb and maybe stores. Use this opportunity to cycle out old, nasty comb. If at all possible, freeze the frames you want to keep for later. Freezing will kill small hive beetle and wax moth eggs. Once the frames have been in the freezer for several days they can be removed and stored in a dry bug-proof container. Let them thaw and thoroughly dry before putting them away.

Summary

Fall (which starts in August for beekeepers) is a great time to make a cold-hearted assessment about whether a colony stays or goes. This is a key part of my successful overwintering strategy (see Controlling Winter Losses). By judiciously combining hives, we can turn what would have been a loss into a win, or at least a bonus. The actual process is extremely easy; the hard part is making the decision to take action. Give it a try and see how it works for you.

Randall Austin is a NC Master Beekeeper who keeps a few honey bee hives in northern Orange County. He can be reached at s.randall.austin@gmail.com.