

## **Beekeeping Two Point Five by Joe Lewis**

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**Overview** - In simplest terms, the concept of Beekeeping 2.5 is managing within your apiary a minimum of two hives and a nuc. With this combination, the beekeeper has the resources and flexibility to take necessary actions for maintaining healthy bee colonies indefinitely.

**Challenges** - Keeping bees is harder than it used to be. As a matter of fact it is probably about 2.5 times harder to keep bees now than it was for your grandfather's generation. That is unfortunate, but we have to recognize things are different now. Mites, viruses, pests, pesticides, fungicides and herbicides, habitat loss, fescue instead of clover, Round-up ready monoculture, etc. challenge the most experienced beekeepers. Not surprisingly, we lose a lot of beekeepers after two or three years (I'll say 2.5) because their hive fails and they are not sure why. This article will explain in part how to overcome some of the challenges and help you keep bees indefinitely.

**The One-Hive Beekeeper** - The one-hive beekeeper is up against some major problems. He/she does not have the opportunity to compare performance and condition by having multiple colonies. How can you know if what you are looking at is normal if your sample population is one? It makes it hard to know what management actions are required, unless you have been keeping bees for 5 or more years already or have had a chance to see what behaviors are expected in a hive at each point in the beekeeping year. The one-hive beekeeper has no backup plan when the hive goes bad or the queen fails. There is no room for maneuver, and there is little that can be done after things "turn south". Discouragement turns to unhappiness and seeing costs multiply, sometimes the inexperienced beekeeper loses interest and gives up. He or she had no chance to make a split after the queen had failed, a laying worker had taken over, or moths or small hive beetles had exploded throughout the hive, etc. The one-hive beekeeper was acting like the car owner who thinks "I don't need insurance, because I will never have an accident" and "I see no need for carrying a spare tire, jack and tire tool, because it is highly unlikely that I will ever have a flat."

**Keeping Two Point Five Hives** - One answer is to keep at least 2.5 hives. That means two full hives of whatever size and a 5-frame nucleus colony (the point five!). This is where you would raise a new queen or keep one as a backup. A nucleus hive or "nuc" is split off of one of the large hives using any one of many techniques. The performance and condition of the two large hives can be compared on a regular basis. With more than one hive you have multiple data points as reference instead of just one. Therefore, you can make better judgments concerning the management of your hives and you will recognize when something needs adjusting. (And something always needs adjusting!) The larger hives act as a source of brood when hive strengths need to be cross-leveled. Eggs and young larva from a large hive can act as a source to

make an emergency queen in a queenless hive. And a strong hive will often make really nice queen cells in the spring and early summer that can be used to make instant or walkaway splits.

**The Nuc** - A five-frame nuc box is easy to build and can be made in minutes from scrap wood on a table saw. Plans are on the internet if you need details. Or you can also take an old 10-frame box and cut it into a 5-frame and a 4-frame nailing a new side on each. (BTW, trying to make two 5-frame boxes from a 10-frame box results in not quite enough extra space, but the 5/4 split works just right! Put 9 empty frames in a 10-frame box, separate the 5 from the 4 and mark the mid-point between them. That is where to cut the box. I also keep sample wood pieces on hand for nucs. These are easy to copy and I loan them to anyone who asks. There is really no reason not to have a couple of nuc boxes on hand at all times. In swarming season you keep one empty nuc box (and lid) in the trunk of your car for collecting swarms, making unexpected splits, and carrying spare frames. Another nuc always has a split in it, made on the spot when multiple queen cells are seen. Remember, when you make a split you need to replace the removed frames. That is why you carry 5 extra frames in the other, empty nuc box. The nuc can easily be fed syrup using a mason jar and a 70 mm hole in the lid. The small hive in a four or five frame box is highly portable and can be moved to another location easily when bees need time to re-orient. If the nuc gets too full, too quickly, expand it to a 10-frame box and make another one! But always have a spare queen. If you end up with but don't want 3 big hives, no problem.... sell one on Craigslist or offer it for sale through your local club! Many beekeepers find success through nucleus hives, taking advantage of the bees' reproductive tendencies. Making nucs also has the advantage of breaking the brood cycle to naturally reduce the varroa mite load. Homegrown nucs have a greater chance of long-term survival because *you are making LOCAL bees rather than importing bees from other areas!!* (Also see my article on nuc making at: <http://susquehannabeekeepers.com/memberarticles.html/>)

**Queens Fail** - Yes, unfortunately queens fail. It is part of the bee life cycle and being a beekeeper. Do not be discouraged! A good queen might last 2.5 years. A poorly mated one, much less. A queen might fail in the middle of the fall or winter, when she cannot be replaced, and ordering a new one is not an option. It is like having a flat tire in the worst possible place. But it happens eventually to everybody. If you have a new, spare queen in your backup nuc, you have a really good option to make a "combine" and save the hive. Or, you have Option B, to pull young larva and brood from another hive and let the failing hive make their own queen (yes, a less desirable, but possible option.) Bottom line, you HAVE options. If you have only one hive, you really don't have many options but to start over, or admit failure and quit.

**Making Queens, Keeping Queens, Keeping Beekeepers** - I make some queens and I keep some queens. I bank some queens. I sell some queens. But I am not trying to make a living on queens or bees. Like many of you, I just enjoy beekeeping and am

excited to be a small bee farmer, watching things grow and multiply. And I enjoy sharing this excitement with others. Seeing new beekeepers quit the hobby is sad. I think a lot more new beekeepers would stay in the hobby or business if they did not experience the inevitable failure associated with having one hive. So let's place the challenge of keeping bees in the beekeeper's favor by adopting the concept of Beekeeping 2.5 and advocating it to others.

**One More Recommendation** - I have one final recommendation. Make it your resolution to read at least two point five books on beekeeping this year. More has been written about bees than you could ever read in a lifetime, so there is a lot to learn. Be a lurker on Bee-L or Beemaster, buy a book, or get to the local library and check it out!

(Full disclosure: Dr. Larry Connor and I came up with the idea of Beekeeping 2.5 in about 2010 when he was a guest in our home.)