

Data-Based Beekeeping

by David L. Bruun

It was in the winter of my second or third year as a member of our local beekeeping club that I noticed some very consistent conversation among members. This was just at the onset of CCD, and many beekeepers were lamenting their losses. What was striking was that most of the beekeepers were unsure of a cause, or causes, for the loss of colonies.

Being a real estate analyst by profession, my unspoken reaction was, "Sorry your bees died. What records do you have? What sort of data do you have access to? After all, you can't analyze data you don't collect."

In the few ensuing years, I have noticed that record keeping is given minimal emphasis in both our apprentice and journeyman courses, even though our state's AG department requires documentation of experience for both designations. Indeed, fewer than half of our members keep permanent written records, and nearly all of them use a simple journal format. Even our beekeeping guru, a veteran with 40+ years' experience, when asked where his beekeeping records are, grins and taps the side of his head.

Most of us, myself included, have somewhat leakier memories. If I have more than four or five hives, I readily lose track of their "histories" - which colony was fed how much, and when; which was a package from California, or a swarm caught nearby? And as regards the colonies I managed just four or five years ago, there's not even a cobweb in the cranium. Clearly, there is a need for some sort of permanent record, and a comprehensive record-keeping system.

With that realization, the first question is, "What sort of records should be kept? And what will they tell you about the colony?"

After identifying the hive, there are a few basic items, most of which will not change during the course of the colony's life. The age of the colony and the performance of the queen can be traced through the source of the colony (swarm/package/split), the race of the queen (if known) and the date of introduction/split. Noting the queen's marker color is always helpful in finding her.

Locational data can include not only the street address of the hive's location, as well as contact name and telephone number, but also the primary forage that may lie within the foraging range of the hive. By recording the appearance date of the first forage in the hive's immediate vicinity, the colony can be prepped to take best advantage of the early forage. Additionally, an aerial photo will indicate areas of possible forage not visible from the hive's location.

The condition of the hive and the temperament of the bees at inspection is certainly worth noting. Is the entrance clean and dry? Is there a reasonable number of active foragers? Are they calm, listless, angry, or...? Are there drones? Is the odor normal, or does it indicate a problem? Once the hive has been entered, was the queen found? Are there supercedure or swarm cells? What is the condition of the brood?

As data is collected over the season, changes in hive condition and bee activity can then be noted.

Recording the date, type, amount and manner of feeding allows the comparison of hive survival and productivity. If pests or other adverse conditions are noted, the date(s) of first observation and application of medication or other corrective actions is essential to assess the progress of infestation and efficacy of treatment.

Finally, recording the hive's productivity, its yields of honey, wax, etc. brings your analysis full circle. An individual hive's performance can then be assessed with regard to the age of the

colony, its origin and queen line, its location and forage, and its history of feeding, pests and treatments. Queen lines can be tracked for desirable qualities such as hygienic behavior, calm temperament, disease and pest resistance, and overall productivity.

Comprehensive and consistent record keeping, while not solving all beekeeping problems, will lead to a better understanding of each colony's unique experience, and enable the beekeeper to better manage the apiary.

And maybe answer the question: "My bees all died. What happened?"

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