

Project Update: Final Inspection and Release of the Colonies from the Study

A Comparison of Strength and Survivability of Honey Bee Colonies with Conventional Versus Northern-Requeened Packages

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SARE FNE 12-756

On April 19th, 2014, we released the colonies from our SARE project. By this we mean that since their installation, each colony had to be treated equally in all respects. So when we fed one colony, we had to feed the rest of the colonies, and if one colony was strong and ready to swarm and the next colony was weak and needing boosting up, we could not switch locations or move brood. In these cases we simply had to note the state of the colony and allow the bees to do what they were going to do. By releasing the colonies from the project, we are now able to work with each colony individually in ways that might have skewed our data during the project.

To release the colonies, we had to conduct our final inspection and assess each colony's strength coming out of winter. We did that final inspection on April 19, 2014, which was literally the first day this spring that we were able to get into the colonies long enough to do a full inspection without jeopardizing the health of the colonies. April 19th was the first day that we saw natural pollen coming into the hives (only a little bit) and the weather was in the low- to mid- 50s with a fairly strong breeze.

Master Beekeepers Cindy Bee, Jacky Hildreth and I conducted the inspections with note-taking and other assistance from Anne Simpson who had come out and inspected with Cindy one time last summer. We worked quickly but thoroughly to minimize interruption to the colonies, but we needed to make a full and accurate report of colony strength for our final assessment. The reason we were conducting these inspections as early as possible in the season was so that we could feed any colonies that were light (many were) and so that we could simulate the efforts of a capable beekeeper who is trying to ensure colony survival.

The results of our final inspections are shown below.

| Final Inspection April 19, 2014 | | | | | | |
|---------------------------------|---------------|------|----------------|------|-------|------|
| Strength | Package Queen | | Northern Queen | | Total | |
| Strong | 1 | 4% | 8 | 32% | 9 | 18% |
| Average | 2 | 8% | 8 | 32% | 10 | 20% |
| Weak | 4 | 16% | 4 | 16% | 8 | 16% |
| Dead/Disqualified | 18 | 72% | 5 | 20% | 23 | 46% |
| Total | 25 | 100% | 25 | 100% | 50 | 100% |
| Alive | 7 | 28% | 20 | 80% | 27 | 54% |
| Ready for Spring | 3 | 12% | 16 | 64% | 19 | 38% |

As you can see, the packages that we requeened with northern-raised queens had over double the survival rate of the packages that we did not requeen, and over five-times the probability of being "ready for spring," meaning being in Average or Strong condition.

This is the summary of the final inspections for this year's colonies only. For our final project report we will combine our data with previous years' data and create a presentation for the SARE website. We will presenting the results of this work at EAS this summer, and also at other local and regional club meetings in the coming months.

We would like to thank the MSBA, CCBA, YCBA and other clubs for their support, as well as the individuals who sponsored colonies to increase our project size, and especially those who came out and helped in the SARE bee yard this summer, and in the previous project years.

We hope that the results of our efforts will inspire other people to look at these same issues, perhaps in a larger setting, or at a club level. We particularly hope that you might use the information that we have learned from this project to improve your own management practices, and consider requeening package colonies when northern queens become available to increase the winter survival rates in your own apiaries.

Best to you all, and your bees. 🐝