

SARE Project: A Comparison of Strength and Survivability of Honey Bee Colonies Started with Conventional versus Northern-Requeened Packages

SARE Project #FNE12-756

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Those of you who have been members of the MSBA for a few years probably remember the grant project I conducted with Larry Peiffer comparing northern-raised nucs, commercially raised packages, and commercially raised packages that we re-queened with northern queens. For those of you who haven't heard of the project, we compared 54 colonies over the 2009 & 2010 seasons, from which 20 were disqualified, leaving 34 in the final (adjusted) results as follows (in a nutshell):

Summary of 2009 & 2010 Results			
Nuc	Average + Strong	10	83%
	Weak + Dead	2	17%
Package	Average + Strong	5	42%
	Weak + Dead	7	58%
Requeened	Average + Strong	9	90%
	Weak + Dead	1	10%
Overall	Average + Strong	24	71%
	Weak + Dead	10	29%

The northern-raised nucleus colonies and the packages that were requeened with northern queens demonstrated approximately twice the survival rate of the conventionally raised packages. The increase in survival in our project was stunning. I had expected that requeening packages with northern-raised queens would make some improvement in survival rates, but I didn't expect that requeened packages would have the same likeliness of winter survival as a northern-raised nucleus colony.

I had anticipated that the packages would come with a mite load and associated virus load that would set them behind the northern-raised nucleus colonies.

I decided in late 2011 that I would apply for another SARE grant to continue this work, this time narrowing the project to comparing just conventional packages and requeened packages. The SARE organization caps Farmer Grant projects at \$15,000, which will allow us to purchase and compare 36 colonies. We are also hoping to secure funding for an additional 14 colonies, bringing the total of this 2013 project to 50, which will nearly double our sample size as compared to the first two years — learn more about this opportunity on our website [overlandhoney.com/news/seeking-funding-for-northern-queen-project/].

We will re-queen half of the colonies in June when northern queens become available, and measure the colonies for strength, honey production, disease loads, and ultimately winter survival over the course of the summer, fall and winter. Final evaluations of the colonies will be performed in late April 2014. We hope to increase the statistical significance of the data we collected in the first two years by bringing our colony number up to a total of 104, while eliminating some of the environmental and outlying factors that contributed to our first two years' results. If this year's project results are as promising as in the previous project, we may generate some interest for a larger organization to continue this work.

We are presently preparing for the 50 colonies. This means a lot of new bee equipment to assemble and move around. We will be running this project at our new location in Jefferson, Maine, with all 50 colonies in one apiary. The associated work will be done by me and by my business partner Cindy Bee, Master Beekeeper from Georgia, who relocated to Maine in January 2012. As part of our grant outreach, we will write regular articles for The Bee Line, keeping you all posted on the activities of the project. We hope to engage as many of you as possible, and we look forward to sharing our methods, results, lessons-learned and stories over the next 16 months.

If you would like to learn more about the previous years' projects, visit the SARE website [sare.org/Grants] and search the final reports for projects FNE09-665 and FNE10-694. To read an overview of our new project, search for FNE12-756