Training beekeepers in natural methods and improving their marketing efforts to capitalize on consumer demand, enhance economic returns to honey producers, and improve the welfare of the honey bee population in North Carolina and Virginia

Certified Naturally Grown of Stone Ridge, NY received $12,732 to hold trainings and workshops; and to develop and produce marketing materials; to assist North Carolina and Virginia bee keepers in marketing their products as naturally grown, locally produced and produced in a way that protects the health of bees.

Final Report FY09

Final Performance Report

Date: December 21, 2010
Recipient: Certified Naturally Grown (CNG)
Project Title: Training beekeepers in natural methods and improving their marketing efforts to capitalize on consumer demand, enhance economic returns to honey producers, and improve the welfare of the honey bee population.
Grant Number: 12-25-G-0964
Location: Stone Ridge, NY (office). Project implemented in North Carolina and Virginia.

Project Summary

This project was designed to encourage beekeepers to adopt natural practices as a way both to improve the bees' health, and to meet growing consumer demand for naturally-produced honey.

The critical importance of bees to our food system – indeed our economic system – has been well-established. Roger A. Morse and Nicholas W. Calderone of Cornell University estimate the annual value of increased agricultural production attributable to honey bee pollination is $14.6 billion (*The Value of Honey Bees As Pollinators of US Crops in 2000*). Honey bees help by increasing yields and improving quality. Public awareness of the bees' role has soared as colony collapse disorder and other diseases threaten the honey bee population. Concern for the bees' welfare has made consumers particularly responsive to natural practices that protect the bee population and boosted the number of customers seeking locally produced honey.

As scientists struggle to identify the precise cause of colony collapse disorder, experts agree a number of factors contribute to the declining health of honey bee colonies, including use of pesticides, poor diet, and varroa mites. A recent study carried out by Maryann Frazier and colleagues at Penn State University found sub-lethal but damaging levels of fluvalinate and coumaphos in the vast majority of comb and pollen samples. These are pesticides used on the hives to combat varroa mites, a common pest problem, but they're also toxic to the bees themselves. (See enclosed article from American Bee Journal, June 2008, summarizing findings.) These findings clearly indicate that synthetic chemicals that are commonly used in conventional apiaries to guard against disease and pests are having a negative impact on the health of the very honey bees they are supposed to protect.

Over the past several years natural beekeepers – who already suspected these findings to be true – contacted Certified Naturally Grown (CNG) in hopes we offered certification to natural beekeepers who refrained from using synthetic treatments in their hives. CNG is a grassroots organization that administers a certification program for farms using natural methods. Produce and livestock certification standards prohibit the use of synthetic fertilizers, pesticides, fungicides, wormers and genetically modified seeds. All participants must complete an application and have their farm inspected annually.

Dr. Buddy Marterre, past President of the North Carolina State Beekeepers Association, offered to take the lead in developing a set of standards that define best practices in natural beekeeping. These standards form the basis for a new certification program administered by CNG that will a) create a new incentive to adopt natural beekeeping practices by offering marketing assistance to certified beekeepers and b) require a peer-review inspection process which will help formalize networks of mutual support and information-sharing.

Prior to the development of CNG's apiary certification program, there were not very well-developed standards for honey producers who wish to participate in the USDA organic program. CNG had been contacted numerous times by experienced beekeepers seeking some certification, but who are not satisfied with the options available to them.

The marketing challenges facing beekeepers are unique, compared to fruit and vegetable growers, insofar as the product of honey bees is presented in a container and can't be readily assessed for quality by the consumer. Packaging and labeling play a much more important role. Producers selling pure, natural honey must contend with vendors who attempt to undercut prices by selling inferior products that have been adulterated with non-honey additives (such as corn syrup) or who are selling less-expensive non-local honey as if it's their own. The ability to charge a premium for quality and effort that goes into producing pure natural honey is to a larger degree dependent on an informed, trusting relationship with the customer. CNG's certification program may afford some additional leverage to beekeepers seeking to enter new markets where their practices are not yet known by their customers. Even for natural honey producers who are not certified, there is an opportunity to leverage public concern for honey bee welfare, and, if the right effort is made to communicate about production practices, charge a premium for the honey they're producing.

The need for marketing assistance is further underscored by the fact that honey is not perishable and is eaten in smaller quantities so there are fewer purchases per household per year, therefore a wider audience must be reached than would be the case if customers bought honey on a weekly basis, as we do with highly perishable produce at the farmers markets. Though the challenges are unique, many beekeepers could easily make dramatic improvements in their marketing efforts by taking a few simple steps.

Project Approach

The project sought to increase the practice of natural beekeeping through two main channels: 1) educational workshops that would support beekeepers wanting to keep healthy naturally-managed hives, and 2) marketing assistance that would support the financial success of natural beekeepers and thereby further encourage the natural beekeeping community. The particulars are outlined below.

Goals and Outcomes Achieved

I. Workshops for Beekeepers on Natural Practices

In collaboration with the State Beekeepers Associations of North Carolina and Virgina, CNG hosted workshops designed to assist beekeepers in transitioning to natural practices. In North Carolina, these workshops were offered by Dr. Buddy Marterre of the North Carolina State Beekeepers Association (NCSBA) and primary author of CNG's Apiary certification standards. The workshops were held in three regions of the state: Piedmont (in Winston-Salem), the Mountains (Asheville) and the Coast (Kinston). In Virginia, the workshops were delivered by Pamela Fisher, Vice President and founder of the Beekeepers Guild of Southeast Virginia, and manager of the Commonwealth's hives at the Hampton Roads Agricultural Research Center in Virginia Beach. The workshops were held in two regions of Virginia: Eastern (Virginia Beach) and Southwestern (Blacksburg).

Two different workshops were offered in both states, at each location. The first workshop, an introduction to natural beekeeping practices, was held in the winter. It was designed as an introduction to natural beekeeping practices for beekeepers with at least one year's experience.

The second workshop took place in May and June of 2010 and was a more in-depth presentation of natural techniques for dealing with common pest and disease challenges, timed to precede the period in July when these challenges present themselves most vigorously.

A total of 240 beekeepers participated in the workshops. Feedback from the participants was overwhelmingly positive, with several recommendations that we continue to offer them in future years. The beekeepers tended to have small scale operations, though most of the survey respondents (65%) were in the business of selling their honey. Many of them (17%) were selling for the first time this year, and about a quarter of respondents (26%) were not currently selling honey, but planned to sell in future years. See survey results below:

Total respondents: 136 Survey administered in September 2010

Do you sell your Honey?		*How many hives do you have today?*	
This is our first year	17%	1-5	54%
Yes, and in past years	48%	6-10	25%
No, but someday I will	26%	11-20	12%
Not interested in selling	9%	21-30	3%
		31+	6%

II. Marketing Assistance

With FMPP funding, CNG developed a **marketing guide** "Help the Honey Speak: A Marketing Guide for Beekeepers with Naturally-Managed Apiaries". This guide was distributed to all workshop participants and is publicly available online via the CNG website (see www.naturallygrown.org/guide). It discusses the importance of packaging, a list of resources, tips for success, the great variety of marketing venues, and guidelines on whether an approach is right for ones own particular personality, preferences and resources.

As in-kind contribution to this marketing initiative, CNG developed **a full certification program** to offer beekeepers who adhere to the apiary standards and meet the other program requirements (including an accepted application, a signed declaration form, and an annual inspection). Beekeepers who participate in the certification program receive a certificate and are eligible to use the CNG sticker-labels and signs bearing the CNG logo. CNG also developed **informational materials** to be distributed by natural beekeepers to help them market their products.

CNG farmers appreciate the marketing assistance their certification provides, particularly when dealing with new customers. Certification also helps highlight their practices and serves as a starting point for conversations. We expect the honey bee certification program to be equally useful to natural honey producers who choose to participate.

With FMPP funding, we were able to develop an **online interactive map** that indicates the locations of CNG apiaries so customers can easily find the natural honey producers closest to them and CNG beekeepers can find one another easily. This map has facilitated local network development among beekeepers wanting to be in touch with one another.

Beneficiaries

The primary beneficiaries of this project are the 240 beekeepers who participated in the workshops that were held in North Carolina and Virginia. Many of these participants were still fairly new to beekeeping, and those with more experience were typically seeking information on how to transition to natural beekeeping practices. Beekeeping is a knowledge-intensive practice with a steep learning curve that ascends for many years. By offering educational workshops that support natural beekeeping practices, we can support and encourage those beekeepers who are often told "it can't be done". The marketing guide, "Help the Honey Speak" was provided to workshop participants to help strengthen their marketing efforts.

The financial benefits of being a natural beekeeper with effective marketing techniques can be considerable. As the public becomes more educated about the plight of the honey bee, more customers look for honey from naturally-managed apiaries. Based on anecdotal evidence from several beekeepers in North Carolina, beekeepers with natural

practices and marketing savvy can command a $2 per pound premium for their honey. Assuming a more modest price premium of $1.50, if we assume (conservatively) that our participants on average had five hives, and harvested 30 pounds per hive to sell, they could garner an extra $225 per season over conventional honey prices. With 240 participants in our workshops, and 48% of survey respondents selling *this year and in prior years* (which doesn't include those who are selling this year for the first time), we estimate there were 115 beekeepers experienced with marketing their honey participating in our workshops. Multiply 115 beekeepers by the $225 premium per five-hive-beekeeper and you'd get $25,920 in economic benefits. This is a rough estimate, but a reasonably conservative one since many of our participants (21% of survey respondents) had more than ten hives, and an average harvest in Virginia is 40 pounds per hive (not 30 pounds), with the healthy hives of experienced beekeepers producing as many as 100 pounds each.

In addition to the 240 workshop participants, another 500 beekeepers picked up a copy of "Help the Honey Speak" at the conference of the Eastern Apicultural Society (EAS) held in Boone, NC where CNG had an informational table and several representatives available to talk with interested beekeepers. Most of these guides were distributed to individual participants but about 200 were distributed in batches to leaders of local beekeeping associations.

Over time, the agricultural productivity of local farming operations will benefit through improved pollination. It is unlikely that this one-year project generated significant improvements in the honey bee population as a whole, but over time, with more beekeepers being encouraged by natural beekeeping workshops and the demonstrated success of natural beekeepers, it's quite possible that natural beekeepers can contribute to agricultural productivity by supporting these tireless tiny workers.

As of mid-December, 2010, there are 45 certified apiaries in the CNG program. Of these, six are in Virginia, and 18 in North Carolina. We anticipate a boost in enrollment over the winter months when beekeepers are less busy caring for their bees. While it is difficult to estimate the economic impact of this certification, it is hoped that the CNG Apiary program will contribute to a greater appreciation for natural beekeeping methods, and encourage those beekeepers who are taking – or considering taking – this approach to their beekeeping practice.

Lessons Learned

There is a strong interest in natural beekeeping today. We feel gratified that our workshops were so well received and appreciated by those who attended. Still, the workshop enrollment was smaller than expected for a couple reasons. First, the outreach capacity of our partner organizations wasn't a robust as had been anticipated, particularly with respect to email communications. We were grateful to be able to publicize our workshops in their newsletters and websites, but had hoped to have greater capacity to reach beekeepers more frequently and directly through email

correspondence. Second, the spring workshops had been scheduled for May and June. The rationale for the timing of the second workshops was that they would precede the season when beekeepers face the toughest pest and disease pressures. In retrospect, it would have been better to offer both workshops in the winter when beekeepers tend to be more available for educational workshops. Once the season begins, beekeepers get very busy with actual beekeeping activities and are much less inclined to spend their weekends in an educational workshop.

The legacy of this one-year project is considerable. Thanks to the impressive and commendable initiative of Dr. Buddy Marterre, CNG has a fully-developed Apiary certification program with detailed standards for natural apiary management and an online application. Funding from FMPP made possible the interactive online mapping of certified apiaries to facilitate customers finding them. Dr. Marterre's educational workshops (see attached agendas) have been developed and provided to 240 beekeepers. These materials will be made available to experienced beekeepers interested in offering the workshops in their locations. In future, these workshops can be self-funding through registration fees. The guide to marketing honey from naturally managed apiaries has been written, designed, printed and distributed. The guide is publicly available online. While we had intended to measure the impact of this marketing guide, we realize that was a bit ambitious for a one-year project, particularly since most beekeepers harvest honey in early fall when this project was coming to an end.

One of the secondary project objectives – fostering the development of local networks – was not fully achieved by the end of this grant period. We did, however, make a good start on this initiative by gathering contact information of people interested in fostering local networks of natural beekeepers in their area. The work wasn't fully carried out largely because the demands on the project director's time were considerably greater than anticipated with respect to organizing the workshops (identifying locations, selecting dates, generating attendance through outreach to local beekeeping clubs, and setting up the online registration tool). The work of local network development will be actively continued in the winter of 2010-'11 when we anticipate having some new online tools that will greatly facilitate the organizing process.

Additional Information

Ann W. Harmon, past president of the Virginia State Beekeepers Association (VSBA), introduced CNG to leaders in the beekeeping community who could help with outreach and instruction. She referred us to Pamela Fisher who was an excellent instructor for our natural beekeeping workshops held in Virginia. Ms. Harmon provided invaluable guidance in the early stage of development of the marketing guide for natural beekeepers.

Buddy Marterre, past President of the North Carolina State Beekeepers Association (NCSBA) and Program Chair of the Forsyth County Beekeepers Association, developed and delivered the natural beekeeping workshop agendas and presentations. These educational workshops were based on the apiary standards he authored for CNG's new Apiary certification program.

The attached materials should provide a more detailed understanding of the accomplishments this project.

- "Help the Honey Speak: A Marketing Guide for Beekeepers with Naturally-Managed Apiaries" (also online at www.naturallygrown.org/guide)
- List of Completed Workshops with dates and locations
- Workshop Agendas
- Image of online map indicating locations of certified apiaries
- Examples of Apiary Profile Page
- Apiary Standards
- How to make Splits (sample workshop handout)
- Outline of Apiary Certification process
- Is Your Honey Green? Marketing card for CNG beekeepers
- Article summarizing findings on impact of pesticide residue on honey bee health by Maryann Frazier, et al. (rationale for promotion of natural beekeeping)

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