

Title:	Train the Trainer Workshop: Honeybee Disease Identification and Treatment, to Encourage and Retain Beginning Beekeepers in New York State		
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Program Name: Beginning Farmer and Rancher

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{NO DATA ENTERED}

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{NO DATA ENTERED}

Non-Technical Summary

The honey bee has been in the national spotlight following large scale unexplained losses of numbers. The silver lining in this cloud has been a renewed interest in beekeeping. Like any other specialized activity, beekeeping has a steep learning curve and may not yield immediate returns. Unfortunately, it can be expensive and beginners are highly susceptible to steep losses. Many lose half or more of their colonies during the winter, primarily due to lack of experience and understanding of the colonies' requirements. Kim Flottum, editor of Bee Culture Magazine, estimates the typical beginner quits after three successive years of major losses. New York State, like so many prominent beekeeping states, instituted an Apiary Inspection program early in the 20th century. With the current fiscal crisis, it was severely diminished. To fill this void, we envision the beekeeping community taking charge of disease detection, diagnosis, and treatment options. Honey bee diseases are not difficult to understand, but some degree of skill is required to reliably differentiate between them. Additionally, in order to comply fully with the philosophy of IPM (integrated pest management) keepers need to be familiar with all the various control measures available, and be able to choose the most environmentally sound while effectively controlling pests and pathogens. The Empire State Honey Producers Assn. will serve as an umbrella organization for the regional bee clubs in New York State, by providing an intensive 2 day workshop at 3 locations, to train beekeepers to identify and treat honeybee diseases, then have the students return to their clubs and train other Beginning Beekeepers. Upon completion, students should be able to correctly identify the major bee diseases of New York State, of which there are but several. They will be competent to administer treatment, and teach other beginning beekeepers. The long term result of such a program will be a reduction in the losses of honeybee colonies in New York which will help attract, encourage and encourage new beekeepers, who constitute the next generation of pollinators and honey producers. A successful program in New York State will serve as a model and example for other states in the New England and snow belt region, as our common climate dictates that many of our problems will have regional characteristics. It is a favorite saying among beekeepers that all beekeeping is local; however, localities are overlapping circles with the potential for sharing and learning from each other.

Accomplishments

Major goals of the project

The Empire State Honey Producers Assn. will serve as an umbrella organization for the regional bee clubs in New York State, by providing an intensive 2 day workshop at 3 locations, to train beekeepers to identify and treat honeybee diseases, then have the students return to their clubs and train other Beginning Beekeepers. Our Target Group is Beginning Beekeepers. We have letters of commitment and interest from 8 community based beekeeper clubs in NY. We anticipate educating at least

800 beginning beekeepers over the next 2 years. Upon completion, students should be able to correctly identify the major bee diseases of New York State, of which there are but several. They will be competent to administer treatment, and teach other beginning beekeepers. Expectation of the use of record keeping will also be requested of the partnering clubs, to determine if beginning beekeepers benefit and gain confidence by reducing loss of honeybee colonies by utilizing skills obtained through the efforts of the workshop. Year 2 of the Grant period would be primarily mentoring and assessing the clubs teaching activities. Year 3 may require another workshop as needed, using some of material acquired in Year 1 and perhaps tuition fees to cover any additional costs not covered by any remaining Grant funds. The long term result of such a program will be a reduction in the losses of honeybee colonies in New York which will help attract, encourage and encourage new beekeepers, who constitute the next generation of pollinators and honey producers. Outcome and Objective: 1) Retention of Beginning Beekeepers; there is a continuous interest in beekeeping, especially by women. With success in their efforts, they would be less apt to quit the profession. 2) Decrease in the loss of honeybee populations in New York, by correctly identifying and treating affected honeybee colonies. 3) Establish a standardized and practical workshop packet for reference for Beginning Beekeepers and help keep their bee hives alive and healthy. 4) The common use of up to date skills using current methodology and rationale. 5) Increase membership in both local and State organizations, fostering communication and mentoring. 6) Encourage the atmosphere of sharing knowledge by teaching Beginning Beekeepers, particularly women, and increasing confidence in their abilities. 7) The continuation of evaluation techniques by regularly using questionnaires and record keeping. 8) Improve the public perception of the Beekeeping industry by fostering acceptance of beekeeping.

What was accomplished under these goals?

19 local beekeeping clubs in New York and Connecticut now have representative beekeepers who taken taken the intensive level field training with the NY Bee Wellness program. To date a minimum of 1000 beekeepers have participated in trainings, either at the beginners (Tier II) or intermediate level (Tier I) to identify honeybee diseases. Of the 60 Tier I trainer beekeepers who participated in the intensive 2 day trainings in 2012, those who completed the Year II survey: 97% continue to use skills learned in the workshops, 97% either increased their number of honeybee colonies (80%) or hope to increase their operation, 80% felt their new skills helped with colony survival, 91% have done teaching, 74% plan to continue teaching at the club level "...besides involvement with my club's beekeeping class. I also teach an intro to beekeeping at the local community college.", 83% plan to continue participation with the program, 80% use the NYBeeWellness.org website. "...we have incorporated the very useful information we took away from the workshops into our club programs. I can't stress enough how helpful the workshops were. In our club we went from less than 20% of the membership doing mite counts to well over 50% this year. People just needed to have it broken down into a system they can use."

At the Tier II or club level (~350 beekeepers), 86% increased their knowledge about honeybee disease Greatly or Very Much, 87% increased their skills to diagnose bee diseases Greatly to Very Much, 90% intend to use these skills in their beekeeping practice Greatly to Very Much, and 89% of participants had less than 10 years of beekeeping experience.

A 1 day Tier I field and lab workshop was held in July 2013, with 24 participants representing 9 NY and CT bee clubs; 84% Improved their skills in diagnosing Bee Disease, 100% intend to use their new skills. "I learned more in 1 day than I could learn on my own in a year. Each presenter/mentor brought a unique perspective and increased my apiary skills". In 2014 two intensive 2 day workshops were held in New York to give new beekeepers who have acquired experience in the past 2 years to receive training in order to further disseminate honeybee disease recognition to their beekeeping club. The website, NYBeeWellness.org is kept current.

The program has fostered community building not just statewide, but regionally and locally between bee organizations, motivating beekeepers to develop their skills in apiculture.

Surveys were administered to participants to assess increase in knowlwdge, skill, satisfaction by participants using online or written surveys.

What opportunities for training and professional development has the project provided?

The Tier I students (trainers) learn from experts in the beekeeping field at the NY Bee Wellness workshops, through mentoring while inspecting honeybee hives, lab work, and presentations. Student/teacher ratios are kept small to increase interaction between student and instructor, and to increase knowledge gain; teams from clubs are encouraged to attend together to reinforce learning and implementation of honeybee disease and recognition at the club level. A website developed, NYBeeWellness.org, <http://nybeewellness.org/>, has a basic curricula for Tier I students, but is available to all. It includes : The Field Guide to Honey Bees and Their Maladies (PDF), Ontario Tech Transfer powerpoints and pdf's, Bees at eXtension.org, Lab testing resources/ how to send bee samples to Beltsville, Microscope power point, honeybee anatomy. The site includes an Events page. In 2014 two intensive 2 day workshops were held in New York to give

new beekeepers who have acquired experience in the past 2 years to receive training in order to further disseminate honeybee disease recognition to their beekeeping club. The website, NYBeeWellness.org is updated regularly. Additional educational printed material has been disseminated to local clubs about honeybee diseases : American Foul Brood, Nosema Ceranae. The potential is to develop this program as a beginning to a permanent outreach training program for New York State beekeepers. The Project Director communicated with the clubs via email, newsletter, or in person with reminders of events or of disease management techniques.

How have the results been disseminated to communities of interest?

The website NYBeeWellness.org, <http://nybeewellness.org/>, is available to all beekeepers, in developing skills for diagnosing honeybee disease, the website is advertised on national beekeeping forums and magazines to reach beekeepers who do not attend club meetings or who are not associated with a club; mention of the program was made on a local NPR affiliate; flyers, and business cards with varroa mite count techniques printed on the back, are distributed at beekeepers club meetings, events, seminars; packets with printed material are sent to clubs for distribution; the program was presented at the American Beekeeping Federation 2013 annual meeting in Hershey PA; banners and informational trifold posters are displayed at events such as the Eastern Apicultural Society meeting, the Empire State Honey Producers Association meetings, the New York State Fair honey booth, and banners presented at parades. A Letter to the Editor was published in the April 2013 edition of the American Bee Journal, http://www.americanbeejournal.com/site/epage/132587_828.htm, describing the program. Survey results are posted on the website NYBeeWellness.org.

What do you plan to do during the next reporting period to accomplish the goals?

{Nothing to report}

Participants

{Nothing to report}

Target Audience

Beekeepers living in New York State and neighboring states and provinces (Ohio, Connecticut, Massachusetts, Quebec), with less than 10 years experience in beekeeping, as well as new beekeepers; each year hundreds of people in New York state make the decision to begin beekeeping. During this reporting period, at least 1000 beekeepers were trained in basic honeybee disease recognition and protocol at the local beekeeping club level (tier II) by the intermediate level beekeepers who were trained during the reporting period in 2012-2014

(Tier I Train the Trainers). Workshops were held by 19 beekeeping clubs in New York State and Connecticut; of the beekeepers trained, 89% had less than 10 years experience in beekeeping, and 37% were women.

Products

{Nothing to report}

Other Products**Product Type**

Educational Aids or Curricula

Description

NYBeeWellness.org, <http://nybeewellness.org/>, An educational website established to provide required, prerequisite reading material to prepare the participants for the lab and field work for the train the trainer workshops.

NYBeeWellness.org is now available to all.

beekeepers (particularly in New York) as a guide to identifying honey bee disease using science based information, and links to other educational sites, such as eXtension.org. This website is advertised in national beekeeping forums and magazines to beekeepers who may not be reached by local beekeeping clubs.

-A pictorial pamphlet on identifying American Foulbrood, a highly contagious reportable honeybee disease. Distributed to beekeeping clubs and available online, <http://nybeewellness.org/diagnostics/diseases/afb-id/>.

- A hand-out with protocol for assessing varroa mite levels in a beehive; varroa mites are a major threat to honeybee health.

- Development of a 2 day workshop on honeybee disease identification, with both theory and practicum, which used in 2013, 2012, 2014.

- Development of an annual survey to assess overwinter colony loss.

Changes/Problems

{Nothing to report}