Developing Specialized Tech-Transfer Teams to Help Improve Honey Bee Genetics and Stocks

Project Leader: Marla Spivak
Dept. of Entomology, University of Minnesota, Twin Cities, 219 Hodson Hall, 1980 Folwell Ave., St. Paul MN 55108
(612) 624-4798, spiva001@umn.edu

PROJECT SUMMARY

Objectives:

- Establish a specialized tech-transfer team as a pilot project to work directly with bee breeders in California to improve stock selection, enhance genetic diversity, engage in disease - and parasite-related diagnostic evaluations, and participate in collaborative and interdisciplinary research on key issues.
- Use the pilot project experience as a basis for establishing a second tech-transfer team elsewhere in the United States.

Background:

The almond industry is currently challenged by the presence of colony collapse disorder (CCD) and other adverse conditions that affect the well-being of honey bees and thereby of the pollinator-dependent producers of about a third of U.S food crops.

This project is intended to directly help the beekeeping industry deal with this situation. Based on related work done by the project leader and others, it focuses on actively supporting the industry by providing the industry's all-essential bee breeders with hands-on assistance in the form of expert services intended overall to improve honey bee genetics.

Those services are planned to include helping breeders to (1) engage in effective stock selection and breeding for resistance-to-pathogens-and-parasites traits, (2) enhance the genetic diversity of their bee stocks, (3) use diagnostic evaluation methods and information on integrated management practices to cut back on the use of chemical treatments, and (4) join other breeders and researchers in working collaboratively on key issues, such as the nutritional state of colonies.

The project calls for these services to be provided by a tech-transfer team consisting of a few independent and experienced professional consultants. This approach is based directly on the almond industry's tradition whereby growers work closely with specialized consultants.

Initially, though, the pilot-project team will consist of a professional in the role of coordinator, with the possible assistance of graduate students in honey bee biology. It will also have the guidance and support of the project leader and the project collaborators.

In addition, the pilot-project coordinator will develop a five-year business plan for the tech-transfer team. It will be based on the assumption that the project is likely to lead to significant advances in honey bee genetics and stock selection.

Project Cooperators: Susan Cobey, University of California, Davis; Steve Sheppard and Timothy Lawrence, Washington State University; Katie Lee, Coordinator, UCCE, Butte County

For More Details, Visit

- Poster location 49, Pollination Pavilion, Session 3; or on the web (after January 2011) at AlmondBoard.com/AICposters