

# Tech Team Program to Serve Commercial Beekeeping Industry in the Pacific Northwest

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### PROJECT SUMMARY

#### Objectives:

The Almond Board has supported Tech Transfer Teams since 2011 and is currently providing support to the Pacific Northwest Team (PNW). Objectives of this team are:

- 1) Provide routine evaluation of colony health for beekeepers by obtaining samples at regular intervals round the year in the Pacific Northwest (PNW) region.
- 2) Determine best management practices by collecting data that includes migratory history, disease and pest control strategies/history, and supplemental feeding history for each beekeeper.

#### Background and Discussion:

Commercial beekeepers face a growing set of challenges to keep honey bee colonies healthy. The Bee Informed Partnership (BIP) created Tech Transfer Teams across the nation to assist commercial beekeepers in providing solutions to reduce colony mortality. There are six regional Tech Teams that partner with commercial beekeepers to monitor colony health throughout the year. Nationwide 77 beekeepers currently collaborate with the Tech Teams, which collectively represents about 20% of managed colonies in the United States. Tech Teams are a program of the Bee Informed Partnership (BIP). From 2011 to 2015, commercial beekeepers participating in the BIP Tech Transfer Team program lost, on average, 36% fewer colonies than those commercial operations who did not participate.

With overwhelming interest and encouragement from the regional beekeeping community, BIP launched its fourth team in the Pacific Northwest (PNW). The PNW Tech Team monitors colony health in Oregon, Idaho, and Washington by quantifying disease and pest levels throughout the season from migratory beekeepers in the area. The majority of beekeepers involved in this team

pollinate crops for the most of the year, including CA almonds and PNW seed, vegetable, and fruit crops. The PNW Team is currently partnering with 23 beekeepers. The team regularly obtains samples from each participating beekeeper for *Varroa* mite, *Nosema*, virus, and pesticide levels. We have 2 full-time professionals to operate the PNW team. Both team members travel around the region to sample each beekeeper 4 times a year. This typically includes one site visit in late winter during almond pollination followed by a spring, summer and fall site visit. Each site visit includes: a) standardized colony evaluation; and b) colony samples for further analysis of various pests and disease.

Sample results and colony metrics from each site visit are presented to the beekeeper in a succinct report. By providing sample results to beekeepers in near real time (<10 days), we are able to assist them in determining the efficacy of their management practices and amend as needed. At the end sampling period (winter, spring, summer, and fall), we provide each beekeeper with a seasonal summary report of their pest levels. This allows them to anonymously compare their sample results among other BIP participants. The report expands the information on both a regional and national level while still maintaining the confidentiality of each beekeeper's identity.

The data collected is stored anonymously in the BIP database where it will join a vast and growing archive of data from other Tech Teams as well as disease and colony loss survey data. Beekeepers and researchers will be able to access aggregate summaries of these records to give context to disease loads in specific seasons and locations. Since May 2014, we have taken over 9,400 samples for *Varroa* and *Nosema* levels for participating PNW beekeepers. 2,858 samples were taken in 2014, 3,242 in 2015, and 3,323 to date in 2016.

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**Project Cooperators and Personnel:** Dennis vanEngelsdorp, University of Maryland and Bee Informed Partnership

#### For More Details, Visit

- Poster location 111, Exhibit Hall A + B during the Almond Conference; or on the web (after January 2017) at [Almonds.com/ResearchDatabase](http://Almonds.com/ResearchDatabase)
- 2015 - 2016 Annual Reports CD (15-POLL5-Sagili/vanEngelsdorp); or on the web (after January 2017) at [Almonds.com/ResearchDatabase](http://Almonds.com/ResearchDatabase)
- Related project: 15-POLL2-vanEngelsdorp