

# Technical Transfer Teams Serving Commercial Beekeepers in Almonds

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## PROJECT SUMMARY

### Objectives:

The Almond Board has supported Tech Transfer Teams since 2011 and is currently providing support for all 5 Technical Transfer teams.

Objectives of this project are:

- 1) Help sustain, in part, all regional tech teams whose participants migrate to pollinate almonds in California. The goals of these teams include improving the health of colonies prior, during and after this critical pollination event.

### 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 (TTTs) in 5 key regions to assist commercial operations in providing solutions to increase survivorship. There are five regional TTTs that partner with commercial beekeepers to monitor colony health throughout the year. Nationwide, the 5 TTTs service 99 beekeepers who collectively manage over 579,500 colonies (~15% of the managed colonies in the US). We estimate that 75% of these colonies are used for California almond pollination, representing ~25% of the colonies used by California Almond growers. On average, commercial beekeepers participating in Tech Teams lost an 8.2 percentage points, or 32% fewer colonies than did commercial beekeepers not in the Tech Team program.

With overwhelming interest and encouragement from the regional beekeeping community, BIP launched a fifth team in Michigan this summer. The Michigan Team monitors colony health in those operations that migrate between Michigan for honey production and Florida for overwintering. A subset of these colonies is then moved to California for to pollinate almonds. TTTs assist operations by quantifying disease and pest levels throughout the season allowing

for data driven best management.

Tech teams regularly sample participating beekeepers for *Varroa* mites, *Nosema*, viruses, and pesticide levels. Keeping team members in the field is expensive, so not all teams have full complements of 2 people. This means that we have structured the program to encourage TTTs to help each other out by ensuring TTT members travel to other regions and see other operations and exchange relevant information. We have found that this brings increased productivity and creates team members who are more versatile and valuable to the beekeeping industry as a whole. Currently there are 3 teams with two personnel (Northern CA, Midwest and Pacific Northwest) and 2 teams with a single individual (TX, MI). Sampling schedules typically include 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.

TTTs assess colonies and provide data to the beekeeper in time for them to act on the results, improving their operation's health before and after pollination events, helping them evaluate pre- and post-treatments and in preparing for overwintering. The TTTs act as a commercial operation's second set of eyes and hands, provide advice, recommendations, and as an expert opinion in a constantly shifting honey bee health environment. Tech Teams have been largely successful because of their strengths in communication, confidentiality, flexibility, experience, and a quick turn-around time due to a streamlined, well-practiced process.

Tech teams also conducting field trials on new products. Private companies have discovered that using actual commercial operations in partnership with our TTTs (providing unbiased, trained colony assessment and sampling skills) is a win-win for the industry.

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**Project Cooperators and Personnel:** Bee Informed Partnership, Inc.

### For More Details, Visit

- Poster location 112, Exhibit Hall A + B during the Almond Conference; or on the web (after January 2018) at [Almonds.com/ResearchDatabase](http://Almonds.com/ResearchDatabase)
- 2016 – 2017 Annual Reports (16-POLL5-Sagili/vanEngelsdorp) on the web at [Almonds.com/ResearchDatabase](http://Almonds.com/ResearchDatabase)