

Almond-Honey Bee Fast Facts

Almonds depend on bees and bees depend on almonds.

- Almond growers have a deep, vested interest in protecting honey bee health. Without bees there would quite simply be no almonds.
 - Unlike some plants, almond trees are not self-pollinating, so they need some extra help to fertilize flowers and start the process of growing nuts. Almonds must have pollen from a different variety to fertilize the bloom and begin growing nuts, so honey bees provide the essential link from one blossom to another.
- And it's not just the almonds that benefit. For bees, almonds are often the first natural source of food each spring. Just like almonds are a nutritious snack for us, almond pollen is very nutritious for honey bees.
- Hives usually do well during almond pollination season and routinely leave stronger than they arrived. Beekeepers then split many of the hives to grow their apiaries.¹
- In fact, it's not an exaggeration to say that without almonds, the commercial bee keeping and honey producing industry would be in serious jeopardy.

Overall, the number of hives in the U.S. counted at the end of summer has remained relatively stable over the last 15-20 years.²

- However, winter hive losses make it harder for beekeepers to maintain their hives, meaning they have to work harder to regrow lost hives each year, putting at risk many of the foods we count on for a stable, nutritious food supply.³

There is no single cause for the decline in honey bee health.⁴

- The decline in honey bee health has been linked to a complex variety of factors including:
 - Varroa mites (and other pests and diseases)
 - Decreasing sources of natural forage
 - Exposure to pesticides
 - Lack of genetic diversity in breeding

The Almond Board of California has taken extraordinary steps to be good partners to beekeepers in promoting bee health.

- Since 1995, the Almond Board of California has invested almost \$1.6 million in bee health research – more than any other U.S. crop.^{5,6}
 - The investments we make leverage additional research dollars from other groups, government agencies, and universities.

¹ Ferris Jabr, "The Mind-Boggling Math of Migratory Beekeeping," Scientific American, August 20 2013 – <http://www.scientificamerican.com/article/migratory-beekeeping-mind-boggling-math/>

² USDA Honey Production Report

³ Honey Bee Health Coalition, 2014

⁴ USDA Report on the National Stakeholders Conference on Honey Bee Health <http://www.usda.gov/documents/ReportHoneyBeeHealth.pdf>

⁵ Almond Board of California, Production Research Program, 2015

⁶ Gene Brandi, Vice President, American Beekeeping Federation

- Working with Project Apis m. and others, we also encourage almond growers to provide blooming plants or bee pastures adjacent to almond acreage as additional food sources for honey bees prior to and after almond bloom.

Our Almond Board research has led to several breakthroughs towards improving bee health.⁷

- We have been able to help improve honey bee genetic stock to better manage Varroa mite.
- We have helped develop additional tools to control Varroa mite in hives.
- And because bees depend on variety in their diet for optimum health, we have helped support the development of an improved nutritional supplement that beekeepers use to ensure their bees get the range of nutrients they need in the late summer and fall, when natural sources of pollen are at low levels.

In October 2014, the Almond Board of California published Honey Bee Best Management Practices (BMPs) that garnered praise from leading bee health experts.⁸

- UC Davis Apiculturist Emeritus Dr. Eric Mussen said the recommendations “go far beyond the almond orchard, providing important insights for all crops when it comes to promoting honey bee health.”
- The BMPs lay out simple, practical steps that almond growers can take together with beekeepers and other pollination stakeholders to protect and promote bee health on their land and in the surrounding community. They include recommendations on topics ranging from how preparing for honey bee arrival and removing bees from the orchard to pesticide use and considerations aimed at honey bee safety.
- The BMPs were developed with a wide array of input from sources including the almond community, beekeepers, researchers, California and U.S. regulators, and chemical registrants and represent ABC’s most extensive educational documents to date.
- Note that these BMPs are appropriate for almonds and contain important broader lessons, but may not be exactly transferrable to other crops and geographies, which may have different call for different practices.

The relationship between almond grower and his or her beekeeper often goes back years or even generations.

- The almond industry is vital to keeping beekeepers’ in business. In fact, according to a recent study of Pacific Northwest beekeepers, almonds account for more than 60% of beekeepers’ gross income.⁹ Nationwide, almonds are the source of 45% of all pollination service fees according to the USDA.¹⁰

⁷ Almonds.com, “Bee Active” <http://www.almonds.com/consumers/about-almonds/bees>; The Keystone Center, “Honey Bee Health Coalition” <https://www.keystone.org/policy-initiatives-center-for-science-a-public>

⁸ Almonds.com, Press Release 10/16/14 <http://www.almonds.com/growers/media-center/latest-news/2014/10/almond-board-california-announces-comprehensive-best>

⁹ Dewey M. Caron & Ramesh Sagili. Pacific Northwest Beekeeper Pollination Survey, 2013. Oregon State University.

¹⁰ USDA. Fruit and Tree Nuts Outlook: Economic Insight – U.S. Pollination-Services Market, 2014. Table 1. http://www.ers.usda.gov/media/1679173/special-article-september_-pollinator-service-market-4-.pdf