

2018- 2019 Seeds for Bees Impact Report

Seeds for Bees encourages the use of cover crops to increase the density, diversity, and duration of bee forage in California orchards, farms, and vineyards, while improving soil health. The seed mixes available through Seeds for Bees are designed to bloom at critical times of the year when natural forage is scarce but managed and native bees are active. Seeds for Bees serves the needs of beekeepers and growers while increasing sustainability and biodiversity.



“This is a win-win relationship for the bees and our farming operations.”
-Martin Hein, Hein Ranch Company



Photo: Honey bee and leafcutter bee foraging on PAm Wildflower Mix, 2019

Bee Health: Tipping Point Indicator for Pollinator and Food Sustainability

Our food supply is inextricably linked to the work and health of industrious insects – pollinators. Yet beekeepers are experiencing historic colony losses at the same time demand to pollinate crops and produce honey is growing. Our native bees are also in decline.

California grows ~80% of the world's almonds and ~17% of the produce grown in the US. Most farming has adopted mono-crop practices to increase yield and profitability. This practice has the side effect of creating 'food deserts' for pollinators and has led to diminished soil fertility, less moisture capacity, increased soil compaction, fewer beneficial insects, and increased erosion.

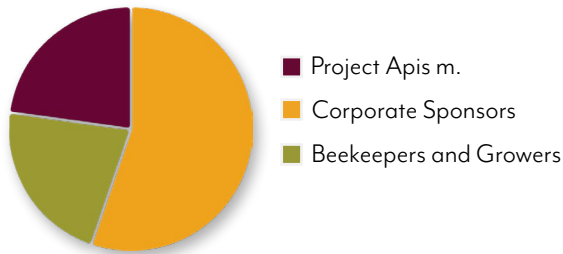
Cover crops are an elegant solution to increase diversity and sustainability in monoculture systems.

Together, we can improve pollinator health and farming practices.

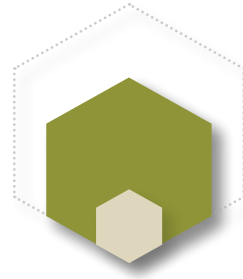
2018-2019 Seeds for Bees Metrics:

- 149 California growers planted over 8,005 acres of cover crop.
- 4 Seed mixes: PAm Mustard Mix , PAm Clover Mix, Vetch and PAm Wildflower Mix.
- 27 CA Counties were represented by enrollees.
- More than 77% of participants increased their engagement in honey bee Best Management Practices like improved pesticide application practices and better communication with beekeepers.
- Top benefits reported by participants include:
 - improved bee health
 - organic matter content
 - weed control
 - water infiltration
 - reduced ground cracking
- Over 85% will include cover crops in future management plans as a result of their participation in Seeds for Bees.

2018-2019 Seeds for Bees Funding Sources



Cover Crop Acreage Total Acres Planted > 28,000



2022-2023 goal: 11,721 acres of forage planted in 23,000 acres of farmland

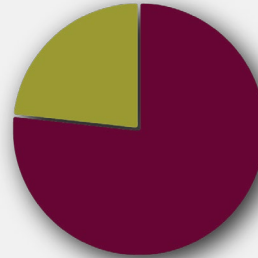
2018-2019: > 8,005 acres of forage planted in 16,200 acres of farmland

2012-2013: > 2,000 acres of forage planted in 7,500 acres of farmland

Leveraging Grower Buy-In to Plant More Cover Crops and Increase Donor Impact:

\$100 donor dollars + \$23 grower dollars
= more habitat on the landscape,
healthier soil and healthier pollinators

2018-2019 Total Invested in Cover Crops: \$265,319 8,005 acres



Seeds for Bees Investment:
\$203,562

Additional Seed Purchased By
Growers: \$61,757

Looking Forward: Strategic Program Advances in 2018-2019

- ▶ Developed a strategic plan to maximize the impact of funder support by targeting growers with immature orchards and adjacent complementary crops like walnuts.
- ▶ Developed a Western monarch habitat seed mix to address declines.
- ▶ Growers purchased more than \$60k of seed; increasing program impact without increasing the budget.
- ▶ Offered new seed mix containing grains to balance pollinator and soil health benefits.
- ▶ Updated growers guide with more information about cover crop management.
- ▶ Improved resources for growers:
(www.projectapism.org/seeds-for-bees)

Ground Truth: Cover Crop Research

[“Management and Benefits of Cover Crops in Almond Orchards”](#) is a study supported by the Almond Board of California with PAm collaboration. A team of researchers led by Dr. Amelie Gaudin from UC Davis is busting some of the myths surrounding cover crops, and revealing new evidence that supports the benefits of cover cropping in orchards. This research, which includes the PAm Mustard Mix, shows fall-planted cover crops terminated in the spring don't interfere with harvest, as they have plenty of time to die off before fall. Dr. Elina Nino also found that colonies pollinating orchards with mustard cover crops average 3 frames more bees at the end of the season.

“It has been a great experience, working with Billy has brought value to our operations. Improving the bee health of our local bee keepers is not only helping our community but also increases our possibility for nut set.”
- Anonymous from Grower Survey

Contact Us

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