Project *Apis m.*

**Research**

Project *Apis m.* (PAm) is uniquely positioned to fund practical, applied honey bee research projects that support beekeepers with both long-term and short-term results. Beekeepers with real-world experience inform our funding decisions along with an expert team of scientists who understand honey bees and the beekeeping industry.

**2020-2021:**

- **23** Projects Funded
- **4** Scholarships Awarded
- **71** Proposals Reviewed

**Since 2006:**

- **143** Projects Funded
- **$8.5 Million** Invested

**Beekeepers’ Priorities are PAm’s Research Priorities**

**Varroa** remains a top concern for beekeepers, and is a research priority for PAm. Recently, we have funded Amitraz resistance studies, breeding and long term-stock-improvement projects, and research to develop new treatments.

- **8** New Varroa & Varroa Control Projects Funded
- **4** Current projects researching new Varroacides
- **3** Current projects studying Amitraz resistance

**Hilo Bees:** Breeding & selecting *Varroa* resistant bees on a commercial scale.
Forage & Nutrition are essential to beekeepers & honey bees. PAm research supports our forage projects and addresses nutrition on a higher level, including supplements and land use decisions.

Queens
- Studying impacts of pathogens & pesticides on queen quality
- Shipping queens
- Queen banking
- Economics of requeening

Research Projects by Primary Area of Research
- Beekeeper Tools
- Honey Bee Health
- Long Term Stock Improvement
- Nosema
- Nutrition and Forage
- Pathology and Viruses
- Pesticides
- Pollination
- Queen Quality
- Varroa

Pesticides
PAm has historically funded important pesticide research, including studies that have informed BMPs for farmers and growers; helping to keep bees safer. PAm’s pesticide research funding is focused on:
- Better understanding effects of pesticides and adjuvants, including sub-lethal effects
- Exploring solutions to negative effects from incidental pesticide exposure

2021 HIGHLIGHTS
- Understanding honey bee & native bee interactions & forage use
- 32,000 Hilo Bee Queens in Commercial Beekeeping Operations
- Assessing pollen substitutes in a commercial beekeeping operation

Learn More: ProjectApism.org/Honey-Bee-Research
Forage

Since 2013:

$2.8 Million Invested

$55,800 + Acres Planted

Seeds for Bees encourages California farmers and growers to plant blooming cover crops that support bee health in agricultural settings. This program increases the density, diversity, and duration of forage on the landscape while improving soil health and increasing the sustainability of farms and orchards.

17 Million
Milkweed Seeds

351 Habitat Projects

The Bee & Butterfly Habitat Fund is establishing high quality pollinator habitat to ensure honey bee and monarch butterfly populations thrive. Working with landowners, conservationists, scientists, and beekeepers to build healthy and sustainable pollinator habitat with maximum benefits where it’s needed most.

3,400 Acres Planted
Historically, PAm delivered the first set of Best Management Practices (BMPs) for Beekeepers, and today we are keeping that tradition alive by identifying and creating relevant resources for the beekeeping industry.

2020-2021:

*New* Indoor Storage Resources
- New chapters of the Indoor Storage Guide published, based on the latest research
- New online resource ([ProjectApism.org/Indoor-Storage-of-Honey-Bees](http://ProjectApism.org/Indoor-Storage-of-Honey-Bees))

*New* Guide to Shipping Queen Cells ([ProjectApism.org/Shipping-Queen-Cells](http://ProjectApism.org/Shipping-Queen-Cells))

12 Webinars
(Hosted or Presented)

26 Articles Published
In leading publications & magazines

6 Videos Produced ([YouTube.com/user/msworkerbee1](http://YouTube.com/user/msworkerbee1))

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**Bee Health Collective** BeeHealthCollective.org

170 Jobs & Funding Opportunities Listed

684 Projects in Research Database

5 Pages of Resources & Honey Bee Health Data

Developing *New* Collaborative Resources
PAm Board of Directors

The PAm Board of Directors includes commercial beekeepers, beekeeping and almond industry leaders, and a state apiarist. Together they represent:

- **85,000** colonies of bees
- **Over 5 million** pounds of US honey produced
- **Over 70 million** pounds of honey packed
- **Over 32** crops pollinated on contract, including **75,000** acres of almonds
- Leadership roles in **25** state and national stakeholder organizations
- Combined total of **28** generations of beekeepers
- Hosting and in-kind support of **16** bee health research projects each year
- **Over 1,000** acres of almonds grown annually using regenerative practices

**FIELD FORCE**

PAm Science Advisors

The PAm Board relies on a team of scientists to review the proposals we receive. Reviewers scrutinize project reviewers scrutinize the project methods and potential for the commercial beekeeping community. Together they represent:

- **100+** years combined experience in research, extension, and industry
- **7** different academic, and government institutions across the US and Canada

**Expertise in:**

- Toxicology and Pesticides
- Queen Health
- Indoor Bee Storage
- Commercial Bee and Ag Industries
- Genetics and Breeding
- Virology and Bacterial Disease
- Molecular Biology & Proteomics
- Best Management Practices
Project *Apis m.* research is funded by beekeepers, growers, individuals and small businesses.

PAm’s corporate research partners trust PAm to identify needs and administer research funding that supports beekeepers through practical, applied projects.

### Research Funding (2006-2021)

**Project *Apis m.***
- **45 Projects Funded**
- **$1.3 Million Invested**

**Costco Wholesale**
- **39 Projects Funded**
- **$4.6 Million Invested**

**National Honey Board**
- **38 Projects Funded**
- **$1.5 Million Invested**

**HEALTHY Hives**
- **15 Projects Funded**
- **$1.1 Million Invested**

### Partners

**Industry & Initiatives**

PAm represents beekeepers’ interests in many industry collaborations, as a leader in honey bee research & science.

- Bee Research Coordination Committee
- The Bee Health Collective
- California Pollinator Coalition
- Honey Bee Health Coalition
- Bee + Scholarship

### Partnering for Pollinators in California Almonds

Supply chain partners sponsor and support bee health through PAm. Corporate partners help implement the Seeds for Bees program and educate growers about Best Management Practices; donating to, sponsoring, and working directly with PAm. PAm works collaboratively with industry partners and other nonprofits to amplify the impact of our work on behalf of honey bees and pollinators in California farms and in orchards.
PAm is an efficient steward of the donations we receive. Beekeeper, grower, and individual supporters of PAm increase our impact directly and gain us additional corporate and supply chain support.

## In 2021, $1,790,914 has gone directly to research and forage

### 13% Overhead Costs

### 87% Funding Research & Forage

We are proud to share that last fiscal year we maintained 13% overhead costs (overhead includes administrative costs such as software and technology, travel, and salaries)

### Statement of Activities

**July 1, 2020- June 30, 2021**

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<tr>
<th>Income</th>
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<tr>
<td>Contributions:</td>
<td>2,824,244</td>
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<td>Program Revenue</td>
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<td>Gov’t Grants</td>
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<td>Interest Income</td>
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<td><strong>Total Contributions:</strong></td>
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<table>
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<th>Expenses</th>
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<td>Research Grants</td>
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<td>Hilo Bees Research:</td>
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<td>Seeds for Bees:</td>
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<td><strong>Total Program:</strong></td>
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<td>Management &amp; General</td>
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<tr>
<td>Fundraising</td>
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<tr>
<td><strong>Total Expenses:</strong></td>
<td><strong>2,059,115</strong></td>
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**Net Income:** 1,186,872  
**End of Year Net Assets:** 2,924,569

### 2020-2021:

**11 Commercial Beekeepers** participated directly in PAm funded research by providing in-kind support and enabling access for scientists to conduct research in real-world commercial beekeeping conditions.
Friends,

Project *Apis* m. was established in 2006 to be an efficient, agile vehicle to fund applied research benefitting honey bees and the crops they pollinate. December marked my first in-person industry conference in 22 months. I was among many glad to see each other, and impressed by the cumulative progress that was reported by all. In times that tested our resiliency, PAm remained stable, and provided the researchers we support flexibility to navigate pandemic setbacks. This allowed them to find ways to adapt, and like the honey bees themselves who so often come through for us, we made impressive forward progress despite unprecedented challenges.

This year our network and collaborations strengthened in new ways, working together to share new learnings with beekeepers online. For example, the Indoor Storage Conference was a free virtual event that combined beekeeper panels, virtual tours of facilities, and research talks from two key labs moving bee storage science forward. Online access allowed many to participate who might not have, and the recorded event is now a resource for all.

Our forage projects also continue to flourish. This year PAm worked with over 290 farmers who seeded more than 11,500 acres of pollinator-nutritious habitat throughout the Midwest and California. The research program is blooming, in 2020-2021, PAm received 71 research proposals and funded 23 of them.

We extend our gratitude to all those who made this work possible, especially in a year that was so difficult for everyone. We thank our donors, our collaborators, the many scientists who strive to deliver results to our industry, and the beekeepers who facilitate and supply their projects with relevant context. We are proud of this network, and working together we know that beekeepers across the country are benefiting from the efforts that can make a difference now and in the future. Thank you,

Danielle Downey, Executive Director, Project Apis m.
Project Apis m.