INTEGRATED CROP POLLINATION (ICP)

Project ICP partners are working to ensure the long term sustainability of specialty crop pollination nationally through Integrated Crop Pollination (ICP). ICP incorporates habitat enhancement for wild bees, farm management practices to support bees, and use of diverse managed bee species into farm systems. Funding from the USDA Specialty Crops Research Initiative is supporting a team of scientists and outreach specialists with diverse expertise who are working with growers to develop 1) best practices for pollinator habitat enhancement and 2) farm management practices to bolster wild and managed bee populations within farms. Our research is also examining the use of alternative managed bees, such as bumble bees and mason bees, to increase the reliability of crop pollination.

With Project ICP’s strong economic and social components, we are assessing how best to fit these ICP strategies into different scales of crop production, as well as how best to share project results with specialty crop growers nationwide to achieve meaningful adoption.

Questions about this project?
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Please visit our website for more information about Project ICP, plus links to project publications and our calendar of upcoming events.

www.ICPbees.org

The Project ICP team is comprised of the following organizations:

AgPollen, LLC.
Franklin and Marshall College
Loyola University Chicago
Michigan State University
Oregon State University
Pennsylvania State University
Rutgers University
Simon Fraser University
St. Mary-of-the-Woods College

University of California, Berkeley
University of California, Davis
University of Florida
University of Vermont
USDA-ARS Pollinating Insects Research Unit
Wenatchee Valley College
The Xerces Society for Invertebrate Conservation

Our project is also guided by an advisory committee of stakeholders and by our grower cooperators.

Bees are essential specialty crop pollinators. Managed bees, such as honey bees, along with bumble bees and other wild bee species are under threat and their populations are declining. Growers need strategies that can reliably deliver pollination to ensure a profitable return from pollinator-dependent specialty crops. To meet these grower needs and ensure reliable pollination, Project ICP is conducting research and extension nationwide on farm management practices that increase wild bees and on techniques for managing alternative bees for pollination.
# Project Integrated Crop Pollination

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## GROWER NEEDS

### BEES
- Which bees can provide stable crop pollination? How can honey bees, other managed bees, and wild bees be integrated into sustainable pollination systems?

### LAND MANAGEMENT
- Which farm practices and habitat enhancements best support crop pollinators?

### MANAGED POLLINATORS
- How can alternative managed bees contribute more to specialty crop pollination?

### ECONOMICS
- How do wild pollinators, habitat enhancements, and alternative managed pollinators influence crop yields?

### SHARED RESULTS
- What are the best ways to incorporate Integrated Crop Pollination strategies on farms?

## PROJECT OBJECTIVES AND TOOLS

- Identify economically valuable pollinators and the factors affecting their abundance.
  - Guide to Integrated Crop Pollination
  - Pollination Monitoring Field Guide
- Identify farm and habitat management practices that enhance populations of wild and managed bees and increase crop pollination.
  - Region-specific guides & mapping tools for establishing optimal bee habitat on farms
  - Tools for minimizing pesticide impacts on pollinators
- Determine performance of alternative managed bees as specialty crop pollinators.
  - Guide to Alternative Managed Pollinators for Fruit and Vegetable Growers
- Measure economic contribution of ICP to specialty crop production.
  - Decision-support tools to guide grower’s investments in habitat enhancements and management strategies

## EXPECTED OUTCOMES

- Higher, stable crop yields
- Improved pollination sustainability
- Greater pollinator diversity and reliability

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Blue orchard bee on almond flower, Derek Artz.