Pollinator Conservation Is Growing Up
Lessons Learned from the Field

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What is the Xerces Society Pollinator Program

The Xerces Society: An International Pollinator Conservation Extension NGO
Collaborating with scientists, government agencies, farmers, cooperative extension, and other conservation groups
- Training and outreach
- Technical support to the USDA-NRCS and to farmers
- Technical publications
- Restoration and habitat enhancement
- Applied restoration research and monitoring
- Information for policymakers and media
- Document at-risk pollinators

Xerces Ag Pollinator Program: Goals

Program Goals
- Increase populations of unmanaged (wild) pollinators and support managed bees
- Increase sustainability and profitability of agriculture

Xerces Ag Pollinator Program: Threats to Pollinators

- Lack of habitat (poor diet)
- Insecticides
- Disease/pathogens
- Pests

Photo: Mike Omeg (Omeg Orchards)

Threats to Pollinators

- Lack of habitat (poor diet)
- Insecticides
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- Pests

Photo: Mace Vaughan (Xerces)

Photo: Jack Ohman (Sac Bee)

Photo: Rollin Coville

Photo: Eric Mader

Photo: Snapseed
Threats to Pollinators

• Lack of habitat (poor diet)
• Insecticides
• Disease/pathogens
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Lesson: We need tools to guide planning

• What are potential habitat limitations to bee diversity and abundance?
• What are management limitations to bee diversity and abundance?
• What opportunities are available on my farm for habitat creation?
• How do I prioritize specific components or location of habitat?
Guidance for pollinator habitat assessment and conservation planning

- A subjective tool to educate user (landowner and/or conservation planner)
- Quantify character of habitat and land management
  - Landscape-level
  - Site-level
- Prioritize conservation actions on a single farm

Problem: How Do I Restore Habitat?

Start with this…

…move to this…

…and end with this.

Lessons Learned: Clear Guidance

Establishment protocols that are not too expensive, but which work.

- Full growing season of site preparation and weed abatement
- Planting techniques that don’t bring more weed seed to surface
- Follow up weed control during establishment

Problem: How Do I Restore Habitat?

Products: Habitat Installation Guides

www.xerces.org
www.xerces.org/pollinator-resource-center
Field trainings on how to:
• Assess habitat and farm management to minimize impacts to pollinators
• Design and implement pollinator projects

Demonstrating efficacy:
California Hedgerow Research
• Farms with hedgerows have greater bee abundance and diversity.
• Hedgerows increase native bee numbers in crop fields.
  • Up to 200 meters from field edges
• Native plants support more native bee diversity than exotic plants.
• Honey bees also prefer native plants in hedgerows

By the Third Year: 12% higher blueberry yields in fields adjacent to wildflower plantings.
Out-of-pocket cost of establishing wildflowers is repaid in 3 to 4 years

Demonstrating efficacy:
Michigan Wildflower Plantings
• 12% higher blueberry yields in fields adjacent to wildflower plantings.
• Out-of-pocket cost of establishing wildflowers is repaid in 3 to 4 years

Lessons Learned: Demonstrate Efficacy

Lessons Learned: Demonstrate It Works

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Project ICP is evaluating the performance and economics of multiple pollination strategies in fruit and vegetable crops across the U.S.
Learn more at www.icpbees.org
Problem: Landowners Don't Care?

Landowner needs and interests are very personal and site specific
• What if don’t grow insect pollinated crop?
• What if no interest in pollinator habitat?
• How do we inspire action?

Lessons Learned: Financial Incentives

Financial incentives are still critically important, and need to be fine-tuned.
Example: 2008 Farm Bill Conservation Programs or European Ag Env Schemes

Lessons Learned: Flexibility and Mainstreaming

• Offer less expensive options
• Incorporate pollinator conservation into other practices:
  • cover cropping
  • riparian restoration
  • erosion control
  • conservation biocontrol
  • other wildlife conservation
  • forage and biomass plantings

Lessons Learned: The Big Picture

Even with these pieces in place, conservation is place-based and requires close support and strong relationships.

Final piece of advice for graduate students or others interested in on-the-ground pollinator conservation...
Learn/practice applied skills:
• Habitat enhancement,
• Cover cropping,
• Pesticide risk mitigation,
• Teaching, etc.

Neal and Christina...
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Thank You!!

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