CULTIVATING SUCCESS™

sustainable small farms education

Assessing Beneficial Insect Habitat on Your Farm

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The Cultivating Success™ Program is a partnership of…

University of Idaho Extension

Ruralroots
Healthy Food, Healthy Farms, Healthy Communities

Food Systems
Washington State University

Visit us at www.cultivatingsuccess.org

Today's Presenter

Ariel Agenbroad, presenter
Area Extension Educator- Food Systems & Small Farms
University of Idaho Extension, Southern District

Colette DePhelps, facilitator
Area Educator, Community Food Systems
University of Idaho Extension, Northern District

Assessing Pollinator Habitat on Farm

Ariel Agenbroad
Area Extension Educator

University of Idaho Extension

CULTIVATING SUCCESS
small farms education

Today's Webinar

- Why save pollinators and beneficial insects?
- How to assess your farm or property for available habitat
- How to find funding to support pollinator habitat improvement on your land

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Value of Pollinated Crops

- Crops pollinated by **honeybees**:
  - –$18 billion per year
  - –½ is in the PNW and CA
- Crops pollinated by **native bees**:
  - –$3 billion or more
  - –Over 1600 species native to region

Know Your Pollinators

- Social bees
- Solitary bees
- Wasps
- Beetles
- Flies
- Butterflies and moths

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Predators & Parasitoids

- Wasps
- Flies
- Beetles
- Assassin Bugs
- Mantids
- Spiders & Mites

The Xerces Society
for Invertebrate Conservation

Conservation Biological Control

Beneficial Insect Habitat

Assessment Form and Guide

FARMS AND AGRICULTURAL LANDSCAPES

June 2015

The Xerces Society for
Invertebrate Conservation

www.xerces.org

The Xerces Society
for Invertebrate Conservation

Idaho

Pollinator Habitat

Assessment Form and Guide

FARMS AND AGRICULTURAL LANDSCAPES

July 2015

The Xerces Society for
Invertebrate Conservation

www.xerces.org

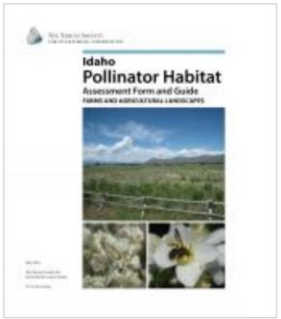
University of Idaho Extension

https://xerces.org/pollinator-conservation/habitat-assessment-guides

Habitat Assessment Guides

Beneficial Insects: Farms and Agricultural Landscapes

Habitat Assessment Guide for Pollinators in Yards,...



Idaho Farms and Agricultural Landscapes

Natural Areas and Rangelands

Pollinator Conservation Resources For...

- farmers & ranchers
- gardeners
- roadside & utility agencies
- park managers & groundskeepers
- pesticide applicators
- natural land managers
- teachers & educators
- companies

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The Xerces Society

www.xerces.org

xerces

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about | programs | publications | news | invertebrates | our work | get involved

- pollinator conservation
- endangered species
- aquatic conservation
- butterfly conservation
- pesticides
- citizen science

The Xerces Society is n that protects wildlife through the conservation of invertebrates and their habitat. For over t has been at the forefront of invertebrate protection worldwide, harnessing the knowle he enthusiasm of citizens to implement conservation programs.

Features

Annual C of Monarchs Overwintering in California May Be Holding Steady
Recently at monarch butterfly populations at overwintering sites in CA may be remainin e numbers of overwintering butterflies is the best way to gauge the status of on.
Read mo

Job Opportunity Open for Grants and Corporate Giving Associate!
The Xerces Society is seeking a Grants and Corporate Giving Associate. Under the supervision of the Director of Grants and Corporate Giving, the Grants and Corporate Giving Associate supports all

DONATE
to protect invertebrates!

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Sign up for our newsletter to receive up to date information about our programs and events.

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THE XERCES SOCIETY
FOR INVERTEBRATE CONSERVATION

Know the Habitat on your Farm

In order to farm for crop pollinators, it is important to know the habitat on your farm. Native bees need both food and shelter-they eat only pollen and nectar and they nest in tunnels or in the ground. In the process of gathering pollen and nectar resources, bees move pollen from one flower to another, and thus pollinate your crops. Bees rely upon an abundance and variety of flowers, and need blooming plants throughout the growing season. Native bees don't build the wax or paper structures we associate with honey bees or wasps, but they do need places to nest, which vary depending on the species. Wood-nesting bees are solitary, often making individual nests in beetle tunnels in standing dead trees. Ground-nesting bees include solitary species that construct nest tunnels under the ground. Cavity-nesting social species-bumble bees-make use of small spaces, such as abandoned rodent burrows, wherever they can find them. Using the illustration below as a guide, look for areas on and around your land that can support native bees. Additionally, you can download our Habitat Assessment Guide or our Farming for Pollinators brochure.

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Native Bee Conservation

Pollinator Habitat Assessment Form and Guide

Purpose

This tool is meant to help educate conservation planners and landowners, prioritize conservation actions, and quantify habitat or farm management improvements on a single farm. The goal of this tool is not to compare one farm with another. Rather, it is intended to help incorporate pollinator conservation into a whole farm plan and then document improvements in pollinator habitat resulting from specific actions and management practices. As with any tool of this nature, the evaluation and scoring practice is a subjective process, and the usefulness of the tool is dependent upon the consistency of the evaluator. While the goal is to implement changes that will result in an increased final score, there may not always be a viable treatment for individual variables. The scoring goals outlined in the instructions are general guidelines, but the capacity to reach or exceed these goals varies widely in different landscapes and may be refined by state NRCS offices for a more regionally specific pollinator habitat assessment guide.

Instructions

- This pollinator habitat assessment guide can be used in both orchard and field crop settings.
- The accompanying photos and notes will help you identify and assess some specific habitat features.
- An assessment should be done twice, once during the conservation planning process (before project implementation) and once after the plan has been implemented.
- Prior to conducting an assessment, print out aerial photos to help with site and landscape questions.
- Each item in the assessment should be given a score of 0 (not present) or the appropriate value from the "Score" column.
- Add up the scores to calculate a subtotal for each subsection (e.g., 4a. Sites for ground-nesting bees).
- In addition, add up subsection subtotals to get a total for each section. Transfer these figures into the summary table on page 3 to generate the overall score for each assessment.
- The post-implementation goal is hard to define for the country as a whole. Ideally, landowners should strive to achieve an overall score of at least 100, and an improvement of at least 40 points. If this is not possible for your region or cropping system, talk to your area biologist or planner for guidance.

Site Summary

Owner/Operator:	
County:	
Field Office:	
Planner:	
Date	Assessment Before Implementation (Existing Habitat):
	Assessment After Implementation:
Location Description:	
Sketch of Site:	

Total Score for Habitat Assessment

The figures entered into this summary table will be calculated during completion of the assessment.

	Before	After
Section 1: Landscape Features (max score 20)		
Section 2: Farmscape Features (max score 35)		
Section 3: Foraging Habitat (max score 40)		
Section 4: Nesting Habitat (max score 38)		
Section 5: Farm Practices (max score 80)		
OVERALL SCORE		

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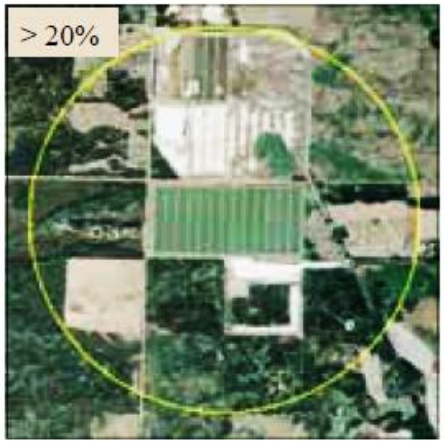
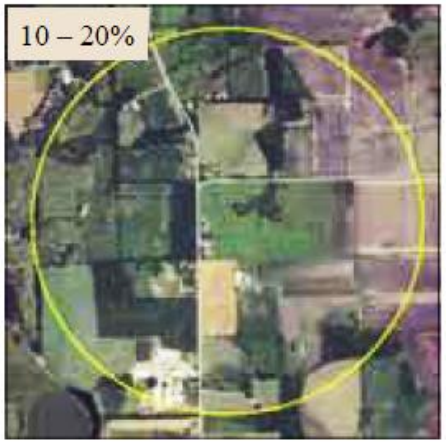
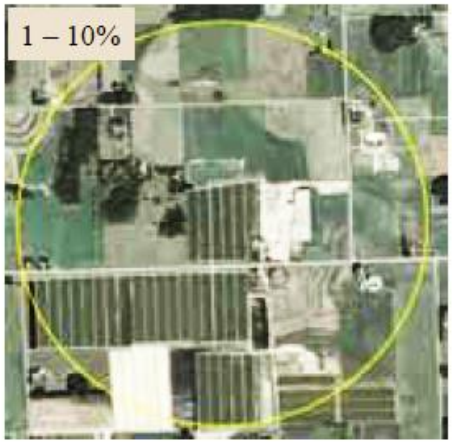
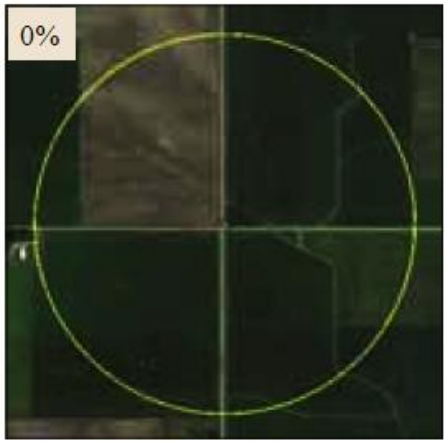
Natural & Semi-Natural Vegetation









Non-crop forbs & flowering shrubs

Sites for ground nesting bees

Pesticide use

- Bee poisoning occurs when insecticides are applied:
  - –when bees are foraging
  - –to bee pollinated crops in bloom
  - –to blooming weeds adjacent to bee pollinated crops
  - –and then drift onto blooming crops

And when bees collect:

- insecticide contaminated pollen or nectar from treated plants that don't require a pollinator but are still a food source (corn)
- Pollen from trees or shrubs treated with systemic insecticides

Chemicals responsible for bee poisoning in the PNW

- Organophosphates (acephate, chlorphyrifos, diazinon, malathion)
- N-methyl carbamates (Sevin)
- Neonicotinoids (imidacloprid)
- Pyrethroids (cyfluthrin)

Organic insecticides of concern

- Permethrins
- Spinosad
- Diatomaceous Earth

Land management techniques

- Areas of naturalized habitat in any production system
- Diversity of flowering plants in rangeland or pasture systems
- Undisturbed borders in row crops and orchards

What's your score?

Total Score for Habitat Assessment

The figures entered into this summary table will be calculated during completion of the assessment.

	Before	After
Section 1: Landscape Features (max score 20)		
Section 2: Farmscape Features (max score 35)		
Section 3: Foraging Habitat (max score 40)		
Section 4: Nesting Habitat (max score 38)		
Section 5: Farm Practices (max score 80)		
OVERALL SCORE		

Programs
- Farm Bill
- Landscape Initiatives
- Financial Assistance
- Technical Assistance
  - Conservation Technical Assistance
  - State Technical Committees
  - Conservation of Private Grazing Land
  - Technical Service Providers
- Easements
- Landscape Planning
- Alphabetical Listing & Archive

Related Topics
- Partnerships
- FSA's Conservation Reserve Program
- National Conservation Practice Standards

Technical Assistance

Introduction

The Natural Resources Conservation Service (NRCS) is the U.S. Department of Agriculture's principal agency for providing conservation technical assistance to private landowners, conservation districts, tribes, and other organizations.

NRCS delivers conservation technical assistance through its voluntary Conservation Technical Assistance Program (CTA). CTA is available to any group or individual interested in conserving our natural resources and sustaining agricultural production in this country.

The CTA program functions through a national network of locally-based, professional conservationists located in nearly every county of the United States.

What is Conservation Technical Assistance?

Conservation technical assistance is the help NRCS and its partners provide to land users to address opportunities, concerns, and problems related to the use of natural resources and to help land users make sound natural resource management decisions on private, tribal, and other non-federal lands.

This assistance can help land users:

- Maintain and improve private lands and their management
- Implement better land management technologies
- Protect and improve water quality and quantity

Plants Animals

- Fish & Wildlife
- Insects & Pollinators
  - How Farmers Can Help Pollinators
  - How Gardeners Can Help Pollinators
  - How NRCS Is Helping Pollinators
  - More Information About Pollinators
- Invasive Species & Pests
- Livestock
- Plants

How Farmers Can Help Pollinators

Native bees are valuable crop pollinators. The over 3,500 species of native bees (often called pollen bees) help increase crop yields and may serve as important insurance when cultivated European honey bees are hard to come by.

There are simple, inexpensive ways you can increase the number of native bees living on your land. Any work you do on behalf of pollinators will support other beneficial insects and wildlife. Improvements to pollinator habitat may be eligible for financial support from government programs.

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Increasing the number and success of small farmers and ranchers in Idaho.

The vision of the Cultivating Success™ program is to increase producer and consumer understanding, value, and support of sustainable local farming systems in Idaho through educational and experiential opportunities. Partners in this program strive to create strong communities with infrastructures that provide the resources and skills needed to produce local and sustainable food and agricultural products for the residents of the Inland Northwest.

Featured Programs
Winter 2020

- Is a Small Farm in Your Future?
- Whole Farm Planning
- Land Stewardship
- Small Farm & Ranch Webinar Series
- Idaho Farm Link

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Small Farm & Ranch Webinar Series

Cultivating Success offers a **FREE** lunchtime webinar series designed to help you explore, strengthen or expand your small farm or ranch operation!
Mondays and Tuesdays at 11 am PST / 12 pm MST

Upcoming Webinars

Tuesday, March 17th – Financial Fitness for Farmers Part 3: Enterprise Budgets
Tuesday, March 24th – Financial Fitness for Farmers Part 4: Cash Flow Statements

https://www.cultivatingsuccess.org/webinar-series

Please take our post-webinar survey!

Our post-webinar surveys are short and quick! And, your feedback is important!

Click on the link below to take the survey: https://www.surveymonkey.com/r/beneficial_insect_habitat

To learn about upcoming programs and watch recorded webinars, please visit www.cultivatingsuccess.org