**Principles of Farming for Crop Pollinators**

1. **Know the habitat on your farm.** Using the illustration in this brochure as a guide, look for areas on and around your land that can support native bees.

2. **Protect flowering plants and nest sites.** Once you know where bees are living and foraging, do what you can to protect these resources from disturbance and pesticides.

3. **Enhance habitat with flowering plants and additional nest sites.** Adding flowers, leaving some ground untilled, and providing tunnels drilled into wood are all ways to increase the number of native bees on your farm.

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**Getting Started**

Here are two things that you can do to begin improving habitat for native bees on your land:

- **Minimize tillage.** Many of our best crop pollinators live underground for most of the year, sometimes at the base of the very plants they pollinate. To protect them, turn over soil only where you need to.

- **Allow crops to bolt.** If possible, allow leafy crops, like lettuce, to flower if they don’t need to be tilled right away. This gives bees additional food sources.

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**Exercising Care with Insecticides**

If you must use insecticides, choose the most targeted ingredients (for example, Btk for pests like cutworms) and the most specific formulation. Spray soon after dark, when bees are not active. Keep in mind that even when crops are not in bloom, some of your best pollinators are visiting nearby flowers, where they may be killed by drifting chemicals.

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**Three Critical Requirements of Native Bees**

**Food.** Bees eat only pollen and nectar and, in the process of gathering these resources, pollinate our crops. They rely on an abundance and variety of flowers, and need blooming plants throughout the growing season.

**Shelter.** Native bees also need places to nest, which vary depending on the species. Solitary bees construct nest tunnels under bare ground or use narrow beetle tunnels in trees. Social humble bees make use of small cavities, such as old rodent burrows.

**Protection from pesticides.** Most insecticides are deadly to bees, and unnecessary herbicide use can remove many of the flowers that they need for food.

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**Native Bees and Your Crops**

Native bees can be valuable crop pollinators. These wild bees help increase crop yields, and may serve as important insurance when honey bees are hard to come by. In addition, work you do on behalf of pollinators will support other beneficial insects and wildlife, and improvements to pollinator habitat may be eligible for financial support from government programs.

There are simple and inexpensive things you can do to increase the number of native bees living on your land. Inside you’ll find more information and a visual guide to identifying and enhancing native bee habitat on your farm.

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**Insects pollinate two-thirds of all crop species.** In the U.S. alone, crops pollinated by insects sell for close to $20 billion each year.
Riparian Buffers  
Food and Shelter  
Habitat along streams should contain a diversity of plants. Willows, in particular, will nourish bumble bee queens in the spring so that large numbers of workers are available when crops begin to bloom.

Snags  
Shelter  
Keeping dead trees standing provides shelter for native bees. Some solitary bees build nests in abandoned beetle tunnels in snags.

Fallow Fields  
Food and Shelter  
Even small areas of fallow or unproductive land, especially when sown with native flowers, can offer important resources for native bees.

Hedgerows or Windbreaks  
Food and Shelter  
Creating hedgerows with a wide variety of plants that have overlapping flowering periods will provide bee habitat throughout the growing season and strengthen populations of natural enemies of crop pests.

Natural or Undeveloped Areas  
Food and Shelter  
Nearby natural habitat may harbor all the native bees needed to pollinate your farm’s crops. Consider inviting your neighbors to help with safeguarding these habitats.

Temporary Bee Pasture  
Food  
Planting fields with canola or other inexpensive seed—or allowing crops such as lettuce, kale, basil, and broccoli to bolt—will supply bees with nectar and pollen.

Ponds and Ditches  
Food and Shelter  
When you create a pond or ditch, leave the pile of excavated soil. Ground-nesting bees may build nests in stable, bare areas of this mounded earth. Planting clumps of native flowers will attract more pollinators.

Pesticides  
Shelter  
Insecticides kill pollinators outright, and herbicides may destroy plants important for both food and shelter. It is preferable to minimize your use of pesticides and to carefully choose products and application methods.

Field and Road Edges  
Food and Shelter  
Leave areas next to fields untilled and unsprayed to support flowering plants and provide nest sites for ground-nesting bees.

Cover Crops  
Food  
Flowering plants—certain legumes in particular—can be included in cover-crop mixes to supply pollen and nectar.

Artificial Nests  
Shelter  
Building houses for wood-nesting bees is another way to increase the number of native bees in your landscape.

Gardens  
Food  
A vegetable, flower, or herb garden, with a diverse assortment of plants, is a good source of food for pollinators. Be wary of fancy hybrids that may produce little pollen or nectar.

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