

Info

How can agroforestry help pollinators?

Working Trees



Over one hundred crop species in North America require a visit from an insect pollinator to be most productive. In the past, native bees, feral honey bees, and other pollinators could meet the needs of these diverse crops because farms were typically interspersed with pollinator habitat. Today, farms in the U.S. are larger and have less nearby habitat to support pollinators.

Private landowners can do a lot to support these critical pollinators by providing habitat and food sources for honey bees, native bees, butterflies, and others. Pollinator habitat and floral diversity on the farm also benefit producers of insect-pollinated crops by improving pollination and increasing yield. Agroforestry practices can be designed to meet the needs of both pollinators and landowners.

3-STEP APPROACH TO HELP POLLINATORS

01

Recognize

Many agroforestry practices already provide good habitat for pollinators

02

Protect

Protect the existing habitat from damaging disturbances and pesticides

03

Enhance

Improve the existing habitat by adding a variety of flowering plants or nesting habitats.

Pollinators need:

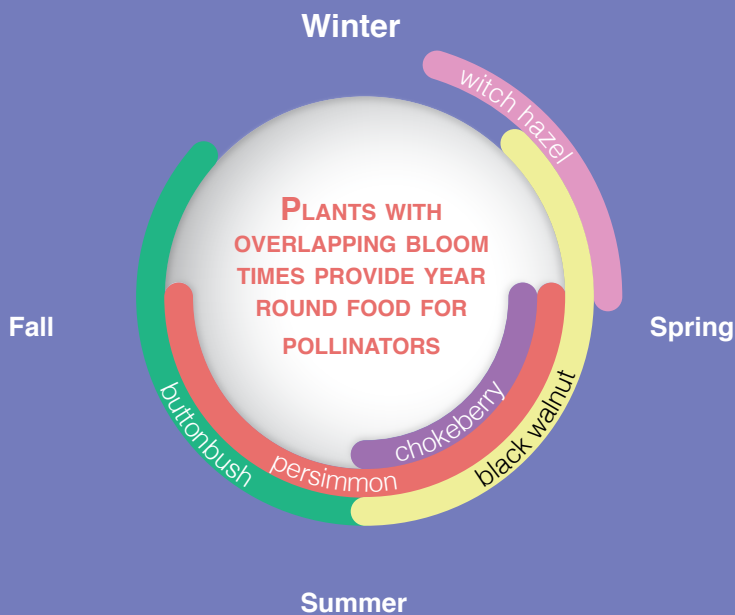
NEARBY POLLEN AND NECTAR SOURCES: Female bees spend less time commuting between nest sites and food sources when they are close together. This extra time allows bees to put more resources into their offspring.

AGROFORESTRY OPPORTUNITIES: Many practices, such as [alley cropping](#), riparian buffers, [silvopasture](#), and windbreaks, can provide pollen and nectar for insects. Some trees and shrubs planted for their production value also have pollinator benefits, such as berry-producing shrubs like blueberries and raspberries, ornamental plants like curly willow, medicinal plants like goldenseal, and hardwoods like black cherry.



NAC Photo

▶ **Raspberries provide both a harvestable crop as well as pollen and nectar for pollinators.**



PLANT DIVERSITY: Pollinators must have access to pollen and nectar even when crops are not flowering. A diversity of plants with overlapping blooming times from early in the spring until late in the fall will provide forage all year long. Bees are most active from March to October, longer in mild climates.

AGROFORESTRY OPPORTUNITIES: By incorporating multiple species on the same acre, landowners provide more readily available plants with a range of blooming times. All agroforestry practices involve planting multiple species together. Pollinator friendly plant lists that show blooming times are increasingly available from experts across the U.S.

NATIVE PLANTS: The use of native plants in agroforestry systems can provide critical habitat for butterflies and other native pollinators. Some specialist bees will only gather pollen from specific native plants.

AGROFORESTRY OPPORTUNITIES: Native plants can be incorporated into existing or new agroforestry practices.

PROTECTION FROM PESTICIDES: Pesticides can harm pollinators. Reducing pesticide use or providing habitat protected from pesticides can help.

AGROFORESTRY OPPORTUNITIES: By reducing wind speeds and serving as barriers, agroforestry practices such as [windbreaks](#), hedgerows, and [riparian buffers](#) can prevent or reduce the transport or drift of pesticides from one field to another. These practices can also provide habitat for pest-controlling insects and thus reduce the need for and cost of pesticide applications. Reduced pesticide use can, in turn, be beneficial for pollinators.



NAC Photo

▶ **Agricultural landscapes can be designed to reduce the impacts of pesticides on pollinators.**

For more information see:
<http://nac.unl.edu/issues/pollinators.htm>

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First Edition July 2015



A partnership between:
United States Forest Service
Natural Resources Conservation Service