

Manage for BOTH Pollinators and Plants

Areas planted to attract pollinators need to be managed to protect both the plants and the pollinators in the area.

To protect the pollinators visiting the habitat you create, you should avoid or minimize the following:

- Tillage
- Insecticides and Some Fungicides
- Plastic Mulch
- Removal of Beneficial Plants

Little-Known Fact: Leaving natural areas protects and attracts native pollinators by providing food and a safe haven away from insecticides.



April 2011

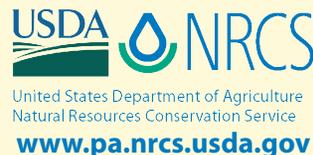
Pollinator Habitat Funding

Funding for pollinator habitat is available through the following NRCS programs:

- Conservation Stewardship Program (CSP)
- Environmental Quality Incentives Program (EQIP)
- Chesapeake Bay Watershed Initiative (CBWI)
- Wildlife Habitat Incentives Program (WHIP)
- Agriculture Management Assistance (AMA)

Through these programs, you can select any of the following conservation practices to help you attract and protect native pollinators on your farm:

- **Pollinator Plantings** – provide a food source and secure nesting for ground-nesting bees by establishing a variety of flowering plants.
 - » **Conservation Cover**
 - » **Field Border**
 - » **Riparian Buffers**
 - » **Tree/Shrub Establishment**
- **No-Tillage** – protects ground-nesting pollinators by reducing ground disturbance.
- **Integrated Pest Management** – protects pollinators by reducing pesticide applications.
- The buffer areas around organic farms can include pollinator plantings.



USDA is an equal opportunity provider and employer.

Attracting Native Pollinators to Your Farm



Native leaf-cutter bee on aster.
Courtesy of Eric Mader, Xerces Society.

The Importance of Pollinators

One out of every three mouthfuls of food and drink we consume is available because of pollinators. Although there are many animals that play a role in the pollination of our food, bees are the most important of these pollinators.

Historically, the agriculture industry has used managed hives of European Honey Bees for pollination. With the recent decline of this species due to colony collapse disorder, it is important to diversify the pollinators we use for crop production and supply valuable pollinator habitat. This habitat benefits both native bees and honey bees!



Native Bee Pollinators Can Help!

Whether you are producing fruits and/or vegetables, it is beneficial for you and your farm to attract and protect native pollinators. Native bees can provide the following benefits:

- More effective flower pollination than honey bees, on a bee-per-bee basis
- More active during cooler and wetter conditions compared to honey bees
- More abundant and larger fruit production because of buzz pollination
- Increase in crop yields because of added pollination service
- Reduction of dependence on and costs related to rented commercial bees, such as the European Honey Bee



Buzz pollination results in more abundant and larger fruit production.

Mace Vaughan, Xerces Society

Attracting Native Pollinators

PROVIDE THE BASICS: Food, Shelter, and Protection from Insecticides

➤ Food: Pollen and Nectar from Flowers

Plant pollinator-friendly flowering plants to attract native bees. These plantings should include native plants with a variety of bloom times to maximize the diversity of pollinators and provide a food source throughout the entire growing season.

These plantings can be part of a field border, riparian buffer, marginal production area, or a hedgerow.

➤ Shelter: Three Types of Bee Nests:



Matthew Shepherd, Xerces Society

Two-thirds of all native bees are solitary *ground-nesting*. For these bees, limit tillage to only those areas where it is needed to avoid disturbing ground nest sites.

Since *wood-nesting* solitary bees make individual nests in beetle tunnels in snags (standing dead trees) or artificial nest structures, nesting tubes can be placed in habitat areas.



Mace Vaughan, Xerces Society

For *cavity-nesting* social bees, such as the bumble bee, make sure your landscape has some unmowed or wild areas, especially adjacent to hedgerows or forest edges.

Little-Known Fact: Most native bees are unlikely to sting because they don't have a communal nest to protect. The yellow jackets and other stinging wasps that eat rotting fruit or hang around picnic areas are not bees, nor are they significant pollinators (Xerces Society).



➤ Protection from Insecticides

Pollinators can be negatively affected or killed by pesticides, especially insecticides. To protect and attract pollinator populations, it is very important to limit or avoid using insecticides.

If you do need to use insecticides, carefully protect the pollinator habitat areas.

- Minimize use
- Use the least toxic formulation (see chart below)
- Avoid applying to flowering plants
- Always follow the label
- Spray during dry and calm conditions
- If possible, spray right after dusk when bees are least active

When using insecticides, choose the formulation that is least toxic to bees.

Formulation	Toxicity to Bees
Dust	Most Toxic  Least Toxic
Wettable Powder	
Flowable	
Emulsifiable Concentrate	
Soluble Powder	
Solution	
Granular	