

Gardening for Bees

Bees are nature's premier pollinators. Their anatomy and feeding patterns uniquely suit them to efficiently move pollen between flowers, thus ensuring the growth of seeds and fruits. Like all wildlife, bees are affected by the landscape and habitat diversity in their surroundings. Successful gardening with bees requires the following: (1) suitable floral resources (nectar and pollen), (2) suitable nesting substrate (for both soil and cavity nesting species) and (3) favorable conditions of the landscape mix and management.

Flower choice matters

☼ Focus on native plants. Studies have shown these plants are more attractive to native bees than exotic plants. Also, stay away from double flowers or plants advertised as "pollen free".

☼ Choose a range of flower colors. Bee favorites are blue, purple, violet, white and yellow. While some bees are "oligolectic", taking pollen from only a few plant species, many are generalists.

☼ Plant flowers in clumps of a single species. This is more attractive to bees than a scattering of single plants.

☼ Include flowers of different shapes. As bees have different tongue lengths, more shapes of flowers benefit different types of bees.

☼ Give bees season-long bloom with the nectar and pollen they require.

Nesting guidelines

☼ The majority of native bees nest in the soil. Preferences vary, but many favor south-facing, sunny locations with sandy, well-drained soils.

☼ Some bees nest in holes, such as abandoned beetle holes in wood, the hollow stem of plants, or natural cavity hollows.

☼ Soil-nesting bees search for patches of bare soil. If a female bee encounters a blanket of turf, inches of mulch or a barrier of black plastic, she will go elsewhere to build her nest. Minimize turf, "mulch madness" and the use of black plastic as weed barriers, since they also inhibit nest construction.

Landscape mix and management

☼ Floral resources and nesting sites must be within the flight distance of bees. Most native bees have a short flight distance ranging from 100 to several hundred feet.

☼ Minimize all pesticide use and become bee friendly. Insecticides should only be applied on calm nights, when bees are not foraging. Use bee-safe insecticides if pest control is necessary. Minimize herbicide use, as many "weedy" species provide valuable nectar and pollen resources for bees.





Pollen and Nectar Sources

Early spring

skunk cabbage
red, silver maple
elm, poplar, ash
serviceberry
pear, almond

Mid-late spring

dandelion
field mustards
locusts
black, raspberries
Pyranantha spp.
peach
plum, apple
cherry

Summer

clovers
milkweed, dogbane
sumac
herbs (mints)
basswood (Linden)
catalpa, persimmon
Queen Anne's lace
cucurbits (vines)
beans, peppers, okra
Black-eyed Susan

Fall

goldenrod
Joe pye weed
sunflowers
asters
boneset

The Sting. Male bees do not sting. Although female native bees are physically capable of stinging, normally they do not sting unless physically threatened or injured. Most bees native to the United States are solitary bees and unlike honey bees, do not have a colony to defend. To be safe, avoid disturbing any bee or insect nest. If you locate the nest of a ground-nesting bee, mark it with a stick so that it can be avoided.

Information Resources

Delaware's Farming for Native Bees Project

<http://dda.delaware.gov/plantind/pollinator.shtml>

Xerces Society for Insect Conservation – fact sheets and publications

www.xerces.org

Enhancing beneficial insects with native plants

<http://nativeplants.msu.edu>

Urban Bee Project

<http://nature.berkeley.edu/urbanbeegardens>