OHIO STATE UNIVERSITY EXTENSION

AGRICULTURE AND NATURAL RESOURCES FACT SHEET

ENT-71-15

# Ohio Trees for Bees

**Denise Ellsworth**, Department of Entomology

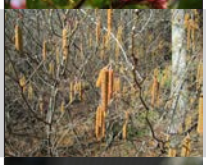
Many people are concerned about the health and survival of bees, including honey bees, native bumble bees and the hundreds of lesser-known native and wild bees that call Ohio home. Bees are threatened by an assortment of factors such as pests, pathogens, pesticides, climate change and a lack of nesting habitat and forage plants.

Bees and flowering plants have a critical relationship. Flowering plants provide nectar and pollen for a bee's diet. Pollen is an essential source of protein for developing bee larvae, and nectar provides a carbohydrate source. Honey bees convert nectar into honey by adding an enzyme which breaks down the complex sugars into simple sugars. Bees, in turn, transport pollen from flower to flower as they forage, allowing for plant fertilization and the production of seeds and fruit.

While trees provide many well-known ecological benefits, the importance of trees as a source of food for bees is sometimes overlooked. Ohio trees can provide food for bees from early spring through late summer, with most tree species in Ohio blooming in spring and early summer. This fact sheet describes some of the Ohio trees that provide food for bees. Trees included in this list have been described as important by multiple researchers and bee experts.

Other trees not listed here can also provide food for bees. For example, Ohio horticultural experts have noted significant bee foraging activity on trees such as Carolina silverbell *(Halesia carolina)*, seven-son flower *(Heptacodium miconioides)*, goldenrain tree *(Koelreuteria paniculata)* and Japanese pagoda tree *(Styphnolobium japonicum)* in landscape settings.

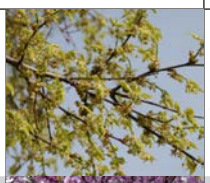
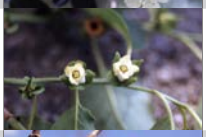
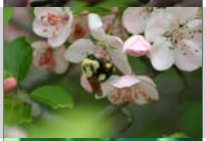
Consider selecting from this list of trees when choosing species to plant in urban, landscape and rural settings.

| | | ***Latin Name*** **Common Name** | **Pollen/ Nectar** | **Native (Na) and/or Introduced** | **Season of Bloom** | **About This Tree** |
|---|---|---|---|---|---|---|
| 1 |  | *Acer* spp. Maple, Boxelder | PN | Na,I | ESP, SP | Silver and red maples provide important early season sources of nectar and pollen for overwintering bees, particularly during warm springs when bees are flying. |
| 2 |  | *Aesculus* spp. Buckeye, Horsechestnut | PN | Na,I | SP | Also visited by hummingbirds. |
| 3 |  | *Alnus* spp. Alder | P | Na,I | ESP | Wind-pollinated but visited by bees for pollen in early spring if weather is favorable. |
| 4 |  | *Amelanchier* spp. Serviceberry | PN | Na | ESP, SP | Several species native to North America. |
| 5 |  | *Catalpa* spp. Catalpa | PN | Na | SP, ESU | Visited by bees during the day and by moths at night. Extrafloral nectaries on leaves. |

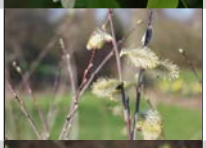
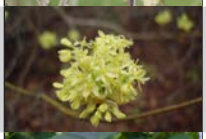
When more than one species of the same genus is useful, the genus name is followed by "spp."
**ESP**: Early Spring **SP**: Spring **ESU**: Early Summer **SU**: Summer

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

extension.osu.edu
agnr.osu.edu

| | | ***Latin Name*** **Common Name** | Pollen/ Nectar | Native (Na) and/or Introduced | Season of Bloom | About This Tree |
|---|---|---|---|---|---|---|
| 6 |  | *Celtis occidentalis* Common Hackberry | PN | Na | SP | Flowers in spring while leaves are emerging. |
| 7 |  | *Cercis canadensis* Red Bud | PN | Na | SP | Attractive to an assortment of bees. |
| 8 |  | *Cladrastis lutea* Yellow Wood | N | Na | ESU | Attractive nectar source but inconsistent bloom from year to year. |
| 9 |  | *Cornus mas* Corneliancherry dogwood | PN | I | ESP | An introduced ornamental tree with early-season flowers. |
| 10 |  | *Corylus americana* Hazelnut | P | Na | ESP | Wind-pollinated but visited by bees for pollen. |
| 11 |  | *Crataegus* spp. Hawthorn | PN | Na | SP | Many species, with wide appeal to bees. |
| 12 |  | *Diospyros virginiana* Persimmon | N | Na | SU | Nectar flow may be brief. |
| 13 |  | *Fraxinus* spp. Ash | P | Na | SP | Wind-pollinated but visited by bees for pollen. |
| 14 |  | *Gleditsia triacanthos* Honey Locust | PN | Na | SP | Brief nectar flow. |
| 15 |  | *Lirodendron tulipifera* Tulip Poplar | PN | Na | SP | Rich nectar source. |
| 16 |  | *Magnolia* spp. Magnolia | P | Na,I | ESP, SP | Many ornamental selections offer a minor pollen source in spring. |
| 17 |  | *Malus* spp. Apple, crab apple | PN | Na,I | SP | Important spring nectar and pollen source. |
| 18 |  | *Nyssa sylvatica* Black gum | N | Na | SP | Dioecious (separate male and female plants), good nectar source. |

When more than one species of the same genus is useful, the genus name is followed by "spp."
**ESP**: Early Spring **SP**: Spring **ESU**: Early Summer **SU**: Summer

| | | ***Latin Name*** **Common Name** | Pollen/ Nectar | Native (Na) and/or Introduced | Season of Bloom | About This Tree |
|---|---|---|---|---|---|---|
| 19 |  | *Oxydendrum arboreum* Sourwood | N | Na | SU | Best grown in moist acidic soils. Not tolerant of urban conditions. |
| 20 |  | *Prunus* spp. *(*cultivated) Cherry, Plum, Peach, Apricot, cultivated | PN | I | ESP, SP | Important spring nectar and pollen source. |
| 21 |  | *Prunus* spp. (native) Wild Cherry (*P. serotina*) and others | PN | Na | ESP, SP | Many native *Prunus* species are important, such as *P. virginiana, P. pensylvanica* and *P. americana*. |
| 22 |  | *Ptelea trifoliata* Hop tree | N | Na | ESU | Visited by many bees for nectar. |
| 23 |  | *Pyrus communis* Pear | PN | I | SP | Abundant pollen producer. |
| 24 |  | *Quercus* spp. Oak | P | Na,I | SP | Wind-pollinated but also visited by bees for pollen. |
| 25 |  | *Robinia pseudoacacia* Black Locust | PN | Na | ESU | Rich nectar source but variable from year to year. |
| 26 |  | *Salix* spp. Willow | PN | Na,I | ESP | Important early-season source of nectar and pollen, including *Salix discolor* (pussy willow) and *Salix nigra* (black willow). |
| 27 |  | *Sassafras albidum* Sassafras | PN | Na | SP | Dioecious (separate male and female plants). |
| 28 |  | *Tilia* spp. Basswood, Linden | PN | Na,I | SU | Rich nectar source. |
| 29 |  | *Ulmus americana* Elm | P | Na | SP | Wind-pollinated but visited by bees for pollen. |

When more than one species of the same genus is useful, the genus name is followed by "spp."
**ESP**: Early Spring **SP**: Spring **ESU**: Early Summer **SU**: Summer

**Photo credits:** *Denise Ellsworth:* 1, 2, 4, 5, 7, 9, 15, 16, 17, 20, 23, 26, 28; *David Stephens:* 3; *Robert Vidéki:* 6, 14, 25; *T. Davis Sydnor,* 8, 11, 12, 13; *Vern Wilkins:* 10, 21; *Charles T. Bryson:* 18; *Wendy VanDyk Evans:* 19; *Richard Carter*, 22; *Paul Wray,* 24, 29; *R. Scott Cameron:* 27