



Extension FactSheet

Horticulture and Crop Science, 2001 Fyffe Court, Columbus, OH 43210

Evergreen Trees for Ohio

Jane C. Martin
Extension Agent, Horticulture

Though we commonly refer to trees that hold their needles over winter as “evergreens,” they are in fact better classified as “conifers” or plants that bear cones. Of course, common and well-known examples include pine and spruce trees. There is also a small group of plants known as “deciduous conifers.” These plants have needle-like foliage that appears to be “evergreen,” but in fact, these plants lose their foliage as the dormant season approaches. This group includes such trees as baldcypress, dawn redwood, and larch. This special group of plants will be discussed at the end of this fact sheet.

Selecting the Proper Tree

There are several factors to consider when choosing an evergreen tree to make sure it will thrive in your landscape. What function do you wish the tree to serve? How large will the tree be when mature? What site characteristics and cultural requirements does it need in order to thrive? Is it suited to your local weather conditions? Is it resistant to known pests and diseases? What is the plant’s form, needle color, and other aesthetic qualities that interest you?

Although a few smaller evergreens are available from the garden center in containers, larger trees (3 to 4 feet or more in height) are usually available “balled and burlapped” — that is, the plants are dug with a soil ball that is wrapped in burlap that is then tied together. A wire cage is clamped around the root ball of larger trees to protect it from being damaged during moving, handling, and planting. For more information on selecting and planting trees, see Fact Sheet 1014, *Preparation for Planting Landscape Plants*.

Understanding Tree Names

Trees have both scientific and common names. While most people find common names easier to remember and pronounce, it is important to realize that some trees have several common

names, and some common names describe more than one plant. However, the scientific name is specific to one plant, and if you use it, you can be certain that you are getting the exact plant you want.

The scientific name, which is always italicized, underlined, or in bold type, consists of the genus name and the specific epithet. For example, the genus name for pine is *Pinus*, and names such as *densiflora* and *sylvestris* are specific epithets. Within the genus are many species, such as *Pinus densiflora* and *Pinus sylvestris*. The common name for *Pinus densiflora* is Japanese Red Pine, and the common name for *Pinus sylvestris* is Scotch Pine.

There may be several selections of *Pinus densiflora* known as “cultivars” or “varieties.” A cultivar is a plant that has been selected for specific qualities, such as height, shape, disease resistance, or foliage color. For example, some of the cultivars of *Pinus densiflora* are ‘Globosa,’ ‘Pendula,’ and ‘Tiny Temple.’ Cultivar names are always set off in single quotes. Varieties are naturally occurring variations within a species.

Evergreen Tree Information

This fact sheet contains some basic information about the various types of evergreen trees recommended for Ohio. All of these species are hardy to USDA hardiness zones in Ohio, which means that they can withstand the lowest average winter temperatures and survive.

General remarks and cultural requirements for each genus are given first. Mature plant size under average landscape conditions as well as rate of growth are shown for each species. Cultural requirements for an individual species are listed only if they differ from general requirements.

When you have identified several trees that you think will fit your needs, you will want to obtain more detailed information about them. A list of suggested resources appears at the end of this publication.

Abies — Fir

Firs are not generally recommended for most of Ohio. They prefer moist, well-drained, acid soil and do not grow well in heavy clay. They also struggle in hot, dry summers. Concolor fir is considered the “best” one for the Midwest, and you may want to try it.

Name	Height	Growth Rate	Comments
<i>Abies concolor</i> Concolor or White fir	35'–50' in height, 15'–30' wide	Slow to medium	Provides a conical, rigid, stiff appearance in the landscape. Needles are blue or grayish-green. Transplant balled and bur-lapped. Withstands heat, cold, drought, and grows best on deep, rich, moist, well-drained sandy loam soil; does not grow well in heavy clay soil. Tolerates light shade.

Chamaecyparis — Falsecypress

Falsecypress grows best in rich, moist, well-drained soil, in a location where it receives full sun (at least six hours of direct sun) and where it is protected from drying winds. Pruning to control size and shape is best done in spring, but branches can be removed at any time. Many dwarf cultivars, which remain smaller or shrubby, are available.

Name	Height	Growth Rate	Comments
<i>Chamaecyparis nootkatensis</i> Nootka Falsecypress, Alaska-cedar	30'–50' in height	Medium	'Pendula' is a widely available cultivar, which has a conical shape with uplifted branches and long, pendulous branchlets in flattened sprays. Foliage is a rich lustrous green. This tree requires abundant moisture.
<i>Chamaecyparis obtusa</i> Hinoki Falsecypress	Dwarf cultivars are available. Rarely used as a tree.	Medium	Pyramidal, with spreading branches and drooping, feathery branchlets of rich emerald green. Many cultivars offered, including dwarf types and those with bluish or yellowish foliage. 'Nana Gracilis' grows slowly to 10'–12' in height, has glossy dark-green foliage arranged in curving sprays, and is one of the most popular dwarf conifers.

Picea — Spruce

Most spruces are large trees of pyramidal to conical outline, conveying a rather formal quality. Even older specimens retain a dense, compact form, remaining attractive and symmetrical over a long period of time. Their size and strong vertical lines can be overwhelming in a small landscape. They perform well in clay soil, but prefer a moderately moist, well-drained soil. It is important to provide them adequate moisture, especially in the first few years of establishment. Spruces grow best in full sun and do not tolerate hot, dry, or polluted conditions. Prune to control size or shape by eliminating or reducing the new growth in early spring.

Name	Height	Growth Rate	Comments
<i>Picea abies</i> Norway Spruce	40'–60' in height, 25'–30' wide. Dwarf cultivars are available.	Medium to fast (fast when young)	Needles are 1/2" to 1" long, stiff, and lustrous, dark green. Stiffly pyramidal in youth, developing graceful, pendulous branchlets over time, and an overall softly pyramidal outline. Numerous cultivars are available, including weeping forms and dwarf, shrubby forms.

Name	Height	Growth Rate	Comments
<i>Picea glauca</i> White Spruce	40'–60' in height, 10'–20' wide. Dwarf cultivars are available.	Medium	Needles are 1/2" to 3/4" long, pale-green or covered with a whitish "bloom" that easily rubs off. White spruce forms a broad, dense cone in youth, becoming a tall, fairly narrow spire. Useful as a specimen, mass planting, hedge, or windbreak. Best in full sun, but tolerant of some shade. Tolerates heat, cold, drought and wind better than most spruces.
<i>P. g.</i> 'Conica' Dwarf Alberta Spruce	10'–12' in height in 25 to 30 years	Slow	This is a widely available cultivar, with dense, light- green foliage and very slow growth (2"–4" per year). Spruce spider mites are usually a problem.
<i>Picea omorika</i> Serbian Spruce	50'–60' in height, 20'-25' wide.	Slow	Needles are 1/2" to 1" long, glossy dark-green on the upper surface. Serbian spruce is an exceptionally handsome tree, with a slender trunk and short branches that are ascending on the upper portion of the tree and drooping on the lower portion, forming a slender pyramid about one-fourth as wide as it is tall. Highly recommended as a specimen or in group plantings.
<i>Picea orientalis</i> Oriental Spruce	50'–60' in height. Smaller forms are available.	Slow	Needles are 1/4" to 1/2" long, glossy dark-green. A dense, compact, narrow pyramid, Oriental spruce is rated by Dr. Dirr as "much superior to Norway or White Spruce." Several cultivars are available. Will tolerate poor, gravelly soils. Protect from harsh winter winds.
<i>Picea pungens</i> Colorado Spruce	30'–60' in height, 10'–20' wide Smaller and dwarf cultivars are available.	Slow to medium (30'–50' in height after 35 to 50 years)	Needles are 3/4" to 1-1/4" long, stout, rigid, and very prickly; usually gray-green to blue-green. A dense, regular, narrow to broad pyramid with tiers of horizontal stiff branches to the ground, sometimes losing their lower limbs and becoming straggly and irregular with age. Blue cultivars widely used as focal points include 'Hoopsii' and 'Thompsenii' ('Thompsen.')

Pinus - Pine

Of all the needle-type evergreens, the pines display the greatest variety of shape and form, natural distribution, and ornamental characteristics. Most species grow to become large trees, but several types remain small. Pines are generally more tolerant of adverse soil, exposure, and city conditions than species of *Picea* or *Abies*. Full sun sites are best for pines, and they require well-drained, slightly acidic soil.

Pines withstand pruning and can be maintained as hedges, screens, and windbreaks. However, it is important to note that unlike spruce and fir, almost all pines lose lower limbs as they mature, so the hedge or screen effect is eventually lost. To make a pine tree more dense, remove one-half of the new candle-growth, usually in June. Water newly planted trees regularly for the first year. Before planting large specimens or dense groupings on small properties, consider the problems of unwanted winter shade, interference with air movement, and overwhelming size.

Pines are easily distinguished from other evergreens in that the needles are arranged in "bundles" of 2, 3, or 5. Other evergreen trees have needles attached singly on the branches.

Name	Height	Growth Rate	Comments
<i>Pinus bungeana</i> Lacebark Pine	30'–50' in height, 20'–25' wide.	Slow	Needles are in bundles of 3; 2"–4" long, rigid, sharp-pointed, lustrous medium to dark-green. Pyramidal to rounded in outline when young, this pine develops an open, picturesque, flat-topped and broad spreading habit. It is often grown with multiple trunks. Its bark exfoliates in patches like a sycamore, making this one of the best pines for bark character.
<i>Pinus densiflora</i> Japanese Red Pine	40'–60' in height, similar in width. Smaller forms available.	Slow to medium	Needles are in bundles of 2; 3"–5" long, soft, lustrous bright to dark-green. Irregular in habit, Japanese Red Pine is sometimes described as an open, floppy grower, even when young. Its trunk is often artistically crooked or leaning; its branches horizontally spreading; its crown rather broad and flat. Bark is orangish when young, becoming grayish with age. Useful as a specimen because of its interesting form and decorative bark. 'Umbraculifera' is the most widely grown cultivar. Cannot tolerate hot, dry winds.
<i>Pinus mugo</i> Swiss Mountain Pine, Mugo Pine	Dwarf forms are available and most common.	Slow	Needles are in bundles of 2; 1" to 3" long, rigid, medium to dark-green. Plants are of variable habit, from ground-hugging to pyramidal. <i>Pinus mugo</i> has numerous cultivars available. Prune annually to retain dwarf size. Tolerates partial shade.
<i>Pinus nigra</i> Austrian Pine	50'–60' in height, 20'–40' wide.	Medium	Needles are in bundles of 2; 3"–5" long, lustrous, dark-green. Wonderfully attractive bark as plant matures. Tolerates heavy clay soil and alkaline conditions. Withstands dryness and exposure better than other pines. However, this pine is not recommended for central Ohio at this time, due to widespread dieback caused by Diplodia (<i>Sphaeropsis</i>) tip blight, a fungal disease.
<i>Pinus parviflora</i> Japanese White Pine	25'–50' in height, similar in width.	Slow	Needles in bundles of 5; 1-1/4" to 2-1/2" long, rather stiff, usually twisted, bluish-green or grass-green. Pyramidal when young, developing wide-spreading branches, a flat-topped outline, attractive dark-gray scaly bark, and an appealing character. This pine is a good choice for small spaces. Salt tolerant.
<i>Pinus strobus</i> Eastern White Pine	50'–80' in height, 20'–40' wide. Smaller and dwarf cultivars are available.	Fast, growing 50'–75' in 25 to 40 years.	Needles in bundles of 5; 2"–4" long; soft, bluish green. Young trees form symmetrical pyramids, and mature trees develop a distinctively attractive plume-like crown. Experience suggests that white pines are very demanding in terms of their cultural requirements. The primary necessity is excellent drainage. Because of the heavy clay soils typical in parts of Ohio, these trees often die from standing in waterlogged ground. Light shade is tolerated. They may develop chlorosis (yellowing due to lack of iron) in high pH soil.
<i>Pinus sylvestris</i> Scotch Pine	30'–60' in height, 30'–40' wide. Dwarf forms are available.	Medium when young, slow when older.	Needles are in bundles of 2; variable in length from 1"–3" long, twisted and stiff; glaucous, blue-green. Young Scotch pines grow as irregular pyramids. As they age, their lower branches die off, leaving mature trees attractively open, with wide-spreading branches and flat or round-topped crowns. Upper portions of

			trunks have handsome, orangish, flaky bark. Must have well-drained soil, preferably acidic. Also susceptible to Diplodia tip blight (<i>Sphaeropsis</i>).
--	--	--	---

Thuja - Arborvitae

Arborvitae are generally considered to be shrubs, but some species grow tall enough to use as trees. Many types have a tendency to discolor in the winter, with the center foliage browning in the fall, and to develop a thin and shabby appearance with age. Arborvitae should be planted in fertile, moist, well-drained soil. They are at their best in full sun, but light shade is acceptable. In heavy shade they lose their dense character and become loose and open in habit. Pruning should be done in early spring before active growth begins.

Name	Height	Growth Rate	Comments
<i>Thuja occidentalis</i> Eastern or American Arborvitae, White Cedar	20'–30' in height, 10'–15' wide. Smaller and dwarf forms are available.	Slow to medium	Useful as a specimen or accent, good for hedges and windbreaks, and widely used in foundation plantings. Recommended cultivars include 'Emerald' ('Smaragd'), which grows 10'–15' in height by 3'–4' wide, with vertical sprays of bright, lustrous, emerald-green foliage. 'Emerald' holds its color well through the winter, is cold-hardy to -40°F, and offers good heat tolerance. 'Nigra' is a narrow pyramidal form, 20'–30' in height by 4'–5' wide, with good dark-green foliage persisting through the winter. 'Techny' ('Mission') is a very popular, broad-based pyramidal form with excellent dark-green foliage year-round. This cultivar is slow-growing to 10'–15' in height. It makes a good hedge plant, and is probably the best cultivar for northern gardens. Susceptible to damage from strong winds, snow or ice loads. Once established, this tree exhibits considerable heat and drought tolerance.
<i>Thuja plicata</i> Giant Arborvitae	50'–70' in height, 15'–25' wide.	Slow to medium	Useful as a specimen and good in hedges in formal and semi-formal plantings. Numerous cultivars are available.

Tsuga - Hemlock

Hemlocks generally grow to be graceful pyramidal trees, which retain their attractive character into old age. This is the best evergreen tree for shady locations — hemlocks will survive even in full shade (although growth will not be as dense) but partial or light shade is preferred. If grown in full sun, hemlocks require good drainage and plenty of organic matter in the soil. Hemlocks are excellent for hedges and screens, groupings and accents. They will tolerate clay soil, as long as it does not remain waterlogged, but grow best in well-drained, moist, acidic soil. They do not perform well under hot, extremely dry conditions; they do not withstand air pollution and are susceptible to salt damage. They will withstand heavy pruning, best done in spring or summer. Sweeping winds dry out the foliage, so hemlocks are not suitable for windswept sites. Mulch to retain soil moisture, and water regularly during dry periods.

Name	Height	Growth Rate	Comments
<i>Tsuga canadensis</i> Canadian or Eastern Hemlock	40'–70' in height, 25'–35' wide. Smaller and dwarf forms are available.	Medium (25'–50' in 15 to 30 years).	Hemlocks retain their relaxed conical outlines as they age, the branches merely becoming more pendulous. New growth in spring is yellow-green, maturing in summer to a glossy dark green. A multitude of cultivars exist, offering an extensive range of habits. Globose (rounded), fastigiate (tall narrow), weeping, variegated, and even prostrate groundcover types are available.

			Hemlocks frequently die in the landscape due to improper siting.
<i>Tsuga caroliniana</i> Carolina Hemlock	45'–60' in height and 20' wide.	Slow to medium (slower than Canadian)	More “stiff” in habit than Canadian. Requires moist, well-drained soil, partial shade, and protected location. Not tolerant of drought. Rare in the trade.

Deciduous Conifers

As mentioned in the introduction, these plants have needle-like foliage that appears to be “evergreen,” but, in fact, these plants lose their foliage as the dormant season approaches.

Name	Height	Growth Rate	Comments
<i>Larix decidua</i> Common Larch	70'–75' in height, 25' wide.	Medium to fast	Useful as a specimen or in groups. Fall color is yellow, often excellent. Grows best in well-drained soil, full sun. A few cultivars are available.
<i>Metasequoia glyptostroboides</i> Dawn Redwood	70'–100' in height, 25' wide.	Fast, as much as 50' in 20 years.	Excellent tree for large areas, effective as a screen. Strongly pyramidal, even into older age. Reddish-brown bark when young; darker, fissured, and exfoliating in older age. A few cultivars are available. Fall color is reddish to orangish-brown in fall. Grows best in well-drained, slightly acid soil, and in full sun.
<i>Taxodium distichum</i> Common Baldcypress	50'–70' in height, 25' wide.	Medium	A tree of notable texture and form — a good specimen plant. Good for wet areas, forming “knees” in shallow water around the edges of ponds. Full sun. A few cultivars are available. Pyramidal when young, maturing to a flat-topped, picturesque plant in old age. The bark is reddish-brown.

Suggested Resources

Dirr, Michael A. 1997. *Hardy Trees and Shrubs: An Illustrated Encyclopedia*. Timber Press, Inc., Portland, Ore.

Dirr, Michael A. 1998. *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*. Stipes Publishing Company, Champaign, Illinois.

Check out the Ohio State University Department of Horticulture and Crop Science's *Plant Dictionary* web site at: <http://www.hcs.ohio-state.edu/plants.html>.

This is a searchable site that provides photographs of plants, cultural information, usage, and more.

Visit Ohio State University Extension's WWW site “Ohioline”
at:
<http://ohioline.ag.ohio-state.edu>

All educational programs conducted by Ohio State University Extension are available to clientele on a nondiscriminatory basis without regard to race, color, creed, religion, sexual orientation, national origin, gender, age, disability or Vietnam-era veteran status.

Keith L. Smith, Associate Vice President for Ag. Adm. and Director, OSU Extension

TDD No. 800-589-8292 (Ohio only) or 614-292-1868

1/2001-jaf