

Scotch Pine



Scotch Pine (*Pinus sylvestris*)

General Description

A medium to large tree, typically pyramidal when young, becoming more rounded and open with age. Orange-brown peeling bark. Bark is relished by porcupines, which can cause extensive damage. The largest tree in North Dakota is 46 feet tall with a canopy spread of 34½ feet.

Leaves and Buds

Bud Arrangement - Buds are in whorls.

Bud Color - Brown and resin coated.

Bud Size - Oblong-ovate, 1/4 to 1/2 inch long, and pointed.

Leaf Type and Shape - Two needles per fascicle, usually twisted.

Leaf Margins - Edges are minutely toothed.

Leaf Surface - Semi-rough.

Leaf Length - Needles 1½ to 3½ inches long, and persist for 3 years.

Leaf Width - Narrow needles.

Leaf Color - Medium green.

Flowers and Fruits

Flower Type - Monoecious, separate male and female strobili that develop into cones.

Flower Color - Female strobili are purple; male strobili are reddish-tan.

Fruit Type - Cone with diamond-shaped scales, 1½ to 2½ inches long, two winged seeds per cone scale.

Fruit Color - Dull gray-brown cones, brownish-gray seeds.

Form

Growth Habit - Pyramidal when young, branches thin and form becomes flat to round-topped with age.

Texture - Medium-coarse, summer and winter.

Crown Height - 25 to 50 feet.

Crown Width - 20 to 35 feet.

Bark Color - Flaky, peeling, orange-brown in upper two-thirds of mature tree. Thick, grayish or reddish, fissured at the base of the tree.

Root System - Shallow rooted, but forms a tap root on dry sites.

Environmental Requirements

Soils

Soil Texture - Prefers moist, well-drained soils, but will tolerate drier sites.

Soil pH - 5.0 to 7.5.

Windbreak Suitability Group - 1, 3, 4, 5, 6D, 6G.

Cold Hardiness

USDA Zone 3.

Water

Does not tolerate flooding. Not very drought resistant, but requires a well-drained site.

Light

Full sun.

Uses

Conservation/Windbreaks

Medium to tall evergreen for farmstead or field windbreaks.

Wildlife

Provides nesting sites and winter cover.

Agroforestry Products

Wood - Not used for dimension lumber. Extensively planted for Christmas trees.

Food - *Pinus* species are a source of pyrone, a sugar substitute.

Medicinal - *Pinus* species are used to treat bronchitis, skin diseases, wounds, and as a source of pinosylvinean, an antibiotic.

Urban/Recreational

Ornamental landscape tree for homes and public grounds. Orange, peeling bark provides visual accents.

Cultivated Varieties

Russian and Northern European seed sources are hardiest.

Waterer Scotch Pine (*Pinus sylvestris* 'Watereri') - Dense-gowing, bluish-green selection. Handsome landscape plant.

Related Species

Jack Pine (*Pinus banksiana*)

Ponderosa Pine (*P. ponderosa*)

Swiss Mountain Pine (*P. uncinata*) - A tree form of Mugo Pine which merits landscape use in the Northern Plains.

Pests

Common diseases include *Cyclaneusma* needle cast.

Western gall rust and *Lophodermium* needle cast are locally common. Common insect pests include tip moth, sawfly, pine needle scale, and giant conifer aphid.

SCOTS PINE

Pinus sylvestris L.

Plant Symbol = PISY

Contributed by: USDA NRCS Plant Materials Program



USDA NRCS National Plant Materials Center
Beltsville, MD

Uses

Windbreaks: Plant Scots pine in the central or leeward rows of multi-row plantings. It is also recommended for planting as single-row windbreaks.

Wildlife: Scots pine is of some importance as food and cover for many birds and small mammals. Although the plant is browsed by whitetail and mule deer, it is not a preferred forage.

Timber/Christmas tree plantations: Scots pine is suitable for ornamental and screen plantings. Its year long coloration adds variety to recreation plantings.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

Scots pine is an evergreen, spreading tree 80 to 100 feet, pyramidal when young, becoming round topped and irregular in age. The tree is introduced from Eurasia, and has become naturalized in eastern North America. It is cultivated for windbreaks, timber, and Christmas tree plantations. It does best on rich, moist soils, but its winter hardiness and moderate drought

tolerance enable it to do well on other soils. It is moderately slow growing, but is long lived.

Description

Fruits are tawny-yellow, oblong, symmetrical cones, 1 to 2 inches long. Clusters of flowers are yellow, minute, male and female. Needles occur in bunches of 2, are stout and usually twisted, 1 to 3 inches long, and bluish-green in color. Scots pine branches are spreading, and stems are often crooked in early years. The plant's bark is orange, thin and smooth on upper trunk, dark and fissured below. The tree's root system is widespread, moderately deep, and wind-firm.

Adaptation and Distribution

Scots pine is distributed throughout the Northeast and upper Midwest. For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

Plantings should be established during the spring of the year on weed free sites. Stand establishment can be enhanced by using 2 year old field-grown stock. Holes or furrows should be deep enough to contain roots without bending.

Management

Weed control is recommended in areas where the tree is grown for shade or Christmas tree plantings. It is also good to shape the tree for the form that you would like to have at time of harvest.

Pests and Potential Problems

There are several wood boring, root feeding, foliage feeding, and twig boring insects that attack this tree. The most common pest are cyclaneusma needle cast, western gall rust, Lophodermium needle cast, tip moth, sawflies, pine needle scales and giant conifer aphid.

Cultivars, Improved, and Selected Materials (and area of origin)

Scots pine has several intergrading cultivars, differing chiefly in leaf color and growth form. Most have ready use as Christmas trees, although leaves of some cultivars turn yellow-green in winter. Seedlings are available at most commercial conifer nurseries. Seed origin is extremely important in obtaining quality trees for a given sub-region.

Consult the state extension forester for information from provenance testing to determine the best seed source for your planting.

Prepared By & Species Coordinator:
USDA NRCS Plant Materials Program

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://Plant-Materials.nrcs.usda.gov>>

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Scotch pine

Pinus sylvestris

Growth Form: pyramidal to ovoid

Crown Density: open

Size: 40-65 feet high
20-40 foot spread

Drought Resistance: very good

Cold Hardiness: very good

Growth Rate: rapid

Life Span: long

Elevational Range: to 7,000 feet

Soil Conditions: tolerates alkaline

Possible Insect Problems: tip moths, ips beetles

Possible Disease Problems: fairly resistant

Wildlife Value: high: food value for upland game and song
birds

Seasonal Color: evergreen

Miscellany: makes an excellent Christmas tree

