

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.