

## 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.