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.