

Jack Pine



# Jack Pine

## (*Pinus banksiana*)

### General Description

A small to medium pine that quickly loses the pyramidal form characteristic of young pine and assumes an open somewhat irregular crown. Fire often required to open cones and allow seed dispersal. The largest tree in North Dakota is 48 feet tall with a canopy spread of 40 feet.

### Leaves and Buds

**Bud Arrangement** - In whorls, resinous with closely pressed scales.

**Bud Color** - Dark brown.

**Bud Size** - 1/8 to 1/4 inch long, cylindrical in shape.

**Leaf Type and Shape** - Needles in fascicles of two.

**Leaf Margins** - Margin has minute or rudimentary teeth.

**Leaf Surface** - Triangular-rounded, rough.

**Leaf Length** - 3/4 to 2 inches.

**Leaf Width** - Needles.

**Leaf Color** - Medium green to yellow-green.

### Flowers and Fruits

**Flower Type** - Monoecious, separate male and female strobili.

**Flower Color** - Female strobili are reddish-brown; male strobili are tan.

**Fruit Type** - Conical shape cone 1½ to 2 inches long; two winged seeds per cone scale. Cones often remain closed and persist on stems until triggered to open by heat or weathering.

**Fruit Color** - Cones brownish-gray, dark brown seeds.

### Form

**Growth Habit** - Open irregular crown.

**Texture** - Medium-coarse, summer and winter.

**Crown Height** - 25 to 50 feet.

**Crown Width** - 20 to 30 feet.

**Bark Color** - Reddish-brown on young trees, dark brown and flaky on older trees.

**Root System** - Spread is more than height. Frequently produces a taproot, trees without a taproot usually have lateral roots which turn and grow downward. The bulk of the root system, however, is in the top 18 inches of soil.

## Environmental Requirements

### Soils

**Soil Texture** - Prefers sandy to loam soils. Pioneer species on poor sandy soils. May have establishment problems related to micronutrient deficiencies and lack of proper mycorrhizae.

**Soil pH** - 5.0 to 7.5.

**Windbreak Suitability Group** - 1, 3, 4, 5.

### Cold Hardiness

USDA Zone 2.

### Water

Requires consistent moisture for best performance. Somewhat drought tolerant.

### Light

Full sun only.

## Uses

### Conservation/Windbreaks

Medium evergreen for farmstead windbreaks or watershed management on sandy riparian sites.

### Wildlife

Used for cover and nesting by morning dove. Used as a food source by a variety of birds, squirrels, and porcupine.

### Agroforestry Products

**Wood** - An important source of dimension lumber and wood pulp for paper making, poles and firewood.

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

### Urban/Recreational

Mediocre tree for ornamental landscaping and park use.

## Cultivated Varieties

**Uncle Fogey Pine** (*P. banksiana* 'Uncle Fogey') - A semi-prostrate form selected at the University of Minnesota Landscape Arboretum.

## Related Species

**Lodgepole Pine** (*Pinus contorta* var. *latifolia*)

**Scotch Pine** (*P. sylvestris*)

## Pests

Western gall rust and Lophodermium needle cast are locally common. Extracts of *Pinus* species are toxic to certain insect pests.