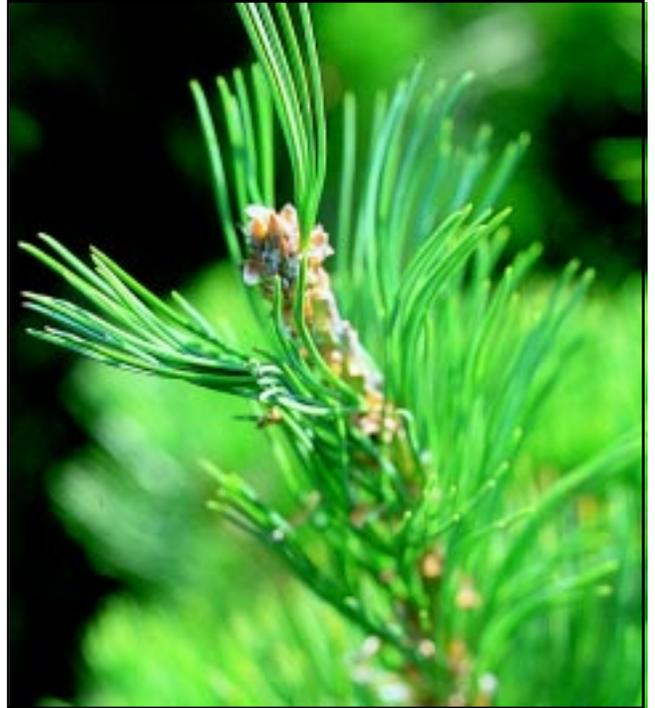




Limber Pine



Limber Pine (*Pinus flexilis*)

General Description

A small to medium pine with an uneven crown. Often multistemmed. This tree is less susceptible to salt and winterburn injury than other five-needle pines. Native to a very limited area in southwestern North Dakota from seed carried to this site by early Native Americans. The largest tree in North Dakota is 39 feet tall with a canopy spread of 30 feet.

Leaves and Buds

Bud Arrangement - In whorls, ovoid, and sharply pointed.

Bud Color - Brown.

Bud Size - Buds are 3/8 inch in length.

Leaf Type and Shape - Needles in fascicles of five.

Leaf Margins - Margin entire, apex sharp-pointed.

Leaf Surface - 3 to 4 lines of stomata on each surface, smooth.

Leaf Length - 2½ to 3½ inches.

Leaf Width - Needles.

Leaf Color - Dark green, slightly glaucous.

Flowers and Fruits

Flower Type - Monoecious, separate male and female strobili.

Flower Color - Female, red-purple strobili; male, yellow-brown.

Fruit Type - Cone, 3 to 6 inches long; two winged seeds per cone scale.

Fruit Color - Light brownish-orange cones, seeds yellow-brown.

Form

Growth Habit - Dense, broad pyramidal when young, becoming flat-topped when mature. Branches are very flexible.

Texture - Medium, summer and winter.

Crown Height - 30 to 45 feet.

Crown Width - 15 to 30 feet.

Bark Color - Branches are light to dark greenish gray, old trunks are dark gray to dark brown, separated by fissures in rectangular plates or blocks.

Root System - Moderately deep, spread is more than height.

Environmental Requirements

Soils

Soil Texture - Prefers loams to sands. Adapted to planting on rocky slopes.

Soil pH - 5.0 to 7.5.

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

Cold Hardiness

USDA Zone 3.

Water

Somewhat drought tolerant.

Light

Full sun only.

Uses

Conservation/Windbreaks

Slow growing, small to medium evergreen for farmstead windbreaks.

Wildlife

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

Agroforestry Products

Food - Seeds were eaten by Native American and early settlers.

Urban/Recreational

Valued for ornamental landscaping, specimen tree, and for public grounds.

Cultivated Varieties

Columnar Limber Pine (*Pinus flexilis* 'Columnaris') - Upright, narrow form.

Blue Limber Pine (*P. flexilis* 'Glauca') - Needles more bluish-green than the species.

Dwarf Limber Pine (*P. flexilis* 'Nana') - Dwarf, bushy form.

Vanderwolf's Pyramid Pine (*P. flexilis* 'Vanderwolf's Pyramid') - A tree form with attractive blue-green needles and superior vigor which merits evaluation in the Northern Plains.

Related Species

Swiss Stone Pine (*Pinus cembra*) - Slow growing, but an outstanding, dense, narrow 5-needle pine. Recommended for landscape use in the Northern Plains.

White Pine (*P. strobus*) - Lacks drought tolerance and adaptation to alkaline pH.

Pests

White pine blister rust has been found on this host in North Dakota.