

Siberian Elm



Siberian Elm (*Ulmus pumila*)

General Description

A very hardy, fast growing tree with brittle wood which is subject to breakage. Extremely susceptible to insect, disease, and herbicide damage, which makes it an undesirable tree. Often confused with Chinese elm (*Ulmus parvifolia*) which is not hardy in North Dakota. The largest tree in North Dakota is 60 feet tall with a canopy spread of 55 feet.

Leaves and Buds

Bud Arrangement - Alternate.

Bud Color - Blackish-brown with ciliate hairs along the edge of bud scales.

Bud Size - 1/8 to 1/4 inch.

Leaf Type and Shape - Simple, unequal at base, elliptic to elliptic-lanceolate.

Leaf Margins - Nearly simply-serrate.

Leaf Surface - Smooth above, glabrous beneath or slightly pubescent when young.

Leaf Length - 3/4 to 3 inches.

Leaf Width - 1/3 to 1 inch.

Leaf Color - Dark green.

Flowers and Fruits

Flower Type - Polygamo-monoecious.

Flower Color - Greenish-red to brown.

Fruit Type - Round winged samara, with the seed in the center of the samara.

Fruit Color - Brownish-tan.

Form

Growth Habit - The habit is rather open, with several large ascending branches with flexible, brittle, pendulous branchlets.

Texture - Medium-fine, summer; medium, winter.

Crown Height - 25 to 50 feet.

Crown Width - 20 to 40 feet.

Bark Color - Light gray to gray-brown.

Root System - Spreading.

Environmental Requirements

Soils

Soil Texture - Adapted to almost any soil texture.

Soil pH - 5.5 to 8.0. Exhibits alkaline and saline tolerance.

Windbreak Suitability Group - 1, 1K, 3, 4, 4C, 5, 6D, 6G, 8, 9C, 9L.

Cold Hardiness

USDA Zone 3.

Water

Drought tolerant. Does not withstand ponding.

Light

Full sun to partial shade.

Uses

Conservation/Windbreaks

Medium to tall tree for farmstead and field windbreaks.

Wildlife

Mostly used for nesting sites in windbreaks.

Agroforestry Products

Wood - Firewood, but difficult to harvest.

Medicinal - Some *Ulmus* species were used for inflammations, burns, cold sores, and wound treatments.

Urban/Recreational

A less desirable tree species due to dieback and short life, especially when exposed to phenoxy herbicides.

Cultivated Varieties

Ulmus pumila 'Dropmore' - A cultivar named in Manitoba of Harbin, Manchuria seed source.

Related Species

Chinese Elm (*Ulmus parvifolia*) and numerous cultivars - Not hardy in North Dakota.

Promising Dutch elm disease resistant hybrid elms from crosses of Siberian Elm (*U. pumila*) and Japanese Elm (*U. davidiana* var. *japonica*) e.g. Sapporo Autumn Gold Elm (*U. x* 'Sapporo Autumn Gold'), Cathedral Elm (*U. x* 'Cathedral'), New Horizon Elm (*U. x* 'New Horizon') and Vanguard Elm (*U. x* 'Vanguard').

Hybrid elms from crosses of Siberian Elm (*U. pumila*) and Slippery Elm (*U. rubra*), e.g. Green King Hybrid Elm (*U. x* 'Green King') also have good to excellent Dutch Elm disease resistance.

Pests

Common diseases include Tubercularia canker, Botryodiplodia canker and wetwood. Common insect pests include cankerworm. Very sensitive to phenoxy herbicides.