

American Elm



American Elm (*Ulmus americana*)

General Description

The state tree of North Dakota. A large vase-shaped tree adapted to a wide variety of sites. No longer recommended because of its susceptibility to Dutch Elm Disease. The largest tree in North Dakota is 62 feet tall with a canopy spread of 74 feet.

Leaves and Buds

Bud Arrangement - Alternate.

Bud Color - Smooth, sharp-pointed, and reddish-brown.

Bud Size - Lateral buds are small, 1/4 inch long.

Leaf Type and Shape - Simple, unequal at the base, ovate-oblong.

Leaf Margins - Doubly-serrate.

Leaf Surface - Glabrous to rough above, pubescent or nearly glabrous beneath.

Leaf Length - 3 to 6 inches.

Leaf Width - 2 to 3 inches.

Leaf Color - Dark-green above, lighter green below; yellow fall color.

Flowers and Fruits

Flower Type - Polygamo-monoecious, in fascicles of 3 or 4.

Flower Color - Greenish-red to brownish.

Fruit Type - Winged samara, oval-globose and wafer-like in appearance, notched.

Fruit Color - Light-green, changing to tan.

Form

Growth Habit - Trunk divides into several erect arching limbs above, umbrella to vase-shaped.

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

Crown Height - 45 to 65 feet.

Crown Width - 30 to 50 feet.

Bark Color - Dark gray-brown, with broad ridges and deep furrows.

Root System - Root spread is greater than height. Root system is shallow, fibrous, and in dry areas may have a tap root.

Environmental Requirements

Soils

Soil Texture - Grows best in rich, moist, well-drained soils, but adapts to a wide range of soil types.

Soil pH - 5.5 to 8.0.

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

Cold Hardiness

USDA Zone 2.

Water

Drought tolerant, but prolonged drought stress predisposes trees to pests. Tolerant of infrequent, short duration flooding during the growing season.

Light

Full sun to partial shade.

Uses

Conservation/Windbreaks

Tall tree for farmstead and field windbreaks, and riparian plantings.

Wildlife

Seed, buds, and tender young twigs are used as food by birds and mammals, particularly deer.

Agroforestry Products

Wood - Used in fine furniture, boxes, barrels, and crates. Good for firewood, but hard to split.

Medicinal - Extracts of some *Ulmus* species have been used as a demulcent, an astringent, a diuretic, and for inflammation, burns, cold sores and wound treatments.

Urban/Recreational

A favorite tree for all sites, but no longer recommended because of Dutch Elm Disease.

Cultivated Varieties

Ulmus americana 'Ascendens' and 'Augustine' - Cultivars with columnar form.

U. americana 'Lake City', 'Moline', and 'Minneapolis Park' - Variably vase-shaped. Due to susceptibility to Dutch Elm disease, the above cultivars are rarely planted (see Japanese Elm and Siberian Elm for Dutch Elm disease resistant cultivars.)

Related Species

David Elm (*U. davidiana*)

European White Elm (*Ulmus laevis*)

Japanese Elm (*U. davidiana* var. *japonica*)

Lincoln Elm (*U. rubra* 'Lincoln')

Rock Elm (*U. thomasi*)

Slippery Elm (*U. rubra*)

Pests

Besides Dutch Elm disease, common diseases include wetwood, black leaf spot, and branch cankers. Common insect pests include cankerworms and aphids. Deer browse damage can be serious on young trees.