

Quaking Aspen



Quaking Aspen (*Populus tremuloides*)

General Description

Aspen trees grow fairly straight and become clear of lower limbs over time. Sometimes called Trembling Aspen because their leaves tremble in a light breeze due to their flattened petioles. Most extensive native range of any tree in North America. Rapidly recolonizes disturbed sites (after fire, logging, etc.). The largest tree in North Dakota is 70 feet tall with a canopy spread of 39 feet.

Leaves and Buds

Bud Arrangement - Alternate.

Bud Color - Reddish-brown.

Bud Size - Terminal buds are conical-shaped, pointed, lustrous, and 1/4 inch long.

Leaf Type and Shape - Simple leaves, cordate to broad-ovate.

Leaf Margins - Margins have small rounded teeth.

Leaf Surface - Glabrous.

Leaf Length - 1½ to 3 inches.

Leaf Width - 1¼ to 2 inches.

Leaf Color - Dark green above, dull green below.
Fall color is golden-yellow.

Flowers and Fruits

Flower Type - Dioecious, staminate (male) and pistillate (female) flowers are on different trees. Flower is a catkin.

Flower Color - Greenish when immature, turning brown.

Fruit Type - Very small cottony seeds (average 3 million per pound). Seeds borne in a capsule.

Fruit Color - Pale green.

Form

Growth Habit - Trunk has little taper to the tip, rounded crown with brittle branches.

Texture - Medium, summer; medium, winter.

Crown Height - 25 to 60 feet.

Crown Width - 20 to 30 feet.

Bark Color - Varies from chalky white to olive-gray, and becomes rough furrowed on the lower trunk of mature trees.

Root System - Roots are abundant in the top 2 to 2½ feet of soil. Aspen usually regenerates from root suckers.

Environmental Requirements

Soils

Soil Texture - Prefers sands to loam but tolerates variable soil conditions.

Soil pH - 5.5 to 8.0.

Windbreak Suitability Group - 1, 1K, 2, 2K.

Cold Hardiness

USDA Zone 1.

Water

Needs a moist site to do well. Primarily present in areas of high water table, north and east facing slopes, seeps and other moist areas.

Light

Full sun, will not tolerate shade.

Uses

Conservation/Windbreaks

Medium tree for farmstead windbreaks, and riparian plantings.

Wildlife

Heavily browsed by deer and other mammals as a winter food source. Grouse utilize large male buds for food.

Agroforestry Products

Wood - Primarily used for paper, pulpwood, boxes, crates, and pallets.

Food - Native Americans used the sap as food.

Medicinal - Used for fever, diuretic, eczemas and wormer. Contains salicin used as an anti-rheumatic drug, disinfectant, and antiseptic.

Urban/Recreational

Along ponds or streams, wetlands, and woody draws. Allowances must be made for extensive suckering.

Cultivated Varieties

None.

Related Species

Bigtooth Aspen (*Populus grandidentata*)

Columnar European Aspen (*P. tremula* 'Erecta')

Pests

Common diseases include Hypoxylon canker, Cytospora canker, and stem decay. Extracts of *Populus* species have toxic effects on insect pests.