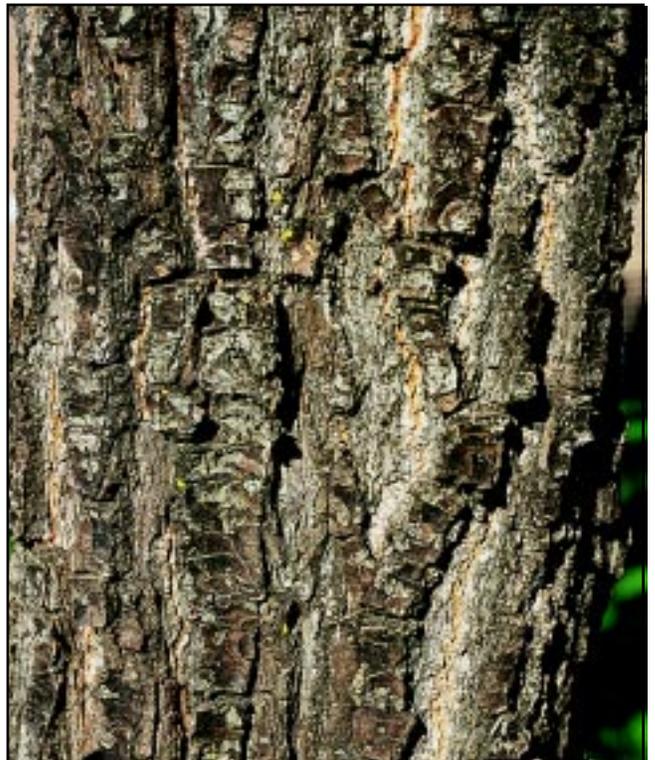


## Mongolian Oak



# Mongolian Oak (*Quercus mongolica*)

## General Description

A medium to large tree forming an open, somewhat irregular crown at maturity. Native to eastern Asia. Growth and performance in NDSU trials are similar to Bur Oak. Rosy-red fall leaf color often occurs and leaves are retained into early or mid-winter. The largest tree in North Dakota is 26 feet tall with a canopy spread of 28 feet.

Leaves and Buds

Bud Arrangement - Alternate.

Bud Color - Pale pubescence covering entire bud.

Bud Size - Imbricate, conical to broadly ovate, 1/8 to 1/4 inch.

Leaf Type and Shape - Simple, leaves are obovate-oblong, auricled base.

Leaf Margins - Leaves are not truly lobed but have a wavy margin with large blunt teeth, termed sinuate-dentate.

Leaf Surface - Glabrous except for a few tufts of hair on the main veins below.

Leaf Length - 4 to 8 inches.

Leaf Width - 2 to 3 inches.

Leaf Color - Dark green above, paler below; in autumn leaves develop rose shades below, bronzy-brown above and often partially retained into winter.

Flowers and Fruits

Flower Type - Catkins.

Flower Color - Male is yellow-green; female is reddish.

Fruit Type - Acorn about 3/4 inch long in a fringed cup.

Fruit Color - Brown.

Form

Growth Habit - Open crown, spreading.

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

Crown Height - 30 to 50 feet.

Crown Width - 30 to 40 feet.

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

Root System - Deep taproot, spread is usually twice tree height.

Sensitive to construction and transplanting injury.

## Environmental Requirements

Soils

Soil Texture - Grows best in fertile loam, but will do well in a wide variety of soils.

Soil pH - 5.5 to 7.5.

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

Cold Hardiness

USDA Zone 3.

Water

Drought tolerant, but prefers moist well-drained soils.

Light

Full sun preferred, but is shade tolerant.

## Uses

Conservation/Windbreaks

Medium to tall tree for farmstead and field windbreaks.

Wildlife

Excellent tree for wildlife food and cover.

Agroforestry Products

Wood - Most oaks are used in furniture and finishing lumber.

Medicinal - Extracts of some oak species have been used as an astringent and antiseptic. Used for dysentery by native Americans and early settlers.

Urban/Recreational

Excellent for boulevard, landscaping, yards, and parks. Sensitive to root compaction. Grows at same rate as bur oak. Merits greater use.

## Cultivated Varieties

None.

## Related Species

Bur Oak (*Quercus macrocarpa*)

English Oak (*Quercus robur*) - Lacks sufficient hardiness in North Dakota, but NDSU has hardy hybrid selections under consideration for introduction.

## Pests

No major pest problems known other than a twig proliferation insect complex.