

# White Oak

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## Tree Type

This tree is deciduous and will lose its foliage for the winter.

## Planting

Plant in an area with lots of room for the tree to grow. White Oak is extremely sensitive to soil compaction and grade change so don't plant near areas with potential construction disturbances. Refer to back for best planting practices for your bareroot.

## Watering

Once established, the tree can tolerate moderate drought and occasional wet soil. Refer to watering guidelines on back for specific watering directions.

## Pruning

Prune early in the tree's life for a central leader. Deadwood or damaged limbs will need to be pruned occasionally.

## Preferences

White Oak prefers full sun to partial shade meaning it needs a minimum of 4 hour of direct, unfiltered sunlight each day. It prefers slightly acidic to neutral, deep, moist, well-drained soil. It is intolerant of alkaline, shallow or abused urban soils.

## Attributes

The White Oak grows to a height of 50 to 80 ft with a spread of 50 to 80 ft at maturity. The tree grows at a slow to moderate with height increases of anywhere from less than 12 to 24 inches per year. It will grow into an oval or rounded shape with notably strong branches. In the fall, the leaves turn showy shades of red or burgundy.

## Wildlife Value

The White Oak's acorns are one of the best sources of food for wildlife and are gathered, hoarded and eaten by birds, hoofed browsers and rodents. Leaf buds are also eaten by several bird species, and all parts of the tree are a favorite food for deer. The White Oak is host to 934 caterpillar species and is one of the best trees to plant to attract butterflies.

When newly planted trees go without enough water, growth slows to a crawl. This delays establishment and may even lead to the death of leaves, branches, roots or the whole tree.

For the most part, trees can only take up water from soil that is in direct contact with roots. Even in the best conditions, newly transplanted trees use water from a relatively small volume of soil. To make matters worse, roots of bare root, balled & burlaped, and spaded trees are cut during transplanting.

Within two to three days after spring or summer planting, the soil around the roots of trees dries enough to impede root growth. Newly transplanted trees in the Midwest benefit from daily watering for the first one to two weeks. Apply 1 to 1½ gallons of water for each inch of trunk diameter. After that, water trees every two to three days for the next two to three months and then weekly until established. The more closely you match your watering frequency to the optimum, the quicker trees become established.

Reduce watering in cool, cloudy, or wet weather if the soil is poorly drained (soil drains less than 3/4 inches per hour). Eliminate daily irrigation in poorly drained soil.

After it rains, stop watering until the rainwater drains from the soil. Stop watering in the autumn once leaves fall from trees.

Mulch reduces evaporation and conserves water. An investment in frequent watering helps insure against tree death and the cost of replanting trees.

### BEFORE PLANTING

Select the correct tree for your site.  
Find help at [mndnr.gov/treecare](http://mndnr.gov/treecare).

Before digging, contact Gopher State One Call at 800-252-1155 or [gopherstateonecall.org](http://gopherstateonecall.org) to check for underground lines.

### AFTER PLANTING

#### Mulching

Applying mulch, such as wood chips, around a tree has many benefits, including:

- Improving growing conditions
- Retaining moisture
- Controlling weeds and grasses
- Adding nutrients
- Insulating soil
- Protecting trunk and roots

Mulch that is applied too deeply and against the tree is harmful. This "mulch volcano" can rot the tree's trunk, lead to insect and disease problems, and deprive roots of oxygen. Use the "3-3-3 Rule" for applying mulch: 3 feet in diameter, 3 inches deep, and 3 inches away from the trunk.

#### Watering

Watering a tree is critical to its survival during the first three years. During any week in which less than 1 inch of rain falls, provide 15-25 gallons of water, until the ground freezes. After the first few years, continue to water trees during dry times. Tree water bags may make watering easier.

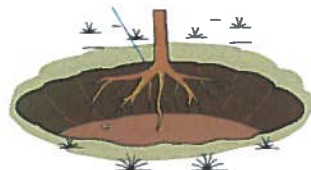
#### Protecting

A plastic or metal mesh tree guard can be installed around the tree's trunk to protect it from animal, mower, and trimmer injury. The tree guard must be removed or replaced as the tree grows.

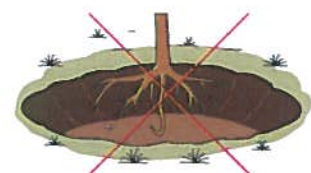


- 1 Keep roots moist at all times. Dry roots die.
- 2 Dig a hole twice as wide as and slightly deeper than root length.
- 3 Place roots in hole so top of first woody root is within 1 inch of soil surface.

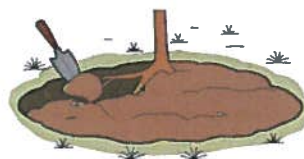
FIRST WOODY ROOT



- 4 Distribute roots evenly, making sure roots are straight and not doubled over or "J" rooted.



- 5 Keeping tree straight, backfill hole up to top of first woody root.



- 6 Heel in soil with foot over entire backfill area to remove air pockets from the soil.

- 7 Water entire backfill area.

- 8 Layer 3 inches of mulch over backfilled area, keeping mulch away from trunk.

