



# WHITE OAK (QUERCUS ALBA)

## TREE FACTS

The White Oak (*Quercus alba*) is a **deciduous, monoecious, nut-producing canopy tree** native to eastern North America. Among the largest of forest trees, the White Oak can grow a staggering **80 - 100 feet tall**, although special giants have been known to reach 150 feet tall. White Oaks often grow as wide as they grow tall, especially in the isolation of a field rather than a forest. **Its leaves, alternately arranged on the stem, have between 7 and 9 lobes which are rounded rather than pointed on White Oaks.** Leaf color in autumn isn't always helpful for identification, as foliage can take on a wide spectrum of colors from golden brown to deep red.

Oaks produce **acorns, one-seeded nuts that are high in tannins** (think the dry mouth feel of a red wine). The White Oak acorn has a **light green to brown** appearance and is topped with a bumpy, bowl-shaped 'cup' (the portion that connects to the stem) that covers **no more than 1/3 of the nut**. In general, **White Oaks produce acorns with the lowest tannin content, making it easier to process for eating.** The tannin content of an acorn is proportional to the amount of time needed for germination. Squirrels have realized this, as they eat White Oak acorns in autumn while storing acorns from other species in the ground. The White Oak acorn sends a tap root from the nut within days of falling from the tree and the above-ground sprout then appears in early spring. Oaks produce nuts in multi-year patterns. **The White Oak produces a standard crop of acorns every year, but produces a massive yield every few years.** Sometimes this highly productive Mast Year can be difficult to predict, but scientists believe drought during the summer and pollen counts in the spring have some effect. **Fun fact: a large oak can produce over 10,000 acorns during its Mast year!**

## SEASONAL CARE

White Oak trees grow well in climate zones **3 and 9**. They are self fertile and require little ongoing maintenance.

**WINTER/SPRING: Pruning is generally not necessary.** Compost or organic fertilizer can be added in the Spring to maximize nut production.

**SUMMER:** The first year, a White Oak tree should be irrigated weekly with 3-5 gallons of water. Once established, the tree generally only needs watering during severe drought.

**FALL: Nuts are generally harvested from the ground and cracked to remove the meat.** 'Loose' acorns and those with holes/bores are composted. Acorn meat is then processed. In the **'hot' method**, the meat is steeped in a series of boiling water changes until the water is clear. In the **'cold' method**, the meat is steeped in series of cold water changes over 3 - 7 days until clear.

## NUTRITIONAL BENEFITS

Unprocessed, raw acorns can be **potentially toxic due to the high tannin content.**

However, acorns are worth the processing steps, as they are a low-calorie (144 calories in 1 ounce) nutritional snack high in **Vitamins A (44% of the Recommended Daily Intake) and E (20%)** as well as a score of **beneficial antioxidants.**

## GROWING WHITE OAK

The White Oak does not respond well to transplanting, **but can be grown by germinating the acorns.** Plant the acorn **0.5 - 1 inch below the soil surface and cover with chicken wire** (to prevent animals from digging up the acorns). **Remove the chicken wire in spring** to allow the sprout to grow freely.

