

# Sawtooth Oak

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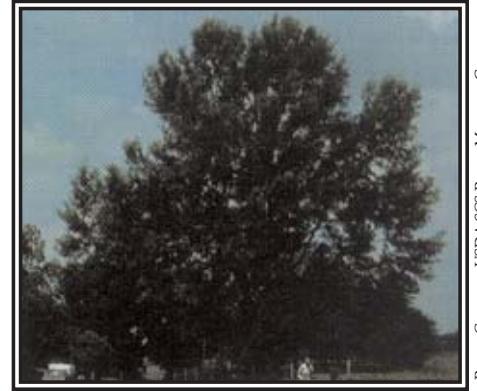


NATIONAL WILD  
TURKEY FEDERATION

Turkey, deer and squirrel hunters know that where they find abundant acorns in the fall is usually where they will also find the game they are pursuing. Acorns are probably the single most important food item in the diet of these three species as they prepare for a winter period of leaner times.

National Wild Turkey Federation members and other conservationists annually plant tens of thousands of tree and shrub seedlings to enhance wildlife habitat. Many of the seedlings planted are oaks. With 60-70 species of oaks native to the U.S. and at least 69 recognized oak hybrids, there are a lot of species to choose from.

Most oaks begin producing acorns at 20-30 years of age. Many of us, however, are too impatient to wait 20-30 years for the trees to begin bearing acorns. Therefore, there is a lot of interest in species that produce acorns at an earlier age. One of these species is sawtooth oak, *Quercus acutissima*.



A mature sawtooth oak tree can grow to 50-70 feet.

PHOTO COURTESY USDA SCS PLANT MATERIAL CENTER

## DESCRIPTION:

Sawtooth oak, native to China, Japan and Korea, was introduced into the United States in 1962, but many people are now just learning about it. Sawtooth oak is a member of the white oak group. The name "sawtooth" comes from the wavy, tooth-like margin on the leaves. The leaves are similar to American chestnut leaves, but at 4-8 inches long, are smaller than chestnut leaves and have pointed teeth on the edge of the leaf. Sawtooth oak trees grow to a maximum height of 50-70 feet.

## RANGE:

The range in the U.S. extends from northern Florida to eastern Texas and Oklahoma, north through Missouri and New York and into southern New England. It grows west to about the 30 inch rainfall area. It is winter hardy to an average low temperature between -10 degrees and 0 degrees Fahrenheit. It may not produce many acorns in areas that get frequent late spring or early fall frosts.

## SOIL CONDITIONS:

Sawtooth oak grows best on well-drained and moderately well-drained soils, but is adapted to soils from sandy loam to clay loam. It is reported that sawtooth oak does well on reclaimed surface-mined areas where there are favorable moisture conditions and the pH is greater than 5.0.

## ACORN PRODUCTION:

The feature of sawtooth oak that is creating interest is its ability to produce acorns at an early age. Laura Ray, manager of the U.S.D.A. Natural Resources Conservation Service Plant Materials Center in Quicksand, Kentucky, told me that under nursery conditions, sawtooth oak can produce acorns at 5-8 years of age. Dave Baumann, Turkey Project Leader with the South Carolina Department of Natural Resources, said he has had trees produce acorns only four years after planting one-year-old seedlings. Ray suggests 8-10 years is probably



*Sawtooth oaks can produce acorns as early as 4 to 5 years after planting, but 8 to 10 years is more realistic.*

a more realistic average age to produce acorns when planted in a field under natural conditions. This is particularly true for the more northern states with shorter growing seasons and cooler temperatures. Regardless, 8-10 years is less than half the time for most other oaks to begin acorn production.

Sawtooth oaks are prolific and consistent acorn producers under the right conditions. According to Ray, four, 25-year-old sawtooth oak trees at the Plant Materials Center in Kentucky, yielded 1,000 pounds of acorns in 1992, and five trees, 1,300 pounds of acorns in 1990. Baumann also said that sawtooth oak is a very consistent acorn producer, with a good crop of acorns almost every year. Sawtooth oak does not tolerate shade well, and he suggests planting it in openings or old fields. It is also very susceptible to fire, so they should not be planted where prescribed burning will take place.

### **'GOBBLER' VARIETY:**

The Plant Materials Center in Quicksand, Kentucky, began a selective breeding program with sawtooth oak in 1967. In 1986, in conjunction with the University of Kentucky Agricultural Experiment Station, Kentucky Department of Fish and Wildlife Resources, and Kentucky Division of Forestry, they released a new variety, 'Gobbler' sawtooth oak, for commercial production. The primary difference between 'Gobbler' sawtooth oak and other strains is the size of the acorn. 'Gobbler' sawtooth acorns are 5/8" to 3/4" long while those of other strains are up to 1 1/4" long. One pound of sawtooth oak acorns contains about 40-80 acorns while 150 'Gobbler' sawtooth oak acorns make up one pound.

### **PLANTING INSTRUCTIONS:**

The success of any planting depends upon the proper planting procedures and maintenance after planting. Below are a few tips that will help you to

have a successful planting of sawtooth oak.

- Use a shovel, auger or planting bar to loosen the soil to a depth of a few inches deeper than the length of the roots.

- Plant seedlings to the same depth that they were planted in the nursery. There will be a slight color change at the base of the seedling at that point.

- Be sure the roots are pointing straight down and not bent into a J shape.

- Plant seedlings where they will receive good sunlight 2/3 of the day.

- To produce a grove, plant seedlings on a 20'x25' spacing no closer than 40 feet apart.

- Keep weed competition controlled for the first several years either mechanically or with herbicides.

- Do not use prescribed fire where seedlings are planted.

- Use tree shelters to enhance survival and growth. Use 4' shelters if deer browsing is not severe and 6' if it is severe. Do not use shelters less than 4' tall on sawtooth oak.

### **SOURCE OF SAWTOOTH OAK SEEDLINGS:**

Bareroot sawtooth oak seedlings are available through the NWTF's Project HELP program. For a free Project HELP catalog, contact the NWTF, P.O. Box 530, Edgefield, SC 29824, Phone (803)637-3106 or click [here](#) to download a copy online. Both sawtooth oak



PHOTO BY RON BRENNEMAN

*One-year-old sawtooth oak seedlings in the nursery.*

and 'Gobbler' sawtooth oak are available. Seedlings are available for shipment from approximately mid-October to the end of April.

Sawtooth oak is not the panacea for all habitat enhancement programs for wildlife, but it does offer an alternative to some of the native oaks and an opportunity to get acorn production much faster.