

WILLOW OAK

Quercus phellos L.

Plant Symbol = QUPH

Contributed by: USDA NRCS National Plant Data Center



Robert H. Mohlenbrock
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Alternate Names

peach oak

Uses

Erosion Control: Willow oak is a good tree species to plant along margins of fluctuating-level reservoirs.

Wildlife: Its acorn is relished by game animals and birds such as ducks, squirrels, deer, and turkey, blue jays and red-headed woodpeckers. Grackles, flickers, mice and flying squirrels utilize the tree itself.

Timber: The wood is used for lumber, crossies, construction and pulp.

Recreation and Beautification: Willow oak is widely planted as an ornamental and shade tree.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

Quercus phellos L., willow oak grows mainly in bottomlands of the Coastal Plain from New Jersey

and southeastern Pennsylvania south to Georgia and northern Florida; west to eastern Texas; and north in the Mississippi Valley to southeastern Oklahoma, Arkansas, southeastern Missouri, southern Illinois, southern Kentucky and western Tennessee.

Willow oak is a medium to large-sized tree that grows up to over 100 feet tall, with a trunk 3 to 6 feet in diameter. It has thick, smooth, light-reddish bark when young; which becomes roughened and divided into narrow ridges on older trees. The leaves are simple, alternate, deciduous, elongated and slender, with smooth edges; they are light green and shiny above, dull and paler below with distinct venation. The small, round, brown acorns are usually produced singly or in pairs with a shallow, saucer-shaped cap. The overlapping scales that make up the cap are thin, hairy, and dark red. There are about 462 acorns per pound.

Adaptation and Distribution

Willow oak is well adapted to moist, well-drained, acid soils and full sun or light shade. For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

Natural regeneration is principally through sprouts from stumps of small trees and advance reproduction. Larger diameter stumps do not sprout readily.

Willow oaks may be established by planting acorns. Acorns collected in the fall may be sown immediately or kept in cold storage until spring. The seedbed must be kept moist, well-aerated with an inch or more of leaf litter. Seedlings are very intolerant of saturated soil except during dormancy. Although only moderately tolerant to shade, seedlings may persist for years under a forest canopy, continually dying back and resprouting.

One to two year old bareroot plants may also be used for field plantings.

Management

Thinning of a stand of trees may be necessary to encourage development of larger willow oaks.

Willow oak's principal enemy is fire. Seedlings and saplings are readily killed by even a light burn; hot fires kill larger trees. Canker infected trees should be

removed immediately both to salvage the log and to protect other trees.

Pests and Potential Problems

Trees wounded by fire are susceptible to butt rot fungi. A common canker is caused by *Polyporus hispidus*. Common trunk borers considered as serious insect pests are the red oak borer (*Enaphalodes rufulus*), carpenterworm (*Prionoxystus robiniae*), and living-beech borer (*Goes pulverulentus*). Willow oak is susceptible to acid rain.

Cultivars, Improved, and Selected Materials (and area of origin)

Seeds and seedlings are commercially available at forest seed companies.

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://Plant-Materials.nrcs.usda.gov>>

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