UF IFAS Extension UNIVERSITY of FLORIDA

ENH-707

Quercus laurifolia: Laurel Oak[1]

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Introduction

A large, fast-growing, shade tree, laurel oak is native to the southeastern United States and noted for its dense, oval canopy. Some botanists separate this species from *Q. hemisphaerica*, others lump them together—take your pick. *Quercus laurifolia* has been described as tolerant of wet sites. *Quercus hemisphaerica* is more of an upland species. Laurel oaks are taller than they are broad, eventually reaching 60 feet or more in height with a 35- to 45-foot spread. The trunk can be up to four feet in diameter and flares out at the base lifting sidewalks and curbing if planted in tree lawns less than eight feet wide. Trees are either deciduous in the north or semi-evergreen in the south. The smooth, narrow leaves are shiny on both sides and the round acorns are set 1/4 or less of their height into thin, saucer-like cups. They normally drop brown in the fall and winter.

General Information

Scientific name: *Quercus laurifolia*
Pronunciation: KWERK-us lar-ih-FOLE-ee-uh
Common name(s): Laurel oak
Family: *Fagaceae*
USDA hardiness zones: 6B through 10A (Figure 2)
Origin: native to the southeastern United States and east Texas

UF/IFAS Invasive Assessment Status: native
Uses: reclamation; shade; parking lot island > 200 sq ft; tree lawn > 6 ft wide; highway median

Figure 1. Full Form—*Quercus laurifolia*: Laurel oak

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Figure 2. Range

Description

Height: 60 to 70 feet
Spread: 35 to 45 feet
Crown uniformity: symmetrical
Crown shape: round, oval
Crown density: dense
Growth rate: fast
Texture: fine

Foliage

Leaf arrangement: alternate
Leaf type: simple
Leaf margin: parted, entire
Leaf shape: oblanceolate, elliptic (oval), obovate, rhomboid
Leaf venation: pinnate
Leaf type and persistence: semi-evergreen, deciduous
Leaf blade length: 3 to 5 inches
Leaf color: green and glossy on top, somewhat lighter green and smooth underneath
Fall color: yellow
Fall characteristic: not showy

Flower

Flower color: male—yellow-green catkin; female—green to reddish spike that emerges from leaf axils
Flower characteristics: not showy
Flowering: early spring

Fruit

Fruit shape: oval, round
Fruit length: ½ inch
Fruit covering: dry or hard acorn; cap has tight reddish-brown scales and covers the top ¼ of the shiny nut
Fruit color: brown
Fruit characteristics: attracts squirrels/mammals; not showy; fruit/leaves a litter problem
Fruiting: fall

Figure 3. Leaf—*Quercus laurifolia*: Laurel oak

Figure 4. Flower—*Quercus laurifolia*: Laurel oak

Trunk and Branches

Trunk/branches: branches droop; not showy; typically one trunk; no thorns
Bark: dark gray and smooth when young, developing shallow fissures with flat ridges, and sometimes a fluted or buttressed base with age
Pruning requirement: needed for strong structure
Breakage: susceptible to breakage
Current year twig color: gray, brown

Current year twig thickness: thin
Wood specific gravity: 0.63

Figure 5. Fruit—*Quercus laurifolia*: Laurel oak

Figure 6. Bark—*Quercus laurifolia*: Laurel oak
Credits: Gitta Hasing

Culture

Light requirement: full sun to partial shade
Soil tolerances: clay; sand; loam; acidic; slightly alkaline; well-drained; occasionally wet
Drought tolerance: moderate
Aerosol salt tolerance: low

Other

Roots: not a problem
Winter interest: no
Outstanding tree: no
Ozone sensitivity: unknown
Verticillium wilt susceptibility: resistant
Pest resistance: resistant to pests/diseases

Use and Management

Laurel oaks have a life span of 50 to 70 years. Tree trunks and large branches often hollow from decay and wood rot. The smallest trunk injury or improper pruning cut can result in columns of decay inside the trunk which are 10, 20 or more feet long. Live oak, and other oaks are more resistant to decay and live longer. Like other oaks, care must be taken to develop a strong branch structure with major branches well-spaced along the trunk early in the life of the tree. It grows well as a street tree and will serve the community well, but hollows with age as it approaches 50 years old. There are more durable street and parking lot trees including live, shumard, pin, southern red, northern red, bluff and bur oak.

Trees should be pruned to one central trunk with major branches trimmed to keep branch diameter less than half the trunk diameter. Major branches should also be spaced two to three feet apart along the trunk. Avoid removing large-diameter branches by pruning regularly so only small branches are removed. This strategy may increase the life span of laurel oak.

Laurel oaks will grow easily in full sun or partial shade and are quite tolerant of a wide range of soils, from moist and rich to dry and sandy. Trees growing under drier conditions will grow more slowly and, it is thought, will have stronger wood which is less susceptible to breakage. In soils with pH above 7, chlorosis often appears.

Propagation is by seed or hardwood cuttings. Propagation of Quercus by seed is the most common, but horticulturists are developing techniques for vegetative propagation.

Some nurseries market 'Darlington' which supposedly has a more compact growing habit. At least some horticulturists doubt the status of this tree as a true cultivar.

Pests

Usually none of this tree's pests are serious.

Mites can cause leaf yellowing, but control is usually not needed. Gall wasp can be devastating to many trees in an area of infestation.

Galls cause homeowners much concern. There are many types and galls can be on the leaves or twigs. Most galls are harmless so chemical controls are not suggested.

Scales of several types can usually be controlled with sprays of horticultural oil.

Aphids cause distorted growth and deposits of honeydew on lower leaves. On large trees, naturally-occurring predatory insects will often bring the aphid population under control.

Boring insects are most likely to attack weakened or stressed trees. Newly planted young trees may also be attacked. Keep trees as healthy as possible with regular fertilization and water during dry weather.

Many caterpillars feed on oak. Large trees tolerate some feeding injury without harm. Trees repeatedly attacked, or having some other problem, may need spraying. Tent caterpillars form nests in trees then eat the foliage. The nests can be pruned out when small. Where they occur, gypsy moth caterpillars are extremely destructive on oaks. Fall cankerworm has been a problem in some years.

Twig pruner causes twigs to drop off in the summer. The larvae ride the twig to the ground. Rake up and destroy fallen twigs.

Spider mite infested leaves first look dusty then yellowed. They are usually only a problem in nurseries.

Lace bugs suck juices from leaves causing them to look dusty or whitish gray.

Leaf miners cause brown areas in leaves. To identify leaf miner injury tear the leaf in two across the injury. If the injury is due to leaf miner, upper and lower leaf surfaces are separate and black insect excrement will be seen.

Diseases

Usually none serious.

Root rot and leaf blister is common in wet years but control is usually not warranted. Leaf blister symptoms are round raised areas on the upper leaf surfaces causing depressions of the same shape and size on lower leaf surfaces. Infected areas are yellowish-white to yellowish-brown. The disease is most serious in wet seasons in the spring but it does not need to be treated.

Canker diseases attack the trunk and branches. Keep trees healthy by regular fertilization. Prune out diseased or dead branches.

A large number of fungi cause leaf spots but are usually not serious. Rake up and dispose of infected leaves. *Tubakia* spp. leafspot is very troublesome in nurseries growing laurel oak in containers.

Powdery mildew coats leaves with white powdery growth.

Shoestring root rot attacks the roots and once inside moves upward, killing the cambium. The leaves on infected trees are small, pale or yellowed and fall early. There is no practical control. Healthy trees may be more resistant than trees of low vigor.

Chlorosis due to iron-deficiency occurs on high pH soil.

References

Koeser, A. K., Hasing, G., Friedman, M. H., and Irving, R. B. 2015. Trees: North & Central Florida. Gainesville: University of Florida Institute of Food and Agricultural Sciences.

Koeser, A.K., Friedman, M.H., Hasing, G., Finley, H., Schelb, J. 2017. Trees: South Florida and the Keys. Gainesville: University of Florida Institute of Food and Agricultural Sciences.