Fact Sheet ST-549
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Quercus laurifolia
Diamond Leaf 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 (Fig. 1). 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 40 to 60-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): Diamond Leaf Oak
Family: *Fagaceae*
USDA hardiness zones: 6B through 10A (Fig. 2)
Origin: native to North America
Uses: large parking lot islands (> 200 square feet in size); wide tree lawns (>6 feet wide); recommended for buffer strips around parking lots or for median strip plantings in the highway; reclamation plant; shade tree; no proven urban tolerance
Availability: generally available in many areas within its hardiness range

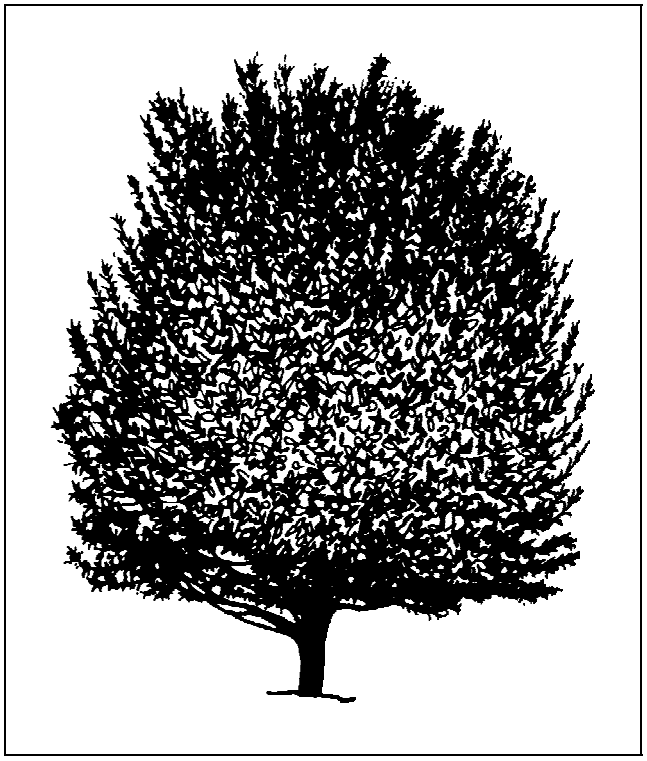

Figure 1. Middle-aged Diamond Leaf Oak.

DESCRIPTION

Height: 60 to 70 feet
Spread: 35 to 45 feet
Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms
Crown shape: oval; round
Crown density: dense
Growth rate: fast

1. This document is adapted from Fact Sheet ST-549, a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: October 1994.

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Figure 2. Shaded area represents potential planting range.

Texture: fine

Foliage

Leaf arrangement: alternate (Fig. 3)
Leaf type: simple
Leaf margin: entire; parted
Leaf shape: elliptic (oval); oblanceolate; obovate; rhomboid
Leaf venation: pinnate
Leaf type and persistence: deciduous; semievergreen
Leaf blade length: 2 to 4 inches
Leaf color: green
Fall color: yellow
Fall characteristic: not showy

Flower

Flower color: brown
Flower characteristics: inconspicuous and not showy; spring flowering

Fruit

Fruit shape: oval; round
Fruit length: .5 to 1 inch; < .5 inch
Fruit covering: dry or hard
Fruit color: brown
Fruit characteristics: attracts squirrels and other mammals; inconspicuous and not showy; fruit, twigs, or foliage cause significant litter

Trunk and Branches

Trunk/bark/branches: droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; not particularly showy; should be grown with a single leader; no thorns
Pruning requirement: requires pruning to develop strong structure
Breakage: susceptible to breakage either at the crotch due to poor collar formation, or the wood itself is weak and tends to break
Current year twig color: brown; gray
Current year twig thickness: thin
Wood specific gravity: 0.63

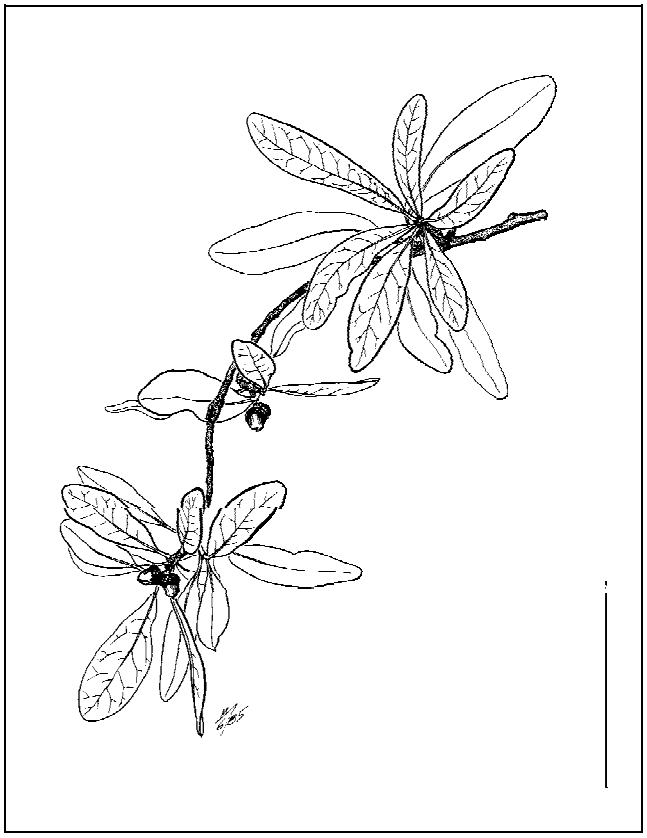

Figure 3. Foliage of Diamond Leaf Oak.

Culture

Light requirement: tree grows in part shade/part sun; tree grows in full sun
Soil tolerances: clay; loam; sand; slightly alkaline; acidic; extended flooding; well-drained
Drought tolerance: moderate
Aerosol salt tolerance: low
Soil salt tolerance: poor

Other

Roots: surface roots are usually not a problem
Winter interest: no special winter interest
Outstanding tree: not particularly outstanding
Invasive potential: little, if any, potential at this time
Verticillium wilt susceptibility: not known to be susceptible
Pest resistance: long-term health usually not affected by pests

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.