

Flowering Dogwood¹

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Flowering dogwood (*Cornus florida*) is native to the eastern half of the United States, including north Florida and portions of central Florida. The state tree of Virginia, flowering dogwood grows 20 to 35-foot-tall and spreads 20 to 25-feet. Trees grown in the sun grow slower, branch more, and are more compact than shade-grown trees. Branches on trees grown in the shade or partial shade appear to form horizontal layers of foliage making dogwood a good candidate for pruning into a specimen. Do this by removing some of the small and medium sized branches from the trunk so major branches have room to develop. Remove some of the small, secondary branches from along the major branches to allow light to penetrate the crown. This will help show off the branch structure of the tree. Dogwood can be trained with one central trunk or as a picturesque multi-trunked tree. Be sure to prune after flowering, but before next years flower buds form in July, to preserve next years flower display.

The showy white bracts (modified leaves surrounding the group of small yellow flowers) add brilliance to both native woodlands and urban landscapes for about two weeks in early spring. Cultivars with pink or red bracts grow poorly in

Florida except for some cooler regions in the panhandle.

Flowering dogwoods also add fall color to the Florida landscape. The fall color depends on site and seed source but on most sun grown plants will be red to maroon. The berries are near 1/4 inch in diameter and are produced in clusters of 2 to 16. The berry contains one large seed which is the primary means of propagation. The bright red fruit is produced in abundance but is often eaten by birds.

USES

Dogwoods can soften the vertical lines of a small home or provide a background for other plants such as azaleas. Branches on the lower half of the crown grow horizontally, those in the upper half are more upright. In time, this can lend a strikingly horizontal impact to the landscape, particularly if some branches are thinned to open up the crown.

Flowering dogwood is an understory tree in nature. This means they are usually associated with and protected by larger trees. It is no surprise the dogwood's primary use in the landscape is on the edge of wooded areas or in groups which provide mutual shading. Dogwood is a standard tree in many

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gardens where it is used to shade the patio, to add spring or fall color in a shrub border or as a specimen in the lawn or groundcover bed. The tree is not suited for parking lot planting but can be grown in a wide street median, if provided with less than full-day sun and irrigation.

ESTABLISHMENT AND CARE

Dogwoods grow best in well drained soils with a slightly acidic reaction (pH 5.0-6.5). They are sensitive to high or rapidly changing soil temperatures. Woodland soil temperatures rise and fall slowly and dogwoods grow best in this environment.

Flowering dogwoods can be grown in sun or shade but shaded trees will be less dense, grow more quickly and taller, and have poor flowering and fall color. They prefer part shade (preferably in the afternoon) in the southern end of their range. Many nurseries grow the trees in full sun, but they are irrigated regularly, if not daily. Flowering dogwood prefers a deep, rich, well-drained, sandy or loam soil with some organic matter and has a moderately long life (up to 40 years on a good site). It is not recommended in areas with heavy clay or wet soils unless it is grown on a raised bed to keep roots away from wet soil.

Bare root or balled and burlapped trees should be transplanted during the dormant season. Container grown trees can be transplanted anytime of the year if they are irrigated regularly after planting. Special techniques are required to move dogwoods from the wild. Greater success is common with smaller trees (trunk diameter less than 1 inch). The tree should be root pruned, then irrigated regularly several months before it is moved. Balled and burlapped trees are easier to establish in Florida than bare root trees.

Trees should be planted in a hole as deep as the rootball, no deeper. In compacted or poorly-drained soil, the hole should be three times the width of the rootball, and the planting hole should be only two-thirds the depth of the root ball. Mound soil to cover the sides of the root ball and gently taper the side of the mound down to the existing soil grade. Never place any soil over the rootball. Create a 3-inch deep circle of mulch about 2 feet in diameter for each

inch of trunk diameter. Increase the size of the mulched area as the tree grows. This technique will establish a tree quickly by eliminating competition from turf and other plants. Pull mulch 1 to 2 inches away from the trunk to prevent moisture from promoting bark decay. The tree should be watered thoroughly after transplanting to settle soil around the roots.

Dogwoods are not tolerant of extended drought periods. This is especially true during the first year after planting. The first few weeks after planting apply small amounts of water to the root ball every day. Ask the nursery operator how much was applied and apply this amount, or slightly more. Plants installed during the cooler months may need less frequent irrigation, depending on the weather. One week after planting, gently dig a small hole just outside of the root ball to check soil moisture. Squeeze some soil in the palm of your hand. If water drips out between your fingers, you are watering too much. If the soil crumbles and falls out of your hand as you open your fingers, you are watering too little. Beginning about one month after planting, cut irrigation to twice each week for about one year. This will ensure that the tree becomes well established. Establishment takes about 6 to 12 months for each inch of trunk diameter. Larger trees will benefit from irrigation during the second year after planting. Trees in partial or deep shade need irrigation after this establishment period only in times of extended drought. Those in full sun will do best with regular irrigation all during the life of the tree.

Over-fertilization can injure the young dogwood. If you wish to fertilize within a year after planting, apply a small amount of slow-release fertilizer to the top of the root ball. Fertilizer can be applied directly on top of the mulch. There is no need to place it below the mulch because it quickly moves downwards with water. Most established trees growing in landscapes where the lawn, ground covers, and shrubs are fertilized do not need additional fertilizer. Their root systems extend throughout the lawn and landscape and receive nutrients when these areas are fertilized.

PESTS

Insects

Insects common on dogwood include dogwood borer, twig borers and club gall. Eggs of the dogwood borer are laid on the dogwood trunk by moths and hatch into small worm-like larvae. These larvae move through openings in the bark and feed on the trunk. A wound creates a prime point of entry for the larvae, therefore the best way to prevent borer damage is to avoid injuring the tree. Be sure not to hit the tree trunk with lawn mowers or string trimmers as these are common ways of damaging the trees. Insecticides usually do not control borers inside the tree, but they can prevent further infestations.

Twig borers cause wilted, then brown leaves on the ends of branches. They bore into the twig and construct a tunnel in the pith. The developing larvae feed on an ambrosia fungi introduced by the beetle inside the tunnel. Trees are seldom killed by twig borers because they are usually present in small numbers. Control twig borers by pruning infested twigs below the discolored pith area and destroying them.

Dogwood club gall midge forms a gall near the end of young shoots during late spring or early summer. The female fly lays eggs at the base of a leaf and the developing larvae cause a noticeable swelling of the twig. Club galls can be controlled by pruning. Prune out galls before August and destroy them.

Other insect problems may include leaf miners, scales, aphids, and twig girdlers. Leaf miners cause brown blister-like mines on the underside of leaves. The adult leaf miner skeletonizes the leaves. Scales can build up to large numbers before being detected. Aphids and twig girdlers may also be problems, but neither will kill the tree.

Diseases and Other Problems

Several diseases may affect flowering dogwood. A large number of leaf spots attack dogwood. Spot anthracnose is caused by a fungus that attacks dogwood leaves, stems, flowers and buds. Spots are usually small (1/25 inch) with reddish or purplish borders. Severe infestations can prevent flower buds from opening, distort leaves and weaken trees.

Discula Blight (an Anthracnose type disease which differs from spot Anthracnose) disease has received a lot of attention recently. To date, there have been no reports of Discula Blight in Florida. In the states where it has been reported, it affects and can kill trees in the woods and in other locations in total shade. There are some reports of anthracnose on landscape trees.

Cankers often start at injuries on the trunk that allow entry of the fungus. The symptoms are first noticed as blackened or water soaked areas on the bark, usually adjacent to the point of fungal entry. The darker area will grow and often a black liquid oozes from the canker. Early symptoms of dogwood canker are smaller and paler leaves than normal. Leaves on infected branches turn red earlier in the fall. At first the symptoms appear only on the infected side of the tree but become more general as the canker enlarges. Cankers normally can not be controlled after infection occurs. Avoid trunk wounds during and after planting.

Root rots may occur on dogwoods, but they are generally caused by mechanical root injury or by cultural conditions such as overfertilization, overwatering or lack of soil water drainage. Wet soils cause roots to decline and become susceptible to root rot diseases. Most horticulturists recommend reducing this problem by selecting a different species for wet sites, by planting in a raised bed in poorly-drained soil, and by adhering to recommended cultural practices.

Powdery mildew coats the leaves with a fine white fungus resembling a white powder. Emerging leaves may be deformed by the fungus. It occurs most often on shade grown trees and on leaves kept moist from frequent rain or irrigating the foliage.

Flower and leaf blight attack fading bracts, especially during wet weather. Infected flower parts fall on the leaves spreading the infection.

Leaf scorch occurs during hot, dry, windy weather and it looks like a disease. Scorch symptoms are drying and browning of the leaf margins, or, in more serious cases, drying and browning of the interveinal area. Marginal leaf scorch can be a common occurrence during the summer months,

especially when plants are located in a full sun exposure. Leaf scorch is caused by the loss of water from leaves at a faster rate than water is taken up by the roots. These symptoms can be caused by a lack of available soil moisture, transplanting shock, fertilizer or salt injury to roots or root rot diseases.

CULTIVARS

Few red and pink forms of dogwood are expected to perform well in Florida. Named cultivars other than 'Weavers White' which has large, white bracts, have not been extensively evaluated in the Florida landscape. Trees planted in central Florida should be propagated only from dogwoods native to central Florida. Heat resistant selections could be developed and propagated from these trees, and they are likely to yield the most adapted dogwoods for that region. Encourage nursery operators to develop these selections.