

University of Connecticut



HOME & garden
EDUCATION CENTER
COOPERATIVE EXTENSION SYSTEM

Dogwood Decline

The decline of the flowering dogwood, *Cornus florida*, is a common concern. People want to know the reason for the early decline of their trees. One or more of the following factors may be involved: fungal infection, insect attack and/or environmental stresses.

The dogwood is an understory plant, living under taller trees or on the edges of forest openings. It is normally found along the banks of rivers, streams or ponds where the soil is deep, moist and well drained. Therefore, dogwoods may not adapt readily to an open lawn situation. In addition, Connecticut is in the northern fringe of cold hardiness for dogwoods. Any severe change in the environment, such as drought or long periods of high temperature, can stress the plant. Such stresses can reduce resistance of dogwoods to disease and insect attack, further weakening the plant to the point where it may die.

The key to keeping dogwood trees healthy and living longer is a good cultural management program. This includes adequate air drainage, fertilizing, watering and pest control when needed.

The following guidelines may be followed for growing the flowering dogwood.

- Buy healthy trees.
- Plant in early spring.
- Use proper planting technique.
- Be sure site is well drained.
- Maintain low mulch around the tree.
- Water adequately during dry weather.
- Protect the trunk from mechanical injury.
- Prevent borer attack by avoiding wounds and painting pruning cuts with tree wound paint or orange shellac.
- Do all pruning in early winter when moths are not active.
- Reduce fungal diseases by proper pruning and good air circulation.

Some of the factors responsible for dogwood decline in Connecticut include the following:

Fungal Infection

Three fungi: *Botryosphaeria* sp., *Discula* sp. and *Elsinoe* sp. are frequently associated with the decline of the dogwood. These and other fungi infest the foliage of dogwoods during cool, wet periods in the spring when the new growth is emerging. The amount of rain does not matter as long as there is a film of water present on the foliage. Susceptibility of dogwood to these fungi is increased when the foliage stays wet for extended periods of time. Controls against the different species of fungi are the same. Symptoms of fungal attack include reddish to maroon spots on the leaves, yellow to brownish discoloration of leaves and light gray lesions on the twigs often followed by progressive dieback of twigs starting in the lower part of the trees.

-*Botryosphaeria* sp. can be recognized by its small black spore-bearing structures found on the twigs and branches.

-*Discula* sp. produces small, 1/8-inch, reddish to reddish-brown spots on the leaves. As the spots enlarge, they often join together, discoloring a quarter or more of the leaf. The fungus may grow through the stem of the infected leaf and enter the twig turning it light gray.

-*Elsinoe corni* causes the disease known as spot anthracnose. Infected flower buds do not open or they produce stunted, malformed bracts with numerous small, circular to elongated tan spots with purple to brown borders. There may be up to 50 spots on a bract. Leaf spots have slightly raised purplish edges paling to yellow-gray at centers. The centers will often fall out producing a shot-hole effect. There may be 100 spots on a leaf. Spots on petiole, fruit clusters and stems are similar to leaf spots.

Control

Have the soil tested to apply the proper amounts of lime and fertilizer, irrigate as needed. Vigorously growing trees tend to have better resistance to fungal attack. Remove broken or diseased branches and dispose of them. Prune in early winter to increase air circulation. Avoid overcrowding, over-fertilizing with a high nitrogen fertilizer and planting in heavily shaded or low, wet sites. If fungal diseases have been a problem, rake up and remove fallen leaves. *For additional information, please read the Horticulture Fact Sheet: Leaf Spot Diseases.*

Insect Attack

The dogwood borer, *Synanthedon scitula*, is the most serious insect pest of dogwoods. Several other insects attack the dogwood but are not considered major pests. The dogwood borer makes irregular tunnels under the bark on the main stem and sometimes on the base of limbs. Small trees or branches may be girdled. Young trees are frequently killed and older ones are reduced in vitality, often leading to death. The adult insect is a clearwing moth which lays eggs from early May to mid-July. Upon hatching, larvae enter the plant through cracks, wounds and fresh scars. Once inside, they disrupt the nutrient supply channels of the tree. Young dogwoods are often attacked at the ground line. Symptoms of the borer attack include drying and dropping of leaves, dieback of branches, the emergence of numerous watersprouts near the borer damage and borer holes on the trunk.

Control

Cover all wounds and pruning cuts on the trunk with a tree wound paint or orange shellac to discourage easy entry of the larvae. A fine wire can be inserted into the entry hole of the dogwood borer and pushed up the feeding channel in an attempt to kill the larva. *Also see Horticulture Fact Sheet: Dogwood Borer.*

Ecological Factors

Each tree species does best within a given environmental range. The flowering dogwoods prefer cool, moist soils on the fringe of woodlands. The open lawn site can be very harsh because soils can be hot and dry in the summer and the site may be cold and windy in the winter.

Other Cultural Factors

- Improper use of mulches around trunk (material piled several inches deep).
- The use of broadleaf herbicides near and under the dogwood.
- Too little or too much water.
- Poor fertilizing practices.
- Improper pruning or lack of pruning.
- Poor transplanting and care practices.

Control

Check the soil's pH and nutrient levels by having the soil tested. Apply fertilizer and lime as recommended on the soil test report. Do not apply fertilizer around dogwood trees after mid-June. It can stimulate soft late growth, making the trees susceptible to winter injury. Avoid planting dogwood in open, exposed areas. Prune dead limbs. Do not use herbicides under and around dogwoods. Do not apply insecticides or fungicides to dogwoods with sprayers that were used for applying weed killers. Use not more than a two-inch layer of mulch around the tree. Dogwoods have shallow roots, so water thoroughly if a summer drought should last two weeks or more. Avoid lawn mower injury. Kousa Dogwood might be a suitable replacement tree. It is later blooming and more resistant to the anthracnose fungi than the native dogwood.

For pesticide recommendation, call UConn Home and Garden Education Center at 877-486-6271

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