

Dogwood Anthracnose

Cause: *Discula destructiva*, a fungus

Host:

Native western dogwood (*Cornus nuttallii*); eastern dogwood (*Cornus florida*)

Identification/appearance:

Many plants develop diseases with symptoms loosely grouped as “anthracnose,” spotting and blotching of leaves. On dogwood, leaf spots and large, brown, irregular-shaped blotches demonstrate characteristic symptoms. Leaves may show brown spots about 1/16 to 3/8 inch across, either before or at the same time as blotching symptoms. These spots and blotches may show well-defined, dark gray-green or purplish margins. Location of the blotch on the leaf may help to identify the disease because blotches characteristically form in a wedge shape spreading from the mid-vein area to the tip of the leaf. The tree can defoliate if severely affected.

Affected trees often retain leaves throughout winter and spring, each diseased leaf resembling a gray, crumpled wad. Presence of these dead leaves helps with identification of affected trees in winter. The disease kills terminal twigs and may spread down branches, causing sunken tan to brown cankers that may eventually cause more twig dieback. Twig infection may kill leaf buds so that branches fail to leaf out the following year.

Life cycle

Fruiting bodies of *Discula*, resembling tiny brown dots, remain on infected leaves and twigs throughout the winter. Spores produced in these fruiting bodies infect new growth as it emerges, particularly during moist weather. Disease generally appears from May to July, but moist weather can promote further infection any time during the growing season because spores are spread by splashing water droplets and wind.

Natural enemies

Not applicable

Monitoring

Prolonged dry weather slows or stops disease spread; moist weather promotes the disease. Several consecutive wet springs can increase severity of infection. Check plants during fall and winter for dead leaves and twigs that may have symptoms. Some dogwood trees will survive with the disease for many years, losing leaves and twigs but

leafing out sufficiently to stay basically healthy. Monitor the volume of leaves and note if the tree has become quite sparse. Advanced cases of dogwood anthracnose can kill trees.

Action threshold

Gauge the degree of disease and the prominence of the tree in the landscape. Many gardeners tolerate a certain amount of damage on dogwood. If it's important to protect the tree, take action in early spring just as buds swell on any tree that has been affected by the disease in previous years. The presence of many dead leaves remaining on the tree could be an indication of anthracnose in the next year.

Cultural/Physical controls

Resistant plants: Plant breeding and selection programs have produced a number of dogwood with resistance to anthracnose caused by the fungus *Discula*.

Cornus kousa var. *chinensis*; *Cornus kousa*: 'Milky Way,' *Cornus kousa* 'Steeple.'

While *Cornus kousa* is reputed to be resistant, it can show anthracnose symptoms in a severe season especially if the tree is under other stresses.

Cornus florida: 'Spring Grove,' 'Sunset'.

Hybrids of *Cornus kousa* and *Cornus florida*: *C.* 'Celestial,' *C.* 'Stardust,' *C.* 'Stellar Pink. The extent of resistance for these cultivars hasn't been researched in the Pacific Northwest; those listed show good resistance in the eastern United States.

Cornus mas, (Cornelian cherry dogwood), *Cornus canadensis* (Bunchberry). Neither of these has the form or flowering characteristic of the larger dogwoods. Cornelian cherry has small yellow flowers and bunchberry is a ground cover.

Cultural needs: Do not allow affected trees to go into drought stress in summer, especially the eastern dogwood, *Cornus florida*.

Pruning: Prune out and dispose of infected twigs, attached leaves, buds, or blooms. On a very large, heavily infected tree, it can be difficult to manage the disease solely by pruning. Pruning practice is practical for smaller garden trees.

(continued/over)



The Green Gardening Program is a program of Seattle Public Utilities to promote alternatives to lawn and garden chemicals. Funded by the Local Hazardous Waste Management Program in King County.

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Garden sanitation: Rake up and destroy fallen leaves during the growing season and in the fall; do not compost these leaves. It's helpful to mulch under the tree after raking to bury more of the fallen leaves. However, on most trees overwintering disease organisms will remain on dead leaves and twigs, or can also spread into the garden from neighboring trees.

Chemical controls:

Timing is crucial if fungicide applications are used in managing anthracnose infections. The spores live over winter on buds, and a protective spray program should begin just as the leaf buds begin to open (bud break). Copper and daconil are registered but should be used with care, following the labels regarding proper timing. Spray at 10-14 day intervals from bud break to dry weather.

References:

Pscheidt, Jay et al. *Pacific Northwest Plant Disease Control Handbook*, 1998, Oregon State University

Smith-Fiola, Deborah. *Pest Resistant Ornamental Plants*, Rutgers Cooperative Extension.