

CYTOSPORA CANCKER

Overview

Cytospora canker (*Cytospora kunzei* var. *piceae*) is one of the most damaging bark diseases of spruce trees east of the Rocky Mountains. Many species are susceptible to this disease, but it is commonly found on blue spruce trees in the landscape.

Cytospora canker is a fungal disease that often attacks trees that are already stressed by other factors. Those other factors can include improper planting, drought, dense planting groups, and age. Cytospora rarely kills trees outright, but it makes them unsightly by killing branches and causing sap ooze from infected branch lesions.



Diagnosis

- Browning of entire limbs, starting low in the canopy moving upwards over time.
- Dieback of entire limbs, can be seen year round.
- White/blue sap oozing from infected branch lesions near the trunk, seen year round.
- Symptoms can look like mite damage, but will lack webbing and the stippling damage mites cause

What To Do

Blue spruce is often planted in stressful urban sites, which predisposes the tree to infection by the fungus. Proper cultural practices including proper irrigation, mulching, and pruning can assist with reduction of tree stress and cytospora canker infection. Cambistat can also be used to promote tree health and has been shown to significantly reduce cytospora infections.

A single Cambistat application provided two years of prevention of cytospora canker in a trial conducted by The Morton Arboretum. When compared to untreated spruce, Cambistat significantly reduced the development of cytospora cankers. Cambistat will not cure this disease if cankers are present at the time of application, however, it will prevent the development of further infection. Use Cambistat as a tool in combination with other tree health care treatments that promote overall tree health.



Typical cytospora symptoms

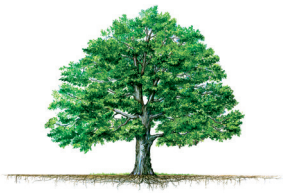


PHOTO: Missouri Botanical Gardens

canker developing on a spruce branch

QUICK FACTS

- Cytospora canker is a fungal disease that often attacks blue spruce that are already stressed by other factors.
- Management practices often focus on alleviating the source of stress such as improving irrigation and providing mulch around the tree.
- While there is no cure for cytospora canker, applications of Cambistat have been shown in research trials to significantly reduce the growth of cankers.



Slower Growing Trees

A common myth about trees is that a faster growing tree is healthier than a slower growing tree. The truth is that slower growing trees will outlive trees that grow faster, especially in situations such as yards where space and resources are limited. The chart below shows some important differences between a tree growing relatively faster or slower.

Cambistat Treated Tree



Slower Growth is Beneficial

Tree Characteristic	Tree Growth Rate Comparison	
	Faster Growth	Slower Growth
Resource Demand	Higher	Lower
Sensitivity to Resource Availability	Higher	Lower
Stored Energy Reserves	Lower	Higher
Root : Shoot Ratio	Lower	Higher
Sensitivity to Stress or Damage	More Sensitive	Less Sensitive
Overall Tree Durability	Less Durable	More Durable

Benefits of Cambistat for Urban Trees

Cambistat is a soil applied product that is absorbed through the roots. Cambistat gently slows the growth of trees, allowing the tree to redirect some of its energy from canopy growth to defense chemicals, fibrous root production, and other uses. The resulting reallocation of energy makes your tree healthier and more durable.

Drought is a major cause of tree death and decline in the urban landscape. Research shows Cambistat increases drought resistance by helping the tree reduce water losses during dry, hot periods.

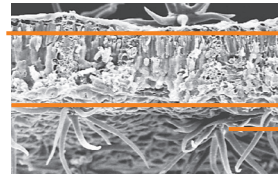


untreated

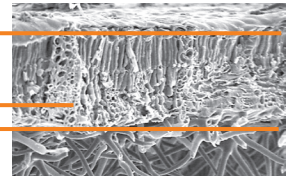


treated

Cambistat changes some important physical traits of leaves. Leaves of treated trees tend to be greener (higher concentrations of chlorophyll) than untreated and have an enhanced protective barrier (thicker leaf surface and denser surface hairs).



untreated



treated

Research has shown Cambistat increases fine root density in trees



untreated



treated

An Integrated Approach

When caring for urban trees it is important to make a thorough evaluation of the site to accurately diagnose all stressing agents and tailor your recommendation to the specific circumstances. These must be dealt with so that your tree can live to its fullest potential. Utilize your arborist for a comprehensive maintenance program.

CORNERSTONE



PARTNERS
Horticultural Services Company

(630) 482-9950

www.CPHort.com

P.O. Box 745 St. Charles, IL 60174