



Prairie Shelterbelt Program Disease Leaflet

CYTOSPORA CANKER

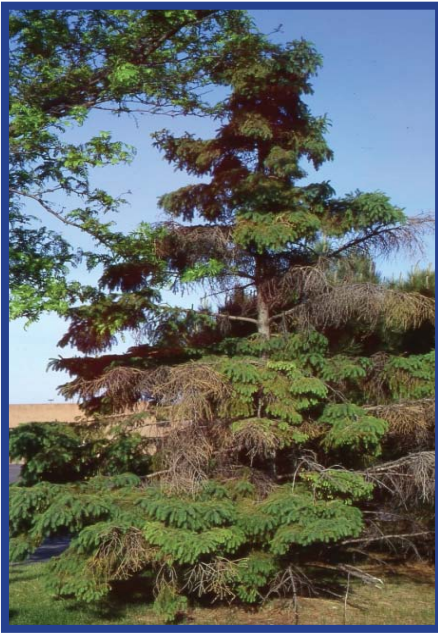
Cytospora kunzei

Hosts:

Colorado and White spruce

Distribution and Disease Cycle:

Cytospora canker is caused by a fungal pathogen which attacks many species of conifer, including Colorado, white, Norway, and Engelmann spruce and Douglas-fir, with Colorado spruce more susceptible than any other species. Spores are released from cankered branches throughout the growing season and spread by rain, wind, insects, birds or man to other branches on the same or other trees. Infection typically occurs through wounds, first infecting and killing the bark and eventually spreading to kill the entire branch. Cytospora can also be opportunistic, growing in bark killed by other pathogens. Damage is usually seen on older, larger trees.



*Cytospora canker
in Colorado
spruce*
Photo credit:
Joseph O'Brien,
USDA Forest
Service,
Bugwood.org

Symptoms and signs:

Cankers are a necrotic lesion on a localized area of stem/trunk tissue where tissue has died. Symptoms of Cytospora canker typically start on lower branches, with all needles on a branch being equally affected. Needles on infected branches turn brown and eventually drop, leaving entire branches bare, with

dead (cankered) areas of the bark exuding a white or bluish resin. Infection is usually most severe on crowded or stressed trees.

Control:

Because Cytospora typically infects trees weakened by environmental stresses, maintain tree vigour by watering during periods of drought, do not cultivate deeper than a few inches nearby trees and avoid inflicting wounds to bark which act as infection entry points. Remove and dispose of infected branches, these branches will not recover and only will serve as a source of infection. Prune during late winter or during dry periods whenever cankered branches are discovered. Prune to a lateral branch at least 10-15cm below any visible cankers or to the main trunk as required, sterilizing pruning tools with 5% bleach solution or alcohol between cuts. When trees become large and crowded, thinning out some trees may help increase aeration and provide some control. There are no chemicals registered for canker control in spruce.



*Cytospora canker close-up with
bark peeled.*

Photo credit: Agroforestry
Development Centre

For further information please contact:

AESB Agroforestry Development Centre
P.O. Box 940
Indian Head, Saskatchewan, S0G 2K0
Phone: 1-866-766-2284
Email: agroforestry@agr.gc.ca
Website: www.agr.gc.ca/shelterbelt