



Prairie Shelterbelt Program Disease Leaflet

CANKERS ON POPLARS

Various spp.

Hosts:

Poplar, Aspen and Willow

Distribution and Disease Cycle:

Most poplar cankers in the prairies are caused by fungal pathogens. Because there are numerous fungal species that can cause canker, all poplar species are susceptible to at least one or more canker causing agent. Fungal spores usually spread by wind or rain splash, but can also be transported by insects, animals or pruning tools. Infection of healthy tissue usually occurs through branch stubs or wounds. Trees that are under stress from drought or insects are more susceptible to cankers.

Canker infections initiating in pruning wounds

Photo credit:

Left: Janna Beckerman, Department of Botany and Plant Pathology

Right: Agroforestry Development Centre



Symptoms and signs:

Cankers are a necrotic lesion on a localized area of stem/trunk tissue where tissue has died and usually shrinks. Cankers may appear as circular to elongated sunken areas with a raised greyish or black margin. The sunken areas may range from 5 to 50 cm in length on main branches and stems on the lower two-thirds of the tree. This diseased bark eventually cracks open and exposes the wood underneath.

The extent of tissue damage depends on the canker pathogen and the tree species. Some types of canker can cause mortality of the host, while others are weaker and only cause reduced growth or create lesions that reduce the aesthetic value of the

trees. Trees killed by the more virulent pathogens should be removed to prevent further spread of the disease. Although typically not fatal in themselves, infections by the weaker pathogens cause wounds, making trees more susceptible to attack by other secondary insects or diseases that can cause tree mortality. Regardless of the pathogen, all cankers will cause weakened stems which can result in limbs breaking during high winds.

Control:

An important measure in control is to maintaining high vigor of trees by removing weed competition, controlling insect pests, and watering during periods of drought. Additional control (depending on type of canker) can be achieved by pruning and destroying all infected branches during dry weather. Practice proper pruning techniques to promote rapid healing and reduce chances of infection. To minimize disease spread during pruning, sterilize tools after each cut. Cull any severely infected trees to reduce disease spread. If possible, plant canker resistant varieties or other tree species. The hybrid poplar species that are distributed through the Prairie Shelterbelt Program are all moderately to highly resistant to canker diseases. There are no chemicals registered for control of cankers in poplar, aspen or willows.

For further information please contact:

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