

BRONZE LEAF DISEASE (*APIOPLAGIOSTOMA POPULI*)



What is BRONZE LEAF DISEASE?

Bronze Leaf disease is a fungus that infects trees in the poplar family, namely Swedish columnar aspen, trembling aspen, and tower poplars. It is an airborne fungus that lives on trees and spreads in the spring through infected debris and branches. It's a nasty bit of business, with no chemical treatments and the ability to kill your tree within 3-5 years.

It's been a few years since it was first found in Edmonton (early 2000's), but the fungus is still a concern.

The fungus that causes bronze leaf disease moves systemically (within the plant's vascular system), therefore, once established it cannot be removed.

As the disease spreads, it slowly girdles the branch, eventually killing it. Bronze leaf disease almost always starts at the bottom of the tree and moves upward.

Signs & symptoms of BRONZE LEAF DISEASE:

Spring:

Generally difficult to identify at this point. Already infected branches may grow new, stunted leaves. These leaves may appear underdeveloped but their colour will look normal (green). Infected branches' leaves may unfurl as either green or yellowish green, but will be stunted in size. Once daytime temps cross about 18 degrees C, the spores will take flight and infect everything around them.

Summer:

An infected tree will produce regular size, healthy green leaves that will become infected by spores from previously infected leaves on the same tree. After it becomes infected, the stem and leaf veins of the regular size leaves will remain green while the rest of the leaf progressively turns brown or bronze. Eventually, the infected leaf will become dark reddish-brown, chocolate brown or bronze although the veins and the leaf stem may remain green for some time. Although the entire tree is infected at that point, these are the leaves capable of spreading it and they must be removed and put in the garbage (not composted) right away.

Fall:

A localized infection will be evident. The tree will display a combination of both healthy and infected branches.

Winter:

Leaves will remain on an infected tree and will be brown/bronze in colour.

Control of BRONZE LEAF DISEASE:

There is no chemical treatment for Bronze Leaf. It lives inside a tree and, once established, can't be eradicated. The only way to control the disease is through pruning and sanitation:

- Cut off affected branches 8-12" back from the last visible sign of infection (either an infected leaf or an area browned under the branch's bark). You may be throwing aesthetics out the window by doing this, but you'll be saving your tree from an untimely end. Make sure to bleach/sanitize your pruning tools in between each cut to prevent spreading the disease around your trees
- Just like humans, healthy trees are better able to repel diseases than sickly trees. Make sure to plant your aspen in good soil and keep it watered and fertilized.
- Remove and destroy fallen leaves if possible. Prune to remove dead branches and increase air circulation; avoid dense plantings that can reduce air flow. Avoid using monocultures of susceptible species in mass plantings or shelterbelts which can accelerate disease spread. Avoid planting Swedish columnar aspen or tower poplar trees, as they are short-lived and susceptible to a variety of insects and diseases.
- Do not keep infected wood, chips or leaves for burning or composting. Immediately bag all infected material in garbage bags (not clear composting bags) and dispose of it in your municipal garbage container or take it directly to the landfill. The goal is to bury the infected leaves so that when the fungus releases spores in the spring, there's nowhere for them to go.
- Keep the ground around the trees clean of all leaves and twigs.
- Watch your trees each year in late summer and prune out any new BLD infected branches.

SUNSTAR NURSERIES LTD INFO SHEET:
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References:

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