

## Canker Diseases of Trees

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Canker diseases of trees cause die back of branches and can lead to tree death. Cankers are most often found on spruce, pine, poplar, willow, crabapple and honeylocust.

A canker is a dead area on a branch or trunk usually caused by a specific fungi or bacteria. For example, the pathogen that infects spruce cannot spread to most other trees, like honeylocust or poplar.

Cankers may appear as a discolored, sunken or cracked area on a branch or trunk. Some cankers ooze sap or bacteria and this is one way to locate them.

There are no fungicide or bactericide controls. Cankers are best prevented by not planting susceptible trees and avoiding tree stress and tree wounds. Most canker pathogens are unable to penetrate bark directly and vigorous, healthy trees are better able to deal with cankers.

In most cases, infection occurs through a wound such as from hail, branches rubbing against one another, staking materials, lawn mowers, weed trimmers and incorrect pruning.

Avoid hitting trees with mowers and trimmers by placing a six foot diameter ring of mulch around the tree. Use an organic mulch layer, like wood chips, that is only four inches deep and not piled against the trunk.

Timely pruning to remove branches that will eventually rub against one another and correct pruning cuts are helpful. Pruning is best done in early spring just before bud break or in June after leaves expand. Avoid pruning from mid-August through January.

A correct pruning cut is one that does not leave a branch stub. Remove branches where they attach to the trunk or another branch. Be sure to leave the branch bark ridge and collar found at the attachment point. The ridge is a rough, raised area on top of the branch and the collar is a slightly swollen area beneath the branch. Do not cut into these when pruning.

Correct cuts results in a smaller wound and a trees chemical defense is better able to seal off the wound from decay and pathogens. Do not treat wounds with wound dressings or tree paints.

For vigorous trees, select the right tree for the site, avoid planting too large of tree at planting to reduce transplant shock or girdling roots, and don't plant too deep. This is the most common planting mistake made.

Limited moisture is a common stress factor leading to canker disease. Relying on automatic irrigation systems to water trees is not a good practice. Most irrigation systems do not moisten soil deep enough to fully benefit trees. During dry years, supplement irrigation to moisten the soil of trees to a depth of six to eight inches.

If a branch has a canker, remove the entire branch with a good pruning cut. This will help slow the spread of canker to other branches or to nearby trees of the same type. Sterilize pruning tools between cuts by dipping them in 10 percent household bleach solution or 70 percent alcohol for several minutes.

If a trunk canker is more than half way around the circumference of the main trunk, monitor the tree for dieback and signs of internal decay. If structural integrity is threatened, the tree will need to be removed.