
D Diagnosing Disease Problems In Saskatoon Orchards

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Introduction

Fungal diseases are the most important barriers to successful saskatoon production. A variety of diseases are known to affect the saskatoon. These include *Entomosporium* leaf and berry spot, saskatoon-juniper rust, *Cytospora* canker, blackleaf, brown fruit rot, powdery mildew, and fireblight. No virus diseases or mycoplasmas have been reported for the saskatoon.

It is important to carefully monitor for diseases and to take preventive measures. Disease problems are more prevalent in years of greater than normal precipitation. Disease control in the saskatoon involves the use of fungicides in addition to pruning and other cultural practices. Three fungicides are registered for use on the saskatoon: 1) triforine (Funginex 190EC); 2) myclobutanil (Nova 40W); and 3) sulphur (Kumulus DF).

Regular inspections and pruning are required to effectively control diseased shoots. The disinfection of tools is important to help control the spread of disease, but is not 100% effective. If disease is not present, then disinfection is probably not necessary, however, in such instances, growers must be able to distinguish diseased plant tissue from healthy plant tissue. When pruning diseased growth, tools should be disinfected with

Lysol (1 part Lysol to 19 parts water), or household bleach (1 part bleach to 9 parts water) after every cut of diseased tissue. Lysol is less corrosive to pruning tools. It is preferable to spray disinfectant on pruning tools after every cut, however, in practice, this isn't very workable. Dipping tools in disinfectant will eventually dilute the disinfectant and make it ineffective. Consequently, the disinfectant solution must be replaced often. Disinfection of tools is practical only when moving from diseased plants to healthy plants if a considerable amount of pruning is necessary. Pruned material should be removed and burned.

Pruning any diseased parts prior to harvest is essential if mechanical harvesting. Harvesters can actively spread disease and these machines may need to be disinfected. Pruning damaged stems and branches following harvest is also important to prevent the development of disease.

Cultural Practices To Help Reduce Disease Problems

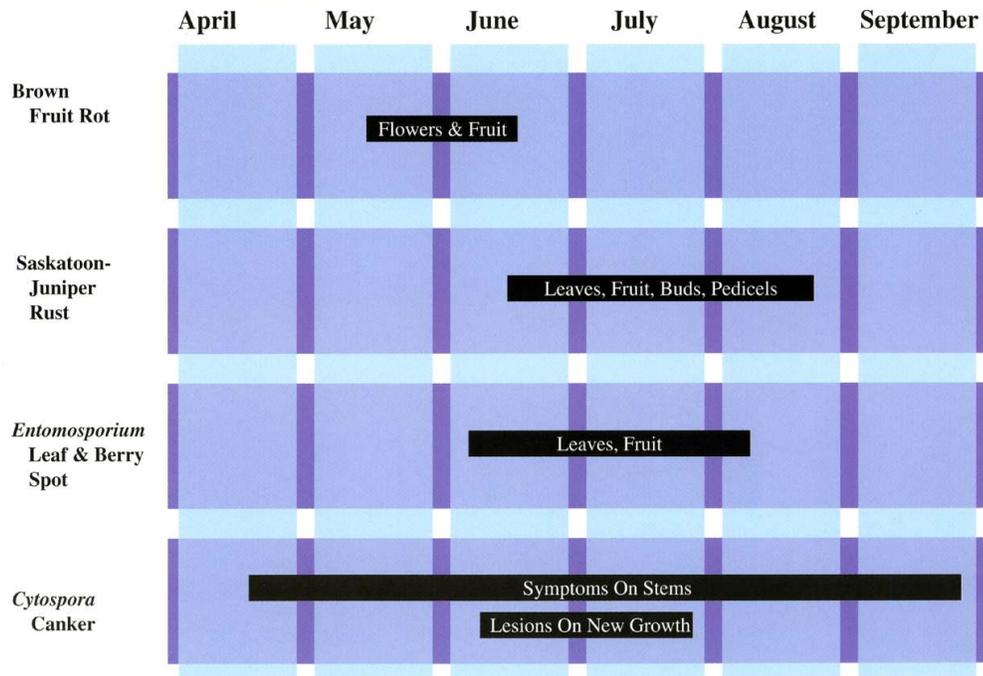
- 1) Ensure that transplants are disease-free.
- 2) Avoid planting in wet, poorly-drained soils, or in frost pockets.
- 3) Avoid planting near diseased plants.
- 4) Disinfect pruning tools between plants.
- 5) Prune to remove diseased material in dry

- weather during June and early-July.
- 6) Avoid late-summer and fall cultivation, irrigation, and fertilization.
- 7) Protect against rodent damage.

The following table and graphic are aids to identifying common disease problems of saskatoons.

Primary Symptoms	Possible Causes
Hard, yellow patches on leaves or fruit; often with spiky, brown outgrowths	Saskatoon-Juniper rust
Swelling & distortion of smaller branches, especially at branch & leaf nodes	Saskatoon-Juniper rust
Leaves with small, angular, brown spots; often followed by leaf yellowing & loss in mid-season	<i>Entomosporium</i> leaf & fruit spot
Semi-ripe & ripe fruit with watery grey lesions	<i>Entomosporium</i> leaf & fruit spot
Prematurely brown flower petals	Brown fruit rot
Discolored fruit with gray or light brown tufts	Brown fruit rot
Shrunken, hard, brown or black fruit often from previous year	Brown fruit rot
Leaf edges rolled downwards; bottom surfaces covered in grey to black felt	Blackleaf
Drying & shrivelling of buds & leaves in late-spring	<i>Cytospora</i> canker
Bark wrinkled with vertical splits or folds	<i>Cytospora</i> canker
Sunken areas of cracked or broken bark	<i>Cytospora</i> canker
Leaf surfaces coated with a white powder	Powdery mildew
Wilting of new shoots in a characteristic crook-shaped manner; sudden wilting and browning of blossoms	Fireblight

Seasonal Occurrence Of Common Diseases Of The Saskatoon



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