

Problem: Pseudomonas Blight of Trees and Shrubs - *Pseudomonas syringae*.



Host Plants: Occurs on many ornamentals, most commonly on lilac and ornamental flowering pears. The 'Bradford' Callery pear is particularly susceptible.

Description: Pseudomonas blight is a foliar and shoot disease of many ornamentals. Symptoms of Pseudomonas blight vary depending on the host and intensity of infection. On Callery pear and lilac, symptoms closely resemble those of another bacterial disease called fireblight. Affected leaves first develop light yellow lesions. These lesions eventually expand, become water-soaked, and turn black. Black streaks often develop along the midrib and veins of leaves. In severe cases, the disease will girdle new shoot growth and cause a rapid wilting and blackening of tissue beyond the canker margin. Dead shoots bend slightly and resemble a shepherd's crook. On stone fruits, particularly apricot and cherry, the bacterium will kill buds in winter and blossoms in early spring. Large cankers may also form on the branches and trunks or winter-damaged trees. Stem cankers are slightly sunken and often have extensive gummosis. The liquid which exudes from the canker may have a sour or foul smell. Multiple trunk or scaffold branch cankers can result in tree mortality.

Disease Development: The bacterium which causes Pseudomonas blight overwinters in infected bark tissue or on the surface of bud scales or twigs. The pathogen enters the plant through natural openings in leaves or bark (stomata, lenticels) or through open wounds. The pathogen may also predispose plant tissue to early fall or late spring frost and invades damaged tissue following freeze injury. Once inside plant tissue, the bacterium produces a toxin that is translocated upward in the water-conducting system to newly developing leaves. The toxin causes a rapid water-soaked appearance and blackening of succulent, new tissue. Lesions on woody tissue may develop, but they rarely expand during the summer months. Disease development is favored by cool, wet spring conditions. Almost all disease development is restricted to cool (often near freezing), wet weather in April and May, and is

suppressed by hot, summer weather. Therefore, it is unlikely you will see damage during summer months.

Recommendations: Blighted tissue can be removed in late spring after symptoms appear, provided that pruning is done on a warm, sunny day. Stone fruits should be pruned for shaping or fruit-bearing in late winter or early spring. Never prune stone fruits in the fall or early winter. This predisposes trees to winter injury and increases the number of wounds for infection by the bacterium. Diseased shoots and branch cankers should be removed from diseased plants and destroyed. Make cuts of succulent tissue several inches below the blighted area. For woody tissue, make cuts flush with branch collars and disinfect pruning tools between cuts.

While *Pseudomonas* blight is common on Callery pear and lilac, it seldom causes extensive damage. Nevertheless, in certain locations this disease can cause an unacceptable level of blighting. For trees, dormant applications of copper-based fungicides will help suppress *Pseudomonas* blight. Applications should be made just before bud break in the spring. Copper sprays also can be applied to lilacs beginning as soon as symptoms appear and continuing on a 5- to 7-day interval until warm temperatures occur.

Table 1. Some trees and shrubs susceptible to *Pseudomonas* blight

Amur maple <i>Acer ginnala</i>	Japanese maple <i>Acer japonicum</i>
Norway maple <i>Acer plantanoides</i>	Red maple <i>Acer rubrum</i>
Sugar maple <i>Acer saccharum</i>	Flowering dogwood <i>Cornus florida</i>
<i>Rhododendron spp.</i>	<i>Magnolia spp.</i>
<i>Forsythia sp.</i>	Lilac <i>Syringa sp.</i>
Ash <i>Fraxinus spp.</i>	Apple <i>Malus spp.</i>
Cherry <i>Prunus sp.</i>	Apricot <i>Prunus sp.</i>
Callery pear <i>Pyrus calleryana</i>	Common pear <i>Pyrus communis</i>
Oriental pear <i>Pyrus pyrifolia</i>	Rose <i>Rosa sp.</i>
Poplars <i>Populus sp.</i>	Willow <i>Salix sp.</i>
Linden <i>Tilia spp.</i>	

References:

1. [Bacterial Blight/Canker](#), University of Illinois Extension Hortanswers.

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