LOUISIANA PLANT PATHOLOGY
DISEASE IDENTIFICATION AND MANAGEMENT SERIES
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Bacterial Gall on Loropetalum

Pseudomonas savastanoi

Bacterial gall on Loropetalum *(Loropetalum chinense)* is caused by a plant pathogenic bacterium called *Pseudomonas savastanoi.* The bacterium also is known to cause galls/knots on olives and oleanders. Other important known hosts include ash, privet and forsythia.

An infection starts with small knots, or galls, on twigs or stems (Figure 1). As the disease develops, the galls enlarge (Figure 2) and eventually girdle the entire twig or stem. The girdling of small lateral shoots results in shoot dieback. Girdling of the main stem may lead to plant death. Mature galls are irregular and appear rough with dark-colored callus (Figure 3). These galls can be found on both shoots and stems.

The disease rapidly develops during extended periods of warm, wet weather. Water splash from rain and/or sprinkler irrigation spread the bacterium from infected to healthy parts of same plant or to neighboring plants. Natural openings or wounds are required for the bacterium to penetrate the host tissue and cause infection. After the initial infection, galls may start to appear in two to three months.

The disease is introduced into landscapes on infected plants where it spreads to healthy plants during pruning and hedging. Contaminated pruning or cutting tools play an important role in pathogen spread. Overcrowding of plants and overhead sprinkler irrigation favor disease development in landscapes where bacterial gall prevails.

Disease management in landscape starts with removing entire plants that have galls on the main stems. If galls are detected at an early stage on small lateral shoots, pruning of infected shoots several inches below the gall helps reduce disease spread. Remember to properly dispose of the infected plant material.

Buying disease-free, healthy plants without galls or knots may help avoid introduction of the disease in home gardens and commercial landscapes. Other measures to take include not overcrowding plants. Select sites with good air circulation to promote rapid drying of plant tissue. Avoid unnecessary injuries and use disinfectants to clean cutting or pruning tools between cuts. Avoid overhead sprinkler irrigation; if not feasible, water plants early in the morning. Preventative applications of copper-containing bactericides during favorable environment for disease development may help

Figure 1. Young lateral shoot showing small gall caused by *Pseudomonas savastanoi.*

Figure 2. Medium-sized gall caused by *Pseudomonas savastanoi.*

Figure 3. Mature, irregular, rough, dark gall girdling entire stem of a Loropetalum.

avoid infection and suppress bacterial growth in landscapes where disease is prevalent.

In nurseries, the disease is first introduced on contaminated plants and, later, the bacterium survives on infected stock plants. Cuttings obtained from the infected stock plants for propagating liners serve as a major source of pathogen spread in nurseries. Environmental conditions suitable for propagation also are very conducive for disease development and spread.

Nursery owners should take all precautions to avoid introduction of disease into their nurseries. Shipment of infected liners or stock plants is the most efficient mode of disease transmission during trade. Buy liners or stock plants from reliable sources. Maintain newly arrived Loropetalums in an isolated area for about three to four months in the nursery. During this time, routinely inspect these plants for development of any galls/knots and shoot dieback symptoms.

Immediately remove symptomatic plants and properly dispose of them. Nursery owners must educate their crews about the disease and how it spreads. If propagation is done on-site, keep this area as clean as possible. Clean tools and other equipment used in propagation area with a disinfectant. Avoid reusing potting mix or pots to avoid infection carry over. Maintain disease-free healthy stock plants away from propagation areas and keep them healthy. Preventative applications of copper-containing bactericides may help avoid infection and suppress the disease. But remember bactericides will not cure the galls/knots.

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Pub. 3479 (1M) 07/16 Rep.