

# Fire Blight of Ornamental Pear

Dr. Green Thumb

Arkansas Gardener - September

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Fire blight can be a persistent disease problem for the Callery pear (*Pyrus calleryana*). Fire blight, caused by a microscopic bacterium (*Erwinia amylovora*), can also affect other ornamentals in the Rosaceae family, such as fruit bearing pear, apple, flowering crabapple, pyracantha and quince. Rose, cotoneaster, and hawthorn are also susceptible, but to a lesser extent. Under conditions of high relative humidity or frequent rainfall, this disease can spread rapidly through a group of susceptible plants. This disease becomes most apparent during the spring. Disease incidence and severity are favored by extended periods of wet, warm weather and heavy fertilization.

Symptoms of disease include the presence of blighted leaves and blossoms near the twig tips. Leaves wilt and rapidly turn a dark brown. Twig tips appear as if they were scorched by fire and develop a “shepherd’s crook”. Blighted twigs are often randomly distributed throughout the tree. Stem lesions develop a sunken appearance with small cracks at the margins. Twig dieback may resemble frost damage; however underlying tissues are not streaked and black as with fire blight symptoms.

Disease severity is directly related to the cultivar and weather conditions at the time of infection. Infections begin through the blossoms where the bacteria enter the plant by insect activity. During wet weather in the early spring, bacteria ooze from stem cankers and attract insects that spread the bacteria within the trees as well as other susceptible plants. Splashing water can also spread the bacteria to flower buds and blossoms. Significant dieback may occur on highly susceptible cultivars. Susceptible plants may be severely affected by repeated infections by the bacterium. Laboratory analysis is required for positive confirmation.

Sanitation practices are helpful in limiting damage due to fire blight. Diseased wood should be pruned during the late winter or during an extended dry period during the year when the bacterium is not as active. Wood should be removed eight to ten inches below the edge of the sunken dark brown to black cankers or stem lesions that have developed. Pruning equipment should be sanitized with either a 10% household bleach solution or 70% alcohol solution following each cut. To avoid rapid plant growth, it is best to lightly fertilize during the fall rather than the spring.

In the home landscape, resistant cultivars and selective pruning are the best methods of control for ornamental pears and other woody ornamentals. Chemical control is usually not successful in the home landscape since timing is very important. In commercial operations, copper materials applied during the dormant season followed by regular spray applications of the antibiotic streptomycin beginning at bloom have successfully managed the disease.

\*\*[See Extension Fact Sheet FSA7534](#)

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