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NEWS RELEASE

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Fireblight of Trees and Shrubs in the Landscape and Garden

This year's spring rains have predisposed susceptible plants to fireblight, a destructive bacterial disease affecting plants in the rose family only. The disease takes its name from the blackened appearance of twigs and branches, which appear as though scorched by fire. The incidence of fireblight is strongly affected by rainfall, and although a problem in Kern County, the disease is more frequent and more severe in higher rainfall areas. If a tree or shrub contracts the disease, careful pruning may be needed to prevent death of sections of the canopy or even the whole plant.

Fireblight is caused by *Erwinia amylovora* bacteria. Infection occurs during wet spring weather when splashing rain, wind, bees, and other insects contribute to spread the bacteria from old bark infections to blossoms and new leaves. As bacteria multiply, plant shoots suddenly wilt, with leaves showing patches of brown and twigs turning black. Shoot tips bend over into a hook shape as wilt progresses down a twig. As bacteria move further down the stem to larger wood, attached branches may wilt as water-conducting tissues are killed. Cankers, which are sunken areas of dead tissue, form on branches. During warm (70-85°F) wet weather bacteria mixed with sap ooze to the surface of these cankers and can spread to uninfected parts of the plant or nearby susceptible plants. Overhead irrigation will prolong the active period. As weather turns warmer and drier bacterial activity ceases, but bacteria residing in wood are not killed.

Susceptible plants can be killed in one season by fireblight. Edible pears and quince are extremely susceptible, while apples, crabapples, and pyracantha are less so. Occasionally hawthorn, photinia, cotoneaster, or loquat may be affected. Ornamental pear species and varieties vary in susceptibility, with most exhibiting low incidence of fireblight in Kern County. 'Aristocrat' ornamental pear is very susceptible and cannot be grown further north in the San Joaquin Valley, but does well in Bakersfield. Non rose family members, such as camphor, redwood, ash, and oaks, cannot contract fireblight.

If the disease is progressing in a tree or shrub, pruning several inches below the infected wood can arrest further damage. During dry weather dead areas should be cut out of the tree several inches below the diseased twigs or cankers. On heavier wood in very susceptible trees, like pears, pruning cuts should be made in healthy wood 6-12 inches below cankers. Because pruning tools can spread the bacteria, it is important to disinfect pruning tools between cuts by dipping in a solution of one part bleach to nine parts water, or using another household disinfectant.

If fireblight seems likely to occur based on weather, plant susceptibility, past history, and local disease prevalence, blossoms can be given limited protection through application of a copper-containing fungicide. Protective sprays must be applied before infection occurs.

Succulent growth is more susceptible to infection. Excessive nitrogen, heavy irrigation, and heavy pruning force rapid growth. Try to be moderate with these cultural practices if fireblight is a problem.

Further information is found in the University of California Pest Note, *Fireblight*, publication no. 7414, available at the UC Cooperative Extension office, or via the web at www.ipm.ucdavis.edu/PDF/PESTNOTES .

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