

Fire Blight

Over the last few years, a disease called fire blight has caused many difficulties, infecting pears, apples and certain landscape plants of the rose family. It is caused by bacteria that enter through open flowers and recent injury points from mechanical damage or pruning. Once infected, plant tissue turns dark brown or black as it dies. This is where the disease gets its name. Often, newly infected branch tips develop a characteristic bend often referred to as a shepherd's crook.

Susceptible plants are especially prone to infection during warm, wet weather while they are in blossom. To prevent infection during this time, avoid pruning if at all possible. Additionally, heavy pruning at any time eventually stimulates excessive new growth that is highly susceptible to the disease. To avoid this excessive growth, prune no more than 20 to 25 percent of the total branches of pears and apples in a given year, and do so in late winter or early spring when plants are still dormant.

Additionally, fertilization should be managed carefully since excessive fertilization stimulates unnecessary growth that is more susceptible to the disease. If established plants are visually healthy and sufficient amounts of good tasting fruits are produced, there is no reason to fertilize. Otherwise, when plants look unhealthy or do not grow sufficiently, fertilizer can conservatively be applied in spring before plants leaf out. Soil and possibly tissue analysis can be used as a guide since they reveal what nutrients a plant may need. Never fertilize woody plants in the summer or fall. Soil and tissue analysis are performed by the USU Analytical Laboratory at a reasonable price. Visit the lab website at www.usual.usu.edu for further information.

Proper variety selection is a helpful method for managing fire blight. Unfortunately, some of the most popular apple and pear varieties such as Fuji, Gala, Jonathon, Yellow Transparent, Bartlett, Bosc and Commice are predisposed to infection. Susceptible landscape plants include varieties of cotoneaster, pyracantha and English hawthorn, which are commonly sold under the varieties Paul's Scarlett and Crimson Cloud.

Fortunately, many resistant varieties of apples and pears are available. They include Empire, Enterprise, Jonamac and Honeygold apples. Some resistant pears include Beurre Bosc, Harrow Sweet and Honey Sweet. Many of these may need to be purchased via mail or the internet. Many reliable vendors exist. For a relatively comprehensive list of resistant and susceptible types, refer to the following fact sheet:
<http://www.ext.colostate.edu/pubs/garden/02907.html>.

Sprays, called agricultural antibiotics, are a useful tool for preventing infection but must be applied regularly while plants are in blossom. They are available from most garden centers and farm stores.

Once a plant is infected, the only control method is pruning the infection out 6 to 12 inches beyond the point of visible symptoms. USU Cooperative Extension recommends sterilizing pruners after every cut. Rubbing alcohol, commercial aerosols or a 10 percent bleach solution can be used. Rubbing alcohol seems to be the least corrosive to pruning tools. See the fact sheet at: <http://extension.usu.edu/cache/files/uploads/fire-blight-08.pdf> for further information.