Fireblight

Fireblight is a destructive disease that attacks more than 75 different species of plants, all of which are in the Rosaceae family. In Alberta, fireblight is common on: apple, crabapple, pear, mountain ash, hawthorn, saskatoon, cotoneaster, raspberry, plum, mayday and spirea.

Because this is a very infectious disease, it is important that effective control measures be undertaken as soon as possible. A severe outbreak can kill a tree in one year.

Symptoms

The disease usually appears in the spring when the tree is in bloom. Infected blossoms suddenly wilt and turn a light to dark brown. Leaves on infected branches become brown and shriveled and appear to have been scorched by fire. The affected leaves usually remain on the tree well after normal leaf fall.

Blackened new growth is often curled at the tip in a shepherd's crook-like manner. The surface of smooth-barked branches darkens and cracks usually develop. Infection can spread to older branches and to the trunk where cankers may develop. These cankers are discolored, slightly sunken and tend to crack at their edges. They may eventually encircle the branch causing all parts above them to die.

Young infected fruits become oily in appearance and exude a clear, milky or amber-colored ooze. The fruits shrivel, become dark brown in color and remain attached to the tree.

Cause

Fireblight is caused by the bacterium **Erwinia amylovora.** The bacteria overwinters in the cankers and in the spring produces an ooze that is spread from tree to tree by bees, other insects and rain. The bacteria enter the plant through blossoms, wounds and natural openings.

Abundant rainfall followed by warm, cloudy weather provides conditions that encourage the development of the disease. Excessive nitrogen fertilization, late season fertilization, poor soil drainage and over watering are some of the factors that promote succulent growth which is more susceptible to fireblight.

Control

There is no chemical control for fireblight but the disease can be managed with proper sanitation and cultural practices. As soon as the infection appears, diseased twigs and limbs should be removed by pruning 25 - 45 cm (10 - 18 inches) below any sign of infection. Trees that are severely infected with large cankers on the trunk should be removed.

Tools must be disinfected between each cut or the pruning may spread the disease. Disinfect with a solution of household bleach (100 ml/L), a disinfectant such as Lysol (50 ml/L) or rubbing alcohol.

Prevention may be the best approach to managing fireblight. Sprays containing fixed copper applied during blooming may help prevent infections of open blossoms. Follow the directions on the label.

Suckers from the base of the tree should be removed as this soft growth is easily infected. Fertilizers, if necessary, should be applied early in the season. Avoid those with high levels of nitrogen. Control leaf hoppers, aphids and other leaf

feeding insects that could spread the disease. Regularly inspect trees and shrubs for evidence of fireblight.

Some varieties of apples and crabapples appear to be resistant to fireblight. These include: Haralson, Heyer 12, Heyer 20, McLean, Norland, Parkland, Patterson, and Westland. Crabapples include: Albright, Almey, Dolgo, Hopa, Kelsey, Makamik, Radiant, Red Superior, Selkirk, Thunderchild and Trailman.