

FireBlight

Hosts: Apple, crabapple, pear, raspberry and pyracantha in Oklahoma

Fire Blight: the bacteria *Erwinia amylovora* over winters in cankers, bud scars and branches. In the spring edges of the cankers from previous infections ooze sap. Crawling and flying insects transfer bacteria from the sap to flower stigmas. At temperatures above 65 ° F. the bacteria multiplies rapidly to high levels but infection usually does not occur unless there is rain, heavy dews or overhead watering to wash the bacteria into the natural openings, nectaries at the flower base

Fire Blight is a cyclic disease, major outbreaks usually occur during cool wet years, when there is rain or heavy dew during the blossom stage.

Symptoms:

Blossom Blight Shortly after bloom the blossoms appear soaked and gray-green in color, and then turn brown or black, the entire cluster becomes blighted and dies.

Shoot Blight This phase appears one to several weeks after petal fall. The leaves turn brown and the stems on young shoots turn brown or black as the infection spreads from the initial site, either up or down the stem bending it into the shape of a shepherd's crook. Dead leaves remain attached to the stems.

Scorched Look Under favorable conditions, bacterium will multiply rapidly and the blight will continue to spread up or down the stems, causing the tree to appear as scorched by fire. The infection can expand beyond the current season's growth into older supporting wood, causing dark sunken cankers to form.

Prevention:

Resistant Varieties; See University of Arkansas, FSA6126, Landscape Trees for Specific Uses". uaex.edu

Fall:

Reduce succulence; fertilize lightly in the fall to reduce new growth in the spring. Do not fertilize trees during the summer.

Dormant season:

Inspect Limbs and Shoots for fire blight cankers; remove infected tissue by cutting limbs 8 to 12 inches below the margin of the visible infected area. Where the visible margin is close to a larger branch, leaving the collar intact, trim back to the collar on the larger branch. Bacteria over winters in the margins of cankers on the trunk and larger limbs, remove by scraping off infected margin tissue. Remove all suckers to prevent spread of bacterium to the trunk or rootstock. Remove all cuttings and debris. **After each cut sterilize pruning shears** with alcohol or a solution of 10% bleach and water.

Spring:

Fruit Trees Prior to bud break start a fruit spray schedule, see, "Missouri Fruit Spray Schedule" handout.

Early detection and immediate removal of infected blossoms and shoots is essential to control Fire Blight during the growing season. Be especially vigilant during blossom bloom and shoot break.

Blossom Bloom inspect, trees for blighted blossoms, remove the entire infected blossom cluster back to the stem. Bloom clusters on branches with no shoot, should be brushed off by hand, not pruned.

Shoot Blight Inspect trees for shoot blight one to three weeks after petal fall, prune infected shoots eight to twelve inches below the visible infected tissue. Leaving the collar intact, trim short infected stems back to the branch collar. After each cut sterilize pruning shears with alcohol or a solution of 10 % bleach and water.

Mature Growth When plants reach maturity, fungicides are not recommend or needed, but can be used to reduce the spread of fire blight when wind, hail etc., damages foliage creating entry points

for bacteria. OSU recommends spraying with a preparation containing the antibiotic streptomycin, if you wish to take this route



Fire Blight in crabapple tree