

Control of Pear Fire Blight

Recognize the problem

The fire blight pathogen (*Erwinia amylovora*) can invade all parts of the pear tree. Infected plant parts blacken and die. Shoot tips exhibit the typical shepherd's crook hooked distortion. If infections are not treated, the entire tree may be killed as the disease spreads into the main scaffolds, trunk, and roots.

Background

Sticky, amber-coloured droplets, containing millions of bacterial cells, exude from freshly blighted tissue. This can be used to distinguish fire blight from blossom blast infections. The bacteria overwinter in limb cankers and are commonly spread by insects. Infection occurs mostly through blossoms and less often through succulent shoots. Growth of the bacteria is favoured by warm, humid weather in spring or autumn. Fire blight development is influenced primarily by seasonal weather, with warm spring weather and intermittent rain and hail being ideal for disease development. Other variables of disease development are the plant varieties and rootstocks used in the orchard, location of the orchard, the levels of nitrogenous fertiliser applied to the soil, irrigation and pruning cultural activities.

Management

Management relies on maintaining trees in the proper range of vigour, applying protective blossom sprays (bactericides and biologicals), and most importantly, prompt detection, removal and destruction of blight strikes. Antagonistic microorganism formulations are commercially available to prevent colonization of the blossoms by *Erwinia amylovora* during the blooming stage of the plant. Certain products also suppress frost formation and fruit russeting, thus having multiple uses. They are most effective when used in conjunction with antibiotic treatments such as streptomycin (dosage of 1 g/litre water), but cannot be tank mixed with terramycin. These are incompatible with copper and certain fungicides, particularly mancozeb (Manzate) with a dosage of 2 g/litre water.

Symptoms on leaves. (Photo by Matthew J. Blua)



Symptoms on Fruit. (Photo by Clemson University – USDA Cooperative Extension Slide Series, Bugwood.org)



When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.

Scientific name(s) > *Erwinia amylovora*

The recommendations in this factsheet are relevant to: Afghanistan, All Countries



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