

Bacterial Canker (also known as Blossom Blast), is a bacterium that infects Asian pear, European pear and apple varieties, as well as stone fruits (including peaches and cherries). It can severely reduce crop yield, limit the number of leaves and fruit spurs on the trees, and can ultimately kill the tree.

### Cause:

- A bacterium that infects Asian pear, European pear, and apple as well as stone fruit; common on cherries.
- The bacteria spread primarily from bud and twig tissue in cankers formed the previous season, or from grasses and herbaceous weeds.
- The bacteria invade damaged tissue and produce a toxin that kills surrounding cells, providing conditions that encourage the bacteria to multiply.
- The bacteria produce a protein around which ice crystals form during the winter. As the ice crystals expand, they pierce plant cells providing more opportunity for the bacteria to multiply. This is called ice nucleation.

### Symptoms:

- Shoot (twig or branch) and flower blights, cankers, and diebacks (a condition where a tree begins to die from the tips of its leaves or roots backward).

### Timing:

- Cold, wet weather promotes bacteria populations and disease development.
- The infection causes greater susceptibility to frost damage. Frost damage in fruit and foliage tissue occurs at temperatures 3° to 6°F higher than if the disease were not present.

### How to Avoid:

- Clean/disinfect pruning shears between plants.
- Avoid planting susceptible species in frost-prone areas.
- Carry out dormant pruning only in cool and dry weather. Thinning flower spurs during dry periods reduces bloom and helps improve fruit size, which may reduce the amount of disease observed.
- Limit late-season growth (which is susceptible to winter injury) by avoiding late season fertilization.

### How to Treat:

- Copper sprays applied in the fall or dormant season is suggested, but the efficacy of these treatments is limited.



Infected Blossom (Cornell University)



(UGA, Plant Path., Bugwood.org)

Sources: Pennsylvania State University Extension, The American Phytopathological Society, Pacific Northwest Pest Management Handbooks, University of California IPM, Patrick L. Byers, Horticulture Specialist, and Michael Phillips, "The Holistic Orchard".