

# Fire blight (*Erwinia amylovora*)

## What is it?

Fire blight is a devastating bacterial disease that infects fruit trees such as apple, pear and quince and amenity plants such as cotoneaster, crab apple, flowering quince and hawthorn.

Currently, there are no effective chemical controls available where this disease is present.

## Where is it found?

For many years, the disease was confined to North America. Since 1910, the pathogen has spread to most apple and pear producing regions of the world including New Zealand, Mexico, United Kingdom, Poland, Denmark, the Netherlands, Guatemala, most of the European Union, the Middle East and small areas of Asia.

Fire blight is not present in Australia.

## What does it look like?

Symptoms begin as dark green, water-soaked spots on tissue where it is penetrated by bacteria. Common entry points are through wounds, blossoms, and natural openings such as stomatas and nectaries. As the disease progresses, leaves and twigs take on a black shriveled appearance as if scorched by fire. A characteristic shepherd's crook often develops as tender growth rapidly wilts and dies. As the twigs die back, dead sunken areas on the stem called cankers develop. These can girdle the stem causing even more dieback. Young trees can be killed in one season, but it generally takes several years of continuous dieback for death to occur.

## How will it spread?

Within an orchard, heavy rain, birds, insects, animals and plants rubbing against each other can spread the pest. The bacteria can spread larger distances on infected plant material or on personnel and equipment that has been in contact with infected plant material.

## What can it be confused with?

Fire blight may be confused with a number of other bacterial or fungal disease symptoms, as well as damage resulting from insect attack or frosts. The presence of bacterial ooze seeping out of cankers is an identifying feature of Fire blight and will distinguish it from these other pests.



Shoot blight and shepherd's crook on an apple branch.  
Photo: J.P. PAULIN Information Services, Agriculture Western Australia

## What should I look for?

Shoots and branches bent into a 'shepherd's crook' shape or the development of a bacterial ooze are key symptoms to be looked for. Other symptoms that can be detected following Fire blight infection include water soaked and dark sunken cankers, dry twigs, dead branches that appear a burnt or deep rust colour and dead leaves that remain on the tree. Blossoms and fruitlets may also develop a dark brown to black blight.



Symptoms on fruit include fruit rot and bacterial ooze; however, these symptoms are relatively rare as fire blight often causes death of flowers.

Apple and pear photos by Brendon Rodoni (DPI Vic) and Trevor Ranford (SARDI), respectively.

## What should I do?

Should Fire blight gain entry into Australia, eradication will only be possible if it is detected very quickly after establishment.

Growers can put on-farm biosecurity measures in place to reduce the chance of pests and disease getting onto their properties.

These include:

- using pest-free propagation material and seedlings, sourced from a reputable supplier
- putting up farm biosecurity signs on gates and fences to manage visitors coming onto your property
- avoiding sharing equipment
- keeping equipment and vehicles clean and free of plant matter
- wearing clean clothing before visiting other growers' properties
- teaching farm workers on-farm hygiene practices, what to look for and how to report unusual pests and diseases
- report suspect symptoms to the Exotic Plant Pest Hotline

**EXOTIC PLANT PEST HOTLINE**  
**1800 084 881**

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