

Fireblight (*Erwinia amylovora*)



Symptoms:

- **Dead blossoms, brown hanging leaves**
- **Dark brown/green cankers on bark** that is water-soaked with a **distinct line** where diseased area ends

“Shoot infection is characteristic – initially tips wilt and droop without browning and at this stage golden droplets of bacterial ooze are often seen on the affected stem.

“Later, leaves and stem become brown. Symptoms also appear on fruit as brown irregular blotches, resembling bruises or sun scorch.

“During warm humid weather, a glistening whitish/cream bacterial slime may ooze from affected shoots, branches and fruits. In dry weather, ooze becomes desiccated and appears as a silvery film on affected surfaces.” (Defra 2012)

Conditions for infection: **Wet & windy > 18°C**

Risk factors increased in:

- Young trees
- Gala, Egremont Russet, Vilberie, Brown snout
- Hail or wind (entry via wounds)
- high level of soil moisture and nitrogen (high plant-tissue water aids disease progression and both water and nitrogen encourage soft shoot growth)

Host plants:

Major pome fruits (pear, apple, quince; ornamentals) hawthorn, cotoneaster, pyracantha, stransvaesia (Photinia), white beam, mountain ash.

Chemical control:

There are **NO recommended chemical control** measures.

****Vigilance & rapid action is the best treatment****

All information from the Defra Best Practice Guide on apples (disease section written by Angela Berrie, East Malling Research), updated by HDC and now hosted by HDC on their Web site.



Prevention & treatment:

Routine inspections after leaf fall, during winter pruning, soon after bud break, about mid-June and in late July to early August.

Inspect young trees more frequently.

Make **additional inspections** following: **frost damage, storms, warnings** of fireblight, or **reports** of fireblight elsewhere.

Remove and burn diseased parts of young trees. **Cut twigs or shoots 12 inches** below stain; on branches cut 18 inches below stain. Start **exploratory knife** cuts in healthy tissue first and move up.

Disinfect tools between cuts and trees
Limit beehive use

Summer prune only in dry weather
Avoid unnecessary N fertilizer or water



BULMER FOUNDATION
Planning for tomorrow, acting today

Note on Recent Outbreak by Dr Angel Berrie, East Malling Research, 2012:

In the last month there have been many outbreaks of fireblight in cider apples, particularly in young orchards in Herefordshire. Initially, outbreaks have been associated with the cultivar Gilly but the disease is now appearing in others.

Limited observations in affected orchards indicate that the current outbreaks are characterised by shoot infections, which on young trees result in rapid die-back of the shoots to the trunk and death of the tree. On such trees dead blossoms may be present indicating that the initial infection of the tree probably occurred during flowering. Conditions post-flowering did not favour further infection and spread. However, recent warmer weather combined with heavy rain and wind and the presence of lush shoot growth have resulted in fireblight spread from these earlier infections into the young shoots which are very susceptible.

The cultivars affected by fireblight were probably in flower when conditions favoured the initial infections and this explains why the disease is present on these cultivars rather than any extreme susceptibility to fireblight. Once the disease is established in an orchard and the current pattern of warmer weather and heavy rain continues then the disease will spread to other cultivars in the orchard.

