1. PaDIL Species Factsheet

Scientific Name:
Erwinia amylovora  (Burrill 1882) Winslow, Broadhurst, Buchanan, Krumwiede, Rogers & Smith 1920
Enterobacteriaceae

Common Name
Apple and pear fire blight
Live link: http://www.padil.gov.au:80/pests-and-diseases/Pest/Main/136655

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Plant Health Australia

Department of Agriculture, Fisheries and Forestry

Department of Agriculture and Food, Western Australia
2. Species Information

2.1. Details

**Specimen Contact:** Dr Jose R. Liberato - jose.liberato@nt.gov.au

**Author:** Liberato JR & Scortichini M

**Citation:** Liberato JR & Scortichini M (2006) Apple and pear fire blight (*Erwinia amylovora*) Updated on 7/28/2016 Available online: PaDIL - http://www.padil.gov.au

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2.2. URL

Live link: http://www.padil.gov.au:80/pests-and-diseases/Pest/Main/136655

2.3. Facets

**Status:** Exotic Regulated Pest - absent from Australia

**Group:** Bacteria

**Commodity Overview:** Horticulture

**Commodity Type:** Fresh Fruit, Pome fruits

**Distribution:** USA and Canada, Europe and Northern Asia, South and South-East Asia

2.4. Other Names

*Bacillus amylovorus* (Burill 1882) Trevisan 1889

*Bacterium amylovorum* (Burill 1882) Chester 1897

*Bacterium amylovorum* (Burill 1882) Chester 1897

*Bacterium amylovorum* (Burill 1882) Chester 1897

*Erwinia amylovora f.sp. rubi*  Starr, Cardona & Folsom 1951

*Erwinia amylovora f.sp. rubi*  Starr, Cardona & Folsom 1951

*Erwinia amylovora f.sp. rubi*  Starr, Cardona & Folsom 1951

*Micrococcus amylovorus*  (Burill 1882) Trevisan 1889

*Micrococcus amylovorus*  (Burill 1882) Trevisan 1889

*Micrococcus amylovorus*  Burill 1882

2.5. Diagnostic Notes

**Symptoms:**

*E. amylovora* is systemically distributed in plants and can survive as an endophyte and an epiphyte. Symptoms develop following the seasonal growth of the host plant. First water-soaked lesions can occur on flowers, peduncles, immature fruits and twigs. Leaves wilt and shrivel. Later, the infected organs turn brown to black, as though burned by fire, oozing droplets of bacterial exudates under favourable weather and usually remaining attached to the tree for some time. The terminal shoot becomes shepherd's crook-shaped. The bacteria move down from infected twigs into main branches causing canker and cracks on the bark. Cankers can occur on the trunk and rootstock. When the bacteria infect highly susceptible rootstocks, the canopy can remain symptomless. The disease can kill branches and the entire tree (Lopez et al. 2004, Crop protection compendium 2005, Steiner et al. 2006). A detailed description of the development of the symptoms is given by Steiner et al. (2006) and van der Zwet & Beer (1995).

**The bacteria:**
Gram-negative, rod-shaped, motile, facultative anaerobic, 0.5-1 x 1-3 µm, with peritrichous flagella. A detailed description of Erwinia amylovora is given by Bradbury (1986). Comprehensive details of the identification of E. amylovora using multiple techniques can be found in López et al. (2004). PCR-based identification methods for this pathogen have been developed (Guilford et al. 1996, Llop et al. 2000, Taylor et al. 2001, Salm & Geider 2004).

2.6. References

2.7. Web Links

3. Diagnostic Images

Symptoms on blossom (left) and pear fruit (right) (copyright, for use contact mscortichini@yahoo.it).

**Host Symptoms:** Marco Scortichini Istituto Sperimentale Per La Frutticoltura, Roma, Italy

Symptoms on twig apple (copyright, for use contact mscortichini@yahoo.it).

**Host Symptoms:** Marco Scortichini Istituto Sperimentale Per La Frutticoltura, Roma, Italy

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