

# *Xylella fastidiosa*

## Plant Pest Information Note

### What is it?

*Xylella fastidiosa* is a bacterium that infects the xylem tissues of a wide range of plants. *X. fastidiosa* has been widespread in the Americas for many years and occurs also in Asia. The bacterium is associated with several diseases of crops of economic significance, for example, Pierce's Disease of Grapevine, Peach Phony Disease, Oleander Leaf Scorch and Citrus Variegated Chlorosis. In 2013 *X. fastidiosa* was recorded for the first time in Europe on Olive trees in the province of Lecce, the Puglia region of Italy. Extensive efforts have been made to control the spread of the disease from this region. In July 2015, the disease was reported in Corsica, France, on the ornamental plant *Polygala myrtifolia*.

### What are its hosts?

*X. fastidiosa* has a wide range of host plants comprising 312 species in 192 genera and 69 botanical families. Annex I of Commission Implementing Decision (EU) 2015/789 lists the plants known to be susceptible to the European and non-European isolates of *X. fastidiosa*. This can be viewed at :

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015D0789&from=EN>

Hosts of major economic significance are olive (*Olea europea*), the grapevine (*Vitis vinifera*, *V. labrusca*, *V. riparia*), citrus (*Citrus* spp. *Fortunella*), almond (*Prunus dulcis*), peach (*Prunus persica*), coffee (*Coffea* spp.), and oleander (*Nerium oleander*).

Other fruit crops are susceptible to *X. fastidiosa* including blueberry (*Vaccinium corymbosum*, *V. virgatum*), plum (*Prunus domestica*), and sour cherry (*Prunus cerasifera*).

Among the many amenity trees that have been found to be affected by *X. fastidiosa* are Oak (*Quercus* spp.), American sweet gum (*Liquidambar styraciflua*), American sycamore (*Platanus occidentalis*), red maple (*Acer rubrum*)



Figure 1

### How does it spread?



Figure 2

*X. fastidiosa* is transmitted from plant to plant by xylem sap sucking insects and it is thought that virtually all sucking insects that feed predominately on xylem fluid are potential vectors of the bacterium. The bacterium can persist in symptomless uncultivated plants, from which insects may acquire the bacterium and pass it to crops. *X. fastidiosa* does not survive in seed. The control of the movement of potential hosts and insect vectors and the eradication of infected material is considered the most effective method of limiting the spread of the disease in the EU.



**Figure 3**

### What are its symptoms?

Tissues in the xylem of plants become congested by bacteria causing blockages. The transport of water and nutrients around the plants is restricted leading to dieback from the leaves along the branches.

### Pest status

As *X. fastidiosa* represents a very serious threat for the EU, the European Commission implemented COMMISSION IMPLEMENTING DECISION (EU) 2015/789 of 18 May 2015 regarding measures to prevent introduction and spread of the disease within the EU. Decision 2015/789 can be viewed on the European Commission website by clicking on the link below:

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015D0789&from=EN>

To date *X. fastidiosa* has been detected in Puglia region of Italy (2013) and more recently in Corsica, France (2015). *X. fastidiosa* was also detected on Coffea plants, imported from third countries, in the Netherlands and France.

### Risk of *X. fastidiosa* establishment in Ireland

Research by the Forest Resources and Climate Unit of the EC Joint Research Centre indicates that, due to current climatic conditions in Europe, the risk of *X. fastidiosa* establishing is higher in the Mediterranean Countries with a low to medium risk in Northern European Countries. Research suggests that the risk of *X. fastidiosa* establishment in Ireland is low. Nevertheless importers of host plant material must be extremely vigilant when importing from Third Countries and infected areas within the EU.

### Actions in the event of suspect cases

Any suspected sightings of this disease should be reported to your local plant health inspector or the Division Headquarters at the number below.

**Horticulture and Plant Health Division,**  
Department of Agriculture, Food and the Marine,  
Backweston Administration Building,  
Backweston Campus,  
Celbridge,  
Co. Kildare.  
Phone: 01-5058885  
Fax: 01-6275994  
Email: [plantandpests@agriculture.gov.ie](mailto:plantandpests@agriculture.gov.ie).

Further information and symptoms of this pest can be viewed on the website of the European Food and Safety Authority (EFSA) by clicking on the links below.

[http://www.efsa.europa.eu/sites/default/files/scientific\\_output/files/main\\_documents/3989.pdf](http://www.efsa.europa.eu/sites/default/files/scientific_output/files/main_documents/3989.pdf)  
[http://www.efsa.europa.eu/sites/default/files/scientific\\_output/files/main\\_documents/4061.pdf](http://www.efsa.europa.eu/sites/default/files/scientific_output/files/main_documents/4061.pdf)

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Antonio Guarino, Plant Protection Service, Regione Puglia (IT)



**Figure 4** Pierce's disease of grapevine. J. Clark - University of California, Berkeley (US)