DAFM Plant Pest Factsheet

Xylella fastidiosa

EU Priority Pest!

Fig 1: *Xylella fastidiosa* leaf scorch symptoms on oak

Pest Characteristics

- **Pest:** *Xylella fastidiosa*
- **Hosts:** *Xylella fastidiosa* is highly polyphagous and can infect a wide range of cultivated and wild host plants. An EU database of host plants found to be susceptible to *X. fastidiosa* currently lists 664 plant species.
- **Symptoms:** The bacterium can colonise and block xylem vessels hence, symptoms often resemble those caused by water stress. Symptoms include leaf scorching, wilting, defoliation, bronzing along the leaf margin, stunting and dieback (Fig 2). Visual examination can play a major role however symptom expression is highly variable, depending on the host plant, the bacterial strain and environmental conditions. For instance, some infected host plants remain asymptomatic during their lifetime. Laboratory testing therefore has an important role to play in Xylella surveillance.
- **Entry Pathways:** There are two likely pathways for introduction into Ireland The most likely is through live plants for planting imports from areas where *X. fastidiosa* is present. Higher risk planting hosts include Coffee, Lavender, Nerium oleander, Olive, *Polygala myrtifolia*, Prunus, and Rosemary. Another pathway is the introduction of infected insects which are known to spread the pest, commonly called “spittlebugs”.
- **Distribution:** *Xylella fastidiosa* is found widely in the Americas and in limited areas in Asia. It is also found in some EU countries, where it is regulated and under official control for containment/eradication (Fig 3).

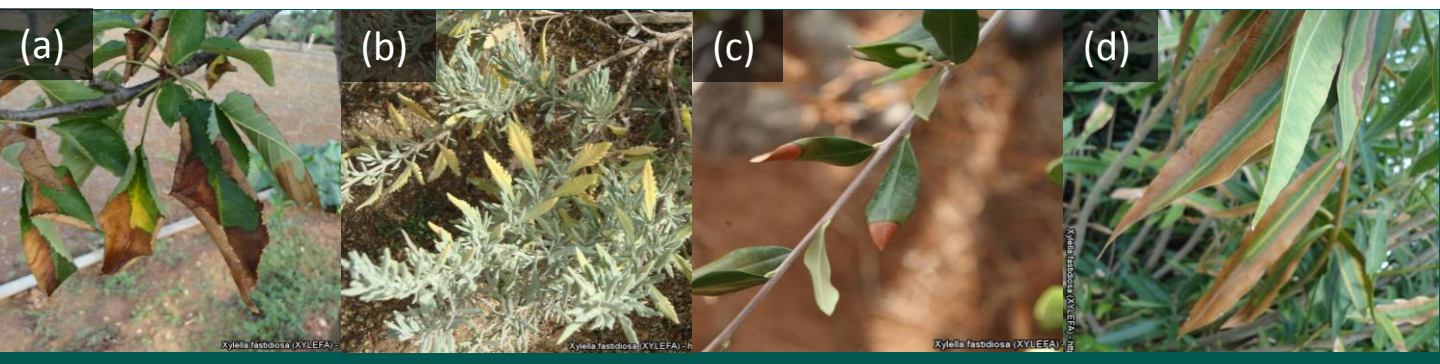

Fig 2: Visual symptoms of *X. fastidiosa on* (a) cherry (b) lavender (c) olive (d) Nerium oleander. More photos are available on EPPO Global Database

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- **Dispersal:** Should *X. fastidiosa* be found in Ireland, wider dispersal and vectoring of the bacterium could occur through spittlebugs**.** In Europe the most common and proven vector is the spittlebug *Philaenus spumarius*, which is native to and widely present in Ireland.
- **Climatic suitability:** Currently *X. fastidiosa* doesn't occur in comparable climates to Ireland, therefore some uncertainty exists on the influence of our climate such as our cool summers would have on the severity of the damage caused by *X. fastidiosa* .
- **Lifecycle:** *Xylella fastidiosa* is transmitted by xylem-feeding vectors such as *Philaenus spumarius*. Successful transmission results from three consecutive events: non infected vector feeds on infected host, attachment of the bacterium to the foregut of the vector and inoculation of the bacteria into a new host plant. Vectors are not active in winter months and they overwinters as eggs.
- **If suspected:** If you find suspected symptoms, please submit images to DAFM at: plantpestreport@agriculture.gov.ie

Photo credits: Fig 1: John Hartman, University of Kentucky, Bugwood.org; Fig 2: (a),(b), (c),(d) & Lifecycle: (a),(f) images were obtained from EPPO; Lifecycle: (a),(f) Howard Ensign Evans, Colorado Stateiversity, Bugwood.org. Lifecycle: (b) Tomasz Klejdysz, shutterstock.com. Lifecycle: (c) & (e) Cheryl Moorehead, Bugwood.org. Lifecycle: (d) Ulla Jarlfors, University of Kentucky, Bugwood.org.

Fig 3: Map showing demarcated areas established in the EU for *Xylella fastidiosa*, areas under green are under containment and areas under red under eradication. Information correct as of 27.09.2022 (Link)

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