



Department
for Environment
Food & Rural Affairs

Supplementary data on *Xylella fastidiosa*

Date: October 2020

What is the name of the pest?

Pest: *Xylella fastidiosa* (all subspecies and strains)

Taxon: Bacterium (Xanthomonadaceae)

What initiated this document?

This paper provides a summary on some new information pertinent to the PRA for *X. fastidiosa* which was published in February 2020. While the PRA was only published seven months ago, there have been some important developments and this document aims to summarise these. It is not a reassessment of the risks, but merely provides additional background information.

Background

Xylella fastidiosa is a plant-pathogenic bacterium which infects a very wide range of plants. It is already heavily regulated to reduce the likelihood of it entering the UK. In some host species, impacts can be severe and the plant or tree can be killed rapidly. Other hosts have latent infections, or may remain asymptomatic (but still be capable of spreading the disease) for several years before succumbing to the bacterium. *Xylella fastidiosa* is native to the Americas, but has been spread to countries elsewhere in the world, including parts of Europe. There are several subspecies of *X. fastidiosa*, which have different host ranges. *Xylella fastidiosa* is vectored by a number of xylem-feeding hemipteran insect species, including some which are widespread in the UK. At least parts of the UK are likely to prove suitable for *X. fastidiosa* to establish, but it is unclear what levels of damage it may be able

to cause to plants in the UK. If an outbreak were to occur in the UK, the greatest impacts are expected to be social. Leaf scorches and other symptoms could be visible on amenity trees causing public concern, impacts on horticultural businesses could be severe, and this is already a high-profile pest in the media. Other impacts could occur due to the response required to keep the UK free of *X. fastidiosa*, reputational damage to the UK, and potential restrictions on exports if eradication were to be unsuccessful. However, substantial uncertainties remain about many key aspects of *X. fastidiosa* which means many of the assessments made in the UK 2020 PRA were subject to low levels of confidence.

Legislation

The legislation used for the 2020 UK PRA was based on the legislation as at December 2019, namely Commission Implementing Decision (EU) 2015/789/EU, as amended. This legislation is no longer in force. The legislation which now applies (since August 2020) is Commission Implementing Regulation 2020/1201.

For comprehensive comparison of the new measures against the old, both sets of the original legislation should be consulted via a search on <https://eur-lex.europa.eu>. Several changes are noted in the bullet points below but this is by no means a complete list of the alterations. Additionally, each bullet point summarises the original text, so many nuances will be lost.

Movement of plants – overview of selected changes

- Movement out of a demarcated area within the EU: previously a requirement for plants grown under physical protection from *X. fastidiosa* and its vectors; now there are requirements for treatments against the vectors, and that the vectors are not found on the site, but the requirement for physical protection has been removed.
- Movement within the EU of plants which have never been grown in a demarcated area: the additional requirement for the first movement of each lot of *Polygala myrtifolia* out of its production site to confirm absence of *X. fastidiosa* is no longer present.
- Movement within the EU of specified plants within infected zones and between infected zones and buffer zones: these are now less stringent than the requirements for their movement out of the demarcated areas.
- Movement into the EU from countries where *X. fastidiosa* is not present (updated to “known not to be present”): additional testing requirements for each lot of *P. myrtifolia* is no longer required.

Eradication or containment measures – overview of selected changes

- Reduction in size of the buffer zones for eradication: was 5 km, now 2.5 km.
- Reduction in size of the buffer zones for containment: was 10 km, now 5 km.
- Reduction in size of the infected zone: was 100 m, now 50 m.

- The requirement for removal of all hosts in the infected zone is no longer present. Now, all plants must be removed from the infected zone which meet any of the following criteria: known to be infected, showing symptoms or which are suspected to be infected, of same species as the infected plant, other species of plant which have been found to be infected in the demarcated area.
- Increased survey requirements within the EU (applies from 1 Jan 2023).
- Greater focus on vector control.

What is the pest's current geographical distribution?

The UK 2020 PRA should be consulted for details about the full distribution, though the summary map is copied here for ease of reference (Fig. 1). The specific distribution information provided here is merely new information (up to the end of October 2020) which is not included in the 2020 UK PRA.



Figure 1. Global known distribution of *Xylella fastidiosa* as of autumn 2019. Sources: EFSA, 2018 and EPPO GD, 2019.

2020 new information: France

Xylella fastidiosa subsp. *multiplex* was found in a new region of France, in Occitanie in species of *Lavandula* (lavenders) and *Phlomis fruticosa* (Jerusalem sage). The outbreak is under eradication. The origin of the outbreak is not known, but *X. fastidiosa* was not detected in any of the samples taken from the wider environment. Follow-up surveys detected infections in an additional host: *Perovskia abrotanoides* (Russian sage). A *Lavandula x intermedia* plant in a plot adjacent to the affected premises has also tested positive (EUROPHYT outbreaks database, data extracted Oct 2020, unpublished information).

2020 new information: Italy

Xylella fastidiosa subsp. *pauca* was found on *Olea* trees in the buffer zone in Apulia in October 2020. This finding is being regarded as a new outbreak, with the objective of eradication, rather than as an extension of the existing outbreak in the region. (EUROPHYT outbreaks database, data extracted Oct 2020, unpublished information).

What pathways provide opportunities for the pest to enter the UK and transfer to a suitable host?

- The 2020 UK PRA identified the riskiest pathway as plants for planting, which were assessed as moderately likely with medium confidence as it was considered unclear how effective the legislation was at reducing the chances of entry. Long latent periods in some hosts (EFSA, 2019) and asymptomatic hosts means plants could be moved before symptoms were apparent. Additionally, infections can be localised, and if the wrong part of the plant is sampled for testing, an infected plant may give a negative result.
- The movement of infectious vectors was also considered in the 2020 UK PRA: entry with adult infectious vectors was considered unlikely, and entry with infectious immature vectors was considered very unlikely. Both judgements were made with low confidence as a lot of assumptions were made in the assessments.

In summer 2020, Spain detected *X. fastidiosa* in a consignment of plants originating from the USA in the port of Castellón¹, indicating that despite controls on movement of planting material, in this case from outside the EU, the pest is still able to move in trade.

Pest biology and/or lifecycle

No new information pertinent to the UK assessment of risk has been found since the publication of the UK PRA (2020).

¹ <https://www.freshplaza.com/article/9232656/spanish-authorities-detect-a-batch-of-plant-material-infected-with-xylella-in-the-port-of-castellon/> (last accessed 29 Oct 2020)

Pest Risk Management

What are the risk management options?

The movement of infected planting material has been assessed as the greatest risk.

The current legislation has many requirements on planting material which are quite complex and which differ according to combinations of: host species, the conditions under which the plant has been grown, whether the origin is in the EU or otherwise, and pest status of the country of origin.

It may be beneficial to clarify the very complex regulations by structuring the regulations by host. Some plant species are considered higher risk in the existing legislation as they have been infected by more than one subspecies of *X. fastidiosa* and have been infected in more than one geographical location. Additionally some hosts have the potential for long latent periods before symptoms are visible (EFSA, 2019). Therefore, initial high level organisation of measures by host may provide some clarity while allowing for measures tailored against the differences posed by hosts with long latent periods, hosts considered high risk, and other host species.

References

EFSA Panel on Plant Health. 2018. Scientific Opinion on the updated pest categorisation of *Xylella fastidiosa*. EFSA Journal 16(7): 5357. 61 pp.

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EPPO GD. 2019. EPPO Global Database. Available online <https://gd.eppo.int> (accessed June 2019)

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