

Xylella 'is causing olive disease in Italy'



***Xylella fastidiosa* is responsible for the disease that is destroying olive trees in southern Italy, a new study has confirmed. Oleander and myrtle-leaf milkwort also succumb to the Apulian strain of the bacterium, but citrus, grapevine and holm oak appear to be resistant.**

The findings are from investigations into the host range of *X. fastidiosa* CoDiRO carried out in Apulia over the past couple of years. Scientists from the Italian National Research Council exposed varieties of major perennial crops to the bacterium through artificial inoculation and by exposure to infective insect vectors in the field.

Mediterranean crops such as olive, grape, citrus, almond, peach, cherry and plum were tested, as were forest species such as holm oak and ornamental species such as oleander and myrtle-leaf milkwort. The project was funded by EFSA.

Giuseppe Stancanelli, head of EFSA's Animal and Plant Health Unit, said: "These findings confirm that the CoDiRO strain of *X. fastidiosa* causes olive dieback. This is an important step forward because we can only accurately assess the risk of an epidemic spreading from Apulia if we fill knowledge gaps on the host range and epidemiology of the Apulian strain."

The inoculated olive plants displayed similar severe symptoms – desiccation and dieback – to those observed in the field. However, not all the varieties of olive responded in the same way. For example, the bacterium seemed to take longer to colonise – with a lower bacterial concentration – the Coratina, Leccino and Frantoio cultivars than the Cellina di Nardò cultivar, which is one of the most common cultivars in the contaminated area.

The researchers say that more tests on a larger number of olive cultivars are necessary to understand the different responses.

The field experiments also showed that infective spittlebug (*Philaenus spumarius*) – an insect that is widespread in Apulia – can transmit the bacterium to olive, oleander and myrtle-leaf milkwort. Infection was detected as early as six months after exposure to the insects, when the plants were still symptomless.

None of the citrus, grape or holm oak plants tested positive for *X. fastidiosa* upon exposure to infective *P. spumarius*. Similarly, plants of citrus, grape and holm oak did not become systemically infected or develop suspicious symptoms when experimentally inoculated. More observations and tests are necessary to obtain conclusive data on the stone fruit plants.

All the inoculated plants will be kept under observation for at least one more vegetative season, while field experiments will be extended for up to 10 years.

Dr Stancanelli added: "The results from this project significantly reduce the uncertainties surrounding the risks connected to *X. fastidiosa* strain CoDiRO for the EU territory and will help in the planning of future research.

"Subsequent field and laboratory experiments will have to further explore the responses of Mediterranean olive, with the aim of identifying tolerant or resistant varieties that can be grown by farmers in the areas affected by *X. fastidiosa*.

"We expect to gain more insights that will assist control of this disease from the research projects funded under the EU's [Horizon 2020](#) programme."

[Pilot project on Xylella fastidiosa to reduce risk assessment uncertainties](#)

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