

(<https://www.efsa.europa.eu/en/microstrategy/xylella>). The EFSA database of *Xylella* spp. host plant species represents a key tool for researchers, risk assessment and risk management and main results will be presented.

### **Evaluation of vascular occlusions in xylem vessels of olive cultivars infected with *Xylella fastidiosa***

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The present work was presented in the framework of the Joint Annual Meeting of the EU Horizon 2020 Projects POnte 'Pest Organisms Threatening Europe' (GA 635646) and XF-ACTORS 'Xylella fastidiosa Active Containment Through a multidisciplinary-Oriented Research Strategy' (GA 727987).

**Abstract:** Understanding the mechanisms underlying the development of symptoms of Olive Quick Decline Syndrome (OQDS) and the different olive cultivar responses to infections caused by *Xylella fastidiosa* subsp. *pauca*, ST53, is fundamental for disease control. The combined action of bacterial aggregates and plant-derived vascular occlusions (tyloses, gums and gels) has been invoked as the cause of the pathogenic alterations occurring in *Xylella*-infected plants. Conflicting observations were found about the role of vascular occlusion in the disease progression in field-grown olives. In the present work the distribution of vascular occlusions in the secondary xylem vessels of susceptible, Cellina di Nardò, and resistant, Leccino and FS17, cultivars were studied by light microscope observations of toluidine blue stained sections, recovered from stems of greenhouse-grown mock and artificially inoculated olives. One-year-old shoot portions collected from symptomatic or symptomless twigs were firstly tested by qPCR and used to recover thin sections (0.2 mm thick), with a similar number of vessels inspected for each cultivar. In the sections recovered from the non-infected controls 0.15%, 0.02% and 0.13% of occluded vessels were present, respectively in Cellina, Leccino and FS17. These percentages increased in the infected twigs reaching 9.65%, 6.81% and 1.33% in Cellina, Leccino and FS17, respectively, indicating that *Xylella* infections (regardless of the cultivar) induced occlusions of the xylem vessels; these were significantly higher in the susceptible cultivar. More specifically, percentages of occluded vessels in the susceptible cultivar ranged from 1% to 34%, while those of the resistant Leccino and FS17 ranged from 0.044% to 14% and 1.09% to 1.53%, respectively. Although a clear-cut difference was observed among the infected cultivars, within each cultivar no significant differences were recorded between symptomatic and non-symptomatic shoots, suggesting that the development of symptoms is enhanced by a combination of different factors (anatomical, chemical and physical).

### **Antibiotic susceptibility and virulence profiling of endemic *X. fastidiosa* subsp. *fastidiosa* isolates from Costa Rica**

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**Abstract:** *Xylella fastidiosa* subsp. *fastidiosa* is endemic in Costa Rica. Although the bacterium has great potential for disease and it is widespread throughout the country, a common feature is that infected host plants tend to be asymptomatic or in the worst case scenarios show mild symptoms as reported for 'crespera disease' in coffee. Another trait within this population is that isolates have shown broad genetic diversity, based on different typing techniques including MLST. Our recent efforts have focused on phenotypic characterisation of isolated strains. We tested antibiotic susceptibility of *X. fastidiosa*