Beyond *Xylella*, Integrated Management Strategies for Mitigating *Xylella fastidiosa* impact in Europe

Practice abstract 17

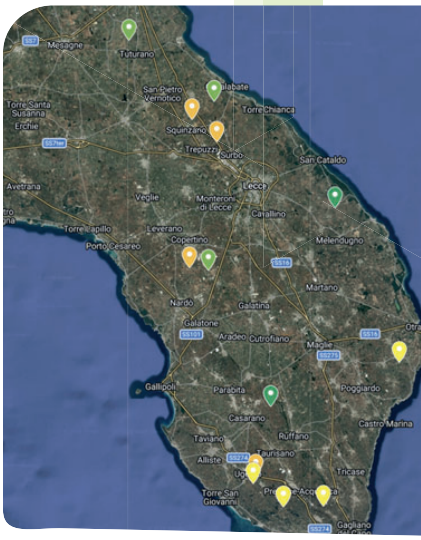
Managing resistant/ tolerant olive groves under *Xylella fastidiosa* pressure in Apulia

BEXYL
BEYOND XYLELLA



Funded by the European Union

Managing resistant/tolerant olive groves under *Xylella fastidiosa* pressure in Apulia



Resistant olive cultivars are is one of the main strategies available to support the regeneration of olive production in areas infected by ***Xylella fastidiosa*** **subsp**. ***pauca***.

However, their long-term performance depends on vector pressure, agronomic management and local epidemiological conditions. **BeXyl** evaluated these factors in 16 commercial olive groves planted with 'Leccino' and 'Fs17' cultivars in the infected area of Apulia, Italy, from 2023 to 2025.

How did BeXyl make a difference?

BeXyl monitored commercial groves rather than small experimental plots, allowing assessment under real farming conditions.

The project compared soil management, planting density, vector abundance, ***X. fastidiosa*** incidence, symptom expression and within-canopy infection dynamics using field surveys, vector monitoring and qPCR testing.

Main outcomes

Juvenile vector populations were dominated by ***Philaenus spumarius*** and were generally higher in mulched groves and unmanaged field borders. Adult vectors were more abundant early in the season, especially on ground-cover vegetation.

X. fastidiosa incidence ranged from 1.68% to 69.45% and increased from 2024 to 2025 in all monitored groves. Soil management alone did not explain infection incidence, whereas cultivar and vector-density class were significantly associated with infection levels. Incidence was lower in 'Leccino' than in 'Fs17' groves, and fields with low vector density had lower infection than those with medium or high vector density. Most infected groves showed no or limited symptoms, and within-tree infection was heterogeneous and dynamic.

Impact: The results show that resistant cultivars can support olive production recovery in infected areas, but they are not sufficient as a stand-alone measure. Sustainable management requires site-specific strategies combining cultivar resistance, vector suppression, reduction of local inoculum pressure and long-term monitoring.

Funded by the European Union