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

Practice abstract 5

Tracking Threats: Identifying New Hosts and Strains of *Xylella fastidiosa* Relevant to European and Mediterranean Plant Health

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Tracking Threats: Identifying New Hosts and Strains of *Xylella fastidiosa* Relevant to European and Mediterranean Plant Health

BeXyl project addresses the threat posed by *Xylella fastidiosa* (***Xf***) to agriculture and ecosystems in the European Union by identifying potential new host plants and assessing the pathogenicity of relevant ***Xf*** strains.

How does BeXyl integrates information from diverse sources to strengthen the scientific basis for risk assessment and disease management?

Pathogenicity testing: Inoculation experiments with **selected *Xf* strains** conducted under controlled conditions to assess their virulence on economically or ecologically important plant species relevant to the EU and Mediterranean region.

Sentinel plots: Highly susceptible host plant species have planted in multiple countries, both in ***Xf***-infected and ***Xf***-free areas. These plots allow for real-time monitoring of natural infections and help assess disease dynamics under different environmental conditions.

Botanical garden surveillance: Surveys in botanical gardens located in **areas where *Xf* is native**. These sites may harbor infected but asymptomatic plants of potential concern to European agriculture or natural environment, providing insights into long-term host–pathogen coexistence.

Use of National Plant Protection Organizations (NPPOs) surveillance data: **Official surveillance data** from NPPOs across Europe are analysed to identify potential new host species and understand the distribution of different ***Xf*** strains under natural conditions.

By integrating these complementary sources of information, BeXyl will contribute to a better understanding of *Xf*'s biology, host range, and disease epidemiology. These insights will support EU-level preparedness, strengthen the scientific basis for risk assessment and targeted surveillance, supporting the development of sustainable plant health strategies.

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