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# *Xylella* (*Xylella Fastidiosa*): A Phytopathogenic Bacteria a Serious Threat to the Olive Tree, Cultivated or Non-Cultivated Plant Species

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The bacterium *Xylella fastidiosa* is a very serious phytopathogenic quarantine organism, which to date has been reported to infect more than 450 plant species worldwide, including economically important cultivated plants, such as olive, stone fruit, grapevine, as well as many ornamental and forest plants. This pathogen establishes and multiplies in the wood vessels of plants and causes symptoms that range from invisible to complete drying of the host plant. The first recording of Xylella in Europe took place in 2013, when it was proven to cause a new disease of olive trees, described as 'Rapid Decay Syndrome' (Complesso del Disseccamento Rapido dell Olivo) in Italy. It was subsequently detected in other European countries (France, Germany, Spain, Portugal), while to date it has not been detected in our country. This pathogenic bacterium can enter an area with infected plants and insect vectors. Preventing the pathogen from entering new areas is the main measure to avoid its attacks, and systematic and harmonized relevant diagnostic tests are carried out in all EU countries, which mainly aim to ensure the movement of plant material free from this bacterium and to detect any initial attacks in uninfected areas as quickly as possible. The Bacteriology Laboratory of the Benakeio Phytopathological Institute (EB-MFI) performs diagnostic tests for the *Xylella* bacterium on samples taken on purpose by: i) the Services of the Ministry of Rural Development & Food (MARD) in the context of the Country's Crop Survey Program and the Phytosanitary Control of Plants for Import, Export or Movement, and ii) by the Services of the MARD, producers and other citizens, in the context of current phytopathological work. These tests are based on validated; accredited methods and their results are communicated to the MARD and the EU. As international experience and scientific research in the field of diagnosis and control indicates that a collective effort is required to prevent and treat the *Xylella* bacterium, the EB-MPI participates in national and European research programs to optimize diagnostic protocols and the use of indicator plants for the early detection of any presence of this very destructive phytopathogenic bacterium in uncontaminated high-risk areas.

**Keywords:** *Xylella fastidiosa*; olive tree disease; rapid decay syndrome; Benakeio Phytopathological Institute; rural development.

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