Project Actions

1

Evaluate crosses between olive varieties to obtain new genotypes resistant to XF. These new genotyes will be an alternative crop for producers in areas potentially affected by XF, minimizing the risk of losses due to this pathogen. Additionally, these new genotypes will produce olive oils with distinctive organoleptic and quality profiles, increasing competitiveness in the sector.

2

To identify best practices and sustainable technologies for the intensive cultivation of olive and almond trees (250 ha included in trials in Spain, Italy and Portugal). These practices should increase biodiversity and reduce water consumption, carbon footprint, and the incidence of pests and diseases without compromising farm performance.

3

To provide a model of recommended practices applicable to the cultivation of the olives, almonds and other woody crops such as citrus and vines in Europe, increasing their capacity to adapt to climate change.

4

Involve multidisciplinary actors in a transnational collaboration that provide new strategies for the prevention of XF and the adoption of EU environmental policies.

LIFE RESILIENCE

+34 91 222 80 07

comunicacion@liferesilience.eu

Partners

Agrifood comunicación

greenfield TECHNOLOGIES by AGRODRONE

Asociación Agraria Jóvenes Agricultores

BALAM AGRICULTURE

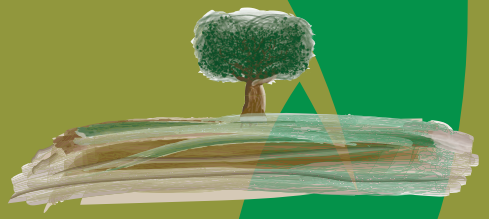
UNIVERSIDAD D CÓRDOBA

Consiglio Nazionale delle Ricerche Institute of BioEconomy

NUTRIPRADO

FILIPPO BERIO

Charqueirao



LIFE RESILIENCE

Sustainable agricultural practices to prevent *Xylella fastidiosa* in intensive olive and almond systems

www.liferesilience.eu

Project co-financed by the European Union through LIFE programme LIFE17/CCA/ES/000030

Project duration: 01/07/2018 - 30/06/2022

What is *Xylella fastidiosa*?

It is a pathogenic bacterium that causes diseases in several woody crops. This pathogen has alarmed the whole of Europe since its detection in 2013 in olive orchards in Southern Italy where it has affected more than 1 million olive trees causing Olive Quick Decline Syndrome (OQDS). Currently, the EU considers *Xylella fastidiosa* (XF) as a highly dangerous pathogen due to the ease with which it can spread throughout the world.

The European project LIFE Resilience

LIFE Resilience pursues sustainable solutions aimed at reducing the spread of XF in intensive olive and almond plantations. Much of the project will focus on breeding varieties resistant to XF. Agronomic factors will also be identified that reduce the spread of XF and other quarantine pathogens. This plan will contribute to the establishment of sustainable agricultural and forestry exploitations that favour disease control and adaptation to climate change. LIFE Resilience will develop strategies to reduce the water consumption and carbon footprint of production systems, increasing the mitigation and adaptation potential of agriculture to climate change.

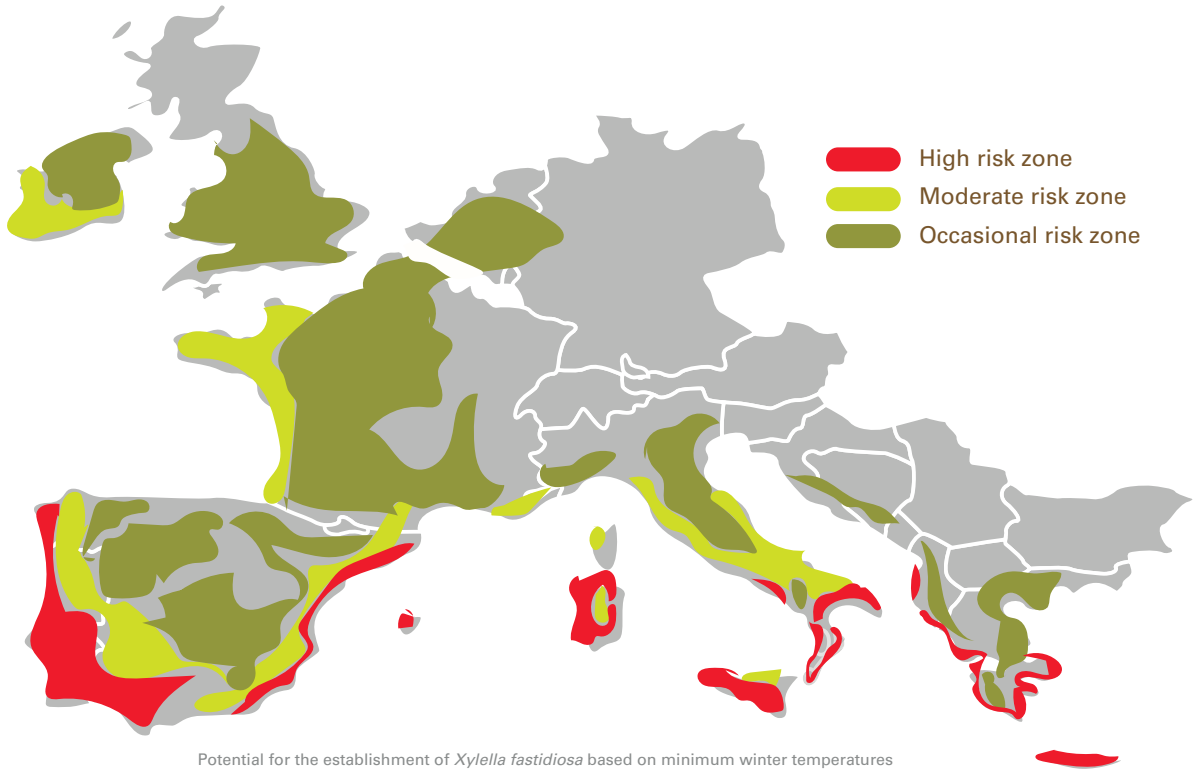
Effects of climate change

The incidence of pests and diseases in crops may increase as a consequence of climate change. Intensive production systems in particularly vulnerable areas, such as olive and almond orchards in the Mediterranean, must have the mechanisms to deal with these threats. LIFE Resilience focuses on the development of new genotypes and the demonstration of agronomic practices that increase the sustainability of these systems, strengthening their capacity to prevent and reduce the impact of diseases caused by *Xylella fastidiosa*.

Risks

Detected in crops in France, Germany, Greece, Italy and Spain, *Xylella fastidiosa* presents several risks:

- The potential to spread to other countries with similar climate and other species such as the almond tree.
- Subspecies of the Xylella genus are known to cause other plant diseases.
- World producers of olives andolive oil (Spain, Italy and Greece) are at risk of losing millions of euros due to this bacterium.



Potential for the establishment of *Xylella fastidiosa* based on minimum winter temperatures according to Fail and Purcell criteria, 2001. Source: J.A.: Navas-Cortés, unpublished.

Objectives

1

Conduct crosses between olive varieties, evaluate the offspring and select potential new genotypes resistant to XF. These new genotypes will constitute cultivation alternatives for the currently affected areas and an extremely valuable resource in the case of a hypothetical advance of the disease.

2

Demonstrate that sustainable farming practices, including control methods of XF vector, will help prevent the spread of this bacterium by making intensive plantations less vulnerable to attack by pests and diseases.