



HELLENIC MINISTRY OF RURAL DEVELOPMENT AND FOOD
HELLENIC AGRICULTURAL ORGANIZATION "DEMETER"

Greek olive germplasm breeding and certification research priorities on *X. fastidiosa*

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<http://www.nagref-cha.gr/>



HELLENIC AGRICULTURAL ORGANIZATION “DEMETER”

- Over 700 employees
- Specialized laboratories and germplasm banks
 - DG Agricultural Research (former NAGREF)
 - DG Farmers training – Extension service
 - DG Certification of rural products
 - DG Food control (meat and milk)

<http://www.elgo.gr/>



Research priority 1

- Survey for infected plants

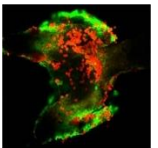
- Remote sensing (unmanned aerial vehicles) to scan large areas and early detect *Xylella*

Research to transfer know-how from Verticillium Wilt (Calderon et al., 2015, Remote Sens. 7, 5584-5610)



- Low cost, fast and accurate lab test

Research to develop e.g. molecular, chemical or spectral analysis of massive samples of plants or insects



- Survey for vectors

- Network of traps and monitoring of insect species and populations



Research priority 2

- Domestic production of certified nursery material
 - True to type and plant health
 - insect-proof facilities
 - traceability



Koubouris et al. (2007) J Gen Plant Pathol. 73:370–373

Koubouris et al. (2006) Plant Cell, Tissue and Organ Culture 85: 173–180

Research priority 3

- Management of sustainable agroecosystems
 - Good agricultural practices for improved plant resilience
Soil organic matter management, biodiversity, whole systems approach



<http://www.oliveclima.eu/en/>

Research priority 4

- Breeding for plant resistance
 - Cooperation of International Olive Council network of germplasm banks
 - Marker-assisted selection
 - Pathogenicity-tests
 - Caution to avoid spreading the disease in the countries free from Xylella



<http://www.internationaloliveoil.org/>

Xanthopoulou et al. (2014) Plant Genetic Resources: Characterization and Utilization, 12, 273-277

Markakis et al. (2014) Plant Disease 98, 1584-1585