



LOCATION	Spain, Egypt & Algeria
DURATION	48 months [March 2020-February 2024]
TOTAL BUDGET	1.750.000 EUR
EC CONTRIBUTION	1.556.500 EUR
WEBSITE	www.hortimed-prima.eu
SOCIAL MEDIA	 @hortimedPRIMA  www.linkedin.com/company/hortimed-prima

COORDINATOR

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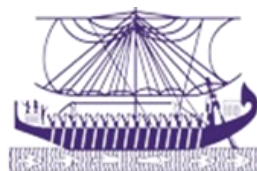
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PARTNERS



HortiMED Towards circular horticulture
Closing the loop on Mediterranean greenhouses



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WHY HORTIMED?

- # Irrigation demands in the Mediterranean region are projected to increase.
- # Food products, crop and fish yields are projected to decline in many Mediterranean areas due to climatic and other stress factors.
- # Urgent need for technological updating of greenhouse industry to face the increasing competition arising from globalisation
- # Resource efficient and circular approaches are needed to minimize the environmental impacts of protected horticulture: discharge of nutrients and growing eutrophication trends, intensive water use, excessive pesticide use, etc.

OBJECTIVES

HortiMED aims to provide the Mediterranean farming community with innovative tools to enable resource efficient year-round greenhouse cultivation by harnessing the potential of both simple & advanced technologies for smart nutrient, irrigation & climate control, and Integrated Pest Management (IPM) taking into account their feasibility and cost-effectiveness at individual greenhouse level.

SO1- To develop and test a user-friendly and flexible Decision Support System (DSS) allowing smart nutrient, irrigation & climate control, and IPM in greenhouses through:

- # Expert advisory services to help farmers in intensive knowledge tasks where climatic, crop & nutrient variables decisively influence crop growth and productivity (water & fertilizer needs, efficient climate control...)
- # Efficient and cost-effective partial or full automation of greenhouses.

SO2- To demonstrate the potential of biological agro-ecological technologies to close the loop in Mediterranean greenhouses by validating aquaponic systems based on the combination of Integrated MultiTrophic Aquaculture and hydroponics to deliver high quality Mediterranean horticultural and fish products with improved water and nutrient use efficiency.

SO3- To provide farmers with tools for environmentally friendly IPM by testing bio-based pest management tactics for effective pest control in greenhouses.

SO4- To validate HortiMED technologies in low, medium and high technology greenhouses from Egypt, Algeria and Spain.

SO5- To achieve an effective transfer of the project results and to successfully embed HortiMED technologies into local farming systems.

EXPECTED IMPACTS

IMPROVED RESOURCE EFFICIENCY AND INCREASED CIRCULARITY

- # Water Use Efficiency improved by 15%
- # Nutrient Use Efficiency improved by 10%
- # Energy Use Efficiency improved by 10%
- # Reduction of chemical pesticides use by 5%
- # Production costs reduced by 5%

REDUCTION OF ENVIRONMENTAL IMPACTS

- # Reduced pollution from nitrate and phosphorus leaching thanks to precise fertiliser applications
- # Minimized greenhouse gas emissions thanks to optimized fertiliser applications and minimised energy use
- # Reduction of chemical pesticides residues in food, soil & water

PRIMA PROGRAMME



PRIMA
PARTNERSHIP FOR RESEARCH AND INNOVATION
IN THE MEDITERRANEAN AREA

The Partnership for Research and Innovation in the Mediterranean Area (PRIMA) will devise new R&I approaches to improve water availability and sustainable agriculture production in a region heavily distressed by climate change, urbanisation and population growth.

The PRIMA programme is an Art.185 initiative supported and funded under Horizon 2020, the European Union's Framework Programme for Research and Innovation.