Good Agricultural Practices as a Result of Applied Research to Ensure Sustainable Agriculture and Adaptation to Climate Change Through Efficient Water Use

Ορθές γεωργικές πρακτικές ως αποτέλεσμα εφαρμοσμένης έρευνας για τη διασφάλιση βιώσιμης γεωργίας και προσαρμογής στην κλιματική αλλαγή μέσω της αποτελεσματικής χρήσης του νερού

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DG AGRICULTURAL RESEARCH
HELLENIC AGRICULTURAL ORGANIZATION (ELGO DIMITRA)
Hellenic Agricultural Organisation (ELGO DIMITRA) is the national Centre for research, training and certification in agriculture and is supervised by the Ministry of Rural Development and Food.

11 Research Institutes

The Institute of Olive Tree, Subtropical Crops and Viticulture (IOSV) has specialized laboratories covering all chains of tree crop production and growing systems (irrigation, fertilization, pest management, etc).

IOSV has participated in several EU, national or privately-funded projects, which include either research work or demonstration activities at pilot scale, in close cooperation with local farmer’s groups, Municipalities and Regions all over Greece.

LIFE Projects


The LIFE oLIVECLIMA project is an effort to guide the agricultural sector in order to face these challenges by converting olive cultivation to a climate change management tool. [https://oliveclima.eu/](https://oliveclima.eu/)

The LIFE AgroClimaWater project’s main objective is to promote water efficiency and support the shift towards climate resilient agriculture in Mediterranean countries through the development of water management adaptation strategies in Farmers’ Organizations. [http://www.lifeagroclimawater.eu/](http://www.lifeagroclimawater.eu/)
The LIFE AgroClimaWater project aims to define and implement farming practices that can increase water use efficiency in tree crops / create farms that can respond to extreme climate conditions.

**Project’s Methodology - LIFE AgroClimaWater**

**LIFE oLIVECLIMA**
Crop management practices focused on climate change mitigation and adaptation

**LIFE AgroClimaWater**
Proper agricultural practices for water saving at farm and river basin scale

3 year of implementation practices

- 7/18 irrigated και 11/18 rainfed

Plant protection from diseases and insects are not included as practices for this project and they were applied, in the same way, by farmers both in demo and control plots.

The LIFE AgroClimaWater project focuses on defining and implementing farming practices that can increase water use efficiency in tree crops and create farms capable of responding to extreme climate conditions.

- **Demo - Demonstration part:**
  - Good Agricultural Practices by the scientific team

- **Control - Traditional management by the farmer**
“LIFE Agroclimawater” - Efficient Water Use & Climate Change
Goal A: Reducing water losses by evaporation

Soil cover:
- Pruning residues
- Weed residues

Goal B: Reducing water losses by transpiration
- A. Spring weed management
- B. Winter pruning
- C. Summer pruning
- D. Application of kaolin

Goal C: Reducing water losses by deep infiltration
- A. Increase soil organic matter
- B. Fertigation

Goal D: Rational use of irrigation water & fertilizers
- A. Irrigation based on meteorological and soil moisture data
- B. Application of deficit irrigation
- C. Recording of irrigation water
- D. Annual maintenance the irrigation network
- E. Soil and leaf analyses – FERTILIZES

Goal E: Reducing water losses from Runoff
- A. Maintain weeds during winter
- B. Legumes sowing
- C. No soil tillage
- D. Introduction of barriers
Project’s Methodology - LIFE AgroClimaWater

Demonstration part (0.2 ha)

Control part (0.2 ha)
Traditional management by the farmer

Runoff water traps
Conveyor pipe collected materials
Container collection sample

Runoff
Comparing Yield (Kg/ha) between Control and Pilot Olive Farms

<table>
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<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
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<tbody>
<tr>
<td>Yield</td>
<td></td>
<td></td>
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<tr>
<td>Control</td>
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<td>Control</td>
<td>5030</td>
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<tr>
<td>Pilot</td>
<td>6390</td>
<td>Pilot</td>
<td>7770</td>
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<tr>
<td>Increase 2%</td>
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<td>Increase 54%</td>
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</tbody>
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Thank you

Information:

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