EcoWinery: Eco-innovation for the production of low environmental footprint wine (EXCELLENCE/1216/0279)

SECOND NEWSLETTER

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About EcoWinery

ECO-WINERY aims at promoting eco-innovation in vineyards and wineries to enable local SMEs differentiate their wines based on the inherently low environmental impact and their significance for the cultural heritage of the island. ECO-WINERY aims to:

a) deliver a user-friendly tool for the determination of the environmental footprint of wine in line with consumer concerns,
b) explore best practices for lowering the environmental footprint of wine, and
c) create a protocol for the production of eco-friendly wine.

The project will deliver novel knowledge on the Product Environmental Footprint determination, biodiversity conservation and carbon sequestration in vineyards, towards low footprint wine production, zero waste economy and climate change mitigation.

Project duration: April 2019 - October 2021 (30 months)

Total budget: 249.923,04 EUR
The EcoWinery project determined for the first time the Product Environmental footprint (PEF) for grapes and the Carbon Footprint for Xynisteri Wine. This is part of the work conducted in WP3, which aims at collecting data and delivering a methodological framework for PEF determination for viticulture and winemaking. The work in WP3 supports activities in WP5, were simple tools are developed for PEF determination for use by professionals of the sector.

The team, published the work in two scientific papers:
1) CF Xynisteri wine: Atmosphere 2020, 11(5), 463; https://doi.org/10.3390/atmos11050463
2) PEF Xynisteri grapes: Sustainability 2020, 12(21), 8812; https://doi.org/10.3390/su12218812

Field work - Biodiversity

Vineyards located in Krasochoria and Commandaria region are visited by members of the team for biodiversity monitoring to assess the impacts of management practices on target groups, focusing on plants (annual and perennial), insects (bees, butterflies, orthoptera), reptiles (lizards, snakes) and birds. Biodiversity monitoring was conducted from May to July 2020 and will be continued in 2021.

EcoWinery - CFA tool

The project has produced in collaboration with the University of Aberdeen and the NGO Cool Farm Alliance a user friendly tool for the determination of PEF parameters in Cypriot grape production. The tool is currently tested in cooperation with vine growers. The collected feedback will be used for ensuring its usability by the professionals of the sector.
Field work - C sequestration

The main experiment for WP6 started in February 2020, with the application of the manure/winery wastes mixture in the experimental vineyard. The experiment lasted until the end of October. The carbon balance in the vineyard was determined using on site and laboratory measurements. The effect of different management practices (e.g., manure, synthetic fertilizers) on the C balance was assessed. Grape quality characteristics were also determined. The results are under evaluation and the experiment will be repeated in 2021.

Reducing energy consumption in the winery

Energy consumption in the winery was monitored during the period October 2019 - November 2021. A model was built for simulating the energy use due to the various processes in the winery. The next step is to demonstrate methods for energy consumption reduction in the winery.
The scientific committee meeting took place as a teleconference on 11/11/2020. The project team presented the work to the scientific committee members.

**Presentation in MEDCLIV**

The EcoWinery work and the tool for PEF determination were presented on 23/12/2020 in a Living Lab with stakeholders, for the needs of the Climate-KIC project MEDCLIV.

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**Useful links:**

https://sustagric.weebly.com/ecowinery.html
https://www.facebook.com/ecowinery/

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