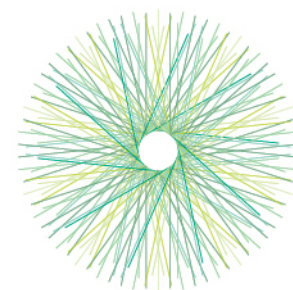


Press article

Olive trees and pest management

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Press article long article

Changing weather conditions force olive farmers to deal with pests

Sicilian farmer uses ecological solutions to make olive groves climate resistant

Nowadays, olive trees across the Mediterranean area deal with extreme weather conditions caused by climate change. Heavy rains, spring frosts, strong winds and summer droughts are just some examples. How can farmers prepare their olive orchard for these extreme weather conditions?

Vincenza Ferrara is a farmer at Azienda Agricola 'DORA', an extensive small-scale olive farm in the rural area of inner Sicily. The total cultivated area is approximately six hectares, spread out in a hilly landscape with steep slopes. The farm was set up in 2013 thanks to a project co-funded by the European Agricultural Fund for Rural Development. In the past, Vincenza did not need to deal with pest management, but with the changing weather conditions she had to.

Vincenza: "The area where our olive trees are planted has a very dry and temperate microclimate with cold, snowy winters and hot dry summers. This generally protects the trees from pest attacks. Nonetheless, climate change has recently disrupted the predictability of the weather, affecting olive production. In 2018 we had a humid summer that caused the massive spread of *Bactrocera oleae*, better known as the olive fruit fly. This has forced our farm to plan a pest management strategy for the years to come."

"With the help of the European LIFE programme, we worked out a pest management strategy based on agroecological management techniques. In the fall of 2018, we first started planting a seed-mixture of nitrogen-fixing plants as a cover crop among the olive trees. We did this to improve the soil conditions, and to increase both the diversity in wild plant species and the presence of pollinators and natural predators to olive pests. Also, no-till and strategic pruning were part of the strategy. Strategic pruning means that we try to avoid a concentration of branches inside the crown of the trees. If there is a high concentration of branches, the sunlight can't get through and this increases the humidity within the tree crown, which favours the fruit flies."

"Finally, we integrated handmade traps for olive pests. They consist of water, rotten fish and Ammonium chloride. We set them up in the beginning of June 2019, immediately after the first fruits started to grow. We placed the traps strategically considering 3 main factors: the number of fruits growing on the tree, the location of the tree relative to the surrounding trees and the position of the tree's branches. When placing the traps, the aim was to protect the tree itself and at least the nearby trees surrounding the tree with the trap. The average was 1 trap covering 6 trees."

"The results of this new strategy are amazing. In October 2019 we checked the traps and the fruits. In the traps we found many specimens of the fruit fly, while the fruits on the trees were very healthy and beautiful and they turned out to be very strong. For the years to come, we plan to continue this pest management strategy. It is a wonderful idea that we can work with nature to make our orchard 'climate-proof'", Vincenza concludes.

Press article short

Changing weather conditions force olive farmers to deal with pests

Sicilian farmer uses ecological solutions to make olive groves climate resistant

Nowadays, olive trees across the Mediterranean must deal with extreme weather conditions caused by climate change. What does this mean for farmers and how can they prepare their olive orchards for these extreme weather conditions?

Vincenza Ferrara is farmer at Azienda Agricola 'DORA', an extensive small-scale olive farm in the rural area of inner Sicily. In the past, Vincenza didn't have to deal with pest management, but with the changing weather conditions she had to start doing this.

Vincenza: "The area where our olive trees are planted has a very dry and temperate microclimate with cold, snowy winters and hot dry summers. This generally protected the trees from attacks by pests, such as the fruit fly."

"With the help of the European LIFE programme, we worked out a pest management strategy based on agroecological management techniques. In 2018 we started planting a seed-mixture of nitrogen fixing plants as cover crop among the olive trees. Also, no-till and strategic pruning were part of the strategy. Finally, we integrated handmade traps for olive pests. They consist of water, rotten fish and Ammonium chloride."

"The results of this new strategy are amazing. In the traps we found many specimens of the fruit fly, while the fruits on the trees were very healthy and beautiful and they turned out to be very strong. For the years to come, we plan to continue this pest management strategy. It is a wonderful idea that we can work with nature to make our orchard 'climate-proof'", Vincenza concludes.

Background information

Project information

Ms. Vincenza Ferrara - donidinatura@gmail.com

Website: <https://www.donidinatura.com/home-eng>

LIFE project: <https://olive4climate.eu/it>

EIP-AGRI contact

Ina Van Hoye

Communication officer

EIP-AGRI Service Point

ina.vanhoye@eip-agri.eu

+32 486 90 77 43

Pictures

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Vincenza Ferrara: "We integrated handmade traps for olive pests. They consist of water, rotten fish and Ammonium chloride." – copyright - Vincenza Ferrara



In the traps they found many specimens of the fruit fly, while the fruits on the trees were very healthy and beautiful and they turned out to be very strong. – copyright: Vincenza Ferrara

More information on olive trees and pest management

Ferrara Vincenza is one of the farmer Focus Group experts from the [EIP-AGRI Focus Group 'Pests and diseases of the olive tree'](#). She presented her case at the Focus Group meeting. The Focus Group members now continue to work on the Focus Group report and the minipapers, scheduled to be published in 2020.

Operational Groups working on pests and diseases of the olive tree

7 Operational Groups working on pests and diseases of the olive tree are available in the EIP-AGRI Operational Groups database (10 December 2019).

<u>Network for the development of an innovative agrometeorological and phytopathological monitoring system</u>	Italy
<u>Innovative pilot project in the fight against the olive fruit fly (<i>Bactrocera oleae</i>)</u>	Spain
<u>DOSAOLIVAR: pesticide dosing in olive canopies</u>	Spain
<u>Ground Covers of Native Species in Olive Groves</u>	Spain
<u>New practices in rainfed olive groves: strategies for mitigation and adaptation to climate change</u>	Portugal
<u>FitoFarmGest - Sustainable management of phytopharmaceuticals in olive groves, vineyards and arable crops in the area of influence of EFMA</u>	Portugal

<u>Mechanical pruning and continuous harvesting of olive groves of Portuguese varieties</u>	Portugal
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Horizon 2020 multi-actor projects working on pests and diseases of the olive tree

- XF-ACTORS - Xylella Fastidiosa Active Containment Through a multidisciplinary-Oriented Research Strategy: [website](#) - [CORDIS](#) (11/2016-10/2020)

Multi-actor projects are projects in which end users and multipliers of research results such as farmers and farmers' groups, advisers, enterprises and others, are closely cooperating throughout the whole research project period.

EIP-AGRI

The European Innovation Partnership 'Agricultural Productivity and Sustainability' (EIP-AGRI) is one of five EIPs which have been launched by the European Commission in a bid to promote rapid modernisation of the sectors concerned, by stepping up innovation efforts. The EIP-AGRI aims to foster innovation in the agricultural and forestry sectors by bringing research and practice closer together – in research and innovation projects as well as via the EIP-AGRI network.

EIPs aim to streamline, simplify and better coordinate existing instruments and initiatives, and complement them with actions where necessary. Two specific funding sources are particularly important for the EIP-AGRI: the EU Research and Innovation framework, Horizon 2020, as well as the EU Rural Development Policy.

- [EIP-AGRI Brochure on the EIP-AGRI Network \(2015\)](#) (EN – BG – DE – ES – FR – GR – HU – IT – PT – RO)
- [EIP-AGRI Brochure on Funding opportunities under Horizon 2020 – Calls 2020 Calls](#) (EN)
- [EIP-AGRI Brochure on Horizon 2020 Multi-actor projects](#) (EN – BG – DE – FR – SI)
- [EIP-AGRI Brochure on Thematic Networks under Horizon 2020](#) (EN – BG – DE – ES – FR – HU)

EIP-AGRI Operational Groups

- 98 rural development programmes (27 member states) provide support to EIP Operational Groups
- Over 3200 Operational Groups are expected to be established under the approved RDPs (2014 – 2020)
- Over 1000 Operational Groups projects have been selected for funding and are currently ongoing (or already finished)*

* Information officially submitted to the European Commission by RDP managing authorities (September 2019)

EIP-AGRI Operational Groups **are groups of people who work together in an innovation project funded by Rural Development Programmes** (RDPs). They bring together partners with complementary knowledge. The composition of the group can vary according to the theme and specific objectives of each project. Farmers, advisers, scientists, businesses or other relevant partners work together to find practical solutions for specific problems facing people in the European farming and forestry sectors. Farmers and foresters need to be closely involved throughout the project to ensure that the innovative solutions are relevant and likely to be quickly applied in the field.

Find out more in the [EIP-AGRI brochure on Operational Groups](#). The brochure on Operational Groups is available in English, Bulgarian, Czech, French, German, Greek, Hungarian, Portuguese, Romanian, Slovak, Slovenian and Spanish

Operational Groups can benefit from networking and collaborating with organisations from outside their partnership and from other regions and countries, such as other Operational Groups, research projects, farmers' organisations or local authorities and European knowledge networks. Read the [EIP-AGRI Brochure 'Operational Groups – Collaborate to innovate'](#). It shows some examples of successful collaboration. It

provides Operational Groups with inspiration and tools for further knowledge exchange within the EIP-AGRI network. This brochure is available in English, Latvian, Romanian and Slovenian.

Check out the '[Operational Groups](#)' dedicated section on the EIP-AGRI website, including:

- More than 900 Operational Groups are available in the database
- detailed information on how to set up Operational Groups, on supporting networks and relevant EIP-AGRI seminars and workshops
- links to results and contact details of ongoing Operational Groups in the [EIP-AGRI database](#)
- a [list of all RDP Managing Authorities](#)

Contact information

Ina Van Hoyer
Communication officer
EIP-AGRI Service Point
ina.vanhoye@eip-agri.eu
+32 486 90 77 43