

THE PROJECT



The main goal of SUSTAINOLIVE is to improve the sustainability of the olive oil sector, through the implementation and promotion of a set of innovative sustainable management solutions based on agroecological concepts, as well as through the exchange of knowledge and experiences among its multiple associates and end users.

the numbers

- 6 countries
- 22 partners
- 88 experimental farms
- Hundreds of field experiments
- 31 deliverables

an easy effective approach



REDUCING SOIL EROSION

The greatest wealth of olive farmers is the soil of their farms. The best strategy to guarantee that olive trees have an adequate stock of nutrients and water, and prevent the land from being severely affected by erosion, is to invest in soil conservation.

REDUCING SOIL EROSION

According to estimates of SUSTAINOLIVE

The economic losses associated with soil erosion in olive groves range from €42 to €118 per hectare and year, depending on the intensity of the erosive processes.

Recommended POLICY ACTIONS

- Pursue and punish harshly the impacts caused by the erosion of olive grove soils on public infrastructures
- Encourage the application of corrective measures with low environmental impact aimed at controlling erosive processes in olive groves that, in parallel, would help to enhance biodiversity:
 - Elimination or reduction of pre-existing gullies through non-impact technologies
 - Creation of new natural boundaries between farms
 - Naturalization of spaces on farms that, due to their orography or other conditions, are not suitable for cultivation
 - Implantation of riparian vegetation in watercourses, etc.
- Avoid new authorizations for planting olive groves on steep hillsides
- Promote training actions in olive cooperatives that educate and sensitize olive farmers in the development of agronomic practices that minimize or mitigate soil erosion

A ton of soil to replace erosion losses is currently valued at around €55.

When an olive grove loses 12 tons of soil per hectare and year, the cost of replacing it would amount to €660 annually.

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REUSING NUTRIENTS AND PROMOTING A CIRCULAR OLIVE CULTIVATION

Increasing the levels of organic matter in the soil of olive groves implies that nutrients are retained, instead of being lost through surface runoff, leaching or erosion. Undoubtedly, maintaining a seeded or spontaneous herbaceous cover crop becomes crucial to achieve it.

The olive sector generates a colossal amount of by-products with high energy power that is not being sufficiently valued. For example, the 'orujo' has a calorific value of 4200 kilocalories per dry kilogram.

According to our calculations

If the calorific value of the 'orujo' produced in Andalusia during 2015 (around 913000 tons) were converted to equivalent liters of diesel, the 300 million European cars could travel 25 kilometers at a time. In other words, thanks to the energy stored in the Andalusian 'orujo' for a year, 600000 cars could go around the world.



Contrary to popular belief, not all olive groves behave as carbon sinks. If no sustainable management practices are implemented such as those that imply enriching the soil with organic matter, olive grove soils can lose considerable amounts of organic carbon (in many cases as CO₂) and therefore, might have carbon balances.

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...but it represents an excellent investment for the future by increasing the capital of carbon and nutrients available for further crops.

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REUSING NUTRIENTS AND PROMOTING A CIRCULAR OLIVE CULTIVATION

Accelerate the administrative procedures for the opening of facilities and equipments related to the recovery of waste and by-products from the olive oil sector

Incentivize facilities and equipments related to recovery and valorization of olive grove residues and by-products, especially when they are used in nearby olive farms or imply 'kilometer zero'

Encourage and reward oil mills that install olive mill pomace composting plants

Encourage olive farmers to use composted olive mill pomace and manure as sources of organic fertilization

Encourage olive farmers to maintain a minimum herbaceous cover area (between 35 and 50% of the total farm area is suggested)

Establish a structure that allows the integral exploitation of olive pruning residues (use of the olive branches remains for electricity generation and thermal uses, and the branches-leaves combination for composting)

According to results of SUSTAINOLIVE

The implementation of sustainable agronomic techniques not only reduces the application of external sources of nitrogen, but also halves the losses of this essential nutrient since the potential to recycle it efficiently by appropriate management practices is huge: up to 3.5 times more in comparison with conventional olive groves model.

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Collection of Practice Abstracts

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THE PECULIARITIES IN DIFFERENT COUNTRIES

EVOO producing countries and regions are characterized by distinctive combinations of olive grove management practices. Such combinations are driven by the consistent socio-ecological and socio-economic characteristics, traditions, culture and economic barriers in each territory.

The maintenance of herbaceous cover crops is a very common practice in PORTUGAL and ITALY.

The use of plant protection-based solutions is yet uncommon in MOROCCO and TUNISIA.

It is common to see cattle grazing on olive farms in MOROCCO.

The remains of olive pruning are usually used as soil fertilizer in SPAIN, PORTUGAL and ITALY.

the future of the sector

SUSTAINABLE PRACTICES

DO YOU KNOW THAT...

are organic olive groves the only sustainable model for olive tree cultivation, or not?

It is now unanimously acknowledged that organic olive groves are a sustainable approach to management. However, there are many combinations of sustainable management practices that contribute to reducing the environmental impact of conventional olive groves and favor the agroecological transition essential to future societal sustainability. Combinations of management practices in the SUSTAINOLIVE experimental plots with higher sustainability indicators. Note that the location of the combinations around the silhouette of each country is random.

EVOO (Extra Virgin Olive Oil) is the highest quality olive oil classification which involves a free acidity expressed as oleic acid of not more than 0.8 grams per 100 grams. It must be produced solely by mechanical means without the use of any solvents and under temperatures less than 80°C that will not degrade it.

the maintenance of herbaceous cover crops and other plant communities and configurations that favor the presence of pests natural enemies, the use of residues and by-products from olive groves as fertilizers, or the decrease in chemical inputs enabled by the introduction of grazing animals, are some management practices that, either individually or combined, benefit both the environment and the farmer's pocket.

In addition, olive farmers who implement sustainable management practices demonstrate not just a commitment to their business and the environment, but also to the future of their local communities, landscapes and regions.

KEEP IN MIND THAT...

SUSTAINOLIVE: Novel approaches to promote the sustainability of olive cultivation in the Mediterranean. Research project 2019-2023

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