



Life Olea Regenera

LIFE17 ENV/ES/000189

Valorization of bio-waste resulting from the olive oil extraction process.

Valorização de bio-resíduos resultantes do processo de extração de azeite.

Valorización de los bio-residuos procedentes del proceso de extracción del aceite de oliva.



For more information:

Website:
lifeolearegenera.com

Subscription to the newsletter:
lifeolearegenera.com/newsletter/

Social networks:

 /OleaRegenera

 @OleaLife

 Life Olea Regenera



This document has been done with the financial support of the European Union within the framework of the LIFE programme. The contents are the sole responsibility of the project LIFE OLEA REGENERA and in no case it should be noted that reflects the position of EASME and that this agency is responsible for the use that can be made of the information contained.

Life Olea Regenera

Valorization of biowaste generated in the extraction process of olive oil

Title of the project:

Valorization of biowaste generated in the extraction process of olive oil

Acronym:

LIFE OLEA REGENERA

Project number:

LIFE17 ENV / ES / 000189

What does it consist of:

Design of an innovative process by which the alperujo (pomace, water and pit from the olive) generated in the extraction of olive oil will be revalued through its transformation into two new by-products used as raw material for biostimulants and bioprotectors for crops and animal feed.

Beneficiaries:

Olive oil mills, farmers, cattle farmers, citizens, olive-makers, alperujo treatment plant.

Locations:

Spain (Murcia and Jaén) and Portugal (Alentejo)

Duration:

Start date: September 2018

End date: March 2022

Budget:

Total: 1,824,730 €.

EU contribution: € 995,395

Partners:

Fyneco, S.L. (Project coordinator)

Olivais do Sul, S.A.

Orujo Frío, S.L.

CEBAS-CSIC





Targets

LIFE OLEA REGENERA is focused on the introduction of the olive oil industry in the circular economy, revaluing the waste produced in the olive oil mills through a process that produces new by-products from alperujo and using these by-products as raw materials for other activities such as agriculture or livestock. The project will minimize the environmental impact of the olive oil production, reducing the amount of waste generated, as well as the necessary energy and air pollution generated during the treatment of the waste produced.

Other objectives



Design and start-up of a new process in olive oil mills that will allow transforming the waste generated in olive oil extraction into two new by-products through physics methods.



Creation and validation of the new products obtained from the by-products generated during the process.



Reduce the amount of waste generated in olive oil industry, pollution generated, and energy required for waste disposal process.



Include olive oil industry within circular economy.



Better agricultural and livestock products derived from the use of the created products.

Environmental problem

In the olive oil extraction process, only 22 % of the olive is extracted as olive oil or olive pit. The rest becomes part of the residue known as alperujo, which is transported by road (sometimes hundreds of kilometers) to the alperujo treatment plant to extract pomace oil. There, this waste is dried from a humidity of 70-80% to 8%, consuming a large amount of energy and generating emissions of particles into the atmosphere. In the orujera, a second oil extraction is produced by chemical methods (hexane).



Solution to the problem

The alperujo contains organic compounds, such as polyphenols, with high antioxidant power and very beneficial properties. LIFE OLEA REGENERA aims to obtain from this waste two new by-products that keep these properties and use them as a raw material for biostimulants and functional products for crops and animal feed. These products will provide high levels of antioxidants and monounsaturated fatty acids to crops and animals feed.

On the other hand, the use of the alperujo generated in the process of obtaining olive oil, will reduce the emission of harmful gases and particles generated in its transport and its treatment at orujeras.

Actions to be carried out during the project

- Build an industrial plant at olive oil mills to obtain by-products from alperujo.
- Validate the use of by-products, generating efficient products for animals and crops.
- Create new business opportunities at olive oil mills by revaluing the polluting waste produced, which is currently sent to the orujeras.
- Verify the efficiency of a new L3 residue by introducing it into formulations of products that will be tested on various types of crops in Spain and in olive farms in Portugal.
- Reduce CO2 emissions due to the transport of the alperujo by road from the olive oil mills to the orujeras.
- Reduce the environmental impact generated by the orujeras due to the emitted polluting particles into the atmosphere when the alperujo is processed.

Expected results

- Reduction of waste generated
- Recovery of the waste through its use as raw material
- Reduction of emissions
- Formulation of new products that will provide high levels of antioxidants and polyunsaturated fatty acids to animals and crops and that will be beneficial for their consumers.
- Obtaining better agricultural and livestock products.



Process

