

WHAT IS BIO_MARTERRA?

BIO_MARTERRA is a Galician Operational Group that seeks to demonstrate the beneficial effects that biostimulants derived from seaweeds may have on abiotic and biotic stress situations in various crops of interest to Galicia.

BIO_MARTERRA aims to contribute to sustainable agricultural production and mitigation of climate change by utilisation of biostimulants. These compounds promote reduction of the dependence of chemical inputs and agricultural pesticides, enhance the immunologic system of the plants, increase tolerance of biotic and abiotic stresses, and improve nutritional absorption by crops. Furthermore, biostimulants generate economic opportunities in coastal communities through the diversification of seaweed utilisation.

What are OPERATIONAL GROUPS?

Operational Groups are the main actors involved in the implementation of the AIE-Agri (Agricultural European Innovation Partnership for productive and sustainable agriculture). They are one of the key tools in the execution of the Common Agricultural Policy (CAP) 2023-2027 Strategic Plan that aims to impulse the innovation in the agri-food and forestry sectors in Europe. Operational Groups bring together various stakeholders such as farmers, livestock breeders, companies, and research, formation, and dissemination centres, who collaborate to initiate innovative projects addressing shared needs and offering a combined and multisectoral response to current challenges.



Do you want to know more about BIO_MARTERRA?

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The effects of applying biostimulants derived from seaweeds to abiotic and biotic stresses in traditional varieties of horticultural crops, potatoes, and grapevine

Total project budget: 179.634,83 € **Total grant: 179.634,83 €**

This project is funded by the aid for the execution of innovative projects by Operational Groups of the Agricultural European Innovation Partnership (AEI-Agri). The funding breakdown for the project is as follows: The European Agricultural Fund for Rural Development (EAFRD) contributes the majority, at 80%, followed by the Xunta de Galicia (Council of Galicia) at 14%, and the Ministerio de Agricultura, Pesca y Alimentación (Ministry of Agriculture, Fisheries and Food) at 6%. The Consellería do Medio Rural (Galician Ministry of Rural Development) is the Galician Administration authority responsible for proposing and executing the general guidelines in agriculture, livestock, rural development and regional planning, rural structures, agri-food and forestry industries, mountains, and prevention and defence against forest fires.



Who are the **TARGET GROUPS** of BIO_MARTERRA?



Seaweed producers and marketer companies



Service companies



Farmers and winemakers



Public administration related to agriculture and costal activities, environment and/or rural development



Technology centres, research centres, and universities



Consumers and the general public



Technological platforms

What are the expected **RESULTS** of BIO_MARTERRA?

The project is expected to generate a new line of ecologic biostimulants derived from seaweed extracts that will enhance crop development by raising its resilience to abiotic stressors (high temperatures, drought, and salinity) as well as to biotic stressors (pathogenic fungus attacks). At the same time, the project is expected to lead to a decrease in generation of byproducts from seaweed activity, by valorisation of discards and non-marketable species. Additionally, it is supposed to reduce the use of synthetic agricultural inputs in horticultural crops and grapevine.

BIO_MARTERRA ACTIVITIES

1



Elaboration of biostimulants on a pilot scale.

2



Assessment of how abiotic stress (high temperatures, drought, and salinity) affects germination, plant pot and horticultural crops.

3



Evaluation of the effects of biostimulants on the production of horticultural crops (pepper, tomato, lettuce) and ecologic agriculture (lettuce, tomato, potato).

4



Evaluation of the effects of application of seaweed extracts with fungicide activity on grapevine varieties of traditional crops.

5



Analysis of the effects of biostimulants on the production of grapevine varieties of traditional crops.

6



Implementation of the dissemination plan.

What are the **OBJECTIVES** of BIO_MARTERRA?

The main objective of the project is to demonstrate the potential beneficial effects of biostimulants, which are derived from discards of seaweeds without a commercial use, on abiotic and biotic stress situations in different crops of native varieties and local ecotypes of interest to Galicia.

Furthermore, the project aims to promote the introduction of the blue bioeconomy in the seaweed sector by utilisation of non-marketable species and valorisation of discards. This contributes to the generation of a positive environmental impact by reducing the need for application of synthetic fertilizers and pesticides. In addition, the project seeks to increase agronomic and economic profits, enhancing the sector's competitiveness and promoting synergies between industry experts, researchers, and agriculturists.

Who are the **MEMBERS** of BIO_MARTERRA?

The **BIO_MARTERRA** Operational Group is coordinated by the company **Porto Muíños S.L.**, with the participation of the **Waste management and fertilization** unit from the **Agronomy** group of the **University of Santiago de Compostela (USC)**, the **VIOR** research group of the **Misión Biológica de Galicia-CSIC**, the producer **Avelino Santana** and the **Fundación Empresa Universidad Gallega (FEUGA)**. In addition, the **Centro de Investigaciones Agrarias de Mabegondo (CIAM)** and **Horta da Lousa** participate as external collaborators.

