

ALTERNATIVE BIOPESTICIDES FOR SAFE INTEGRATED PEST AND WATER MANAGEMENT AROUND MEDITERRANEAN (SAFWA)

GENERAL INFORMATION

SAFWA is funded by PRIMA fundation under the section 2 2022-Multi-topic call.

It starts on 1.6.2023

Partners: Centre de Biotechnologie de Sfax (Tunisia), The Citrus Technical Center (Greece), Laboratoires MédiS (Tunisia), Toulouse Biothechnology Institute (France), University of Valencia (Spain), Institute of Agrifood Research and Technology (Spain), Saint-Joseph University (Lebanon), University of Gastronomic Sciences (Italy), Biyans Biological Products LTD (Turkey), Julius Kühn-Institut (Germany)

MAIN AIM

SAFWA aims to release to the market an innovative solution combining a new competitive biopesticide to cultural trainings aiming to reduce land and water pollution through new agricultural practices. SAFWA specific challenge is to meet the requirement of the EU regulation regarding the registration of safe biopesticides and to provide an environment in which agriculture production contributes to reduce the pollution of the water and the land. SAFWA aims to minimize the risk associated to chemical pesticides. SAFWA will capitalize on knowledge and knowhow developed in IPM-4-Citrus (2016-2023) both at technological and market assessment levels to drive new cultural practices to farmers in three experimental farms through the Mediterranean (Tunisia, Spain and Turkey). Biopesticides, based on two sporulating (BLB1, LIP) and one non sporulating (S22) *Bacillus thuringiensis* strains, will be used in the field assays to treat olive, citrus and pomegranate trees as well as tomato to protect these different cultures against five pest species. Participation of technical centres will contribute to the multi-actor approach of SAFWA project by focusing on the dissemination of good practices and relative information for farming activities without polluting land and water.

The relevance of SAFWA relies on its double focus on farming good practices and innovative solution to reduce land and water contamination by chemical pesticides. The project originality mainly lies in a new approach based on an educating program for encouraging farmers to adopt new farming practices. Besides, SAFWA will exploit the promising results of the ongoing project IPM-4-Citrus to complete the commercial exploitation of a new Biopesticide compared with the commercial ones in terms of efficiency, yield, cost, and stability.



GOALS

The project's specific objectives are:

- SO1: Developing a new competitive alternative based on Bt biopesticides
- SO2: Validating large scale production and formulation of the new biopesticide.
- SO3: Reusing waste bioprocess water by recycling it in formulation process
- SO4: Reducing the use of harmful chemicals by enhancing the use of biopesticides
- SO5: Implementing good practices in farming activities.
- SO6: Rising awareness among farmers about good practices impact on water and land safety.

Overall SAFWA implementation will incorporate scale-up production and formulation, based on innovative and tested methodology adapted to the pre-industrial scale, for trial batch manufacturing.

The project will introduce eco-friendly guidelines for the adoption of good practices in farming activities. All guidelines will be evaluated extensively for their adequation to farmers' needs and feasibility using socioeconomic models

UNISG TEAM

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UNISG CONTRIBUTION

The UNISG will focus its contribution on the analysis of Farmer's Cultural Practices & Civil Society's Engagement (WP4) Specifically, it will lead first of all action concerning the Structural Push-and Pull factor analysis. Based on bibliographic research conducted on scientific and grey literature, the task analyses the main socio-cultural and political-economic push and pull factors involved in the introduction of biopesticides with a particular focus on the research area. It identifies the factors and identifies their role, as well as it indicates the main actors involved in the achievement of a successful introduction of these tools. Moreover, it will conduct case-studies analysis. The task ethnographically analyses the main dynamics concerning bio-pesticides implementation in the pilot areas. It identifies the actors involved and the specific factors that intervene in the process and their intensity. Finally, it will be in charge of a qualitative assessment of impact of the implementation of biopesticides in the pilot areas, identifying the results and the factors underpinning the experimentation success and failure. The result of the task informs the project in order to improve the materials and the teaching methods in order to overcome possible difficulties that emerged from the analysis.