



Insect Farm - DISTAL Lab

Descriptive Summary

Step into the world of sustainable agriculture as we grow the insect *Galleria Mellonella* for scaling up in developing countries at the "Insect farm - DISTAL Lab". This small but innovative facility at the University of Bologna is at the forefront of researching sustainable, circular, and cost-effective methods for the production of *Galleria Mellonella*. Beside this main scope, DISTAL Lab also foresees the integration of experimental simplified hydroponic systems to implement the research on sustainability and circularity of cultivation systems for household consumption and small business development in emerging countries. Join us in our quest to expand the horizons of eco-friendly insect farming and accessible simplified hydroponic systems, and unlock the potential for a greener and more sustainable future.

Background

The insect farm was developed basing on the UNIBO team entomological knowledge on the life cycle and breeding of this specie, normally considered as a harmful insect for beehives. It aims to favor the development of alternative low-cost alternative proteins.

Aims and Goals

The primary objective is to investigate and develop sustainable methods for the production of *Galleria Mellonella*, integrating in the diet industrial wastes (e.g., bakeries wastes). Furthermore, the research wants to evaluate the nutritive properties in case of applications as fish and chicken feed.

Actions taken

Currently the demo has conducted research on alternative diets for *Galleria mellonella* to expand the existing knowledge base on farming practices and lifecycle of insects. This is complemented by capacity building on insect farming which is foreseen for autumn 2024.

Main Achievement to date

The larvae of *Galleria Melonella* could be produced at large-scale in industrial facilities but also by non-mechanized and low investment technologies, and could be attractive to farmers in northern Mediterranean countries such as Greece or Italy, but also in Morocco, Jordan, Tunisia, and Turkey.

A Value Chain for Development (VC4D) analysis for insects has been undertaken.

Baseline data for WEFE Nexus and livelihood impact analysis has been collected.

Partners

Universität der Bundeswehr aquaponik manufaktur Foodscale Hub Ben Gurion University of the Negev Alma Mater Studium Universita Di Bologna National Agricultural Research Center University Mohammed VI Polytechnic Elbosten Euroscolar Türkiye Bodrum Municipality

Lessons, replicability and scalability potential

Scalable technologies: Developing technologies and farming practices that are scalable and adaptable to different environments, resource constraints, and socioeconomic contexts. This might involve designing modular systems or providing guidelines for customization based on local conditions.

Cost-effectiveness: Ensuring that the methods and technologies employed are cost-effective and accessible to a wide range of users, particularly in resource-constrained settings. This might involve optimizing resource use, reducing input costs, and identifying low-cost alternatives for equipment and materials

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Keywords

Circular Economy Insect farming Hydroponic systems Sustainable agriculture

Country

Italy

Start year

Mon, 01/01/2024 - 12:00

Facebook

<https://www.facebook.com/frontagnexus/>

Twitter

https://twitter.com/i/flow/login?redirect_after_login=/frontagnexus

LinkedIn

<https://www.linkedin.com/company/frontag-nexus/>

Acknowledgement of funding source

PRIMA

Total funding

100 - 500k €

Environmental

High

Social

Medium

Technological

High

Financial

Medium

Institutional

Medium

SDGs**YouTube**

<https://www.youtube.com/@FrontAgNexus>

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Nexus Dimensions

Ecosystems

Food

City

Bologna

Source URL: <https://wefe4med.eu/demo/insect-farm-distal-lab>