



BIOBESTicide

BIO-Based pESTicides
production for sustainable
agriculture



www.biobesticide.eu

THE PROJECT

The BioBESTicide project aims at demonstrating and validating the efficacy, sustainability and cost-effectiveness of a novel biopesticide and its production process. The demonstration will include a novel bio-based value chain starting from the valorization of residual biomasses (e.g., beet pulp and sugar molasses) and the properties of the oomycete *Pythium oligandrum* strain I-5180 to enhance natural plant defenses, resembling an eco-friendly, sustainable and highly effective solution for vine plants protection.

GreenCell, the project coordinator, has developed an effective bio-control and bio-remediation approach for one of the major causes of worldwide vineyards destruction: the Grapevine Trunk Diseases (GTDs). The protection system leverages the natural behavior of *P. oligandrum* I-5180 to colonize vines' roots and stimulate plant's defenses, increasing protection towards GTDs by 40%-60%.

The BioBESTicide project will reply to the increasing demand for innovative cost-effective and sustainable crop protection agents, upscaling their proprietary technology from the lab scale (TRL4) up to a DEMO plant (TRL 7) to assess the industrial viability of the project.

The BIOBESTicide project will assess and validate the efficiency of the formulated product on vineyards of different geographical areas, ensuring its safety under both health and environmental perspective in compliance with European regulations.



OBJECTIVES

- Build a DEMO plant with an annual production capacity of 10T of high-grade oomycete biopesticide for vine plants protection
- Define the optimal final product formulations to maximize the efficiency of the *P. oligandrum* strain I-5180 and guarantee ease of use for end-users
- Assess and validate the effects and performances of the final product in both controlled and semi-controlled environments, excluding potential risks for both environment and human health
- Ensure sustainability of the established value chain, optimizing process logistic to maximize cost-effectiveness and minimize losses
- Comply with the European regulation on *Plant Protection Product* (PPP) and submit an approval dossier required for commercial distribution authorization
- Demonstrate and showcase to relevant stakeholders the feasibility of adopting the proposed value chain for novel *P. oligandrum*-based biopesticides production
- Involve specific categories of interest in the project

LATEST UPDATES FROM THE PROJECT

Pythium Oligandrum strain I-5180 growth and scale-up

Greencell, a leader in microbial ecology applied to agroecology, with expertise in the production of biosolutions, is building a clean room and a sterile chamber dedicated to the large-scale production of the new biopesticide based on *Pythium Oligandrum* strain I-5180.

The construction is ongoing and the production process is in the final stage of validation.

The estimation of the quantity of excellent quality of oospores in the final product is now possible with state-of-the-art technology, namely flow cytometry.

Several production batches have been used for field trials and in planta under controlled conditions.



PARTNERS



CONTACT US

PROJECT COORDINATOR



Assia Dreux-zigha



[linkedin.com/company/biobesticide-project](https://www.linkedin.com/company/biobesticide-project)



assiadreux@greencell.tech



twitter.com/biobesticide



This project has received funding from the Biobased Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement N° 886776. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio-based Industries Consortium.