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. The BioBESTicide project will validate the efficiency of the formulated product on vineyards of different geographical areas.

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

FIRST YEAR PROJECT RESULTS

Within the first year of the project, GreenCell worked along with two engineering firms to develop different tray fermenter configurations for oospore production. Proposals have been assessed and are currently under optimization for *P. oligandrum* cultivation and harvesting to ensure that production targets set in the project will be met. At the same time, Lamberti has assessed several formulative options, selecting the most convenient ones for both chemical/biological stability and ease of application for end-users. Last round of stability testing is taking place to make the final decision on the preferred formulation to be used for the next project phase. EURION prepared a first approval dossier according to the data requirements of the Regulation (EC) n°283/2013 (active substance) and Regulation (EC) n°284/2013 (representative formulation) and sent it to the Belgium Authorities in November 2020. Tecnalia, responsible of the integrated Life Cycle Sustainability Assessment, is establishing the methodology to be applied and how the Life Cycle Assessment, Life Cycle Costing and Social-Life Cycle Assessment should be carried out (goal and scope phase). CiaoTech actively led Dissemination activities associated to the project on social media and in international conferences such as the IFIB 2020, (the International Forum on Industrial Biotechnology and Bioeconomy), further starting to identify the major market and technology trends as well as the most important stakeholders to provide partners with a comprehensive overview for future road to market and possible exploitation routes definition.

PARTNERS

GREENCELL BIOTECHNOLOGIES · Lamberti · tecnalia Inspiring Business · INRAE · EURION CONSULTING Regulatory Affairs and Registrations — In confidence, from Innovation to Market

CiaoTech · zielona chemia · IFV INSTITUT FRANÇAIS DE LA VIGNE ET DU VIN · Mercier DEPUIS 1890 Pépiniériste viticole expert · Nordzucker

CONTACT US

PROJECT COORDINATOR

Benoît Keraval

benoit.keraval@sabiovitis.fr

BBI JU

Bio-based Industries Consortium

Horizon 2020 European Union Funding for Research & Innovation

BIOBESTicide has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N° 886776. This poster reflects only the author's view and that the European Commission is not responsible for any use that may be made of the information it contains.

linkedin.com/company/biobesticide-project

twitter.com/biobesticide