AgriMax

Agri and food waste valorisation co-ops based on flexible multi-feedstocks biorefinery processing technologies for new high added value applications

http://www.agrimax-project.eu

Type of Action: Innovation Action - Demonstration

Value Chain: VC3 – agro-based

Start date: 01 October 2016

End date: 30 September 2020

BBI JU contribution: € 12,484,461.46

Summary

Around a third of all food produced globally is wasted each year. This waste occurs throughout the whole value chain, from farmers to consumers. However, there are significant amounts of valuable compounds contained in the wasted food that could and should be recovered.

The AgriMax project is designed to establish the technical and economic viability using bio-refining process on waste from crops and food processing to deliver new bio-compounds for the chemical, bio-plastic, food, fertilisers, packaging and agriculture sectors.

The project will combine affordable and flexible processing technologies, including ultrasound assisted and solvent extraction, filtration, thermal and enzymatic treatments for the valorising side streams from horticultural and food processing industries that can be used in a cooperative approach by local stakeholders.

Objectives

Agrimax will combine flexible processing technologies to valorise residues and by-products from the agriculture and food processing industry to extract valuable biocompounds used to produce active ingredients, packaging and agricultural materials among others. The objectives are:

- To map the available Agricultural and Food Processing Waste (AFPW) and their features
- To set up two flexible pilot plants for processing bio-wastes to process AFPW into value added biocompounds
- To validate and demonstrate the use of derived biocompounds in packaging applications, food and agricultural applications
- To demonstrate the safety & regulatory compliance, as well as environmental & economic sustainability of the developed processes and products
- To implement a joint stakeholder platform for cooperatively operating the processing plants and propose suitable business

Expected impacts

- Minimise the impact of agriculture and food processing industry on the environment by reducing the amount of waste that is not properly treated and by reducing the raw materials and fossil fuel usage. The overall environmental impact and greenhouse gas emissions (methane, nitrous oxide and CO2) will be decreased along the new value chains.
- Produce economic benefits through the new business opportunities generated in the commercialisation of the new products and complementary biogas.
- Maximise agriculture and food industry growth and competitiveness.

Achievements & Milestones

Turning food and crop waste into new products
18 February 2019

Every year around one-third of all food produced across the world is wasted before it even reaches the consumer. Our AGRIMAX project is tackling the problem by turning crop and food-processing waste into high-value products. Read more

From agricultural and food-processing waste to bio-products
24 May 2018
How can we use agricultural and food-processing waste to create useful products for a sustainable Europe? Read more

Consortium

- Innovacio i Recerca Industrial i Sostenible SL (Spain)
- Asociación de Investigación de Materiales Plásticos y Conexas (Spain)
- Universiteit Gent (Belgium)
- Consorzio Inter Universitario Scienza e Tecnologia dei Materiali (Italy)
- Institut de Recerca i Tecnologia Agroalimentàries (Spain)
- Nofima AS (Norway)
- Instituto Tecnológico del Embalaje, Transporte y Logística (Spain)
- Università di Bologna (Italy)
- Fraunhofer Gesellschaft (Germany)
- Stazione Sperimentale per l'Industria delle Conserve Alimentari (Italy)
- University College Dublin (Ireland)
- Universidad de Almería (Spain)
- Biovale Ltd (United Kingdom)
- Federació de Cooperatives Agràries de Catalunya (Spain)
- Food Industry Federation Austria (Austria)
- Gospodarsko Interesno Združenje Grozd Plasttehnika (Slovenia)
- Azienda Agricola Chiesa Virginio (Italy)
- Exergy Ltd (United Kingdom)
- Laboratori ARCHA srl (Italy)
- Femto Engineering srl (Italy)
- Laser Consult Ltd (Hungary)
- Mycoplast di Federico Maria Grati e Stefano Babbini S.n.c. (Italy)
- Organic Waste Systems NV (Belgium)
- Bioprocess Pilot Facility B.V. (The Netherlands)
- Fertinagro Nutrientes, S.L. (Spain)
- Gaviplas SL (Spain)
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Project coordination

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