

# FACTSHEET



This project has received funding from the Bio Based Industries Joint Undertaking under the European Union's Horizon 2020 research & innovation programme under grant agreement

GRANT AGREEMENT NUMBER  
**720719**



Bio-based Industries  
Consortium



**H2020-BBI-PPP-2015**



**48**  
months



**15**  
millions  
budget



**29**  
partners

**STARTING DATE 01/10/2016**

## KEYWORDS

Bioprocessing technologies, biocatalysis, fermentation, Environment, resources and sustainability, Bioproducts; biomaterials, bioplastics, biofuels, bioderived bulk and fine chemicals, bio-derived novel materials, Agricultural waste, Food waste, multi-feedstock biorefinery, pilot plant, food, packaging, agriculture, ultrasound & solvent extraction, filtration, thermal & enzymatic treatment, agricultural & food processing waste valorization

# AGRI AND FOOD WASTE VALORISATION CO-OPS BASED ON FLEXIBLE MULTI-FEEDSTOCKS BIOREFINERY PROCESSING TECHNOLOGIES FOR NEW HIGH ADDED VALUE APPLICATIONS

## ABSTRACT

Approximately one third of all food produced globally is wasted every year throughout the whole value chain from farmers to consumers. To extract the significant amounts of valuable compounds contained in these wastes, AgriMax will combine affordable and flexible processing technologies (ultrasound assisted and solvent extraction, filtration, thermal and enzymatic treatments) for the valorization of side streams from the horticultural culture and food processing industry to be used in a cooperative approach by local stakeholders.

Through the selection of case-scenarios previously developed to a pilot scale by the participating RTOs and their industrial transfer in new applications as food additives, packaging and agricultural materials among others, the project will disclose the holistic potential of four new agro-value chains (residues and by products from the culture and processing of tomato, cereals, olives, potato).

Any by-product generated along the production cycle will be valorized in a cascade manner to reach over 40% of high value use of the waste. This will lead to additional production of active ingredients in lower concentration, but also fibres, biogas and fertilizers from the left biomass (the latter with the aim of being used in closed loop in the culture of the crops used in the project to prevent soil impoverishing). An LCA and LCC will also study the best approach to minimize the environmental impact of the new value chains without jeopardizing the cost effectiveness of the operations.

The pilot multi-feedstock bio-refinery processes will be validated in two demonstration sites in Spain and Italy. Societal, ethical, safety, techno-feasibility and regulatory aspects will be studied. Last but not least, a business model and platform for communication between the potential raw materials suppliers will be set up to maximize the use of the cooperative treatment plants throughout the year

## PARTNERS

- IRIS Innovacio i Recerca Industrial i Sostenible SL (Spain)
- AIMPLAS Asociación de Investigación de Materiales Plásticos y Conexas (Spain)
- UGENT Universiteit Gent (Belgium)
- INSTM Consorzio Inter Universitario Scienza e Tecnologia dei Materiali (Italy)
- IRTA Institut de Recerca i Tecnologia Agroalimentàries (Spain)
- NOFIMA AS (Norway)
- ITENE Instituto Tecnológico del Embalaje, Transporte y Logística (Spain)
- UNIBO Università di Bologna (Italy)
- FRAUNHOFER Fraunhofer gesellschaft zur foerderung der angewandten forschung e.v (Germany)
- SSICA Stazione Sperimentale per l'Industria delle Conserve Alimentari (Italy)
- UCD University College Dublin (Ireland)
- UAL Universidad de Almería (Spain)
- BIOVALE Biovale Ltd (United Kingdom)
- ARDAGH Ardagh Group Italy Srl (Italy)
- FCAC Federació de Cooperatives Agràries de Catalunya (Spain)
- FIAA Fachverband der nahrungs und genussmittelindustrie (Austria)
- PCS Gospodarsko interesno zdruzenje grozd plastehnika (Slovenia)
- CHIESA Chiesa Virginio (Italy)
- EXERGY Exergy Ltd (United Kingdom)
- ARCHA Laboratori ARCHA s.r.l (Italy)
- FEMTO Femto Engineering SRL (Italy)
- LC Laser Consult Ltd. (Hungary)
- MYCOPLAST Mycoplast di Federico Maria Grati e Stefano Babbini S.n.c. (Italy)
- OWS Organic Waste Systems NV (Belgium)
- BPF Bioprocess Pilot Facility B.V. (Netherlands)
- FERTINAGRO Fertinagro Nutrientes, S.L. (Spain)
- GAVIPLAS Gaviplas, S.L. (Spain)
- BARILLA Barilla G.E.R. Fratelli SPA (Italy)
- IL Indulleida SA (Spain)

**Project Contact: Gianluca Belotti Email: gianluca.belotti@iris.ca Tel. +34 93 554 25 00**