


agriloop

high-value products from agricultural residues through sustainable chains




Tackling agricultural waste

AgriLoop is a major project finding new ways to convert agricultural-food residues into high-value, eco-friendly products, such as food, feed ingredients and bio-based materials. It is funded by the European Union, UK Research and Innovation and the National Key Research and Development Program of China.

AgriLoop will bring significant economic, environmental and societal benefits by making better use of agrifood residues: an underexploited resource across Europe and China.

35 project partners across Europe and China are joining forces in AgriLoop to increase agricultural sustainability, grow the bioeconomy, tackle climate change and plastic pollution and increase European/Chinese cooperation.

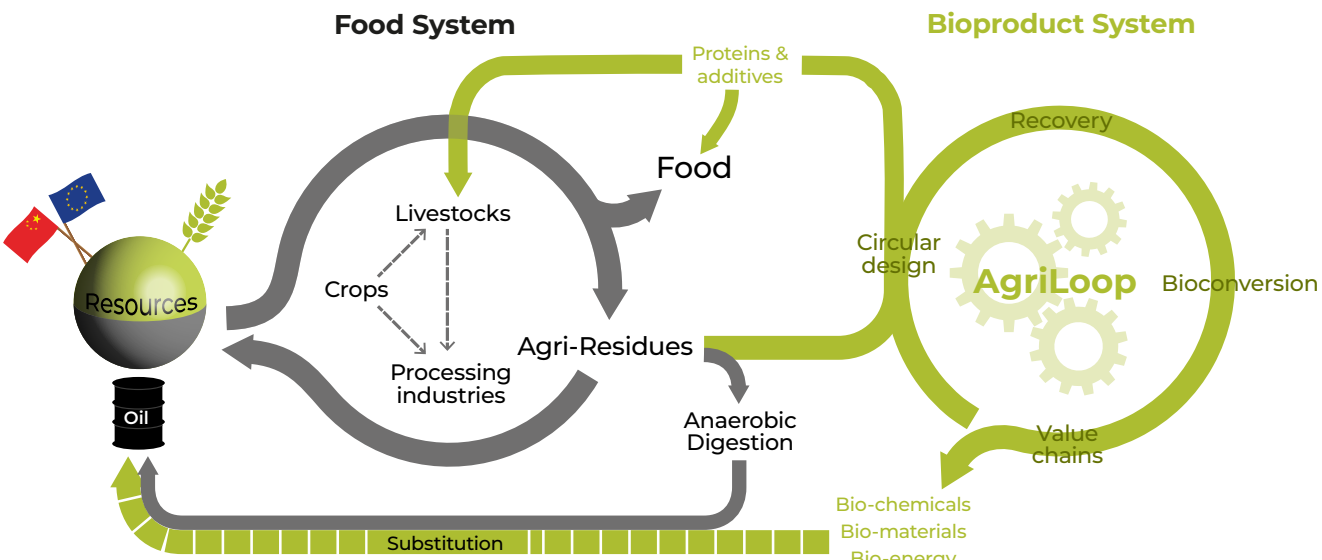
The AgriLoop project will...

- Convert a range of agricultural residues including tomato, soybean, peanut, apple, straw, potato, brewery grains, oil, grapes and animal manure into plant and microbial proteins, polyesters and other bio-based chemicals.

- Develop safe-and-sustainable-by-design bioconversion processes integrated into a cascading biorefinery approach.
- Develop new end-user products and processes for the food, feed, health and material applications, particularly for the agricultural sector.
- Demonstrate innovative sustainable value chains.
- Validate environmental, safety, economic and social assessments.
- Achieve several environmental, societal and economic impacts from its innovative approach.

Partners are from 11 countries; 20 from 8 EU countries, 2 from non-EU countries and 13 partners from China.

AgriLoop's concept for sustainable biorefineries based on agricultural residues



Developing innovative processes and technologies

AgriLoop is developing safe-and-sustainable-by-design methods to convert agrifood residues from crops (tomato, soybean, peanut, apple, potato, brewery grains, oil and grapes) and animal manures into high-value products. These processes include: green extraction, microbial conversion and material compounding and extrusion. AgriLoop processes will produce a range of products in a cascading biorefinery approach, with any remaining biomass used to generate biogas.

AgriLoop will run for 4 years, from 2022 to 2026.

A range of innovative bio-based products

AgriLoop is developing a range of innovative bio-based products that include:

- Food and feed ingredients (plant proteins, carotenoids)
- Highly functional biochemicals (antioxidants, antimicrobials)
- Microbial proteins
- Bio-based materials: plant polyesters (cutin, suberin) and microbial polyesters (PHA) based materials
- Fertilisers

The functionality and value of these frugally designed bio-based products will be tested by end users including farmers and bio-processors.

There is an emphasis on products for agriculture and food, creating a fully circular solution.

Partners include research and technical organisations, small-to-medium-size companies and larger organisations.

Creating environmental, societal and economic impacts

AgriLoop will provide a range of environmental, societal and economic benefits for Europe and China such as:

- By using residues and wastes as a feedstock, AgriLoop will increase resource efficiency and reduce our dependence on fossil fuels.
- Products aim to be greener in production, compostable and biodegradable.

- Create new value chains, helping to open up new markets, create new jobs and increase economic competitiveness.
- Connect and create new partnerships between organisations and sectors across Europe and China.

AgriLoop has funding of 7.8 million euros.

Our partners

The National Key Research and Development Program of China

Funded by the European Union

UK Research and Innovation

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For further information on the AgriLoop project, visit: www.agriloop-project.eu

This project has received funding from the European Union's Horizon Europe research and innovation programme and the UK Research and Innovation fund under the UK government's Horizon Europe funding guarantee, grant agreement No. 101081776.