



PRESS RELEASE

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Empowering farmers - PRIMARY project aims at upcycling underutilized agricultural feedstocks into new businesses

New EU Horizon Europe project unites 12 partners across Finland, Greece, and Estonia to transform agricultural by-products into valuable resources.

[Espoo, Finland] – May 28, 2025 – A new European research and development project, PRIMARY, has officially launched with funding from the EU's Horizon programme. PRIMARY brings together 12 partners from Finland, Greece, and Estonia, with a shared goal of finding smarter and sustainable ways to valorize agricultural by-products, such as grass, greenhouse waste, cotton, and olive residues. Today, much of Europe's valuable agricultural biomass is burned, composted, or simply wasted.

Led by VTT Technical Research Centre of Finland, PRIMARY aims to boost local businesses, create jobs in rural areas, and help Europe move toward a more sustainable economy.

“Primary producers are at the core of building sustainable food systems in the EU. Farmers have the gold in their hands in a form of agricultural biomass that can be converted into valuable business and boost EU's Bioeconomy. PRIMARY will team up with local farmers to demonstrate various bio-based production processes, facilitating the creation of new farm-centric value chains that increase farm incomes,” says Emilia Nordlund, PRIMARY project coordinator, and Research Manager at VTT.

PRIMARY brings together a strong and diverse group of partners from across Europe and focuses on developing and piloting the solutions in two regions, Finland and Greece, over a four-year period. Besides VTT, the team includes research institutes (Natural Resources Institute Finland – Luke; Centre for Research and Technology Hellas –

CERTH; and The agricultural research organization Hellenic Agricultural Organization – DIMITRA (ELGO), leading companies (Valio Ltd and Fiberwood Ltd), agricultural organizations (MTK and NEA ENOSI), and renewable energy communities (ESEK and MINOA). The project's communication and outreach activities are led by CIVITTA Foundation, an innovation consultancy based in Estonia. PRIMARY also features financial support to third parties coordinated by the open call expert reframe.food (RFF).



PRIMARY consortium partners at the project kick-off meeting, May 26, 2025.

The PRIMARY project will develop versatile processes, all involving farmers, cooperatives and local SMEs. This includes piloting in Finland a biorefinery process for grass to produce food and feed ingredients and biobased materials. Finnish partners will develop and pilot fermentation processes to upcycle agricultural feedstocks to protein rich ingredients, and foam forming technology to produce packaging or construction materials from fibre rich feedstocks. For cotton and olive tree byproducts available in Greece, the project will demonstrate pelletizing processes to produce solid biofuels, and gasification methods for electricity generation along with biochar production for fertilizer and material applications.

For example, "Our Greek pilots are transforming agricultural waste into valuable resources across two regions," say representatives from the piloting partners in Greek, ESEK, NEA ENOSI, and MINOA. "In Karditsa, we're turning cotton byproducts into clean energy and soil-enriching biochar, while in Crete, we're creating new value chains from olive tree prunings that were previously burned, developing bioenergy, compost, and bio-based materials. These initiatives demonstrate how circular bioeconomy begins at the farm level, creating local innovation with European impact."

An open call will soon target the adaptation and validation of PRIMARY technologies beyond Finnish and Greek regions, extending the project's solutions across the EU. These innovations will contribute to improving the EU's protein self-sufficiency, reducing greenhouse gas emissions and land use, while enhancing soil health. The new business opportunities have the potential to generate tens of thousands of jobs throughout the EU and create billions in economic value. Additionally, PRIMARY will promote rural livelihoods and increase the attractiveness of agriculture, a sector critical for the EU's strategic autonomy and bioeconomy development.

Disclaimer:

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