zelda-project.eu

ZELDA Project Officially Launched

Advancing Zero-Waste Bio-based Solutions for Smart and Sustainable Crop Protection

On **16 September 2025**, the European project **ZELDA – Zero-waste Lignocellulose-Derived biorefinery products for smArt plant protection** was officially launched. Funded by the **Circular Bio-based Europe Joint Undertaking (CBE JU)**, ZELDA aims to develop a new generation of **bio-based, sustainable solutions for crop protection**.

ZELDA addresses one of today's most pressing challenges in agriculture: reducing dependency on synthetic pesticides while ensuring effective plant protection. By **valorising lignocellulosic biomasses through a zero-waste biorefinery approach**, the project will deliver **sustainable alternatives** that protect crops, safeguard human health, and respect planetary boundaries.

The project will develop **smart bio-based formulations** acting, mainly, as **plant immune boosters** and, additionally, as **microbicides**, combined with **AI-powered precision farming technologies** to optimise their delivery. ZELDA's **BioSolutions** will be tested **from laboratory scale to real-field conditions across Europe**, ensuring both scientific robustness and real-world applicability in different pedo-climatic regions.

A Collaborative Vision Woven from Day One

ZELDA's kick-off meeting embodied the spirit of collaboration at the heart of the project. To break the ice, partners passed around a **ball of yarn**, each introducing themselves and their role while weaving a growing web of connections. By the end of the exercise, the room visually represented ZELDA's mission: **linking people, knowledge, and action** to protect crops and the planet through cooperation and reciprocity.

Circular Bio-based Europe Joint Undertaking
Bio-based Industries Consortium
Co-funded by the European Union

This meeting marked more than a formal start – it was the **first step in weaving the network** that will turn ZELDA's vision into tangible impact.

First Synergies and Growing Connections

Although newly launched, ZELDA is already actively building **synergies with like-minded initiatives** to maximise impact and foster knowledge exchange. The consortium already held its **first meeting with sister project CROPSAFE**, opening the door to future collaborative pathways in sustainable crop protection.

ZELDA is also expanding its constellation of connections by engaging with **OLinWASTE**, a project focused on transforming **olive mill waste into high-value bioproducts**. From biopesticides and biofertilisers to biobased plastics and clean bioenergy, OLinWASTE exemplifies innovative **waste-to-resource value chains**, aligning strongly with ZELDA's zero-emission and circular bioeconomy approach.

ZELDA at BrIAS Agri2026: Shaping the Future of Smart Agriculture

ZELDA will take part in BrIAS Agri2026 – the 3rd BrIAS Conference on Smart Agriculture, organised by the project coordinator **Université libre de Bruxelles (ULB)**. The conference will be held in **Brussels from 4 to 6 February 2026** and represents a key annual event for a **multidisciplinary scientific community** working on smart and sustainable agriculture.

ULB BrIAS VUB

Stay tuned to discover the full programme and learn more about ZELDA's contributions to the conference!

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Looking Ahead

ZELDA is just at the beginning of its journey, but its ambition is clear: to **reshape the future of farming** through innovation, collaboration, and circular bioeconomy principles. By connecting research, technology, and real-world agricultural needs, ZELDA aims to contribute to a **healthier, greener, and more resilient food system for Europe**.

Watch the project video teaser and get a first glimpse into ZELDA's vision.

Follow ZELDA's journey on the project website and social media, and subscribe to the newsletter to join our community and stay updated on the latest news and project milestones!

Website | LinkedIn | Instagram | Facebook | YouTube

ZELDA Consortium

Project's Contacts

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