



# Circular economy for biodiversity Unlocking the green potential

*Skills for sustainable,  
resilient, and socially  
fair communities*

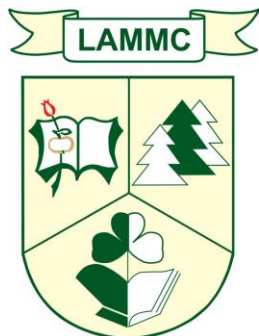
**EUROPEAN  
YEAR OF  
SKILLS**



Date

June

5



**LITHUANIAN  
RESEARCH CENTRE  
FOR AGRICULTURE  
AND FORESTRY**

3-11 June 2023

**#EUGreenWeek  
PARTNER EVENT**

# Expertise and Infrastructure of Laboratories

## Agrobiology Laboratory

- Long-term experience in the field of **soil pollution**.
- Decomposition and effect to the environment of **pesticides, personal care products, and pharmaceuticals** in various types of external organic matter and other matrixes.
- The development and use of new mineral, organic **fertilizers** and **liming materials** from **secondary waste**.
- **The quality** of various **soil improvement materials**, potential pollution and their impact on plants and soil.
- Nontraditional and traditional plants **phytochemical composition**.

## Chemical Research Laboratory

- **Soil carbon stability, sequestration and transformation**, qualitative and quantitative research of **humus substances**, their **fractions** research on **humification and mineralization** in mineral and organic soils of various soil genesis used in agriculture.
- Research on **chemical properties**, total and plant available **macro- and micro- elements** in mineral and organic soils under different land use, fertilisation systems.
- Research of **physical, chemical, and technological properties** and suitability for industrial processing of **grain** and its products (**flour, bran, dough, starch, bread**) while used various agro-technological research and genotypic diversity
- The studies of **quality and nutritional value** of traditional and alternative agricultural **plants** and **silage** as affected by genotypic diversity, agrotechnological peculiarities, climate change, used for development technologies and bioenergy.
- Research of **water** quality and pollution
- Studies of **biowaste** composition to assess the quality of the biogas process



# Experience in projects

## Agrobiological Laboratory

**Research Council of Lithuania** „From waste to resources: shrimp waste regeneration to sustainable antimicrobial products applied in agriculture”. 2023-2026

**Horizon 2020 EJP SOIL** “External organic matters for climate mitigation and soil health” EOM4SOIL. 2022-2024

**RTO Lithuania project** “Extraction of plant nutrients using secondary raw materials“. 2021

**Research Council of Lithuania** “Sustainable use of solid biofuel ash for the production of fertilizers and additional cementitious materials”. 2022-2024

**Horizon 2020 EJP SOIL** “Bio-economy and Circular Agriculture for Soil Health” BioCASH. 2022-2024

**South Baltic INTEREG** “Baltic Phytoremediation (BAPR)“. 2019-2023

## Chemical Research Laboratory

**Horizon 2020 EJP SOIL 2021-2024:**

- AGROECOseqC
- MaxRoot-C
- MIXROOT-C
- TRACE-Soils
- SensRes
- CarboSeq

**ERA-NET** Connecting sustainable agroecosystems and farming with circular bioeconomy and new technologies (ConnectFarms). 2022-2024

**High level R&D project (SMART)** funded by Research Council of Lithuania “Quality diagnostics of biogas production by-product (digestate) for innovative use as a biofertilizer “. 2017-2021

**High level R&D project (SMART)** funded by Research Council of Lithuania “Development of winter wheat varieties for amylose-free starch and vital gluten processing”. 2017-2021

**Ministry of Agriculture of the Republic of Lithuania** “Production of alternative biomass source in primary agriculture: technological solutions, their use for bioeconomy development purposes – energy, feed, food”. 2020

## WE ARE INTERESTED IN CALLS:

- **HORIZON-CL6-2024-BIODIV-01-7:** Reintroduction of landscape features in intensive agricultural areas
- **HORIZON-CL6-2024-BIODIV-02-1:** Demonstrating Nature-based Solutions for the sustainable management of water resources in a changing climate, with special attention to reducing the impacts of extreme droughts
- **HORIZON-CL6-2024-BIODIV-02-3:** Promoting minor crops in farming systems
- **HORIZON-CL6-2024-CircBio-02-1:** Circular solutions for textile value chains through innovative sorting, recycling, and design for recycling
- **HORIZON-CL6-2024-CircBio-02-2:** Increasing the circularity in plastics value chains
- **HORIZON-CL6-2024-CircBio-02-4:** New circular solutions and decentralised approaches for water and wastewater management
- *HORIZON-CL6-2023-ZEROPOLLUTION-02-1: Optimisation of manure use along the management chain to mitigate GHG emissions and minimize nutrients/contaminants dispersion in the environment*
- *HORIZON-CL6-2024-ZEROPOLLUTION-01-1: Demonstrating how regions can operate within safe ecological and regional nitrogen and phosphorus boundaries*
- *HORIZON-CL6-2024-ZEROPOLLUTION-01-2: Best available techniques to recover or recycle fertilising products from secondary raw materials*
- *HORIZON-CL6-2024-ZEROPOLLUTION-01-3: Environmental impacts of food systems*
- *HORIZON-CL6-2024-CLIMATE-01-4: Land use change and local / regional climate*

## WE CAN OFFER:

- Perform vegetative experiments in controlled climate chambers and fields;
- Determination of organic and inorganic pollutants;
- Determination of pesticides, personal care products and pharmaceuticals in various matrixes;
- Determination of the main nutrients in various matrixes;
- Analyses of various plant bioactive compounds;
- Determination of carbohydrates, crude fibre, NDF, ADF, lignin, cellulose, hemicellulose;
- Determination of humified and mobile humus fractions, total soil organic carbon, dissolved organic carbon and carbonates;
- Soil granulometric composition (WRB 2022);
- Determination of soluble forms: P, K, Al,  $\text{SO}_4^{-2}$ ,  $\text{S}^{-2}$ ;
- Research of biowaste (NPK, ChDS,  $\text{NH}_4$ ,  $\text{NH}_4\text{-N}$ , S);
- Qualitative and quantitative water research;
- And much more...

# Contact details of Agrobiology Laboratory



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