



NEWSLETTER #20 LITHUANIA

11 July 2024

Every two weeks, this newsletter will be prepared by a different Alliance member.

Today we are happy to share a contribution from [Vytautas Magnus University \(VMU\), Agriculture Academy](#), in Lithuania.

Precision agriculture to combat mycotoxin contamination in cereals and reduce pesticide application

Researchers from Vytautas Magnus University (VMU), Agriculture Academy (Lithuania) together with partners from Aristotle University Thessaloniki (AUTH, Greece), Swedish University of Agricultural Sciences (SLU, Sweden), Soluciones Agrícolas de Precisión S.L. (Agrosap, Spain), University of Sevilla (USE, Spain) are carrying out the POSHMyCo project coordinated by Ghent University (UGent, Belgium). The ERA-NET COFUND ICT-AGRI-FOOD project “POSHMyCo: Potential of selective harvest based on mycotoxins content assessment in cereal crops” aims establishing for the first time a novel solution to reduce the risk of mycotoxin contamination in food products originated from barley and wheat grains by adopting smart farming technologies. This is expected to maximize the crop yield price, while minimize the risk to human health and livestock.

POSHMyCo aims to increase farm profitability and reduce the environmental footprint and human risk associated with the consumption of unhealthy food products derived from barley and wheat grains. A system for predicting and detecting the spatial distribution of Fusarium head blight (FHB) in the field is being developed to predict the spatial distribution potential of mycotoxin contamination. Preventive, site-specific spraying of Fusarium fungicides aims to reduce the risk of crop infection with FHB during the growing season, thereby reducing the risk of mycotoxin contamination of harvested grain. Selective harvesting allows the harvested grain to be sorted into three categories: healthy, low/moderate and contaminated.

For more information, please visit www.poshmyco.eu.



Wheat scanning in Experimental Station of Vytautas Magnus University Agriculture Academy, Lithuania

Robotic technologies for weed control in organic sugar beet production

Scientists from the Faculty of Engineering, Vytautas Magnus University, Agriculture Academy have conducted research in commercial fields to assess the environmental impact of robotic technologies in organic sugar beet production. An autonomous solar-powered robot was used for direct seeding of sugar beet and mechanical weed control (WC) in intra- and inter-rows. The application of robotic technology in organic sugar beet sowing and WC operations resulted in a significant reduction in human labour time and GHG emissions compared to conventional technology used on organic farms. In addition, experimental field studies using different WC methods showed that robotic technology had less negative impact on soil physical properties and that the effectiveness of WC was higher than that of conventional WC measures used in organic farming.

The articles based on these studies can be found here:

- <https://www.mdpi.com/2073-4395/12/7/1514>
- <https://www.sciencedirect.com/science/article/pii/S2666789424000242>

Contact : [Indre Bruciene](#)



An autonomous solar-powered robot for direct seeding of sugar beet and mechanical weed control used for experiments in Lithuania.

5th International Scientific Conference AgroEco2024: “Agroecosystem Sustainability: Links between Carbon Sequestration in Soils, Food Security and Climate Change” Vytautas Magnus University Agriculture Academy, 6-18 October 2024, Kaunas, Lithuania

The 5th International Scientific Conference AgroEco2024: Agroecosystem Sustainability: Links between Carbon Sequestration in Soils, Food Security and Climate Change will be held at Vytautas Magnus University, Agriculture Academy, Lithuania, October 16-18th, 2024. The conference is organised to celebrate 100 years of Agriculture Academy in Lithuania (1924-2024).

Main scientific topics of the AgroEco2024 conference are:

- Soil health and carbon sequestration for sustainability
- Soil and crop management towards a chemical pesticide-free agriculture
- Biodiversity, crop and production diversification
- Precision farming and digital technologies
- Food quality and safety
- Climate change adaptation and mitigation

Important dates and deadlines:

Call for Abstracts - until **September 15**

Early-bird registration - until **September 15**

Late registration - until **October 1**

The opening of the conference, sessions and seminars - **October 16-17**

Scientific field expedition - **October 17**

Further information can be found on the [conference website](#).



12th International Scientific Conference Rural Development 2025: Resilience to Global Change Vytautas Magnus University, Agriculture Academy, Lithuania, 1st-3rd October, 2025

We are pleased to invite you to participate in the 12th International Scientific Conference “**Rural Development 2025: Resilience to Global Change**”. It has already become a biannual tradition to meet colleagues and partners from all over the world here. Our topic, “Resilience to Global Change,” underscores the need for robust strategies and collaborative efforts to enhance the adaptability and sustainability of rural regions and bioeconomy businesses. Resilience is not merely about survival; it is about embracing change, leveraging strengths, and forging pathways to a prosperous and sustainable future.

In this conference, we will hear from experts across various fields - agriculture, food, forestry, IT, ecology, technology, economics, and management sciences - who will share their insights and experiences. We will engage in discussions and workshops that will challenge our thinking and inspire new approaches. Together, we will explore solutions that can empower bioeconomy businesses and rural communities to overcome adversities and harness the potential of global changes.

We encourage each of you to actively participate, share your perspectives, and collaborate with fellow attendees. It is through our collective effort and shared knowledge that we can build resilient bioeconomy businesses and rural communities capable of facing the challenges of today and tomorrow.

More information can be found on the [conference website](#).



This is the newsletter of the European Research Alliance Towards a chemical pesticide free agriculture
Visit the Alliance's website: <https://www.era-pesticidefree.eu/>

This issue has been prepared by [VMU Agriculture Academy](#) as a member of this Alliance.

If you would like more information about this issue, feel free to [contact them](#).



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