

Lantmännen's From Field to Fork Scholarship awarded to thesis on innovative sensor technology

The From Field to Fork scholarship is part of Lantmännen's long-term collaboration with students at the Swedish University of Agricultural Sciences (SLU) and the Ultuna Student Union. The annual scholarship aims to highlight and reward students and alumni for academic work that contributes to the development of Swedish agriculture — with a focus on both profitability and sustainability.

This year's scholarship is awarded to Johanna Forss for her master's thesis "Estimation of Ley Quality with the Arable Mark 3 – A Commercial Field Spectrometer."

"We are very pleased to award this year's From Field to Fork scholarship to Johanna. Her thesis is both innovative and grounded — in more ways than one. It demonstrates how digital tools can make a tangible difference in practice, improving productivity, increasing efficiency, and reducing climate impact," says Patrik Myrelid, Director Group Strategy at Lantmännen.

Lantmännen is deeply committed to exploring how technology and innovation can support the sustainable development of agriculture, and the From Field to Fork scholarship reflects that commitment.

"We believe it's important to support young talents who dare to think in new ways in areas where there is strong potential, but where tools are still lacking. Johanna's work exemplifies how science, innovation, and practical application can come together — exactly what this scholarship is meant to encourage," adds Patrik Myrelid.

From Theory to Practical Use in the Field

In her master thesis, Johanna analyses whether sensor technology — specifically the spectrometer Arable Mark 3 — can be used to estimate the nutritional value of ley directly in the field. This would allow farmers to harvest at the optimal time.

"Ley is Sweden's most widespread crop, and we see great potential for growth in Swedish livestock production. With strong animal welfare, clean water, solid environmental conditions, and highly skilled agricultural businesses, this work is both timely and important. It highlights how technology can help strengthen an already strong segment of Swedish agriculture," says Peter Annas, Managing Director Lantmännen Machinery.

Increased Profitability, Productivity, and Sustainability Through Sensor Technology and Data-Driven Decisions

Johanna's master thesis shows that the timing of harvest is crucial in ley cultivation. Farmers must balance yield and nutritional quality. By using sensor technology that measures nutrient content in real-time, decisions when to harvest can be based on field-specific data instead of traditional estimations.

"In the short term, such a tool could improve ley quality and increase forage value. Profitability and productivity on the farm would improve, while climate impact is reduced. In the longer term, it enhances the economic value of ley in crop rotations, improving soil health and yield

levels,” says Johanna Forss.

More information

Motivation

“This year’s thesis is, quite literally, close to the ground — addressing one of Swedish crop production’s largest and most complex crop types with both technical insight and practical relevance. The work is forward-thinking, and the scholarship recipient shows in an exceptional way how digital tools can support decision-making in ley cultivation, with the potential to improve quality, sustainability, and profitability within Swedish ley cultivation.

The master thesis is both scientifically robust and practically applicable, contributing to the development of ideas and knowledge that create added value and sustainability throughout the value chain from field to fork. It lays the foundation for profitable Swedish agricultural businesses, an initiative the From Field to Fork scholarship aims to encourage.”

Scholarship Committee

The committee includes the following members: the chairman, secretary, inspector, and industry liaison of ULS (Ultuna Student Union), as well as two representatives from Lantmännen.

Thesis

Johanna Forss master thesis can be downloaded [here](#).

For more information, please contact:

Lantmännen’s Press Service

Phone: +46 10 556 88 00

E-mail: press@lantmannen.com

About Lantmännen

Lantmännen is an agricultural cooperative and Northern Europe’s leader in agriculture, machinery, bioenergy and food products. Owned by 17,000 Swedish farmers, Lantmännen has 12,000 employees, operations in over 20 countries and an annual turnover of SEK 70 billion. With grain at the heart of the operations, Lantmännen refine arable land resources to make farming thrive. Some of Lantmännen’s best-known food brands are AXA, Kungsörnen, Scan, GoGreen, FINN CRISP, Schulstad and Vaasan. The company is founded on the knowledge and values acquired through generations of farmers. By engaging in research, development and operations throughout the value chain, Lantmännen takes responsibility from field to fork. For more information: www.lantmannen.com