Conventional Arable Farming Systems vs. Controlled Row Farming (CRF)

Name of the Organisations Involved

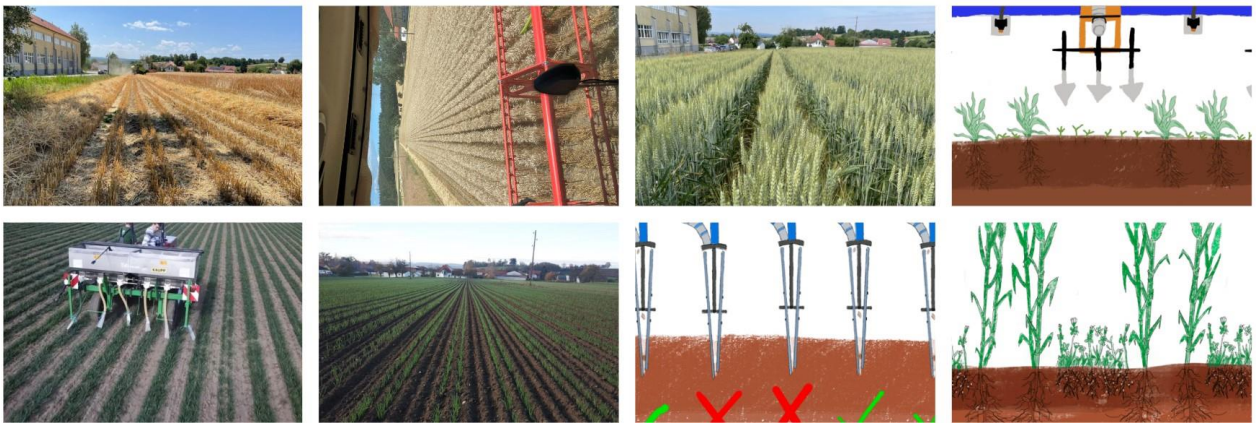
- Innovation Farm in Mold, Austria

Challenges Identified

- Traditional farming methods often lead to inefficient use of plant protection products, resulting in higher costs and potential environmental impact.
- Also, conventional farming practices often lack precision in crop management, resulting in suboptimal resource use and potential yield loss. Ensuring that agricultural practices are applied uniformly throughout the farm at all times can often be a challenge with traditional methods.
- Farmers face barriers to adopting new technologies, including the cost of upgrading machinery and the need for training.

Goals and Solution

The aim is to implement the new arable farming system Controlled Row Farming (CRF) using tried and tested technology and Real-Time Kinematic (RTK) positioning guidance systems, making it applicable to all of the farm's main crops. CRF aims to use band spraying to achieve savings in plant protection products while maintaining the same yield. Additionally, it seeks to enhance the preceding crop effect by sowing clover between the rows.



Pictures source: Innovation Farm, Link: https://www.innovationfarm.at/projekte/vergleich-von-herkoemmlichen-ackerbausystem-zu-controlled-row-farming/

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Actions Taken

The measured field is divided into two plots. One plot is cultivated using the conventional arable farming system, and the second plot is sown in double rows with a row spacing of 50 cm. The area between the rows is then cultivated using hoeing technology, and the rows are treated using band spraying. In spring, a clover mixture is sown between the rows.

Benefits and Impact

The project addresses the following questions:

- How can double rows of cereals be best planted using conventional technology?
- How can the conventional crop protection sprayer be converted to band spraying?
- How can the clover mixture be sown into the existing crop?
- How can lane planning or row planning be organized efficiently?
- How much labour is involved for the farmer compared to the conventional method?

All benefits and results will be reported in 2025.

Contact Information

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Author of the Good Practice

Wolfgang Eisenreich (WIN)

Application Area

☒ Plants

Digital Technology in the Value-Chain

☒ Agricultural Inputs and Services ☒ Agronomic Services

Digital Technologies

☒ Robotic and Automation

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