

MSc Thesis Opportunity (WUR & University of Göttingen)

Standardised Testing of Crop Protection Practices

As agriculture shifts toward more diverse and ecological systems, effective crop protection becomes increasingly important. At the same time, the number of crop-protection technologies has grown rapidly, creating more options but also more complexity in decision making for farmers. Without a standardized way to compare performance, it is difficult to judge which approaches truly work, despite strong claims from manufacturers.

A current project at the University of Göttingen is developing a method for standardized testing of crop-protection efficiency. Within the CropMix project at WUR, we see similar challenges in alternative crop protection strategies, which offer ecological benefits but lack guidance on the most effective strategies. This MSc thesis project brings these efforts together. You continue working standardized testing framework and build a proof-of-principle for an additional crop protection practice (mulches, under sowing, mechanical weeding).

Your Role

You will contribute to designing a robust, scalable approach to test crop protection strategies.

- Consider the specific agronomic and engineering challenges of crop combinations and spatial variability in strip cropping.
- Determine relevant performance indicators (e.g., weed suppression, soil disturbance, selectivity, operational feasibility).
- Propose a standardized testing framework and test this for one crop protection practice. , adapted, or redesigned of the practical, structured testing protocol for additional crop protection practices.

Supervision & Collaboration

The thesis will be supervised jointly by:

- Hannes Meyer, Agricultural Technology, Georg August University of Göttingen
- Lisa Marijke van den Berg, Agricultural Biosystem Engineering Group, Wageningen University & Research; Industrial Engineering & Innovation Sciences, Eindhoven University of Technology

This project directly aligns with the ongoing work of FarmerSpaceAI and CropMix, offering you a chance to integrate your thesis into a broader research effort. The project is part of the CLAAS Stiftung Twinning Program, supporting innovation and international collaboration in agricultural engineering. Work location can be arranged flexibly and includes (part of) your work in Göttingen, depending on your preferences and the supervision plan.