

## **MSc Thesis Opportunity (WUR & University of Göttingen)**

### **Precision Harvesting in Organic Farming: Crop Quality Assessment through Multispectral Sensing**

In organic farming, options for precision management are limited with fewer targeted interventions and highly variable field conditions. Common precision-agriculture approaches often do not work effectively for organic systems. Yet, there is a growing need to differentiate crop quality at harvest, especially for wheat, where protein levels determine whether a crop is suitable for human consumption or animal feed.

In an ongoing project, Anna Hilda Prasun is developing a method to assess wheat protein levels in organic fields using multispectral drone data, providing insights for precision harvesting decisions. To expand this research, we are looking for an MSc student who will extend and apply the underlying concept to additional crops.

#### **Your Role**

In this MSc thesis project you will:

- Conduct an exploration of other crops where precision harvesting could add value in organic arable farming.
- Identify meaningful quality indicators for these crops and how these parameters can be measured geospatially on-field.
- Build on the proven principles of the wheat study and explore opportunities to apply precision-harvest concepts for one of the promising crop-parameter combinations.
- Analyse and interpret your findings to evaluate the potential for precision harvesting in organic systems.

#### **Supervision & Collaboration**

The thesis will be supervised jointly by:

- Anna Hilda Prasun, 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 Anna Hilda Prasun, 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 experiments or modelling work in Göttingen, depending on your preferences and the supervision plan.