

Host characteristics of known and novel cover crops for soil-borne potato pathogens in Norway

Are you interested in sustainable agriculture and soil and plant health research?

This is your chance to contribute to important research on soil-borne potato pathogen management in Norway.

Objective:

The objective of this thesis is to evaluate the host characteristics of cover crops in relation to common soil-borne pathogens affecting potatoes in Norway. Potatoes are highly susceptible to a variety of soil-borne pathogens and understanding how cover crops interact with these pathogens is key to support the widespread adoption of cover crops in Norway. This research is especially relevant in the context of climate change, as it aims to enhance soil health and improve disease management strategies through effective cover crop management in Norwegian potato farming.

The focus of the project will be to identify which cover crops — both traditional and new — can host pathogens during the fallow period, potentially influencing their survival and activity. The student will engage in both field and laboratory research to investigate the behaviour of pathogens in the presence of different cover crops, as well as their impact on potato.

Research Aims:

- Investigate the host characteristics of selected cover crops in relation to soil-borne potato pathogen and relate your findings to existing literature
- Evaluate the ability of different cover crops to suppress or support soil-borne pathogens
- Contribute to the selection of the most effective cover crops for potato pathogen management in Norway

Key Responsibilities:

- Analyse soil samples to assess pathogen loads and identify key interaction mechanisms with cover crops
- Conduct lab bioassays to evaluate the growth and development of cover crops in presence of pathogens
- Collaborate with other researchers and experts in plant pathology, agronomy, and sustainable agriculture practices

Ideal Candidate:

- A background in plant science, agronomy, plant pathology, or a related field
- A strong interest in soil health, plant pathology, and sustainable agricultural practices
- Analytical thinking, good laboratory skills, and enthusiasm for field-based research
- Previous experience in soil or plant research is preferred

Why Join Us?

- Contribute to pioneering research with direct benefits for potato farming in Norway
- Gain practical experience through both field experiments and laboratory analyses
- Work in an interdisciplinary and supportive research environment
- We are seeking motivated candidates who are interested in continuing their work at NORSØK after successful thesis submission

Application Deadline: 20.02.2025

For more information or to apply, please contact: maximilian.koch@norsok.no