

Cover crops in the Nordic countries—Soil C, N management and greenhouse gas emissions

course code: P000078

To ensure that the soil is covered with vegetation during autumn is an important adaption of the cropping systems to a changing climate, where soils will be more exposed to degrading processes and extreme weather conditions. Cover crops contribute to soil fertility, soil carbon sequestration, reduced nutrient losses and other services linked to resilience of soils.



Photo: Peter Sylwan

This course (2 credits) is a one-occasion course held in September-October 2024 with contributions of researchers from Sweden, Norway and Denmark. Lectures and field visits will provide insight into current research and methodology for studying the role of cover crops and other type of vegetation during autumn and winter, for flows and storage of carbon and nitrogen in soils. The course will also include management strategies to maximize C storage and reduce N-losses by leaching and N₂O-emissions.

Content and course set-up

On-line seminars (in total 5) led by invited lecturers in collaboration with the students will focus on the following themes:

- Cover crops for reduced eutrophication
- Cover crop biomass, carbon inputs and stabilisation in soil
- Cover crops and N management
- Effects on N₂O emissions
- How to assess long-term carbon storage?

In addition there will be a physical meeting (from lunch 15th until lunch 17th of October 2024) with students' oral presentations, field visits and dialogues with researchers and practitioners

Course venue

The seminars will be held on-line, between 19th of September 31th of October

The venue for the physical meeting (15th -17th of October) is SLU campus Alnarp in Sweden, which is quite close to Malmö central station and about one hour travel from Kastrup airport.

Prerequisites and access

The attendants must be accepted as PhD students and should preferably have a background in Soil Sciences, Soil Biology, Ecology, Agroecosystems, or similar

Application

Potential applicants should send an e-mail to helena.aronsson@slu.se no later than 2024-06-16. In the subject line, please give the *course code* "P000078", and in the text body, include the following details: *your name, affiliation, and the title of your PhD project*

Webpage

The course syllabus can be find here: <https://www.slu.se/en/education/programmes-courses/course/P000078/F0009.2425/Cover-crops-in-the-Nordic-countries-Soil-C-N-management-and-greenhouse-gas-emissions/>

During the course, the Canvas platform will be used for distribution of course literature.