

SLUkurs

Syllabus

PNS0009 CROP PHYSIOLOGY and NUTRITIONAL QUALITY, 4.5 credits

Syllabus approved

2004-09-03

Subjects

Crop Production Science

Education cycle

Third cycle

Grading scale

Pass / Failed

The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

English

Prior knowledge

Admitted to the PhD education

Objective, including learning outcomes

The aim is to learn about how basic phenomena of crop physiological and external factors together determine the crop yield and nutritional quality.

As a special topic, the student will apply a theory for nitrogen supply in relation to plant growth, to achieve defined plant nitrogen levels. The student will build and apply a dynamic simulation model to design fertilisation regimes, and control the cultivation in Uppsala, on distance, by communication and lectures over the WEB.

Content

Plant photosynthesis and respiration and the relation to climate conditions

- Crop physiology and resource capture
- Crop phenology and development in relation to climate conditions
- Plant development in relation to cold temperatures
- Biochemical aspects of plant nutrient content
- Plant nutrition on whole plant level
- Grain nitrogen accumulation and protein composition
- Modelling growth, plant N, phenology and crop protein composition
- Cultivation of plants in a nutritional experiment

Requirements for examination

Poster presentation of own research work will be included in order to get the training, have the poster evaluated, and inform others about own research. The poster presentation is a prerequisite for full credits of the course.

Additional information

<http://www.evp.slu.se/Projekt/NOVA2005/invitation.pdf>

Responsible department

Department of Crop Production Ecology