Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Syllabus

PNS0096 Exploring tradeoffs around farming livelihoods and the environment - using farming systems modelling, 3.0 credits

Syllabus approved

2012-05-08

Subjects

Agricultural 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

PhD students with an interest in natural resource management are welcome to participate. Also other researchers (non-PhD students) interested in natural resource management are very welcome to participate in the intensive week/workshop 13-17 August 2012 subject to availability.

The PhD students should have knowledge in agronomy or equivalent corresponding to an MSc.

Objective, including learning outcomes

The aim of the course is to:
(i) present the state-of-the-art in resource management in general and nutrient management in particular within in a smallholder context,
(ii) introduce simulation modelling, concepts of farming systems and farm typologies, and
(iii) introduce and aid participants to explore the NUANCES framework through hands-on case studies.

Content

Prior to the workshop the participants will read the assigned literature and complete a pre-course assignment describing own work in relation to natural resource management.

The first three days of the workshop will contain lectures and exercises where farming systems analysis and modelling will be presented, and the NUANCES framework presented and explored as an example. Contents will include how the FARMSIM tool can be used to analyse interactions in crop-livestock systems, explain long-term consequences at the farm level of resource allocation on productivity of crop-livestock systems, and how to use indicators to evaluate management scenarios.

The two last days of the workshop will be spent on hands-on case studies where participants can use own data if available. This will allow participants to start using the whole framework or the sub-models FIELD, LIVSIM and/or HEAPSIM, depending on their own research area, and to evaluate whether farming systems analysis in general and the NUANCES framework in particular can be used to answer their research questions.

After the workshop the participants will complete a post-course assignment expanding their pre-course assignment by reflecting upon how the knowledge obtained during the workshop has changed/adjusted their views of natural resource management, and describe how farming systems analysis can be used or why it will not be useful in their present research.

Requirements for examination

Approved written pre- and post- assignments and active participation in course exercises and discussions.

Additional information

The course is given by the Graduate School NRML (Natural Resource Management and Livelihoods in International Development).

Course will be given as an intensive workshop 13-17 August 2012 with literature to be read before the workshop.

The workshop will be led by Dr. Mariana Rufino, International Livestock Institute (ILRI), and Prof. Pablo Tittonell, Wageningen University, both members of the team that developed the NUANCES framework. The pre- and post-assignments will be handled by Dr. Sigrun Dahlin (Department of Soil and Environment, SLU).

Responsible department

Department of Soil and Environment