



Independent project/ degree project

Title:

Improving productivity and sustainability of smallholder farmers in Kenya and Uganda through evaluation of soil fertility in Integrated Soil Fertility Management systems

Credits: 30

Level: Bachelor or Master

Subject: Soil Science/Biology/Environmental Science

Programme: Agronomprogrammet (mark/växt), Naturresursprogrammet. The studies can be carried out as MFS, BSc, or MSc.

Start: autumn 2011 or spring 2012

Description:

Smallholder farmers in sub-Saharan Africa (SSA) are reliant on nutrient-poor soils. The productivity is declining due to intensive farming, related to a high population growth and absence of fallows that partly can restore soil nutrient status.

Researchers from the Department of Soil and Environment are, in collaboration with international research institutes in Africa (CGIAR), researching in the field of soil and crops for smallholder farmers in Kenya and Uganda. Through this collaboration, students can carry out studies on soil fertility, crop production, crop protection and rural development.

Focus of student projects can be:

- Integrated Soil Fertility Management (ISFM) practices to improve rural livelihoods in Kenya and Uganda
- role of dual-purpose soybeans in improving soil fertility through N-fixation capacity, organic inputs, nutritional benefits, etc.
- role of soybeans in reduction of Striga weed seed bank through suicidal germination
- organic matter management to improve soil fertility
- production and utilization of bio-char as a soil amendment

Activities may include on-farm, field trials, greenhouse experiments and modeling of soil carbon balances.

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