

1 PhD student in the research education subject: Soil Science, oriented to plant nutrition

Improved fertilisation effect of manure with different treatments

Improved plant nutrient efficiency in agriculture is a key issue for a sustainable food security. The nutrient utilization is particularly low in manure fed cropping systems and has a large potential for improvement which would result in lower dependency of fertilizers produced from fossil resources, and less leakage of nutrients to the environment. Cattle slurry is typically an example of manure with very low fertilization effect compared to its nutrient content. This can partly be explained by high carbon content, promoting microbial immobilization and partly by often high ammonia emissions. By processing the manure in different ways, there are possibilities to change the composition and properties of the manure so that the risk of its unwanted effects is significantly reduced.

This project will study how biological and chemical processes after slurry application are affected by different slurry treatments such as anaerobic digestion, slurry separation and acidification and how combinations of treatments together with improved application technology can improve the nitrogen fertilization effect. The project will combine laboratory experiments with field trials and studies of systems at farms. The effect of different tools and the combination of them on nitrogen efficiency will be studied at farm and field level for different crops.

Qualifications

We are looking for a very motivated and enthusiastic candidate with a master degree in agronomy, soil science or similar. You should be interested in agriculture both from a practical and scientific standpoint. Drivers licence for car is mandatory. Good knowledge in chemistry and microbiology is meriting and in English mandatory. Personal skills, such as ability to work independently as well as in groups is highly valued.

Forms for funding or employment

Employment as PhD student

SLU is an Equal Opportunity Employer.

A person has basic eligibility for third cycle education if he or she has taken a second cycle qualification or has completed course requirements of at least 240 higher education credits, including at least 60 higher education credits at second cycle education. Upper secondary school grades equivalent to English B/English 6 are a basic requirement.

Selection among applicants meeting the requirements is made with reference to written application including curriculum vitae, copies of degrees and transcripts of academic records, one copy of the dissertation for masters or undergraduate degree, a list of at least two references familiar with the applicant's qualifications, certified knowledge of the English language and an interview.

Read about the PhD education at SLU at www.slu.se/en/phd

Use this [APPLICATION FORM](#)

Further information:

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Applications, marked with **ref no SLU ua**

2017.2.5.1-4170, must have arrived at the Registrar of SLU, P.O. Box 7070, SE-750 07 Uppsala or registrator@slu.se no later than **2018-02-15**.