UNIVERSITY OF WATERLOO

ENVIRONMENT

GRADUATE STUDENT ASSISTANTSHIP (Ph.D.):

Effect of elevated CO_2 on soil carbon and nitrogen transformations in cereal-legume intercrops

Supervision: Prof. Maren Oelbermann, University of Waterloo, Waterloo, ON, Canada

Application Deadline: February 01, 2013

Project: The goal of this project is to evaluate the long-term effect of elevated CO_2 concentrations and temperature on soil carbon and nitrogen transformations in cereal-legume intercrops. The research will include analysis of soil chemical and biological characteristics, and use of novel $\delta^{15}N$- and $\delta^{18}O$-N_2O stable isotope techniques. The candidate will have an opportunity to further develop this research in close association with the supervisor, which may include an in-depth evaluation of soil-plant relationships, changes in soil microbial community dynamics, and / or use of an empirical model to predict changes in soil carbon and nitrogen under future climate change scenarios in complex agroecosystems.

Qualifications: Applicants should possess a master's degree with a strong background in the biophysical sciences (soil science, agriculture, environmental science, or related fields). Strong written and oral communication skills are essential. The applicant should be eligible for NSERC or other major scholarships.

Stipend: $20,000/year for 3 years. Additional scholarships, including entrance scholarships, research assistantships or teaching assistantships may also be available for qualified applicants.

Start Date: September 1, 2013

For Further Information Contact:

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