

# Soil, Plant, and Gas Sampling and Processing Technician

## Undergraduate Summer Research Student Position Announcement

Applied Soil Ecology Laboratory of the Department of Soil Science, University of Manitoba, Canada

**Project title:** Development of Greenhouse Gas Neutral Agricultural Systems

**Project description:** The Soil Ecology Laboratory is currently looking for highly motivated hands-on students who enjoy working outdoors and a part of a team. The student will work on several projects examining best management practices to reduce greenhouse gas emissions from soil and animal manures. Projects include fertilizer and past manure applications to soil and its effect on nitrous oxide (N<sub>2</sub>O) emissions, effect of cattle diet on manure properties and greenhouse gas emissions, the benefit of cover crops to reduce N<sub>2</sub>O emissions, as well as projects involving the source, timing, and placement of various fertilizers in corn and canola to reduce N<sub>2</sub>O emissions. Please see [www.soilecology.ca](http://www.soilecology.ca) for more information on the research in the Applied Soil Ecology Laboratory.

**Qualifications:** Enrolled in Agroecology, Agronomy, Biology, Engineering, Environment, Physical Geography, or Soil Science. Preference given to those in senior years with excellent academic achievement. Previous field/farm experience is an asset. Ability to follow detailed instructions and attention to detail an asset. Enjoys working outdoors. Valid Manitoba Driver's license necessary.

**Duties and responsibilities:** The student will be responsible for assisting graduate students and Senior Technicians in small scale research field plot maintenance, soil, manure, plant and greenhouse gas sampling. Laboratory duties include preparation of gas storage vials, soil grinding and extraction, plant grinding and plant threshing. Ensuring proper documentation of soil, plant and greenhouse gas samples and making sure field equipment is in proper working order. Individuals will report daily to a Senior Greenhouse Gas and Field Technicians.

**Skills and benefits to be gained from this position:** Methods for analysis of various greenhouse gases, determination of greenhouse gas

fluxes using chambers, soil sampling, plant sampling / preparation for analysis, trouble shooting techniques and working in teams. Introduction to the set up and maintenance of small scale agricultural research plots.

**Supervisor:** Professor Mario Tenuta, Applied Soil Ecology Lab, Department of Soil Science, Faculty of Agricultural and Food Sciences

### Job Terms

**Number of Jobs:** TBD

**Job dates:** May 3 to August 27, 2021

**Hours/week:** 35

**Salary:** Faculty pay scale dependent on program year

**Location:** Ellis Bldg, UM and frequent day trips to rural field sites

**Other info:** Transportation vehicle provided

### How to Apply

**Applications accepted from:** February 5 to March 2, 2021

**University Level:** Undergraduate

**Application method:** E-mail

**Required application materials:** Cover letter, resumé, academic transcript, a statement indicating the school, program, and year that you are currently enrolled in, and the names and contact information of three (3) references who have agreed to be contacted.

**Notification process:** email application materials to Brad Sparling, lead Gas Analyst and GIS Research Technician, Applied Soil Ecology Lab at [Brad.Sparling@umanitoba.ca](mailto:Brad.Sparling@umanitoba.ca)

Please note that our ability to offer employment is contingent on changes in the restrictions as per the University's SARS-CoV-2 biosafety protocols.