

# THE SOILED PROFILE



## NEWSLETTER DEPARTMENT OF SOIL SCIENCE UNIVERSITY OF MANITOBA “bringing you the latest dirt”



UNIVERSITY  
OF MANITOBA

For general inquiries or if you have material to include in the newsletter:

Lynda Closson  
University of Manitoba  
Room 362 Ellis Bldg  
Winnipeg, MB R3T 2N2

Phone: 204 474-8153, Fax: 204 474-7642  
Email: [lynda.closson@umanitoba.ca](mailto:lynda.closson@umanitoba.ca)  
Past issues of the Soiled Profile are on our  
webpage: [umanitoba.ca/afs/soil science/](http://umanitoba.ca/afs/soil%20science/)

9 June 2017

### Upcoming:

Friday, June 9 – Special Event at Investors’ Group Field. **Parking restrictions will be in effect for W lot starting likely at 5:30 p.m.**

Thursday, Jun 15, 9:00 a.m. – **Annual shed clean-up day. This is next week!** We need more people on the sign-up sheet in the main office. All PIs must either be present or delegate responsibility for sample storage/disposal decisions. Currently we do not have all research programs represented. Please address this right away. Remember that we also need a head count so that there is enough pizza ordered for everyone.

### Department Staff Away:

Martha Blouw	June 5-9
Lynda Closson	June 30-July 24 (vac)
Wole Akinremi	June 10-15 (CSSS), June 16-17 (vac)
Brian Amiro	June 19-21 (vac), June 26-27 (vac), July 4-7 (vac)
Paul Bullock	July 10-18 (vac)
Don Flaten	June 27-28 (Toronto), July 3-7 (vac), July 17-20 (Minnesota)

### News:

#### *Soil Science Shed Security*

In the past 2 weeks, there have been several instances when the overhead door on the east side of the shed was left open and the man door on the south unlocked with no one working inside. If you open a door in the shed, you need to ensure it is closed and locked again before you leave. We all need to be diligent about doing everything possible for security purposes and to prevent tools and equipment from being stolen. If you have any concerns about shed security or ideas for how we can improve it, please come to the Technician meeting on Monday, June 12 at 8:30 a.m. in Room 375 when shed security will be discussed or send the information to [Trevor.Fraser@umanitoba.ca](mailto:Trevor.Fraser@umanitoba.ca) or [Paul.Bullock@umanitoba.ca](mailto:Paul.Bullock@umanitoba.ca).

## *Soil Science Graduate Convocation*



The convocation ceremony that included Soil Science graduate students Timi Ojo (PhD), Mick Runzika (MSc), Kamala Sapkota (MSc) and Megan Westphal (MSc) was the morning of Thursday, June 8. Congratulations to all!

### *Live Well at Work Week - June 19-23*

All faculty and staff are invited to participate in this year's Live Well @Work week at the Fort Garry and Bannatyne campus, June 19 to 23. The Live Well @Work week includes 20 workshops that focus on the 'whole selves' that faculty and staff bring to work each day.

Most events run between 12:00 and 2:00 p.m., and this year, participants are encouraged to book their attendance at a workshop as training/professional development. Ultimately, Live Well @Work ties into the overall Live Well initiative, a webhub that gathers health and wellness resources at the U of M, and Success through Wellness: U of M's Mental Health Strategy. Together, these efforts support the university's goal to create an outstanding learning and working environment.

All staff are encouraged to take advantage of this packed week of interesting events! For a complete list of Fort Garry and Bannatyne events, see: <http://umanitoba.ca/livewell/atwork>.

### *Paper of the week:*

Dian Fiantis, Malik Nelson, Jusop Shamshuddin, **Tee Boon Goh**, Eric Van Ranst. 2016. Initial Carbon Storage in New Tephra Layers of Mt. Talang in Sumatra as Affected by Pioneer Plants. *Comm. Soil Sci. Plant Anal.* 47(15): 1792-1812.

## Opportunities:

### **Research Technician, University of Guelph, Ridgetown Campus**

The Research Technician is responsible for providing technical expertise for all facets of the Nitrogen Fertility and Cover Crop Management program at the Ridgetown Campus. The program focuses on cropping systems research on vegetables and low acreage crops (seed corn, sugarbeets) with an emphasis on cover crops, nitrogen dynamics and soil health. The position is fully responsible for effective development and execution of approx. 6 to 10 crop research projects including planning, organizing, implementation, delivery and quality control of research (approx. 1,600 field small plots annually) from land preparation to crop planting and harvest. The incumbent is also responsible for ensuring proper calibration and use of agricultural research equipment (planters, sprayers and combine data logging equipment); maintaining and improving agricultural field equipment and research land; operating and maintaining laboratory equipment; liaising with farmer co-operators; data collection and some analysis; and providing teaching support in the off-season months. Lastly, the position is responsible for hiring, training, and supervising 1 to 5 seasonal research assistants/students and training graduate students.

Requirements for the position include: a Bachelor of Science in Agriculture, Soil Science, or related area and two years of previous relevant experience or the equivalent education and experience. The position requires practical in-field experience, and agricultural field research experience; a clear understanding of the principles, practices and procedures that are required to achieve precision and accuracy in agricultural research data; strong knowledge of both scientific experimentation and the use of specialized research equipment. The position requires: a valid drivers' license with preference for an AZ license; Grower Pesticide Safety Certificate; Ontario Ministry of Environmental Pesticide Applicator's License; and Emergency First Aid and CPR.

Position Number: 462-032; Classification: OSSTF/TARA, District 35 Salary Band 6\*

Salary Range: \$26.00 Minimum (Level 1), \$29.05 Normal Hiring Limit (Level 3), \$35.17 Job Rate (Level 7)

Closing date: **June 9, 2017**. To apply: <https://www.uoguelph.ca/hr/careers-guelph/how-apply>

### **Student Employment Opportunity, Biodiversity Baseline Study, Office of Sustainability, U of Manitoba**

The Office of Sustainability (OOS) is initiating a biodiversity baseline study and assessment of the river bottom forest with a focus on the vegetation and habitat of the University of Manitoba's Fort Garry Campus Point Lands, Southwood Lands, Glenlea Research Station and Ian N. Morrison Research Farm (Assessment Areas). A Request for Quotations (RFQ) has been sent out to Consulting firms. Within the RFQ, the Office of Sustainability has required that the Consultant include accommodation for student participation.

The study will include a desktop analysis as well as field investigations. The desktop analysis will include a literature review and desktop analysis of the Assessment Areas using available aerial imagery. This information will be used to develop the field investigation which shall:

- Describe the soil type.
- Assess biodiversity, habitat and long-term health.
- Describe vegetation types and their composition and condition.
- Describe the age class of trees.
- Describe the understory health.

- Verify the presence/absence of protected plant species (such as those traditionally used for medicine, subsistence and cultural purposes, and other vegetation information) and invasive species.
- Make recommendations on native conservation areas and new planting species.
- Describe evidence of wildlife species and wildlife species seen.
- Describe the habitat that supports vegetative and wildlife communities identified.
- Verify the presence/absence of protected wildlife species and species of interest (such as those traditionally used for subsistence and cultural purposes).
- Make recommendations on conserving existing vegetation in areas where it has been eroded or removed.
- Describe the types of native vegetation that should be used for naturalized areas.
- Provide GIS Mapping of collected data.

The timeline for the Study is:

- July 4, 2017 – kickoff
- September 15, 2017- field investigations complete
- December 15, 2017 – final reports

\*These dates may not reflect the actual employment period of the student.

We would like to receive resumes from interested students by **Tuesday, June 13**. Please forward them to [tamara.thomson@umanitoba.ca](mailto:tamara.thomson@umanitoba.ca). For questions, contact Tamara Thomson, Project Coordinator, Office of Sustainability, University of Manitoba, 501 Fitzgerald Bldg, 204-318-2918.

### **Agronomist / Plant Ecologist, Native Plant Solutions, Winnipeg (1 year term with possible extension)**

This position requires expertise in plant ecology, agronomy, heavy equipment use, and upland reclamation practices. Candidates must be comfortable working in the field and coping with variable weather conditions as a substantial portion of your time will be spent working outdoors during the growing season. The position requires three to five years of experience in the agricultural field and advanced knowledge of upland plant ecology.

#### Requirements

- Undergraduate or graduate degree in Agriculture, Agroecology, Plant Science, Soil Science, Plant Ecology or a related discipline
- Experience in planning and project management.
- Ability to foster key business relationships.
- Previous experience working with budgets.
- Excellent communication skills, both written and oral.
- Ability to operate heavy machinery (tractors, ATV's).
- Must possess or obtain a pesticide applicators license.

To Apply: submit cover letter (including salary expectations) and resumé for confidential consideration to the attention of Carly Bjornsson, HR Generalist, Ducks Unlimited Canada, [resumes@ducks.ca](mailto:resumes@ducks.ca).

Closing deadline: **Friday June 30, 2017** at 4:00 pm (CDT)

## **AAFC Agricultural Youth Green Jobs Initiative**

The Agricultural Youth Green Jobs Initiative offers wage subsidies for post-secondary graduates to undertake environmentally beneficial activities, services or research in the agricultural sector. Under the Green Internships Stream, internships can be four to 12 months in duration and work must start December 1. AAFC will cost share 50% of student wages up to \$16,000 for each project (AAFC will consider up to 85% to a maximum \$16,000 for not for profits on a case by case basis). Applications will be accepted until all funds have been allocated and approved on a first-come, first-served basis. Applicants are encouraged to apply early to increase chances of securing funding.

For additional information, contact Helena Marak, Community Liaison/Co-op and Job Placement Coordinator, Faculty of Agricultural and Food Sciences, (204) 480 – 1488, [Helena.Marak@umanitoba.ca](mailto:Helena.Marak@umanitoba.ca).

## **PhD Opportunity, Dept of Plant, Food, and Environmental Sciences, Dalhousie University, Truro, NS**

Examination of the temporal patterns in soil nitrogen supply, nitrogen loss potential and the role of ammonium and nitrate exposure in documenting the risk of nitrogen loss.

Supervisor: Dr. David Burton

Project Description: The potential for N loss as a greenhouse gas (N<sub>2</sub>O) or through NO<sub>3</sub><sup>-</sup> leaching to groundwater is dependent on the degree to which NO<sub>3</sub><sup>-</sup> accumulates in the soil profile, particularly during periods of high soil water content (spring and fall). The accumulation of NO<sub>3</sub><sup>-</sup> in the soil profile is a result of the asynchrony of nitrogen supply (N mineralization + N fertilization) and plant N demand. In Atlantic Canada, most N loss to air and water occurs in the fall and spring driven by hydrologic events (precipitation and thaw) triggering loss events. While this general relationship is well understood, and accepted, seldom has it been explicitly used to assess the risk of N impacts on air and water and to evaluate differential risk associated with current soil status and how various N management strategies mitigate or exacerbate those risks. This approach will also allow an assessment as how projected changes in climate will impact the risk of N impacts on air and water. This activity will measure soil N status of soils in NS and PEI, in combination with more detailed study of losses from selected management systems, to evaluate the importance of the timing of N mineralization on the potential for N losses.

Position Details: The PhD position starts September 1, 2017. To apply, please send transcripts, resume and names of two references to: Dr. David Burton, Department of Plant, Food, and Environment, Dalhousie University ([dburton@dal.ca](mailto:dburton@dal.ca)) by **July 1, 2017**. Applicants should hold a Master's degree with a strong background in natural or agricultural sciences. Expertise in agriculture, plant and soil science is desired. Annual PhD stipend: \$24,000 per year, for a maximum of two years. There are scholarship and teaching assistant opportunities to supplement the stipend above this base level.

## **Events:**

**CSSS Soil Science Education Committee, June 12, 2017, noon–1 pm, 2017 CSSS Annual Meeting, Peterborough, ON,**

Everyone is welcome! More information: [click here](#)

**Crop Diagnostic School, July 4-6 and 11-13, 2017, Ian N. Morrison Research Farm, Carman, MB**

Faculty staff and student day is **July 4** with registration cost of \$50 versus regular \$175.

For more information and to register: Call 204 945-5660 or [crops@gov.mb.ca](mailto:crops@gov.mb.ca).

**Living Soils Symposium, October 13-15, 2017, Montreal, QC**

The call for speakers is open until May 31, 2017.

Please contact: Gabrielle Bastien, Director, Living Soils Symposium Montreal, 514-616-6004, [gabrielle@livingsoilssymposium.ca](mailto:gabrielle@livingsoilssymposium.ca).

For more information, click on the link below:

[https://gallery.mailchimp.com/ca7fd4410b9dab34e3ef8b381/files/173aa9fa-5c3f-4b75-ad5e-bae1d1e40a5c/Living\\_Soils\\_Symposium\\_Montreal.pdf](https://gallery.mailchimp.com/ca7fd4410b9dab34e3ef8b381/files/173aa9fa-5c3f-4b75-ad5e-bae1d1e40a5c/Living_Soils_Symposium_Montreal.pdf)