

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:

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Past issues of the Soiled Profile are on our
webpage: [umanitoba.ca/afs/soil science/](http://umanitoba.ca/afs/soil%20science/)

29 March 2018

Upcoming:

Monday, Apr 2, 8:30 a.m., Room 375 Ellis Building – Weekly technician meeting. Please note, the meeting time is shifting to 8:30 a.m. starting next week.

Thursday, Apr 5, 12:00-1:00 p.m., Room 346 Ellis Building – Soil Science seminar series. Doubleheader. Presenters: Dr. Pooneh Maghoul, Assistant Professor and Dr. Beata Gorczyca, Associate Professor, Department of Civil Engineering, University of Manitoba. Titles, respectively, “The effect of heat and mass transfer in freezing unsaturated soils on heat loss through the below-grade building envelope.” and “Bioremediation of groundwater contaminated with chlorate and chromate.”

Thursday, Apr 5, 2:00 p.m., Room 346 Ellis Building – Department of Soil Science, M.Sc. thesis defence, Melody Caron. “Integration of Sediment Fingerprinting Techniques and Sampling Approaches within a Prairie Watershed in Southern Alberta”.

Wednesday, Apr 11, 12:30 p.m., Room 346 Ellis Building – Soil Science seminar series. Presenter: Dr. Said Nawar, Postdoctoral Fellow, Department of Soil Management, Ghent University, Belgium. Title: Proximal soil sensing for variable rate nitrogen fertilisation.

Tuesday, May 1, morning – Soil Science annual spring orientation. More details to follow.

Department Staff Away:

Wole Akinremi	Apr 23-May 7
Paul Bullock	Apr 16-27
Mario Tenuta	Apr 15-27

News:

IUSS Presidential Elections 2018

The election of the next President of the IUSS is due this year. The appointment of the President represents a total of six years commitment to the Union by serving two years each as President-Elect (2019/20), President (2021/22) and Past-President (2023/24).

Nominations should be made by two accomplished, highly-respected senior soil scientists. Full Nomination documentation should be submitted electronically to Roger Swift (r.swift@uq.edu.au) by **June 30, 2018**. A copy should also be sent to iuss@umweltbundesamt.at.

For more information, [click here](#).

Paper of the week:

Munira S, Farenhorst A. 2017. Sorption and desorption of glyphosate, MCPA and tetracycline and their mixtures in soil as influenced by phosphate. *Journal of environmental science and health* 52(12):887-895.

Opportunities:

William Wilson Muir Graduate Fellowship

The purpose of this fund is to support graduate students working in a research-based graduate program focusing on agronomy in the Faculty of Agricultural and Food Sciences. One fellowship is offered to a graduate student who:

- (1) is enrolled full-time in the Faculty of Graduate Studies, in a M.Sc. or Ph.D. degree program delivered by a department in the Faculty of Agricultural and Food Sciences;
- (2) has obtained a minimum grade point average of 3.5 (or equivalent) based on the last 60 credit hours of study;
- (3) submits an application which consists of a one to two page (maximum 500 words) description of their research interest;
- (4) submits a letter of support from their graduate supervisor or proposed graduate supervisor.

Deadline: **April 2nd, 2018**. Application forms and eligibility criteria are on the new UM Learn site.

Graduate Student Positions, Soil Ecology Laboratory, Department of Soil Science, Univ. of Manitoba

The laboratory for Applied Soil Ecology at the University of Manitoba (<http://soilecology.ca/>; Twitter @soilecologyUMan) is seeking highly motivated and talented candidates for training leading to MSc or PhD degrees. The Lab is very active in soil ecological research with state-of-the-art facilities and a diverse array of multidisciplinary projects in crop nutrient management, plant disease management, and soil ecology of major field and horticultural crops in Manitoba. The laboratory employs 4 permanent technicians, and routinely 2-3 research associates, 5-10 graduate students, and 10-15 summer students/term technicians. The University of Manitoba is in the City of Winnipeg, with a vibrant metro area of 750,000 people and is less than an hour by car to Prairie, Boreal and Canadian Shield landscapes, and the U.S.A. Positions are available starting April 2018 to April 2019. The Applied Soil Ecology Laboratory is committed to a training environment with gender equality and encouragement of participation of First Nations and Metis peoples and minorities.

Plant Parasitic Nematode Management

Students will undertake graduate research to understand host and environmental preferences, yield damage, and control strategies of plant-parasitic nematodes in the Canadian Prairie Provinces. The nematodes to be examined include members of the genus *Ditylenchus* and *Pratylenchus*. Crops examined include major field, pulse and horticultural crops grown on the Canadian Prairies. The research involves microscopic and molecular identification of nematodes. Candidates will have excellent oral and written

skills in English and have completed a 4-year equivalent BSc in the agricultural or natural sciences. Students with experience in nematology are encouraged to apply. Candidates will have excellent oral and written skills in English and have completed a 4-year equivalent BSc in the agricultural or natural sciences. Salary is \$18,500/yr for two years to MSc students and \$21,000/yr for four years to PhD students. Students who already have scholarships are encouraged to apply as a top-up salary is available to them. The training is funded by several government and industry sources to projects lead by the Applied Soil Ecology Laboratory. For more information on this opportunity please send a detailed CV, statement of relevant experience, availability, and list of three referees by email to Dr. Mario Tenuta, Professor of Applied Soil Ecology, mario.tenuta@umanitoba.ca, please use the subject heading "Graduate Studies Nematology".

Potato Early Dying Management

Students will undertake graduate research to limit yield losses from the disease, Potato Early Dying. Field research will be conducted examining treatments including fungicides, green manures, compost, and fumigation to reduce levels of the pathogen, *Verticillium dahliae* in soil, and farm surveys of disease incidence, yield and pathogens. Candidates will have excellent oral and written skills in English and have completed a 4-year equivalent BSc in the agricultural or natural sciences. Students with experience in plant pathology are encouraged to apply. Salary is \$18,500/yr for two years to MSc students and \$21,000/yr for four years to PhD students. Students who already have scholarships are encouraged to apply as a salary is available to them. The training is funded by several government and industry sources to projects lead by the Applied Soil Ecology Laboratory. For more information on this opportunity please send a detailed CV, statement of relevant experience, availability, and list of three referees by email to Dr. Mario Tenuta, Professor of Applied Soil Ecology, mario.tenuta@umanitoba.ca, please use the subject heading "Graduate Studies PED".

4R Nitrogen Management and Reduction in Nitrous Oxide Emissions

Students will undertake graduate research examining 4R Nitrogen Fertilizer Management (right source, rate, timing and placement) on canola or grain corn agronomy and N use efficiency or emissions of the greenhouse gas, nitrous oxide (N₂O). Treatments examined include the range of currently available enhanced efficiency N fertilizers as well as products under development as well as in-crop N application practices including developing passive and/or active spectral sensor approaches to optimize N application rates. Candidates will have excellent oral and written skills in English and have completed a 4-year equivalent BSc in the agricultural or natural sciences, or engineering. Candidates with experience in production agriculture are encouraged to apply. For more information on this opportunity please send a detailed CV, statement of relevant experience, availability, and list of three referees by email to Dr. Mario Tenuta, Professor of Applied Soil Ecology, mario.tenuta@umanitoba.ca, please use the subject heading "Graduate Studies 4R".

Cover Crop Agronomy and Increased Crop Nitrogen Use Efficiency

Students will undertake graduate research in the area of development of cover cropping systems in the Red River Valley region of Manitoba and benefit to fertilizer nitrogen use efficiency of crops. Benefits to be examined include reduced emissions of the green house gas nitrous oxide (N₂O), lowered residual fall soil nitrate tests, and improved coincidence of nitrogen mineralization and crop uptake. Candidates will have excellent oral and written skills in English and have completed a 4-year equivalent BSc in the agricultural or natural sciences, or engineering. Candidates with experience in production agriculture are encouraged to apply. For more information on this opportunity please send a detailed CV, statement of relevant experience, availability, and list of three referees by email to Dr. Mario Tenuta, Professor of Applied Soil Ecology, mario.tenuta@umanitoba.ca, please use the subject heading "Graduate Studies Cover Crops".

Professeure adjointe ou professeur adjoint en Ingénierie des infrastructures, constructions et équipements agricoles et agroalimentaires, Université Laval, Québec QC

Le Département des sols et de génie agroalimentaire de l'Université Laval (Québec, QC, Canada) recherche des candidates et candidats qualifiés afin d'exercer la fonction professorale dans le domaine de l'ingénierie des infrastructures, constructions et équipements agricoles et agroalimentaires. Ce poste s'inscrit dans le cadre d'une chaire de leadership en enseignement (bâtiments verts durables) dont le montage financier est actuellement complété.

Description du poste

- Enseigner et développer des cours dans le domaine de l'ingénierie des infrastructures, constructions et équipements agricoles et agroalimentaires aux niveaux des trois cycles de formation.
- Développer un programme de recherche original dans le domaine de l'ingénierie des infrastructures, constructions et équipements agricoles et agroalimentaires.
- Encadrer (direction et co-direction) des étudiants aux 2e et 3e cycles dans le domaine du poste visé.
- Participer à l'encadrement des étudiants de 1er cycle.
- Participer à la vie de l'Université Laval.

Date limite du dépôt de candidatures: **21 mai 2018**, 16h30. Date d'entrée en fonction: 1er sept 2018.

DOSSIER DE CANDIDATURE :

- un curriculum vitae détaillé
- les relevés de notes (1er, 2e et 3e cycles),
- une lettre de présentation faisant valoir vos qualifications dans le domaine d'ingénierie des infrastructures, constructions et équipements agricoles et agroalimentaires,
- deux articles scientifiques pertinents publiés récemment dans le domaine visé par le poste.
- trois lettres de référence acheminées par courriel à antoine.karam@fsaa.ulaval.ca, provenant directement des signataires.

l'attention de :Dr. Antoine Karam, Directeur, 2425, rue de l'Agriculture., Département des sols et de génie agroalimentaire, FSAA, Pavillon Paul-Comtois, Université Laval, Québec, QC, Canada, G1V 0A6

Les documents peuvent être envoyés par voie électronique à l'adresse: antoine.karam@fsaa.ulaval.ca.

Events:

2018 Joint Meeting of the Canadian Geophysical Union, Canadian Society of Soil Science, Computational Infrastructure in Geodynamics, Eastern Section of Seismological Society of America and Canadian Society for Agricultural and Forest Meteorology, Jun 10-14, Niagara Falls, ON

Online registration is now available. The following link will take you to the conference registration portal: www.regonline.ca/CGU2018.

Member rates include members in good standing (annual dues paid) of the CGU, CSSS, CSAFM or ES-SSA. CIG-affiliated attendees are expected to obtain membership in CGU – Solid Earth Section.

Not a member yet? Join here!

CGU Membership: <http://cgu-ugc.ca/aboutcgu/membership/>

CSSS Membership: <http://csss.ca/online-registration/>

CSAFM Membership: <http://csafm.ca>

ES-SSA Membership: <https://www.seismosoc.org/membership/individual-membership/>