

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/)

8 December 2017

Upcoming:

Friday, Dec 8, 12:30 p.m., Room 346 Ellis Building – Soil Science seminar series. Presenter: Dr. Alex Koiter, Department of Geography, Brandon University. Title: The Geography of My Academic Path

Monday, Dec 11, 8:30 a.m., Room 375 Ellis Building – Weekly Technician meeting. Please note, the meeting will start at 8:30 a.m. for this week only.

Wednesday, Dec 20, 12:00 noon, Room 346 Ellis Building – Department of Soil Science annual holiday potluck. There is a signup sheet in the main office. Bring your favourite dish. The band is preparing some holiday tunes. It will be another great holiday celebration. Don't miss out!

Dec 22 to Jan 1 – Winter holiday. University closed.

Department Staff Away:

David Lobb	Sabbatical July 01 – December 31, 2017
Mario Tenuta	Sabbatical July 01 – December 31, 2017

News:

Celebrate Christmas, World Soil Day and Mario's 50th Birthday with a Manitoba Kitchen Party

Friday, Dec 8 from 6 p.m. to 4 a.m. (or when WPS shuts us down), 6 Willow Creek Road, Bridgewater Trails. Dinner at 6:30 p.m. and Social Trays at 10:30 p.m. Welcome to bring alcohol, desserts and musical instruments (guitars and piano on hand). Open performance floor all night. Children's movie and craft room, helium balloons and kid food. Please no presents. All Department members and affiliates past and present welcome, RSVP not needed. #86 Bus Stop by the house. House has Christmas lights in front and a bit in back to recognize it. Let yourself into the house. If lost call 204-290-7827, in case of emergency call 911.

Seminar Attendance by Graduate Students

Please note that Graduate Students are expected to attend all Soil Science Seminars. This is important for your education.

Graduate Student Registration

All graduate students are required to register every academic term, including Fall, Winter and Summer. Students who do not register will be discontinued from their program of study. For the Winter 2018 term, ensure you are registered:

Master's Re-registration	GRAD 7020	Winter 2018	50187
Doctoral Re-registration	GRAD 8020	Winter 2018	50198

CSSS Election Results and Thanks to Outgoing Members of Council

President Noura Ziadi sends the following message:

It is with great pleasure that we announce and welcome our new President-Elect (Fran Walley), Western Councilor (Richard Farrell), and Treasurer (Edith Olson). We would also like to take this opportunity to express our appreciation for council members Maja Krzic (Past-President), Wole Akinremi (Western Councilor), and Kent Watson (Treasurer) whose terms will end on the 31st of this month. We would also like to thank Barbara Sanipelli and Steve Sheppard for their assistance with the election. As of January 1, 2018 the Council for the Canadian Society of Soil Science is as follows:

President, Noura Ziadi	Past-president, Joann Whalen	President-elect, Fran Walley
Secretary, Amanda Diochon	Treasurer, Edith Olson	Student representative, Michael Carson
Eastern Councilor, Judith Nyiraneza	Western Councilor, Richard Farrell	Journal Editor, Newton Lupwayi

Science video contest

Deadline: **Jan. 12, 2018**

http://nserc-crsng.gc.ca//ScienceAction/how_do_i_win-comment_gagner_eng.asp

Science photography contest

Deadline: **Jan. 19, 2018**

http://www.nserc-crsng.gc.ca/ScienceExposed-PreuveParLimage/how_do_i_win-comment_gagner_eng.asp

Opportunities:

Two M.Sc. Positions, Department of Biology, University of British Columbia - Okanagan

Project title: Understanding the impact of irrigation on soil carbon storage and associated greenhouse gas emissions at a regional scale. Supervisor: Dr. Melanie Jones

Two enthusiastic MSc students are sought to join an inter-disciplinary research team. Both students will assist in the collection and analysis of soil samples from non-cultivated sites and from irrigated fields, orchards and vineyards located along length of the Okanagan Valley. These students will also learn how to measure soil CO₂ and N₂O emissions at key points through the annual irrigation cycle, and will receive training in cutting-edge techniques for assessing soil properties and processes.

The first student will examine the contribution of organic C to soil C storage and CO₂ emissions. This student will learn techniques for quantifying water-stable aggregates to assess the stability of soil C pools,

and will employ novel ¹³C analyses to partition soil surface CO₂ efflux into that released by respiring roots and rhizosphere biota and that released by the decay of older soil organic carbon.

The second MSc student will focus on the inorganic soil C pool, and how it relates to total soil C storage and CO₂ emissions. This student will conduct a series of laboratory experiments to better understand how soil properties (e.g., soil texture, moisture, pH and C content) can influence the release of CO₂ from irrigation water-derived bicarbonates and soil inorganic C. This student will employ novel ¹³C analyses to partition soil surface CO₂ efflux into that released from organic and inorganic sources.

Qualifications: A background in Soil Science, Biology or Environmental Studies and a keen interest in agriculture, environmental health and ecosystem services. Valid driver's license is required.

Annual stipend: An annual stipend of \$20,000 will be provided. Scholarships are also available.

For more information about graduate studies in the Department of Biology at UBC-Okanagan, please visit <http://biol.ok.ubc.ca/graduate/biology.html>.

To apply for one of these positions: Please send your transcripts (unofficial versions are acceptable), CV and the names of two references to Drs. Melanie Jones (melanie.jones@ubc.ca) and Kirsten Hannam (kirsten.hannam@ubc.ca), and indicate which position interests you most.

Events:

Soil Fertility Refresher, Jan 24-25, 2018, 9:00 a.m. – 4:00 p.m., Brandon Ag Extension Centre

Instructors: Dr. Don Flaten (U of Manitoba) and John Heard (Soil Fertility Extension- MB Agriculture)

Contents:

1. Basic soil properties and productivity
2. Nitrogen, Phosphorus, Potassium, Sulphur, Micronutrients
 - a. Form and behaviour in soil
 - b. Nutrient uptake, function and deficiency symptoms
 - c. Fertilizer source, placement, timing and rate
3. Soil test interpretation and recommendations

Materials:

- Nutrient Management Modules, lecture notes
- Limited to 30 participants.
- Preregistration is required to John Heard, John.Heard@gov.mb.ca 204 745-8093
- For CCAs, 9 Nutrient Management CEUs and 3 Soil and Water Management CEUs are available.

Registration Cost: Mail \$100 cheque made out to Manitoba Soil Science Society to: Manitoba Agriculture, c/o Monika Menold, Box 1149, Carman, MB R0G 0J0

CropConnect Conference, Feb 14-15, Winnipeg

The CropConnect Conference is being held at the Victoria Inn Hotel in Winnipeg. New this year to the conference is a poster session during the morning nutrition breaks. To accompany the poster presentations, a reduced student registration fee has been added to the registration page for those students

interested in participating, however, the poster session is not restricted to students. Anyone with valuable research to share is more than welcome to submit a poster.

Poster Submission Deadlines:

Friday, January 12, 2018 - Deadline for submission of title and 25-word summary for use in the conference program and website

Monday, January 22, 2018 - Deadline for submission of poster abstract

Friday, February 2, 2018 - Deadline for submission of an electronic PDF version of poster

Poster Submission Guidelines:

Poster size no larger than 4' x 3'. Please bring 20-40 copies of your poster (8.5"x11") to hand out at the conference. Poster sessions will occur during the morning nutrition breaks at the conference - Feb. 14, 10:50 - 11:30 a.m. and Feb. 15, 10:00 - 10:50 a.m. Please be prepared to be present with your poster during this time and have a 30 second oral "poster pitch" prepared to highlight the main points of your poster and increase viewer interest. It is of particular importance poster participants are able to articulate why the project was funded and how it is important to farmers and their operations.

Poster participants have a reduced conference admission fee of \$50. If poster participants wish to volunteer, please let laura@manitobapulse.ca know, and the admission fee will be waived. Volunteers will help in the morning with registration, directing traffic and conducting surveys with attendees in the p.m.

CCA credits will be offered for participants viewing posters and successfully completing a quiz based on the poster. If you would like your poster to be eligible for these credits, please submit 5 multiple choice questions in addition to your abstract submission.

Submit your title and summary by email by **Friday, January 12, 2018** to: laura@manitobapulse.ca

In the body of your e-mail please include:

Project title. Author. Summary: Maximum 25 words, submit in the body of the e-mail.

If you have any questions, contact Laura Schmidt, Extension Co-ordinator, MPSG, O: 204-745-6488, C: 204-751-0538, laura@manitobapulse.ca, www.manitobapulse.ca

Joint Meeting of the CGU, CSSS, CIG, ES-SSA and CSAFM, June 10-14, 2018, Niagara Falls, ON

Call for Session Proposals: [click here](#)

Manitoba Soil Science Society, 61st Annual General Meeting, Feb 1-2, 2018, Winnipeg

The focus of the 2018 AGM is "Remembering the Dirty 30's: Lessons learned, forgotten and rediscovery", but submissions on other topics in soil science will also be considered. Both oral and poster presentations are welcome. Graduate student presentations are judged with awards for the best oral and poster presentations (PLEASE INDICATE IF YOU ARE A GRADUATE STUDENT WHEN YOU SUBMIT YOUR TITLE). Certified Crop Advisor Credits will be applied for.

Registration form is at the end of the newsletter.

Complete contact information and abstracts must be submitted by **December 20, 2017**. Abstracts will not be accepted after this date.

Abstracts are to include the Title, Authors, Author Affiliations and Abstract Text of less than 300 words. (ATTENTION GRADUATE STUDENTS: You must put an asterisk after your name on the abstract to be considered for an award). A sample with the required formatting is below.

SAMPLE ABSTRACT

Nitrogen Uptake by Barley Grown in Chernozemic Soils Amended with Anaerobically Digested Manure

Waraidzo Chiyoka^{1,2*}, Francis Zvomuya¹ and Xiyang Hao²

¹*Department of Soil Science, University of Manitoba, Winnipeg, Manitoba, Canada.*

²*Agriculture and Agri-Food Canada, Lethbridge Research Centre, 5403 1st Ave. S., Lethbridge, Alberta, Canada*

Anaerobically digested manure (ADM) is a nutrient rich substrate co-generated during biogas production from anaerobic digestion of livestock manure. Currently, the separated solid fraction of ADM (SS) is commonly applied to cropland at rates equivalent to those for raw manure. We hypothesize that biophysicochemical changes occurring during anaerobic digestion may result in a digested product with a different N supplying power. We tested this using five, 6-wk cycles of forage barley (*Hordeum Vulgare L.*) grown in a Dark Brown and a Black Chernozem amended with raw beef cattle (*Bos taurus*) feedlot manure, SS, pelletized SS (PSS) and synthetic fertilizer (urea + monoammonium phosphate, UMP). Amendments were applied at rates calculated to supply 400 and 800 mg total N kg⁻¹ soil, with a control included for comparison. At each harvest, plant roots and shoots were harvested separately and analyzed for total N. Amendment-derived N content of total biomass was highest for UMP and manure, and lowest for PSS at both rates. The difference between manure and SS was higher at the higher amendment rate, while both PSS rates depressed N uptake relative to non-amended soils. Amendment-derived N also increased with increasing rate for all amendments except PSS. We conclude that anaerobic digestion does not alter N availability and uptake from beef cattle manure while pelletization of the solid fraction of digested manure can cause N immobilization and depress plant N uptake.

CALL FOR PAPERS

61st Annual Manitoba Soil Science Society Meetings

Contact Information	
Name	
Affiliation	
Address	
Phone	
Email	
Graduate Student (Yes or No)	

*Please note that we will be using e-mail as the primary means of contact.
If you do not have access to email, please indicate your preferred means of contact:

Type of Presentation Preferred:
<input type="checkbox"/> Oral Presentation
<input type="checkbox"/> Poster Presentation
Title:
Note that a LCD projector and laptop computer will be available for oral presentations. Please contact us if any other equipment is needed.

Please submit the above information including your abstract as a .doc or .docx file by December 20th, 2017 to:

Email: msss@cc.umanitoba.ca

Fax: 204-474-7642 (Attention: MSSS)

Or Mail: MSSS, c/o Department of Soil Science, 362 Ellis Bldg, University of Manitoba,
Winnipeg, MB, R3T 2N2

For more information contact:
Kevin Baron

Email: solumvalley@gmail.com