22 December 2016

** Have a Great Holiday Break **

Upcoming:

December 22, 2016, 3:30 p.m – January, 2017, 9:00 a.m. – Department of Soil Science equipment lockout.


** Please note change of date ** Monday, Jan 9, 12:30 p.m., Room 346 Ellis Building – Department of Soil Science seminar. Melody Caron, M.Sc. student. “Integration of sediment fingerprinting techniques and comparison of the accuracy of colour coefficients as tracers.”

Tuesday, Jan 10, 1:00 p.m., Room 346 Ellis Building – Department of Soil Science, M.Sc. thesis defence, Mick Runzika. “Nitrification Rate Effect on Cumulative Nitrous Oxide Emission from Soil.”

Wednesday, Jan 18, 3:30 p.m., Room 130 Agriculture Building – Faculty seminar. Dr. Brian Amiro, Department of Soil Science.

Wednesday, Jan 25, 12:30 p.m., Room 346 Ellis Building – Two Department of Soil Science seminars.


Wednesday, Feb 15, 12:30 p.m., Room 346 Ellis Building – Two Department of Soil Science seminars.

Masoud Goharroki, Ph.D. student. “Assessing some of the issues associated with the time-integrated fine sediment sampler (TIFSS).”

Matthew Wood, M.Sc. student. “Simulation of greenhouse gas fluxes from perennial forage grasses and annual crops using the DNDC model.”
News:

Edward (Ted) Poyser Honoured with Renaming of Protected Habitat Area

Manitoba has renamed a protected unit within the Whitemud Watershed Wildlife Management Area after a long-time champion of protecting the province’s natural habitat, Edward A. ‘Ted’ Poyser. Sustainable Development Minister Cathy Cox announced the tribute to Ted, a pioneer in habitat protection in Manitoba, The Sight Hill Unit of the Whitemud Watershed will be named the Edward A. Poyser Unit. It will provide continued protection to an important parcel of land that is also located near the family farm on which Ted was raised.

Early in his long and impactful career, Poyser was credited with publishing some of the first soil survey reports in Manitoba. Then as a soils specialist with the Manitoba Department of Agriculture, he was instrumental in establishing the Whitemud Watershed Conservation District. He also helped develop productivity ratings for land that became the basis for the Manitoba Crop Insurance Program. He served for many years as the chairman of the Manitoba Habitat Heritage Corporation, and worked closely with environmental groups such as Ducks Unlimited, the Nature Conservancy and the Prairie Farm Rehabilitation Administration. He was inducted into the Manitoba Agriculture Hall of Fame in 2005.

The Edward A. Poyser Unit was officially named during a private ceremony involving Ted, his family and Education and Training Minister Ian Wishart, representing Cathy Cox.

Ace Burpee’s Top 100

Our very own Annemieke Farenhorst has been recognized as one of Ace Burpee’s Top 100 Most Fascinating Manitobans for 2016! (Read more)

Annemieke was the featured speaker for U of M Alumni in Calgary

University of Manitoba alumni in Calgary gathered on December 6 at the Calgary Marriott Downtown. The crowd of 200 was joined by President and Vice-Chancellor Dr. David T. Barnard, Dean Dr. Karin Wittenberg of the Faculty of Agricultural and Food Sciences, and other University of Manitoba members, including the evening’s featured speaker Dr. Annemieke Farenhorst.

WinSETT leadership workshop for women

Annemieke Farenhorst co-hosted a WinSETT leadership workshop for women that was offered at the University of Saskatchewan on December 1, 2017. WinSETT has given numerous workshops over the years, but this was a groundbreaking record of women wanting to participate. Stay tuned for more workshop opportunities under the Prairies CWSE program: http://cwse-prairies.ca/ or contact annemieke.farenhorst@umanitoba.ca and let her know the types of workshops you like to see at the University of Manitoba to advance women careers.
Soil Science Potluck

The annual holiday potluck was a great success with lots of people, food and melodies.

(Thanks Mayowa for taking photos. He has uploaded them to Onedrive, so ask him if you are interested in seeing the full collection.)
Opportunities:

**Technician 5 - 4R NITROGEN AGRONOMIST, Department of Soil Science, University of Manitoba**

**Key Responsibilities:**

- Plan, establish, manage and monitor 4R nitrogen fertilizer trials throughout agricultural Manitoba, in response to dynamic environmental conditions such as weather, crop and pest conditions as they occur.
- Develop and implement sample collection, preparation, storage and analyses protocols for soil and plant samples.
- Work with other Soil Science staff and staff of crop diversification centres, industry research staff and crop consultants to implement the systems and protocols.
- Develop and manage a dataset for soil and plant data. Prepare statistical analyses, tables, graphs and figures.
- Write research reports, peer-reviewed manuscripts and extension publications.
- Recruit, hire, train and supervise summer students.
- Coordinate field and lab activities among researchers and students working at field experiment plots and labs.
- Communicate relevant decisions, activities, opportunities, and challenges to scientists, staff and industry through tours, extension meetings, field tours and social media (e.g. Twitter) on behalf of the Soil Ecology Laboratory.
- Perform other related duties as assigned or required.

**Qualifications:**

- Minimum Education required is a Master of Science degree in Agronomy, Soil Science or other relevant discipline with substantial depth in soil, crop and nutrient management is required.
- Prairie Certified Crop Advisor preferred.
- Two years of directly related experience is required.
- Experience in experimental design, designing and implementing field crop research protocols, project management, statistical analyses, and writing of research reports, is required.
- Substantial experience in agricultural and field operations required, including intensive production and protection of crops is required.
- Experience in supervising staff and publishing peer-reviewed manuscripts is preferred.
- Experience in recruiting, hiring, training, and supervising the work of staff and students is required.
- An acceptable equivalent combination of education and experience may be considered.

Estimated Weekly Hours 35; Salary (Hourly) $25.84 - $34.42; Salary (Annual) $47,028.80 - $62,644.40

**Application deadline: 2017-01-23; Proposed Start Date: 2017-02-01.** More info: [click here](#).

This position is under the supervision of Dr. Mario Tenuta, Soil Ecology Lab. For inquiries please contact Dr. Tenuta at [Mario.Tenuta@umanitoba.ca](mailto:Mario.Tenuta@umanitoba.ca).

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**Sessional Instructor, 2nd Year Hydrology, Department of Environment and Geography, University of Manitoba**

The Department of Environment and Geography is currently seeking a sessional instructor to teach GEOG 2310 (Introduction to Process Hydrology) in the Winter 2017 term. There are currently 29 students (maximum of 30) enrolled. Course PowerPoints and assignments are available for a sessional instructor to
Indigenous Scholar, Assistant Professor, Faculty of Agricultural and Food Sciences, Univ. of Manitoba

The Faculty of Agricultural and Food Sciences, University of Manitoba invites applications from Indigenous (e.g., First Nations, Métis, Inuit) Scholars for a tenure-track position at the rank of Assistant Professor, commencing July 1, 2017, or as soon as possible thereafter, in one of the following broad disciplines: Agricultural Business/Economics; Food/Nutritional Sciences; or Agricultural Production/Ecology. Identification of a specific Department (Agribusiness and Agricultural Economics, Animal Science, Biosystems Engineering, Entomology, Food Science, Human Nutritional Sciences, Plant Science, Soil Science) will be based on the area of specialty of the successful candidate. The position will be weighted at approximately 45% teaching, 40% research and 15% service/outreach. Qualified applicants must possess: a Ph.D. in a relevant discipline; a record of independent research as demonstrated by scholarly publications; the potential for developing an active externally-funded research program including supervision of graduate students; demonstrated ability or potential for excellence in undergraduate and graduate teaching; and excellent oral and written communication skills. The successful candidate will be required to teach undergraduate and graduate courses in their area of expertise with inclusion of Indigenous perspectives and approaches. We also envisage that the Scholar will work closely with other instructors to help include Indigenous knowledge and perspectives for all students. The Faculty of Agricultural and Food Sciences is one of the most research-intensive Faculties at the University of Manitoba, and the Indigenous Scholar will be responsible for developing an independent research program funded through a variety of mechanisms that includes training graduate students. Our expectation is that the research and outreach programs will focus on safe, healthy, just, sustainable food systems for Indigenous Canadians and the broader population. The Scholar will also be expected to contribute to larger interdisciplinary efforts.

All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority. Applicants must, at application, declare that he/she self-identifies as an Indigenous (First Nations, Métis or Inuit) Canadian. Applications, including a curriculum vitae, short statement of teaching philosophy and research interests, the names and addresses (including phone and e-mail addresses) of three referees, and Indigenous Canadian self-declaration verification should be sent (preferably by email) to: Dr. Brian Amiro, Chair, Indigenous Scholar Search Committee, Department of Soil Science, Faculty of Agricultural and Food Sciences, University of Manitoba, Winnipeg, Manitoba, R3T 2N2 Canada. (204) 228-3374; FAX: (204) 474-7642, e-mail: brian.amiro@umanitoba.ca

Closing date for applications is February 27, 2017. The review of applications will continue until the position is filled. Application materials, including letters of reference, will be handled in accordance with the protection of privacy provisions of “The Freedom of Information and Protection of Privacy” (Manitoba). Please note that curriculum vitae may be provided to participating members of the search process.

Orval G. Caldwell and H. Ruth Gardner Caldwell Fellowship in Sustainable Ag/Agroecology

Dr. Orval G. Caldwell (M.Sc./34) and Mrs. H. Ruth Gardner Caldwell have established a trust fund at the University of Manitoba to support graduate student research into sustainable agriculture and agroecology. The available annual income from the fund will be used to offer one fellowship to a student who: (1) is enrolled full-time in the Faculty of Graduate Studies, in any Master of Science degree program delivered by a Department in the Faculty of Agricultural and Food Sciences;
(2) has obtained a minimum degree grade point average of 3.5 (or equivalent) based on the last 60 credit hours of study;
(3) is pursuing a research program in the area of sustainable agriculture or agroecology.

The award may be renewed for one year provided that the recipient:
(1) continues to be registered full-time in the Faculty of Graduate Studies, in any Master of Science degree program delivered by a Department in the Faculty of Agricultural and Food Sciences;
(2) has maintained a minimum degree grade point average of 3.5 (or equivalent) based on the last 60 credit hours of study;
(3) has received a satisfactory progress report from the his/her graduate supervisor.

**Deadline to apply: January 29, 2017.** Applicants will be required to submit an application which will consist of a one-page (maximum 500 words) description of their proposed or ongoing research and a letter of support from their Academic Advisor. Applications will be solicited in May, and the recipient will be announced by late June. The Fellowship will be tenable in the fall session following the announcement of the recipient.

One award valued at $13,050 is available for the 2016-2017 academic year. Only one recipient may hold the Fellowship at any one time. Recipients may hold the Orval G. Caldwell and H. Ruth Gardner Caldwell Fellowship in Sustainable Agriculture/Agroecology concurrently with any other awards, consistent with policies in the Faculty of Graduate Studies. Candidates will be assessed as follows: record of academic achievement (50%), research statement (30%), letter of support (20%).

**Summer Conservation Technician, Native Plant Solutions, Winnipeg**

Native Plant Solutions, the consulting arm of Ducks Unlimited Canada, is now accepting applications for Summer Conservation Technicians to assist with construction and maintenance of naturalized stormwater retention ponds throughout Winnipeg. Duties include day-to-day operations and maintenance of NPS' wetland and upland projects within and around Winnipeg, which may include seeding, chemical and mechanical weed control, conducting controlled burns, fence installation, installation of erosion control products, wetland hand-planting, vegetation monitoring, transect survey data collection, and other tasks as required.

The wage for these summer positions is $15.00/hr, based on a 35 hr week. Deadline for applications is **February 26, 2017.**

If you are qualified and interested in this opportunity, please forward your cover letter (including date of availability for work), resumé, three work-related references, and academic transcript (if a current or graduated student) by email for confidential consideration to the attention of SACHELLE JOHNSTON, EMAIL: s_johnston@ducks.ca, NATIVE PLANT SOLUTIONS – DUCKS UNLIMITED CANADA, UNIT A, 1238 CHEVRIER BLVD, WINNIPEG, MB R3T 1Y3.

**MSc Student Positions, Department of Plant Sciences, University of Saskatchewan, Saskatoon, SK**

**Project title #1: Understanding soil health in horticultural and agricultural soils**

Co-supervisors: Dr. Kate Congreves and Dr. Melissa Arcand

Project description: The proposed research will examine how different horticultural & agricultural practices have influenced soil health, and will identify which key soil attributes are most important in determining soil health. This project will focus on a unique set of long-term trials at the University of
Saskatchewan, which have produced vegetables, fruit, or grains for the past several decades. The project will engage a MSc student in field work (soil sample collection), lab work (analysis for numerous soil attributes such as nutrients, organic matter, aggregate stability, etc.), data integration and interpretation (soil health scoring). The candidate will have opportunities to interact with horticultural producers, provincial and federal government researchers, other graduate students and researchers within the Dept. of Plant Sciences and the Dept. of Soil Science at the University of Saskatchewan.

**Project title #2: Understanding nutrient dynamics in diverse vs simple crop rotations**

Co-supervisors: Dr. Kate Congreves and Dr. Richard Farrell

Project description: The proposed research will examine crop residue decomposition and soil nutrient dynamics in simplified vs diversified crop rotations. This project will employ 15N tracer techniques to understand nitrogen transformation and loss from above- vs below-ground crop residues over time, and will focus on a rare long-term (~30yr) field trial located at the University of Guelph. The project will engage a MSc student in field work (plant, soil, & greenhouse gas sample collection), lab work (analysis for plant nutrients, soil mineral nitrogen, organic nitrogen, and nitrous oxide emissions), data integration and interpretation. The candidate will have opportunities to interact with agricultural producers, government researchers, other graduate students, and researchers within the Dept. of Plant Sciences at the University of Saskatchewan, and also at the University of Guelph (Dept. of Plant Agriculture & the School of Environmental Sciences).

Both positions are available starting May 1, 2017. To apply, please send your unofficial transcripts, CV and names of two references to: Dr. Kate Congreves, Assistant Professor, Department of Plant Sciences, University of Saskatchewan. Email: kate.congreves@usask.ca

Qualifications: Applicants should hold a Bachelor's degree with a strong background in natural or agricultural sciences. Expertise in agriculture, horticulture, plant and soil science is desired.

Annual MSc stipend: $21,000 per year, for a maximum of two years. Notably, there are scholarship and teaching assistant opportunities to supplement the stipend beyond this base level.

**Events:**

72nd Soil and Water Conservation Society International Conference, Jul 30 – Aug 2, 2017, Madison WI

Submissions are being accepted through January 9, 2017, for workshops, symposia, and oral presentations. If you wish to submit a poster presentation, you may do so any time between now and March 10; however, your poster title will only appear in the preliminary program if submitted by January 9.

To view submission instructions, please visit [www.swcs.org/17ac](http://www.swcs.org/17ac).

Soil Fertility Refresher, Jan 24 -25, 2017, Carman Research Station, University of Manitoba, Carman, MB

- Do you miss those Thursday/Friday afternoon Soil Fertility Labs?
- Brushing up for your CCA exam?
- Join us for 2 days of detailed soil fertility training!

Tuesday January 24 and Wednesday January 25, 2017, 9:00 am – 4:00 pm,

University of Manitoba, Carman Research Station
Instructors: Dr. Don Flaten (University of Manitoba) and John Heard (Soil fertility Extension) and Marla Riekman (Soil Management), Manitoba 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

Cost: $100 to Manitoba Soil Science Society, Limited to 30 participants.

Preregistration required to John Heard, John.Heard@gov.mb.ca, 204-745-8093

9 Nutrient Management CEUs and 3 Soil and Water Management CEUs available.

Sponsored by Manitoba Soil Science Society


The MSSS Executive is giving everyone an early Christmas gift this year – an extension to the Call for Papers deadline!!! Please note that the new deadline will be December 30th. The MSSS Executive will be meeting in early January to set the program agenda – presenters can expect to be notified of their speaking date/time by January 12th.

A registration form is also attached. Early bird deadline is January 19, 2017. Please contact marla.riekman@gov.mb.ca if you have any questions about registration. Note, Department of Soil Science participants can fill in a registration form and provide a valid budget number to have it charged directly.

CALL FOR PAPERS
60th Annual Manitoba Soil Science Society Meetings

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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 16th, 2016 to:

Email:  mss@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:
Marla Riekman
Email: Marla.Riekman@gov.mb.ca
Nitrogen Uptake by Barley Grown in Chernozemic Soils Amended with Anaerobically Digested Manure

Waraidzo Chiyoka¹,²*, Francis Zvomuya¹ and Xiying Hao²

¹Department of Soil Science, University of Manitoba, Winnipeg, Manitoba, Canada.
²Agriculture 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.
Registration Form – 60th Annual MSSS Meetings
February 2nd and 3rd, 2017
Holiday Inn South - 1330 Pembina Highway, Winnipeg, MB

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*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.

Registration Options & Fees

Refunds will be provided if written notice is given by January 19, 2017. Receipts will be issued to all registrants.

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Notes: Registration includes continental breakfast, lunch and nutrition breaks on both days. Registration also includes a 60th Anniversary Celebration the evening of Feb 2.

Please advise of any special dietary requirements:__________________________________________

Please make cheque or money order payable to MSSS and send with completed registration form to:

MSSS  C/O Marla Riekman
Department of Soil Science, 362 Ellis Building
University of Manitoba, Winnipeg, MB R3T 2N2