



PRESIDENT'S MESSAGE

Happy New Year and welcome to all new and renewed CSSS members. We have a relatively new CSSS executive this year and I would like to take this opportunity to also welcome them on board: Cynthia Grant (President-Elect), Barbara Cade-Menun (Secretary), Gary Kachanoski (CJSS Editor), Paul Bullock (Treasurer), and Maja Krzic (Western Councillor). I hope you will also join me in extending our thanks to Gerry Neilsen (now Past Past President) and to Dan Pennock for their past, and continued, service to the Society.

Last year's meeting in Prince George was a great success with solid attendance, and what was most gratifying of all was to see so many students come out. This year we will be holding a joint meeting with the Canadian Society of Agronomy and the Canadian Society of Agricultural and Forest Meteorology from August 5 – 7 in Guelph, Ontario. I hope many of you will book this into your schedules and join us.

The CSSS still faces a number of critical challenges moving forward. In particular, we are still facing diminishing membership numbers and new, creative measures are needed to reverse this trend. All ideas are welcome. As part of a Revitalization Initiative developed last year we will be continuing to implement changes to the website throughout 2009. We will be working to make the new website more dynamic while providing easy access to information on conferences, newsletters, job postings, and other Society activities/initiatives. The Soils of Canada website, which the CSSS has supported, should be available very soon.

We are also facing a decline in the number of submissions to the Canadian Journal of Soil Science. As a major scientific forum for soil related work this trend is concerning and will be a significant priority for the CSSS executive. Discussions with AIC are on-going to find ways to enhance the appeal and visibility of the CJSS. However, we need you to continue supporting the journal by making it your first choice to publish in.

These are some of the current issues your executive is working on but there are many more pending. Bring your ideas forward, help us build your Society. I look forward to seeing you all in Guelph this year.

G. W. Price

CSSS Council

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CSSS Executive Biographies

President –Elect: Cynthia Grant

Cynthia Grant has conducted research on nutrient management in crop production since beginning her M. Sc. in 1980. In that time, she has worked on a wide range of prairie crops (wheat, barley, flax, canola, field pea, sunflower, soybean, durum wheat, alfalfa) and a range of macro- and micro-nutrients (N, P, K, S, Mg, Ca, Zn, Cl, Se). She had published more than 95 scientific journal articles on nutrient management including invited review papers on nutrient management in diversified cropping systems for the American Society of Agronomy, on managing for low cadmium levels in crops for the International Conference on the Biogeochemistry of Trace Elements, on nitrogen management in reduced tillage systems for the European Journal of Soil Science and on P fertility management for the Canadian Journal of Plant Science. She has also co-authored chapters on soil fertility management in dryland agriculture and sulphur management for Soil Science Society of America monographs and has co-edited a book on Integrated Nutrient Management published by Haworth press. Dr. Grant has been recognized internationally for her work on nutrient management, being awarded the International Fertilizer Industry Association Award (Paris), the Robert E. Wagner Award (PPI-Atlanta), the Fluid Fertilizer Foundation Researcher or the Year Award (Phoenix) and the Manitoba-North Dakota No-Till Non-Farmer of the year award. She also is a member of the International Fertilizer Industry Association Advisory committee, and the North American advisory committee for the International Plant Nutrition Institute. She is the lead for the NAHARP Trace Element Indicator.

Western Councillor: Maja Krzic

Maja Krzic is an Assistant Professor, jointly appointed by the Faculties of Land & Food Systems and Forestry, at the University of British Columbia. Maja focuses her research on identification of soil properties and processes affecting ecosystem responses to land-use practices. In her program, Maja pursues the following two complementary areas of research (1) land-use impacts on soil formation processes and (2) development of predictive soil quality indicators. Maja has conducted research in forest, grassland, agricultural, and urban land-use environments. Her current research interests include development of soil quality indicators for assessing management impacts on grassland soils, forest soil response to severe mechanical disturbance, and soil compaction susceptibility. To augment and extend her study on land-use impacts on soil processes, Maja has taken an initiative in integrating research, teaching, and community education through application of information technology. As part of this initiative, Maja has developed several web-based, interactive teaching tools that are broadly used in post-secondary institutions across Canada. Maja strongly believes that we as members of CSSS have a responsibility to promote discipline of soil science in Canada (and beyond), and she is excited about the opportunity to pursue this role by serving on the CSSS Council.

CSSS Executive Biographies (cont'd)

Secretary: Barbara J. Cade-Menun

I am interested in phosphorus cycling in soils and water. I have a BSc (Hons.) in Biology from Queen's University, MSc in Soil Science (soil biology) from UBC, and PhD in Soil Science (soil chemistry/forest soils) from UBC. I did post-doctoral research at the University of California, Berkeley, and at Stanford University in California, and then worked as a research scientist at Stanford University. I recently returned to Canada as a research scientist (nutrient cycling) for Agriculture & Agri-Food Canada, at the Semi-arid Prairie Agricultural Research Station at Swift Current, SK. I have been a member of CSSS since 1991, but have not yet had a chance to serve the society. I was treasurer, vice-president and president of the Pacific Regional Soil Science Society as a grad student at UBC. While in California, I served on several committees for the SSSA, including the Emil Truog Soil Science Award committee and the Emerging Issues in Soil Science committee, chairing the EISS committee in 2006. I am also a member of the American Geophysical Union and the American Society of Limnology and Oceanography, and have co-convened topical sessions for both societies at their annual meetings.

Treasurer: Paul R. Bullock

Paul Bullock is an associate professor in the Department of Soil Science, University of Manitoba. Previously, he was Director of Operations in Winnipeg for Noetix Research Incorporated and Director, Weather and Crop Surveillance at the Canadian Wheat Board. He has a Bachelor of Science in Agriculture and a M.Sc. in Soil Science both from the University of Saskatchewan and a Ph.D. from the Australian National University. He has chaired the Scholarship Committee for the Canadian Wheat Board and the National Remote Sensing Advisory Group in Agriculture and Land-Use for the Canada Centre for Remote Sensing. Dr. Bullock has also served as secretary for the Manitoba Soil Science Society and Treasurer for the Biathlon Association of Manitoba. He was a founding member of the Winnipeg Biathlon Club and has served as vice-president and president of the Winnipeg Chapter, Barber-shop Harmony Society. He has been a member of CSSS since 2001.

Editor: R. Gary Kachanoski

Dr. Gary Kachanoski is Professor and Bentley Research Chair (Soil, Water and Environment) at the University of Alberta. He has a B.Sc. (Hons.) in Biology (1976) and an M.Sc. in Soil Science (1980) from the University of Saskatchewan and a Ph.D. in Soil Science (1984) from the University of California, Davis. His research expertise includes soil physics (transport of water, chemicals, and gases), spatial variability and scaling (stochastic models), hydrology (landscape scale) and soil management (nitrogen use efficiency, tillage systems/translocation). He has held academic and research positions at the University of Guelph (1985-1996, Assistant Professor, Associate Professor, Professor, and Department Head in the Land Resource Science Dept); the University of Saskatchewan (1996-2001, Dean of the College of Graduate Studies and Research and Professor, Dept. of Soil Science) and the University of Alberta [2001-07, Vice-President (Research)]. Dr. Kachanoski has published 90 papers in refereed journals. His editorial experience includes Associate Editor positions with the *Soil Science Society of America Journal*; the *Canadian Journal of Soil Science*; the *European Journal of Soil Science*; and *Vadose Zone Journal* (2008). He is a Fellow of both the Soil Science Society of America (1997) and the Canadian Society of Soil Science (1999). At the University of Guelph he was also the Coordinator of Extension (Land Resource Science) and received a Distinguished Faculty Extension Award (1992). He was inducted into the Soil Conservation Canada's Hall of Fame (1997) and served as President of the Canadian Society of Soil Science (2000).

CALL FOR AWARDS NOMINATIONS

CSSS Awards

We all know someone around us who has made a significant contribution to soil science. The CSSS awards are your opportunity to make sure that contribution is recognized. But, you need to nominate your outstanding colleagues for a CSSS awards for them to be eligible. The process is not complicated and the information needed is described in this newsletter and on the CSSS website. Please take the time to submit a nomination before the deadline of May 8.

CSSS Student Travel Awards

This award was established in 1991 to promote student attendance at the CSSS Annual Meetings and is available to any CSSS member graduate student. The award is \$500 and a maximum of 12 travel grants will be awarded. Please go to csss.ca/awards.html for more details on the application process and to download the appropriate form. All applications must be submitted as e-mail attachments or by FAX (204-728-3858) to Cynthia Grant, chair of the Awards Committee at Cynthia.Grant@agr.gc.ca by May 8, 2009.

CSSS Fellow Award

This is awarded to CSSS members with a distinguished record of accomplishment in Soil Science and service to the Society. Please go to csss.ca/awards.html for more details on the nomination process.

All nominations must be submitted as e-mail attachments to Gordon Price, chair of the Awards Committee at Cynthia.Grant@agr.gc.ca by May 8, 2009. Only the following formats will be accepted: Microsoft Word, Corel WordPerfect or Adobe PDF.

CSSS Honorary Membership Award

This is awarded to non-members who have rendered valuable or special service to soil science. All nominations, which are evaluated by the Awards Committee, must have the following documentation:

- * Name, address, telephone number, email address of the candidate.
- * One page letter briefly outlining the reasons for the nomination.
- * A brief résumé (< 3 pages) of the candidate indicating their service to soil science.
- * One page letter from each of three individuals supporting the nomination.

All nominations must be submitted as e-mail attachments to Cynthia Grant, chair of the Awards Committee at Cynthia.Grant@agr.gc.ca by May 8, 2009. Only the following formats will be accepted: Microsoft Word (2000 or lower), Corel WordPerfect, or Adobe PDF. Approval of this award must be a unanimous decision by the Awards Committee members. Please go to csss.ca/awards.html for more details on the nomination process.

If there is also a chance to mention that there are the following Student Presentation Awards at the upcoming CSSS conference in July:

The C.F. Bentley Award was initiated in 1983 to encourage and recognize excellence in oral presentations by students at the CSSS Annual Meetings. It honours Dr. Fred Bentley who was CSSS President in 1956-57 and inducted as a CSSS Fellow in 1973. The Award winner receives \$500, the first runner-up \$300, and the second runner-up \$200.

The President's Award was established in 1992 to foster excellence in student poster presentations as a means of disseminating research results at the CSSS Annual Meetings. The President's Award is: \$500 for the winner, \$300 for the first runner-up and \$200 for the second runner-up.



**Sciences for Sustainability: Soils, Agronomy, and Atmosphere
5-7 August 2009
University of Guelph**

CALL FOR PAPERS

**Joint annual meetings of
Canadian Society of Soil Science,
Canadian Society of Agronomy, and
Canadian Society of Agricultural and Forest Meteorology**

Opening Plenary Program Speakers

The role of agrometeorology in improving crop management
Dr. Rob Gordon, Dean, Ontario Agricultural College

Sustainable plant production systems for the world of 2050
Dr. Dan Pennock, Professor, University of Saskatchewan

Farming systems for greenhouse gas mitigation
Dr. Claudia Wagner-Riddle, Professor, University of Guelph

Genetic enhancement in cereals and its relation to sustainability and world economy
Dr. Ron DePauw, Head, Semiarid Prairie Agricultural Research Centre,
Agriculture and Agrifood Canada

Leaders of the above three scientific societies welcome scientific contributions to the theme, in the form of oral and poster presentations. Abstract submissions can be made at www.guelph09.ca. Please review and carefully follow the guidelines provided at the site.

Important dates:

- 15 February**- abstract submission open
- 1 March** - registration open
- 24 April** - abstract submission deadline
- 5 June** - deadline for registration with early-bird fee
- 15 July** - close of on-line registration (on-site available)

Pedology Subcommittee of the Canadian Society of Soil Science - Update, February 2009

Prepared by Dan Pennock

Work has been going on in two main areas: the Soils of Canada project and the Canadian System of Soil Classification.

The Soils of Canada project involves two main components: a Soils of Canada website and a series of review articles to be published in the Canadian Journal of Soil Science. The website will be rich in visual material and will contain the photos and maps for each order in the Canadian System of Soil Classification (CSSC) along with a relatively brief summary of the genesis and classification of each order. Review articles will be written for each Order, and will be primarily focused on current interpretations of the genesis of each order. Taken together with the on-line and published versions of the Canadian System of Soil Classification the three media will provide a virtual University-level textbook on the pedology of Canadian soils. As such they will introduce a new group of students to the CJSS and the CSSC each year.

CJSS Review Articles

The CJSS review articles will contain a summary of the current information available on the genesis of each soil order in the CSSC. The review articles will be the primary source for information on the genesis of each Order and hence should be widely cited works over the next decade. The structure of each CJSS review article will be similar, and the structure will be developed by the Editors of the CJSS and the coordinators of the review articles. There are three coordinators: Dan Pennock, Scott Smith, and Lito Arocena who will work closely with Joann Whalen, the Special Issues editor for CJSS. The role of the coordinators is to recruit author(s) for each review paper and to shepherd each paper through to its submission to the CJSS; at this point the normal review processes would take over.

The Soils of Canada website

Funding for the website has been received from two sources: the Capling Fund of the University of Saskatchewan and the CSSC. The latter funding was received late in 2008 and has allowed us to develop a photo gallery for the website that will be a major resource for all soil scientists in Canada. CSSC will be identified as the sponsor of the site.

The website will be organized by Soil Orders and focus on visual content – primarily photos and maps, with sufficient content to provide an overview of the genesis and classification for each Order to the subgroup level. Two sets of maps will be provided for each order – for the order as a whole and for national distribution of Great Groups (where the latter is meaningful).

Originally we envisioned that the website would contain much more information, but this runs counter to the principles of successful website design. Instead we will provide the extensive text in the CJSS article to complement each page in the website, as well as links to the on-line version of the 3rd Ed. of the CSSC on the AAFC website.

Development of the website is being overseen by Angela Bedard-Haughn and Dan Pennock at U. of S., and Scott Smith will be in charge of the linkage with AAFC. Ideally the site will also act as a central linkage point to the personal sites and web resources developed by pedologists across Canada.

The site will also act as a forum for the exchange of information among pedologists about any proposed changes to the CSSC as that process develops over the next five years.

There will also be an image gallery in the site where pedologists can post photos of soil profiles and related material.

The CSSC will also be re-developing its website over the next year, and we will work closely with the Western Councillor, Maja Krzic, who is responsible for the re-development of the CSSC site.

Process for Revising the Canadian System of Soil Classification and Eventual Publication of a 4th Edition

The initial impetus for the Pedology Subcommittee came from a concern about the state of limbo that the CSSC had fallen into during the 1990s and early 2000s (which has been discussed in previous updates). At the Prince George meetings we made good progress about a tentative process for making revisions. A key element of this was the need to have a discussion forum whereby suggestions about revisions could be posted and critical feedback received on the suggestions from the pedology community in Canada. Thanks to funding received from CSSC this forum will be included in the Soils of Canada website and hence this impediment to progress will soon be removed.

Ideally this will lead to the publication of a 4th edition of the CSSC within the next five years. As a CSSC sponsored publication the royalties from the sales of the 4th ed. would flow to the CSSC and complement the revenue stream from our existing publications.

For more information on the work of the subcommittee contact:

Dan Pennock	University co-chair	dan.pennock@usask.ca
Scott Smith	AAFC co-chair	smithcas@agr.gc.ca
Angela Bedard-Haughn	Secretary	angela.bedard-haughn@usask.ca

Strengthening the discipline of soil science through interaction with stakeholders, policy-makers and multidisciplinary research teams

Prepared by Miles Dyck, University of Alberta

New demands for soil science knowledge are quickly emerging. For example, in Alberta, the new Land Use Framework proposed by Alberta Sustainable Resource Development¹ indicated the need for an information, monitoring and knowledge system to contribute to continuous land use planning and decision-making. The recently announced Center of Excellence for Integrated Land Resource Management housed at the University of Calgary² has been established to develop a spatially-explicit information technology architecture for the synthesis of resource information required to make informed land use decisions.

Demands for this sophisticated information system have been driven by what seems to be a sudden realization of Alberta's finite land resources, the public's ever-increasing awareness of environmental issues associated with land use and growing interest in land use-based climate change mitigation strategies. I use examples from Alberta out of familiarity; I am sure the reader can think of their own local examples.

The above examples of science-based policy obviously require some science which brings up the usual conflict: the time required for acquisition of knowledge is much greater than those implementing the policy are willing to wait. Thus, science-based policy is usually informed by expert opinion or even borrowed science. Scientists are often critical of the lack of science in these so-called science-based policies, but I propose that this criticism should be backed up by engagement in the policy-making and implementation process. The current demand for soil science knowledge is a golden opportunity for our discipline.

In a seminal paper, Johan Bouma³ proposed a conceptual framework for how soil scientists can be actively engaged with stakeholders and policy makers as an integral part of maintaining a vibrant and scientifically rigorous discipline. For this discussion, I propose that the current demand for soil science knowledge as part of integrated resource management policies compliments the questions raised during the "Dynamic Disciplines, Static Taxonomies" session at the Canadian Society of Soil Science Annual Meeting in Prince George last summer. The recognition of the need by soil scientists to incorporate dynamic processes (e.g. anthropogenic effects) into Canada's soil classification system compliments the (pending?) recognition of the importance of soil science information by policy makers. Interaction between soil scientists, stakeholders and policy makers (1) increases public awareness of soils and soil scientists, and (2) provides application of expert knowledge obtained by rigorous scientific inquiry.

Bouma proposed that soil scientists should be "knowledge brokers" with "T-shaped skills" – grounded in the soil science discipline, but able to reach out and interact with stakeholders and scientists engaged in other disciplines. A colleague once told me that soil science is not parochial. Perhaps he said this because he perceived that soil scientists tended to think that soil science was parochial or only relevant to other soil scientists. Current demands for soils knowledge indicate that soil science is relevant to many other disciplines and applications. It is up to us as soil scientists to ensure that it remains relevant.

1. <http://www.landuse.alberta.ca/>
2. <http://www.ucalgary.ca/news/january2009/geomaticscentre>
3. Bouma, Johan. 1997. The role of quantitative approaches in soil science when interacting with stakeholders. *Geoderma*: 78:1-12.

Upcoming Conferences

Residuals and Biosolids Conference. WEF. Portland (Oregon). May 3-6. 2009. <http://www.wef.org/ConferencesTraining/ConferencesEvents/ResidualsBiosolids/>

AQSSS 2009 annual meeting. May 20-22. http://www.aqsss.com/article.php3?id_article=97

Western Society of Soil Science Annual Meeting. June 22-24, 2009. Fort Collins, CO, <https://www.soils.org/branches/western/>

The 16th Nitrogen Workshop will be held in Turin, Italy, from June 28th to July 1st, 2009. Connecting different scales of nitrogen use in agriculture. <http://www.nitrogenworkshop2009.org/>

June 13-18, 2009

CLS Saskatoon Synchrotron Summer School IV: Synchrotron Techniques in Environmental Science

Contact email: outreach@lightsource.ca

Website: <http://www.lightsource.ca/education/summerschool/>

11th International Symposium on Soil and Plant Analysis, Santa Rosa, CA, USA. July 21-25. <http://www.spcouncil.com/symposium.htm>

Sciences for Sustainability: Soils, Agronomy, and Atmosphere, 5-7 August 2009, University of Guelph
Joint annual meetings of, Canadian Society of Soil Science, Canadian Society of Agronomy, and Canadian Society of Agricultural and Forest Meteorology.

September 13-15 2009

The 5th Canadian Residuals and Biosolids Conference. WEAO. Niagara Falls. http://www.weao.org/events/pdf/Current/5RandB/R&B_Conf_2nd_Call_for_abstracts.pdf

November 1-5, 2009. ASA-CSSA-SSSA annual meeting, Pittsburgh, PA. <https://www.acsmeetings.org/>

November 5-7, 2009. IPI-OUAT-IPNI International symposium on potassium role and benefits in improving nutrient management for food production, quality and reduced environmental damage, Orissa University of Agriculture and Technology, Bhubaneswar, Orissa, India. Contact Dr. D. Jena, Organizing Secretary, Department of Soil Science and Agricultural Chemistry, Orissa University of Agriculture and Technology, Bhubaneswar - 751003, Orissa, India. Email: dinabandhu_jena@yahoo.com; www.ipipotash.org; www.ipni.net.

4th International Conference on Plants & Environmental Pollution (ICPEP-4), Lucknow, India. February 7-10, 2010
Contact: The Organizing Secretaries (ICPEP-4), International Society of Environmental Botanists, National Botanical Research Institute, Rana Pratap Marg, Lucknow-226001, India. Email: isebnbrilko@sify.com.
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