



CSA Newsletter

Canadian Society of Agronomy

November 2008



President's Message

The Canadian Society of Agronomy has linkages to many important organizations that share the same goal of promoting application of science to agriculture. These organizations include:

American Society of Agronomy
Agriculture Institute of Canada
Plant Canada
Canadian Societies of Horticultural Science, Soil Science, and more...
Plant Management Network
The many institutions that employ us.

Our Society is by no means large. It can't be taken for granted. Its continued vitality depends directly on the efforts of its members, particularly the elected executive. It strikes me over and over again that as the number of issues confronting agronomy grows, the number of commitments each of us has grows in proportion. Today, many other issue-focused forums compete for our attention. A continuing challenge for our society is to ensure that the discipline of agronomy becomes increasingly recognized as important to issues as diverse as climate change, air and water quality, reliance on non-renewable resources, biodiversity and human health. Your executive works hard to provide articles for newsletters, to contribute to the annual meetings and to keep our committees active—and I often find they are doing this on the move, while participating in many other diverse organizations and networks. Please take a moment to thank them and share your thoughts on their contributions to this newsletter.

Bylaw change

It's been a privilege to serve as president for the past year. One more to go! It looks like the proposed bylaw change to the term of the president has been supported by the members, and will take effect next year. The executive hopes that the change to terms of just one year—rather than two—in each of the president-elect, president, and past-president positions will provide opportunity for more people to serve a term as president, bringing more energy to the leadership. Thank you for your support for this bylaw change.

Upcoming Conferences

Our conference plans take us to the University of Guelph next year, meeting with the Canadian Society of Soil Science and the Canadian Society of Agricultural and Forest Meteorology. Mark your calendars for 5-7 August 2009, monitor the web site for updates, and send your ideas for symposium theme topics.

This is a great opportunity for multi-disciplinary themes addressing high-priority issues. The local arrangements committee includes Rene Van Acker, Istvan Rajcan and Bill Deen (Department of Plant Agriculture) and Gary Parkin and Jon Warland (Department of Land Resource Science). Shabtai Bittman and I have been putting in ideas for the program.

We also need to think further into the future. Our 2010 conference should be somewhere in Western Canada. We've been talking to the Agricultural Institute of Canada about occasional coordinated meetings of all interested agricultural scientific societies once again; possibly in 2010, possibly in 2012. In 2011 we plan to meet in Halifax with Plant Canada once again.

News from the West

This fall is shaping out as a new record fall for fertilizer prices. However, after record prices, grain and oilseed prices have been declining sharply following a general declining trend in all commodity prices. Meanwhile, harvest in western Canada is proceeding at various degrees of completion with the Red River valley in Manitoba seemingly ahead of the rest of the prairies at time of writing; however, crops on the prairies are generally behind. Although prudent agronomics should be in order independently of fertilizer prices, agro-economic conditions today present major agronomic challenges for all of us involved in the business of agronomy whether as scientists, industry, consultants or extension agents. It is time to draw on the vast research database and experience to help growers make the best of their agronomic and economic resources in these times of increased risk. Increased grower risk means more attention to detail. The details involved with problem solving are where our professional organization and its members can find ways to assist the farming community.

This fall The Canadian Fertilizer Institute and Climate Change Central are organizing a Nitrous Oxide Emission Reduction Protocol Workshop in Calgary, Alberta on October 27-29, 2008. Participation is by invitation (and I have been invited to participate). The Workshop will include a review of the Canadian situation in relation to the rest of the world, discuss assessment techniques for quantification of emissions and hold discussions for future direction.

The Manitoba Agronomists Conference is one of western Canada's premier agronomy related events and will be held this year on December 9th and 10th at the University of Manitoba Campus. For more information, please see: <http://umanitoba.ca/afs/school/mac.html> and keep posted for the 2008 Conference web-site. This event does sell out, but introduction of web casting last year made it available to a large audience.

*Rigas Karamanos
Western Director*

Highlights from the Montreal '08 Symposium

This past summer the Canadian Society of Agronomy's scientific conference in Montreal, Canada featured four leading minds who discussed the implications of biofuels, bioproducts and recent market price trends for the development and direction of agronomic science. I'd like to briefly summarize the main points I found relevant to my particular corner of agronomy—the management of plant nutrition.

1. Better crops demand better science. Professor Ken Cassman, University of Nebraska, pointed out that current rates of gain in crop yields are not adequate to meet the expected demand for food, feed, fiber, and fuel. Future yield increases need to be achieved in the context of declining supplies of water for irrigation, and a higher relative cost of N fertilizer. Expansion of crop area is limited by lack of good quality soils and by concerns about loss of wildlife habitat and biodiversity. Ecological intensification—accelerated yield gain while reducing agriculture's environmental footprint—is the path forward, but depends on getting scientific breakthroughs in basic plant physiology, ecophysiology, agroecology, and soil science.

2. Healthy ecosystems are crucial. Professor Cal DeWitt, University of Wisconsin, spoke on plant and soil management in the context of the biosphere – the layer of life in the soil, water and air that surrounds the globe. Exploring the issue of climate change, he showed how healthy ecosystems are central to the aspirations of humankind, and that a combination of science, ethics and praxis is needed to conserve the biosphere. Science explains how the world works, ethics describes what ought to be, and praxis defines what we must do. The triad of science, ethics and praxis applies to the management of plant nutrition.

3. Biofuels link energy and climate change. Professor Don Smith, McGill University, noted that biofuels address two great challenges of the 21st century: energy and climate change. Climate change is an energy issue since it is largely driven by use of fossil fuels. Science and technology are striving to improve biofuel crops to produce more energy per unit of energy consumed in their production. Biofuel production systems require rigorous life-cycle analysis.

4. Are we starving Peter to drive Paul? Professor Tom Powers, University of Delaware, discussed the ethical questions that biofuels provoke, including violation of distributive justice, political instability, and harm to the interests of future generations. Our inability to resolve these problems may waste the precious social and political momentum that is attempting to address the challenge of global climate change. A “win-win” solution exists only if we can move beyond a zero-sum game.

So what are the implications for managing plant nutrients? The linkages among food, fuel, and climate change mean that a choice between producing food and fuel is not realistic. Plant nutrient management needs to support ecological intensification. The key is to work with a nutrient management system that appropriately applies global scientific principles to local crop management. The fertilizer industry is developing a Right Product@Right Rate, Right Time, Right Place™ system, in which crop producers and their advisers select practices, on a site-specific basis, for their ability to preserve natural ecosystems by growing more on less land, with less loss of nutrients, recognizing longer-term effects on the soil ecology, and supporting profitable production. These are the performance areas by which new technologies must be evaluated.

As cropping systems intensify, plant nutrient management will need to adapt. What's right for past cropping systems will not suffice. Agronomists, crop advisers and producers therefore continually evaluate nutrient management practices as crop genetics, rotations and end-uses change—a huge role for on-farm research. Each to their own ability must apply science to assess new technologies for their contribution to an intensification that is ecological and sustainable.

More information on can still be found at the conference web site, www.montreal08.org

*Tom Bruulsema
President*

Plants & Soils Conference—Montreal '08



Tom Bruulsema, CSA President, standing at right, with symposium speakers: front, from left, Cal DeWitt, Ken Cassman, and Don Smith, and, standing at left, Tom Powers



Fellow of the CSA

Peter Sikkema of Ridgetown has been selected as a Fellow of the CSA



**Pest
Management
Award**

Chris Willenborg receives the Pest Management award from CSA President Tom Bruulsema



Student Awards

From left to right: Audrey Bouchard, Valérie Bélanger (tied 3rd poster), Marie-Ève Bérubé (1st poster), Caroline Chouinard-Michaud (2nd poster), Zhidong Nie (3rd oral)
Not in the picture: Yvonne Lawley (1st oral) Christian J. Willenborg (2nd oral)

CSA Open Forum on “The Meaning of Agronomy”

As part of the Montreal '08 events, CSA held a special open forum (complete with free pizza!) on our society's ongoing discussion this year on the meaning of 'Agronomy' and the challenges to the CSA of dwindling recognition of agronomy and reduced membership.

The forum was well attended, with a good cross section of young and old agronomists. Since the conference was jointly held with the Northeastern US societies, we also had good input from the perspective of the members active in US sister societies. The discussion was wide ranging, and tackled first whether we thought the word 'agronomy' was still adequate to reflect what we do, and, perhaps more to the point, is it commonly understood? If we were to revise/modify the society name, what substitute terms might be used? Suggested terms included words like 'Crop, Plant, Food, Production, Ecological, Sustainable, Temperate, Boreal and Science'. How about a title like the 'North American Society of Temperate Agriculture'? After discussion it was agreed all the above seemed to be too narrow and inadequate, given that agronomy encompasses fields broader than just crop production, but also soils and environment. That is, agronomy is a truly integrative approach, and that is its strength. One American visitor, noting the diversity in outlook and background of the Canadians present, suggested the more expansive 'International Society of Agronomy and Agricultural Ecologists' as a society title. While 'ecology' seemed to speak to some of the young present more than 'agronomy,' the combined use of both terms seemed redundant. Another approach suggested was to possibly integrate CSA with the Canadian Societies of Soil Science and Horticultural Science, although it was pointed out that the scope of the CSSS is beyond just that of agriculture and includes soil remediation, forestry and natural landscapes also.

Many present shared their thoughts on what membership in CSA has meant to them in their careers. Are we also a professional association? Most present were research agronomists, and it was suggested if that is our main target audience we cannot expect to grow beyond the current 150-200 membership. Is our goal to expand on this membership? An obvious approach then would be to appeal and offer more to professional agronomists in both public and private sector, both nationally and regionally. For the young students present, the mentorship opportunities were cited as an important component of membership.

A deeper problem seemed to be the poor representation of agriculture period nationally (i.e. National Academy of Sciences, federal granting agencies). This led to some discussion of a renewed role of, and possible CSA partnership with, the Agricultural Institute of Canada (AIC) in promoting more broadly the 'Sustainable Agricultural Resource Base', appropriate investment in agronomist research and training to achieve that end, and rekindle excitement about agronomy generally. This discussion is interesting and important, because AIC and the other scientific societies are also considering new ways to address the crucial question of building public understanding and support for agricultural science and innovation.

In closing, CSA President Tom Bruulsema offered a prize (co-sponsored by AIC) for the best article (200-400 word) published in the newsletter that would explain clearly **to the Canadian public** what 'agronomy' means. Yes, this means we want to see it published in leading Canadian national newspapers! If you are interested in participating/submitting such an article please don't hesitate to contact Tom or Steve.

Derek Lynch

Agronomist



**Distinguished
Agronomist Award**

Tom Bruulsema presents Distinguished Agronomist Award to Tapani Kunelius at the
CSA Annual Conference in Montreal
(held jointly with the Horticultural Science and the Northeastern Branch ASA-CSSA-SSSA)

Agroecology

Check out <https://www.agronomy.org/sciencepolicy/sspr> for a discussion on “~ **Exploring Buzzwords: Agroecology**” by Karl Glasener from the ASA-CSSA-SSSA Science Policy Report - 10-01-2008.

“So, what is agroecology? And how can we determine whether it is a valuable concept for agriculture science policy? A number of definitions are available, including the classic and the contemporary. Join the discussion at the Science Policy blog, <http://www.science-policy.blogspot.com/>.”

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