



Merry Christmas



The AIC President, Susan Simpson, the Board of Directors and the staff of the Agricultural Institute of Canada wish you and your family a very Merry Christmas and prosperity and good health in 2009.

The AIC office will be closed at noon on December 24 and will reopen on January 5, 2009. We look forward to working with you in the coming year.

2009 Membership

If you have already renewed your AIC membership for 2009, thank you!

If you have not yet paid your fees, please use our secure on-line renewal at www.aic.ca, call our office, or mail in your form as soon as possible.

A Tribute to Régis Simard: Building Scientific Capacity

Dr. Régis Simard was a respected and admired Canadian soil scientist whose untimely death in 2002 at the age of 46 left a void that is still felt today. Dr. Simard worked for Agriculture and Agri-Food Canada for most of his career, moving to become chair of the Soil Science Department at the University of Manitoba in September 2001, a position he held until his death from cancer in 2002.

Régis Simard's research was important to building the scientific capacity required for the sustainable

and profitable maximization of the societal and commercial benefits derived from the agri-resource base. Dr. Simard and his colleagues developed a research program focussing on the agronomic and environmental impacts of nutrients in agricultural systems. The success of this program resulted from an integrated approach, linking assessment of nutrient availability to an understanding of nutrient dynamics in the soil, and applying this understanding to development of improved management practices for a variety of nutrient sources.

His work on the role of preferential infiltration as the mode of phosphorus transport into agricultural drainage waters showed that the spread of pollution did not result solely from soil erosion and runoff but also from drainage water. As a result of his findings, the regulations for manure management in Quebec were changed to take into account not only supply of nitrogen, but also the phosphorus balance for soils.

Dr. Simard served as Associate Editor and then Editor of the *Canadian Journal of Soil Science* in the period 1994-2002. His legacy is being honoured in the February 2009 issue of the journal through the publication of three special articles:

Integrating Knowledge of Nutrient Forms and Dynamics into Improved Nutrient Management Practices: A Tribute to Régis Simard (Cynthia Grant et al)

This paper describes the contributions of Régis Simard and his colleagues to the improvement of agronomically and environmentally sustainable nutrient management practices, based on an integrated research approach that provided a clear understanding of nutrient availability and soil nutrient dynamics.

Contribution of Régis R. Simard to phosphorus research in agroecosystems and future prospects (Léon-Étienne Parent et al)

The second paper builds on Dr. Simard's groundbreaking research on the impacts of phosphorous on agroecosystems. Phosphorous budget calculations related to crop residues presented in the paper provide a more complete picture of Phosphorous cycling and can be used to renew existing agri-environmental indicators.

Opportunities for improved fertilizer nitrogen management in production of arable crops in eastern Canada: A review (B.J. Zebarth et al)

The final paper examines the challenge to producers of managing their crop production systems in order to minimize environmental losses of nutrients, while achieving crop yield and quality targets. The paper reviews the opportunities and limitations to these new strategies within different arable crop production systems under the humid and sub-humid soil moisture regimes present in eastern Canada and discusses future research opportunities to improve the efficiency of Nitrogen fertilizer utilization.

The work of Dr. Simard and these scientists to build scientific capacity benefits producers and the environment and highlights the importance of continued investment in such research.

(with information from the Can. J. Soil Sci 82: 269-70, August 2002)

A New Model for Agriculture?

AIC's mission, "building professional and scientific capacity for the profitable and sustainable maximization of societal and commercial benefits derived from the agri-resource base" is a mouthful. But it does encapsulate both the need for science and that its practitioners to have the tools to make the most out of agriculture so that we can all benefit from that sustainable resource base. One such tool is measurement of efficiency at the farmgate.

A framework for understanding the scope of contemporary agriculture and of the goods and services that flow from it was recently presented by Dr. Rene Van Acker's at a joint meeting of AIC and the Ontario Institute of Agrologists. His presentation, *Efficient Use of Agricultural Systems*, explored the rapid evolution of "agriculture" and argued that its future sustainability relies on a shift to a more holistic approach to farming, one in which efficiency is measured and balanced by many different metrics.

Advances in agriculture in the past half century have been dominated by an industrial model with only a few efficiency objectives, the prime goal being yield. While the benefits to feeding an increasing and wealthier population are clear, a more deleterious consequence, he argues, has been that more often than not, economic gain accrues primarily to entities beyond the farm gate. In this industrialized model, efficiency means farms tend to be large, have simple production systems, and are reliant on purchased inputs. Highly specialized farms rely on commodity prices and are therefore high risk. Such farms are

also "biologically fragile."

Dr. Van Acker notes that with increasing environmental awareness, and entering the era of the bioeconomy, society's expectations from agriculture have grown to include delivery of clean water, high quality niche products, clean bioenergy platforms, health and wellness bioproducts, stewardship of soil and landscape, food safety security, and much more. This calls for a more complex and nuanced measure of efficiency.

He argues that sustainable agriculture development requires a shift to a multifunctional model in which efficiency means production systems are diversified, there are many cash engines on the farm, there are some niche sales, and systems are biologically robust. Farms may be large or small and management focus is not just financial, but also biological and social.

All professionals who either influence the use of inputs to contemporary agriculture, management of the agri-resource, or use of the feedstock from that resource are adapting to the new demands being made of the sustainable resource. Dr. Van Acker's work is a helpful guide. AIC will be providing more such analysis in workshops in 2009.

Dr. Van Acker's complete PowerPoint presentation is available on request to the AIC office news@aic.ca.

Rene Van Acker is Chair of the Department of Plant Science at the University of Guelph. Contact him at vanacker@uoguelph.ca.

TSAAE in the City

The Tanzania Society for Agricultural Education and Extension or TSAEE (pronounced t'sigh) has been part of the AIC International Twinning Partnership Program (ITPP) since 1994.

Originally partnered with the Canadian Society of Extension (CSE) the two organizations implemented a project to strengthen the capacity of TSAEE as an agricultural organization. As part of the ITTP, which is funded under a contribution agreement with CIDA, the first phase to strengthen capacity continued until 2001. In that year TSAEE Lake Zone members began a project which focused on youth and women in the rural areas of the region, providing them with support to develop and manage small income generating activities.

Although the CSE disbanded in 2006, the project has continued as part of the ITTP, now working in

partnership with a group of former CSE members. The project has grown to include more than 40 youth and women's groups ranging in size from 8 to 40 in almost all districts of the Lake Zone and has expanded into the Western Zone. Success is measured by the tangible goals which the groups select. The list includes school fees, uniforms and books as well as the more visible bicycles, modern housing with zinc roofs and brick walls, sewing machines, radios and mobile phones. As you travel the area you can literally see the impact of the project as it has expanded over the past 7 years.



Tom Beach presents membership cards to the Mwanza Branch members

It is interesting to note that as the project grew with village level beneficiaries, TSAEE also grew in membership and recognition. It has been acknowledged and honoured by local, regional and national governments and is now being sought out by Non Government Organizations and government departments to assist with project implementation or project assessment.

As more youth learned about TSAEE activities they approached their local TSAEE members with a request to get involved and assist their youth group. It is extremely impressive to see the volunteerism that exists within TSAEE, without which the project could not enjoy the success it does. TSAEE members have their costs covered but voluntarily give of their time and expertise to assist the project beneficiaries. In a country where college teachers earn \$300 a month and many others make less than \$2 a day, it is humbling.

I was in Tanzania conducting a review of project activities and was honoured to inaugurate a new branch of TSAEE members on December 2nd. The new branch has the unusual characteristic of being city based as it includes TSAEE members living or working in Mwanza, the second largest city in Tanzania. As a member of the Ottawa St. Lawrence Branch of the Ontario Institute of Agrologists, I am well aware of the unique opportunities branches offer with a diverse membership base working in government, industry, and national associations such as AIC. What I had not realized is the fact that TSAEE members in Mwanza also conduct extension activities to urban agriculture producers in the city, hence the title "TSAEE in the City".

To learn more about TSAEE or other projects funded by CIDA through AIC's International Program go to: <http://www.aic.ca/international/itpp.cfm>

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