

Speaker Bios

Environmental Sustainability Research Forum 2013

9:00 AM to 3:40 PM, Thursday January 24, 2013

The Royal Canadian Legion

57 Watson Parkway South, Guelph On N1L 1E3

Hosted by Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and the University of Guelph

Watershed-based demonstrations and models: sharing lessons learned

Panelists - Kevin McKague, Gord Mcpherson, Dr. Ramesh Rudra, Don King, Craig Merkley, Dr. Wanhong Yang, Mari Veliz,

Dr. Wanhong Yang

Dr. Wanhong Yang is a professor in the Department of Geography, University of Guelph. Dr. Yang has expertise in GIS, environmental economics, and hydrology and has developed a research program on examining the cost effectiveness of agricultural conservation programs using integrated economic-hydrologic-GIS modeling. Dr. Yang has been leading the integrated modeling project for Watershed Evaluation of Beneficial Management practices (WEBs) project since 2005.

Craig Merkley

Craig Merkley works in the 'Conservation Services Unit' of the Upper Thames River Conservation Authority. He has been involved in many research and demonstration projects over the years, working with individual landowners, agencies and organizations. He is a graduate of the U. of Guelph and is the project coordinator for the Kettle Creek 'North Kettle Creek Watershed Evaluation Project'

Mari Veliz

Mari Veliz is the Healthy Watersheds Coordinator at the Ausable Bayfield Conservation Authority (ABCA), a 2400 km² along the south-east shore of Lake Huron. Ms. Veliz has worked at the ABCA since 2000 and coordinated the water quality and bio-monitoring program since 2002. The Healthy Watersheds Coordinator also works with communities and agencies to undertake and implement watershed projects and plans. Currently, the ABCA is working with provincial and federal partners to evaluate agricultural best management practices. Ms. Veliz has a Bachelor of Environmental Studies from the University of Waterloo and a Masters of Science from the University of Alberta.

Kevin McKague,

Kevin McKague is an Agricultural Engineer with the Ontario Ministry of Agriculture, Food and Rural Affairs, based out of Woodstock, Ontario. His work experience since 1984 within Conservation Authorities, the private sector and, the last 12 years with OMAFRA has focused largely on aspects of rural soil and water conservation and management. The WBBE project for

him has been an exciting and enjoyable project to be a part of. He provided technical support to a variety of the tasks undertaken by the WBBE project teams.

Dr. Ramesh Rudra Professor, Water Resources Engineering, School of Engineering, University of Guelph.

Mechanics, modelling, management and monitoring of nonpoint source pollution and drainable water quality, effect of climate change on the on Ontario hydrologic regimes (precipitation, growing season), nonpoint source pollution and drainable water quantity and quality, and development of modelling and monitoring tolls for the identification of source areas in agricultural watersheds.

How is agriculture adapting and preparing for climate change?

Dr. Jonathan Newman, University of Guelph

Jonathan Newman started his career in behavioral ecology, specifically foraging theory. He completed his PhD in 1990 under the supervision of Tom Caraco, at the State University of New York at Albany. He spent the next four years as a postdoctoral fellow in the Department of Zoology, at Oxford University, where he worked on large mammal grazing systems. In 1994 he returned to the US to take a faculty position in the Department of Zoology at Southern Illinois University, in Carbondale Illinois (town motto: It's not as bleak as it sounds!). At SIU Jonathan started working on the ecology of a grass-fungal-aphid system, and on the impacts of climate change. In 1999, he left SIU and returned to Oxford as a faculty member in the Zoology Department and as a Fellow of St. Peter's College. He moved to the Department of Environmental Biology at the University of Guelph in 2004, and became department chair in 2008. In 2009 he became the founding Director of the School of Environmental Sciences at the University of Guelph. He is the lead author of the 2011 book *Climate Change Biology*. He is also currently an editor for both the *Journal of Ecology*, and the *Journal of Animal Ecology*.

ES Research Successes and Emerging Topics Snap Shots

Soil Health - Adam Hayes

Nutrient Management - Dr. John Lauzon

Water Quality and Food Production - Dr. Ann Huber

Agriculture and Water Quality - Dr. Merrin Macrae

Adam Hayes

Adam has been with the Ontario Ministry of Agriculture, Food and Rural Affairs for 28 years. He has served in many roles including soil conservation advisor, resource management specialist, soil and crop advisor, and has spent the last thirteen years as the soil management specialist for field crops. Adam initiated the Southwest Crop Diagnostic days program at Ridgetown and chaired it for 13 years. He is currently the co-chair of the Southwest Agricultural Conference. He has spent much of his career promoting soil conservation and good soil management practices. He has also devoted a significant amount of time tracking agricultural

climate change issues. Soil health is a key focus of many of his current efforts. Adam is an Ontario Certified Crop Advisor and has served on the provincial and international boards.

John Lauzon

John Lauzon has been a professor at University of Guelph since 2000. Current research interests focus mainly on the evaluation of manure management strategies to decrease transport of nutrients and bacteria to the environment and improve the agronomic availability of the nutrients. Other research has focused on various aspects of soil fertility management including; the evaluation of the spatial/temporal variability of soil nutrients and plant response; agronomic evaluation of fertilizer management strategies.

Dr. Ann Huber is the Environmental Microbiology specialist for projects in sustainable agricultural management practices for the Soil Resource Group. She comes from an agricultural background, and has over 30 years of experience in environmental and agricultural research and consulting. She is project lead for a wide array of BMP and risk management related research ranging from water and nutrient management in the Ontario Greenhouse and Container Nursery Industry, to manure management to maximize pathogen reduction for the protection of source water and food safety.

Dr. Merrin Macrae is an Associate Professor in the Department of Geography and Environmental Management at the University of Waterloo. Her research interests center around the effects of variable hydrologic conditions on biogeochemical (nitrogen, phosphorus) transport in agricultural landscapes. Types of hydrologic change include artificial drainage (i.e. tile drains) and climatic variability (e.g. seasonality, different types of storms). Her work largely involves field and laboratory research, and she has seven (soon to be eight) study sites across Southern Ontario. Her current research is focussed in three theme areas: (1) spatio-temporal patterns in hydrologic and nutrient export from agricultural catchments, with an emphasis on the influence of antecedent moisture conditions on stormflow chemistry; (2) evaluating seasonal patterns in nutrient cycling and transport; and (3) determining the effects of tillage/no-till on nutrient transport in drainage tiles. To date she has supervised 1 post-doctoral fellow, 12 Master's students (6 completed), 11 Honours Bachelor's theses, and 10 Research Technicians/Co-op students. She has also sat on the thesis committees of an additional 19 students. She has 17 peer reviewed publications and has co-authored nearly 100 conference presentations.

Panel: Economics + Environment + Social = A Winning Equation for Agriculture and Ontario

Dr. Ralph Martin, Dr. Wayne Caldwell and Dr. Ian McDonald
Moderator - Dr. Bronwynne Wilton

Wayne J. Caldwell, Ph.D., RPP, MCIP

Wayne Caldwell is Director of the School of Environmental Design and Rural Development at the University of Guelph.

His interests include planning for rural communities, farmland preservation, conflict resolution, governance of nutrient management, community based approaches to economic and

environmental issues and facilitation. His sixth book “Rediscovering Thomas Adams: Rural Planning and Development in Canada” was published in 2011.

Caldwell is past Chair of the Ontario Rural Council. He was appointed by the Ontario Government to Chair the Provinces Nutrient Management Advisory Committee and he served as President of the Ontario Professional Planners Institute from 2007-2009 and as President of the Association of Canadian University Planning Programs from 2010-2012.

Ian McDonald Bio

Ian McDonald has been the Applied Research Coordinator for the Field Crops Unit of the Ag Development Branch of OMAFRA since 2000. He is based at the University of Guelph main campus in the Plant Ag Dept. where he works with academic, farm organizations such as OSCIA, OMAFRA, GFO, IFAO, OFA members/staff and others to validate research successes within the scope of farm based adoption. Previously he spent 15 years working on pesticide research for two multinational companies.

He has been working closely within and beyond OMAFRA and UofG on the potential opportunities of the emerging bioeconomy and is most interested in the profitable and sustainable supply of new and existing agricultural feedstock’s to emerging industries in the bioeconomy.

Ralph C. Martin Short bio

Ralph C. Martin grew up on a beef and hog farm in Wallenstein, ON. He learned what is essential about agriculture from his grandfather, before he died when Ralph was seven. After 4-H, his formal education includes, a B.A. and an M.Sc. in Biology from Carleton University and a Ph.D. in Plant Science from McGill University. His love of teaching grew unexpectedly when he began teaching at the Nova Scotia Agricultural College, in 1990, and realized how students teach him too. In 2001, he founded the Organic Agriculture Centre of Canada (www.oacc.info) to coordinate university research and education pertaining to organic systems, across Canada . In 2011, he was appointed as Professor and the Loblaw Chair in Sustainable Food Production at the Ontario Agricultural College, University of Guelph.
www.plant.uoguelph.ca/faculty/rmartin/index.html

Wrap-up and Closing Remarks

Dr Bill Van Heyst, Associate Professor, School of Engineering, Research Program Director - Environmental Sustainability, OMAFRA - U of G Partnership, Office of Research
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