

SUMMIT ON CANADIAN SOIL HEALTH 2017



SOIL CONSERVATION COUNCIL OF CANADA

CONSEIL CANADIEN DE CONSERVATION DES SOLS

*"Soil Degradation – Costs, Consequences
and Opportunity for Change"*

PRELIMINARY PROGRAM

August 22-23, 2017

Delta Guelph Hotel and Conference Centre
Guelph, Ontario

SUMMIT OVERVIEW

The Soil Conservation Council of Canada (SCCC) is pleased to present “Soil Degradation – Costs, Consequences and Opportunity for Change”. This is the second in a series of Summits on Canadian Soil Health.

Cropland soil degradation has not been reflected in food cost, crop production and the economy. Nor has it been reflected as it impacts water quality and quantity, lost carbon to the atmosphere or as it compromises the natural environment. These costs accrue and affect everyone.

Summit 2017 brings together farmers, the agriculture industry, extension experts, scientists and policy influencers to share knowledge and expertise as we address this important issue. Our speakers on the tour and for the conference are world class with commitments to the World Bank, the United Nations on several levels and the Canadian International Development Agency. All have distinguished careers at home and abroad. All are making important contributions to sustainable soil management. Our farmer speakers have proven that healthy soil is attainable and profitable. Their experience and observations will be invaluable.



This Summit will establish a cost for soil degradation where we can, and set a costing agenda where we presently have too little information. Those costs are particularly important to justify and implement policy that will contribute to soil care and protection.

We will also identify opportunities to overcome soil degradation and to improve soil so food production can be more reliable and sustainable. Where there are technology gaps on this front, those gaps will be identified as research priorities.

MESSAGE FROM THE SUMMIT CHAIR

No civilization has ever survived the consequences of exploitive agriculture. As soil was degraded, the survivors moved on to new frontiers. Today, there are no new frontiers.

We must take advantage of the one opportunity left – intensive, scientifically sound, responsible soil management that accommodates a healthy soil biota community. Any form of soil degradation disrupts this. History records the consequences.

Summit 2017 brings focus to the costs of soil degradation to encourage policies and the application of practices that ensure productive soil for future generations.

I encourage you to participate in this important event.

Don Lobb, Chair

*Summit on Canadian Soil Health 2017
Soil Conservation Council of Canada*



CALL FOR ABSTRACTS OF STUDENT POSTERS

The Summit Organizing Committee invites the submission of 300-word abstracts of Student Poster Presentations addressing soil health. Abstracts are to be submitted by e-mail to the Poster Session Chair by July 31, 2017. Posters will be judged and prizes awarded. All details are on the Summit website <http://www.soilcc.ca/soilsummit/2017/index.php>.

CALL FOR SPONSORS

The Summit on Canadian Soil Health 2017 is a major project that requires the support of all stakeholders in soil degradation issues. The SCCC is seeking financial support from organizations that recognize the importance of capturing what is learned during the Summit and to document it as a means to provide guidance for future informed discussion and development of evidence-based policy and action.

There are a wide range of sponsorship options and levels of contribution that provide a range of benefits but if you prefer a tailor-made opportunity, please let us know.

TRADE SHOW

There are opportunities for companies and organizations interested in exhibiting during the Summit. Tables are available for \$500 and confirmed exhibitors can register at the reduced rate of \$250.

For further information about sponsorship and exhibits, please contact Jim Tokarchuk: jimtokarchuk@soilcc.ca or 204-792-2424.

PRE-SUMMIT TOUR

An optional pre-Summit tour has been arranged for Tuesday, August 22. The tour will depart from the Delta Guelph Hotel and Conference Centre promptly at 8:30 am and will return to the hotel by 4:30 pm. The tour costs \$100 and includes round-trip motor coach transportation and lunch.

Participation in the tour is limited, so be sure to register early. Cut-off date for tour registrations is **July 18, 2017**.

SUMMIT REGISTRATION

Registration forms are available on the website at: <http://www.soilcc.ca/soilsummit/2017/index.php> Under "Registration Open" click on either of the two links.

All registration fees are in \$CAD. Registrations for the full Summit includes the Tuesday evening welcome reception, Wednesday continental breakfast, lunch and breaks.

Early Bird Registration (received by July 7, 2017)		Regular Registration (received after July 7, 2017)	
Summit and Tour		Summit and Tour	
Regular	\$300	Regular	\$375
SCCC Member	\$275	SCCC Member	\$325
Student*	\$200	Student*	\$225
Summit or Tour Only		Summit or Tour Only	
Summit Only	\$250	Summit Only	\$300
Tour Only	\$100	Tour Only	\$125

*Students must be in full-time attendance at a recognized post-secondary academic institution.

REGISTRATION CANCELLATION AND REFUND POLICY

Registration fees are refundable, less a \$50.00 administration fee, if written notification of cancellation is provided by email to s1hayward@soilcc.ca by July 31, 2017. No refunds will be provided for cancellations after July 31, 2017.

HOTEL ACCOMMODATION

A block of rooms has been arranged at the Delta Guelph Hotel & Conference Centre at the preferred rate of \$139/night for rooms with two Queen beds or one King bed and the rate includes complimentary Wi-Fi in guest rooms, complimentary use of The Movati Athletic facility, and complimentary on-site parking.

Cut-off date is **August 1, 2017** for the Summit block at the Delta and based on availability at the time of booking. Reserve your room via the Delta link on the SCCC website Summit page or call the hotel toll free at 1-888-236-2427 or locally 519-780-3700 and mention "Soil Conservation Council of Canada".

Delta Guelph Hotel & Conference Centre

50 Stone Road West

Guelph, ON N1G 0A9

Toll-Free: 1-888-236-2427

Local/International: (1)-519-780-3700

[http://www.marriott.com/hotels/travel/](http://www.marriott.com/hotels/travel/ykfdg-delta-hotels-guelph-conference-centre/)

[ykfdg-delta-hotels-guelph-conference-centre/](http://www.marriott.com/hotels/travel/ykfdg-delta-hotels-guelph-conference-centre/)

If the SCCC room block sells out at the Delta, please contact Elizabeth Muckle-Jeffs for other hotels:

North America Toll Free: 1-800-868-8776

Local & International: 613-732-7068

Email: elizabeth@theprofessionaledge.com

GROUND TRANSPORTATION

The Delta Guelph Hotel and Conference Centre is approximately 73 km from Pearson International Airport. Rental cars, taxis and limousines are available at all times.

Red Car Service provides airport shuttle service to Guelph for approximately \$75 each way from Pearson International Airport to the hotel and there is a Summit group rate that provides a \$15.00 discount each way (\$30 discount round-trip). For details go to <https://www.redcarservice.com/> and use booking code: SOIL2017

TUESDAY, AUGUST 22, 2017 | Pre-Summit Tour

8:15 AM	<p>ASSEMBLE IN THE LOBBY OF THE DELTA GUELPH HOTEL & CONFERENCE CENTRE</p> <p>Welcome: Alan Kruszel, Chair, Soil Conservation Council of Canada Tour Host: Gabrielle Ferguson, Agri-Environmental Program Analyst, Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)</p>
8:30 AM	PROMPT DEPARTURE
9:00 – 10:30 AM	<p>ELORA RESEARCH STATION, UNIVERSITY OF GUELPH</p> <p>Soil Health and Soil Ecosystem Services: Dr. Claudia Wagner-Riddle, Professor, University of Guelph Environmentally Sustainable Cropping Systems: Dr. Bill Deen, Associate Professor, University of Guelph</p>
10:30 AM	DEPART
11:30 AM – 12:30 PM	<p>PERTH DEMO FARM, BORNHOLM</p> <p>Reduced-Tillage Demonstrations: Peter Johnson, Farmer/Consultant Soil Remediation and Landscape Restoration: Adam Hayes, Soil Specialist, OMAFRA OSCIA Projects that Enhance Soil Quality: Andrew Graham, Executive Director, Ontario Soil & Crop Improvement Association</p>
12:30 – 1:30 PM	LUNCH
1:30 PM	DEPART
2:00 – 3:15 PM	<p>BOB MCINTOSH'S FARM, ST. MARY'S</p> <p>27 Years of No-Till - Farm Overview/Lessons Learned: Bob McIntosh Soil Management Impacts on Water Quality: Kevin McKague, P.Eng., OMAFRA & Dr. Janina Plach, University of Waterloo</p>
3:15 PM	DEPART
4:30 PM	ARRIVE DELTA GUELPH HOTEL & CONFERENCE CENTRE
5:00 – 7:00 PM	REGISTRATION DESK OPEN
6:00 - 7:00 PM	WELCOME RECEPTION
7:00 – 7:30 PM	<p>WELCOME TO SUMMIT ON CANADIAN SOIL HEALTH 2017</p> <p><i>Session Chair: Laura Rance, Editorial Director, Glacier FarmMedia</i> The Hon. Lawrence MacAulay, Minister of Agriculture and Agri-Food Canada (invited)</p>
7:30 – 7:45 PM	<p>CANADIAN CONSERVATION HALL OF FAME – INDUCTION CEREMONY</p> <p>Harold Rudy is the 2017 Inductee</p>
7:45 – 9:00 PM	<p>KEYNOTE PRESENTATION</p> <p>A Looming Collision: Global Population and Food Security Dr. Don C. Reicosky, Soil Scientist Emeritus, USDA Agricultural Research Service</p>
9:00 – 10:00 PM	NETWORKING – CASH BAR

WEDNESDAY, AUGUST 23, 2017

7:00 – 8:15 AM	BREAKFAST
8:15 – 8:30 AM	<p>MORNING SESSION <i>Session Chair: Jay Bradshaw, President, Syngenta Canada and Chair, CropLife Canada</i></p> <p>Welcome from SCCC, Alan Kruszel, Chair, Soil Conservation Council of Canada Welcome from OMAFRA, The Hon. Jeff Leal, Minister of Agriculture, Food and Rural Affairs (invited)</p>
8:30 – 9:15 AM	<p>WHAT PRICE? THE GROUND BENEATH US Robert Sandford, EPCOR Water Security Research Chair, United Nations University Institute for Water, Environment and Health</p>
9:15 – 10:00 AM	<p>SOIL DEGRADATION – THE COST TO AGRICULTURE AND THE ECONOMY Dr. David Lobb, Professor of Landscape Ecology, University of Manitoba</p>
10:00 – 10:30 AM	BREAK Visit Exhibits and Poster Presentations
10:30 AM - 12:00 PM	<p>PANEL: A SCIENCE PERSPECTIVE SOIL HEALTH DISCOVERIES AND TECHNICAL GAPS <i>Moderator: Dr. Don Flaten, University of Manitoba</i></p> <p>Sustainable Soil Management: Dr. Dan Pennock, Professor Emeritus, Department of Soil Science, University of Saskatchewan Soil Biological Opportunities: Dr. Lori Phillips, Research Scientist – Soil Microbial Ecology, AAFC Harrow Aggregates as a Soil Health Indicator: Dr. Denis Angers, Soil Health Researcher, AAFC Quebec</p>
12:00 – 1:00 PM	LUNCH AND POSTER SESSION AWARDS
1:00 - 2:45 PM	<p>AFTERNOON SESSION <i>Session Chair: Tim Nerbas, Vice Chair, Soil Conservation Council of Canada</i></p> <p>Panel: Farmer Perspective Soil Health, Front Line Experience and Technical Needs <i>Moderator: Harold Rudy, Ontario Soil and Crop Improvement Association</i></p> <p>Quebec: Jocelyn Michon, Crop and Vegetable Farmer Alberta: Doug Wray, Beef Farmer, Canadian Forage & Grassland Association Ontario: Ken Laing, Ecological Farmer Saskatchewan: Paul Thoroughgood, Grain Farmer, Ducks Unlimited Canada</p>
2:45 – 3:15 PM	BREAK Visit Exhibits and Poster Presentations
3:15 – 3:45 PM	<p>CHALLENGE PRESENTATION: WHO IS RESPONSIBLE? Don W. Lobb, Summit Chair</p>
3:45 – 4:15 PM	<p>SUMMIT WRAP UP Dr. Brian Gray, Assistant Deputy Minister, Science & Technology, Agriculture and Agri-Food Canada</p>
4:15 PM	<p>CLOSING REMARKS AND ADJOURNMENT Alan Kruszel, Chair, Soil Conservation Council of Canada</p>



DR. DENIS ANGERS

Dr. Denis Angers is a Principal Research Scientist with Agriculture and Agri-Food Canada in Quebec City. He has held Adjunct or Visiting Professorships at Université Laval, McGill University, the University of Brittany, the University of Sydney, and at the Chinese Academy of Agricultural Sciences. His research has focused on soil structure and organic C cycling, with the overall objective of understanding and developing practices to reduce soil degradation and net greenhouse gas emissions through C sequestration. Denis has been editorial advisor for several international soil science journals and an Editor of the *Soil and Environmental Science Dictionary*. He is a former President and Fellow of the Canadian Society of Soil Science, and a Fellow of the Soil Science Society of America. He was recently elected as a corresponding member of the French Academy of Agriculture.



JAY BRADSHAW

Jay is President, Syngenta Canada Inc. based in the Canadian head office in Guelph, Ontario. Originally born and raised in the Eastern Townships of Quebec, Jay has over 35 years' experience in agriculture having lived and worked in the Prairies and Eastern Canada. He is a graduate of both the University of Guelph with a BSc. Agriculture, Honours Environmental Biology and the University of Saskatchewan with an MBA. Jay is Chair of the Board of Directors for CropLife Canada and also sits on the Executive of CleanFarms Canada Inc. When Jay is not travelling across Canada being an ambassador for agriculture he enjoys his hobby farm and vintage Willys Jeeps...but most of all... enjoys being with his wife Kathy and their two boys (18 yrs & 20 yrs).



DR. BILL DEEN

Dr. Bill Deen is an Associate Professor in the Department of Plant Agriculture, University of Guelph. Bill received a MSc (1991) in agricultural economics and a PhD (1999) in plant agriculture from the University of Guelph. Bill is an agroecologist involved in applied research who does extensive outreach to growers and industry. The objective of his research program is to develop agroecosystems that are both productive and sustainable. Bill has internationally recognized knowledge of crop rotation, cover crop, tillage and field-based research techniques and experience managing interdisciplinary research efforts based on long-term field trials. In his spare time Bill manages a broiler farm in North Wellington County.



GABRIELLE FERSUSON

Gabrielle Fersuson's 25-year career has alternated between industry and the government. She has worked with Cargill, Pioneer Hi-Bred, Agriculture and Agri-food Canada, the University of Guelph and OMAFRA. She also managed her own agronomic consulting business for seven years. Gabe is presently a program analyst at the Ontario Ministry of Agriculture, Food and Rural Affairs where she gathers science evidence to support government decision making. Recent projects include the 4R Ontario nutrient stewardship cooperation and the Agriculture stakeholder working group to support Ontario's Domestic Action Plan to reduce phosphorus in Lake Erie. Gabe would like to promote greater understanding between agriculture and the public. Gabe lives on a grain and oilseeds farm in Lambton County with her husband Dave, where she can be seen training for a marathon or cruising on her motorcycle. She received a BSc in Environmental Biology and a MSc in Herbicide resistance, both from the University of Guelph. Gabe is a graduate of the Advanced Agricultural Leadership Program (2015).



DR. DON FLATEN

Dr. Don Flaten is a professor in the Department of Soil Science at the University of Manitoba. He specializes in soil fertility, crop nutrition and nutrient management, with a focus on agricultural phosphorus management from agronomic and environmental points of view. Don's research interests include the effects of fertilizers and livestock manures on crop uptake, yield and quality, as well as the effects of these and other management practices on agricultural and environmental sustainability in farming systems. Don has received several awards for his efforts to improve soil and nutrient management practices, including the Soil Science for Society Award from the Canadian Society of Soil Science, the Saskatchewan Soil Conservation Association Award of Merit, and the University of Minnesota's Larson-Allmaras Lectureship on Emerging Issues in Soil and Water.



ANDREW GRAHAM

Andrew Graham was appointed Executive Director for the Ontario Soil and Crop Improvement Association in 2014 where his responsibilities span a broad suite of management activities that encompass the strategic directions of the Association, while tending to the day-to-day operations. He has been with the farm organization going on 27 years, engaged in all phases of project development, delivery and management, with an emphasis over that time on environmental programs. During the ten year period prior to his arrival at OSCIA, Andy worked on soil and water conservation initiatives first through the Upper Thames River Conservation Authority, followed by the provincial agriculture ministry.



DR. BRIAN T. GRAY

DR. BRIAN T. GRAY is Assistant Deputy Minister, Science and Technology Branch and Champion, Indigenous Network Circle, Agriculture and Agri-Food Canada. Brian has been Assistant Deputy Minister, Science and Technology Branch at Agriculture and Agri-Food Canada since March 2015. In this role he is responsible for an organization of approximately 2000 staff that works with industry, academia, Provincial governments and other partners to generate new knowledge, foster innovation and increase adoption and commercialization of agricultural, agri-food, and agri-based products, process and practices, to support a resilient and innovative agriculture sector. Brian also serves as the department lead for Indigenous success. From 2011 to 2015, Brian was the Assistant Deputy Minister of the Earth Sciences Sector at Natural Resources Canada (NRCan). Previously, as Assistant Deputy Minister at Environment Canada, Brian led the creation of the department's Science and Technology Branch in 2005. Between 1996 and 2005, Brian served in various executive positions at Ducks Unlimited Canada, having served the last five years as the National Director of Programs. Previously, Brian was the Terrestrial Systems Group Manager for Golder Associates Ltd. in Calgary, Alberta, where he worked on a variety of environmental projects throughout Canada and the Western Hemisphere. Throughout his career, Brian has served on numerous advisory bodies and boards, including the Canadian Foundation for Climate and Atmospheric Sciences. He was the founding co-chair of the Federal Committee on Geomatics and Earth Observation as well as the Canadian focal point for the Intergovernmental Panel on Climate Change (IPCC) and the Inter-American Institute for Global Change Research, and he co-chaired the research and development working group of the Canada-U.S. Clean Energy Dialogue. Brian currently sits on the board of ArcticNet.



ADAM HAYES

Adam Hayes has a long history with the Ontario Ministry of Agriculture, Food and Rural Affairs beginning with soil conservation work and time as a soil and crop specialist. The second half of his career has been spent as a soil management specialist promoting best practices in soil management. He initiated the Southwest Crop Diagnostic Days at Ridgeway and has chaired the Southwest Agricultural Conference for the last 7 years. His current focus is on promoting and measuring soil health. He continues to work to address climate change issues and to remediate degraded soils. He sat on the Soil Conservation Council of Canada Board for a many years. In 2014, Adam was the inaugural recipient of the Ontario Soil and Crop Improvement Association's Soil Champion Award and received the L. B. Thompson Conservation Award from the Soil Conservation Council of Canada in 2016.



PETER JOHNSON

Peter Johnson grew up farming near Guelph, Ontario and attended the University of Guelph at the same time as operating an 800-acre crop and beef farm, receiving his BSc agr degree (Crop Science) in 1982. In 1985, Peter joined the Ontario Ministry of Agriculture and Food, as a Soil Conservation Advisor, and later became the Cereal Specialist, where he continued to work on and promote crop rotation, reduced tillage and cover crops. On retirement, he became the resident agronomist for RealAgriculture.com. In this role, he continues to be an outspoken advocate of better soil management, through research trials, demonstration, presentations, and social media. He produces a weekly update, "Wheat Pete's Word" that is listened to by phone, podcast, and plays on Rural Radio, Sirius Satellite 147. Peter continues to farm, which is where "the rubber hits the road".



ALAN KRUSZEL

Alan Kruszel joined the board of the Soil Conservation Council of Canada in 2006 and is currently the Chair. With the Council, he works to encourage the development of policies, production methods and management systems for agricultural land which enables sustainable use of soil and related resources. Alan has also served on the board of the Ontario Soil and Crop Improvement Association from 2006 thru 2016 serving as President in 2015, where he helped guide the board through an extensive strategic planning exercise and assisted in the unveiling of Ontario's provincial soil. Alan received his Bachelor of Science in Agriculture from Macdonald Campus of McGill University in 1995 and has also been a certified crop advisor since 2003. Alan and his family operate a small 1st generation cash crop farm as well as a crop consulting business in Stormont County in Eastern Ontario. They grow primarily corn, soybeans and spring cereals as well as many types of cover crops using no-till practices. The farm philosophy is to keep something living on the land at all times of the year. Through their consulting business they promote soil health building practices such as reduced tillage and no-till, diverse crop rotations and the use of cover crops. They also provide a suite of other agronomic services to many local producers. Alan is also a member of the Ontario Soil Network, a group of leading producers, researchers and extension specialists who are passionate about soil health and who are learning from each other while sharing their experiences within the broader agriculture community.



KEN LAING

Ken Laing grew up on a mixed farm near Stratford, Ontario. He graduated from the University of Guelph in 1979 with a degree in horticulture. The same year he started a farming operation with his wife Martha. They had a pick-your-own fruit farm for 17 years and transitioned to organic production in 1989. The farm operation changed to focus more on vegetable crop production in 1997 and in 2016 had a CSA (Community supported Agriculture) for 250 families. Ken is passionate about soil health. For many years he has served as an educator and advisor for the Ecological Farmer's Association of Ontario, primarily in the soils area. He is part of OMAFRA'S Agricultural Soil Health and Conservation Working Group, working on developing a soil health policy for Ontario agriculture. He has recently been working to develop organic no-till/cover crop strategies for spring and fall planted cereals and some vegetables.



DR. DAVID LOBB

Dr. David Lobb is a Professor of Landscape Ecology in the Department of Soil Science, University of Manitoba. David grew up on a farm in southern Ontario, earned degrees in Toronto and Guelph and was engaged in soil conservation work in Atlantic Canada before moving to Manitoba. He is internationally recognized for his research in tillage translocation and tillage erosion, particularly for his advances in experimental methods and modelling. In addition to his teaching responsibilities and many professional commitments, David has published many scientific papers and book chapters on soil erosion and soil conservation and made over 400 presentations. His expertise in soil erosion and conservation has been sought by the U.N. International Atomic Energy Agency, the U.N. Food and Agriculture Organization, the World Bank Institute and the Organization for Economic Cooperation and Development, in addition to provincial and federal government agencies in Canada. David's investigations bring forth new evidence about soil erosion and sedimentation processes and their environmental impacts. This work is contributing to the integrated management of soil erosion by tillage, water and wind in a way that will increasingly benefit agriculture. His work on soil landscape restoration on eroded fields demonstrates that crop yield variability can be reduced and overall crop yield increased. David is a Past President and Fellow of the Canadian Society of the Canadian Society of Soil Science and was inducted into the Canadian Hall of Fame in 2015.



DON LOBB

Don Lobb, P.Ag.(Hon) owned a successful farming operation in Huron County, Ontario, from 1962-1997. The farm became a model for sustainable management of soil, water and the natural environment. It was the site of more than 50 major research projects, many of which focused on soil and water management. Several were MSc and PhD research projects. He also participated in the development and delivery of the Environmental Farm Plan and has been an author for Best Management Practices Manuals and soil management columns. Don has developed, applied and promoted soil care practices and the soil care ethic. His dedication, example and leadership has been recognized provincially, nationally and internationally, including the University of Guelph (Distinguished Service Award); Ontario Institute of Professional Agrologists (Honorary Life Membership); Soil Conservation Council of Canada (Hall of Fame as well as Honorary Life Member); the Caledon Walk of Fame – the first agriculturist among this group of distinguished Canadians; and the Ontario Agricultural Hall of Fame. Don continues to be passionate about the need for evidence-based science and responsible actions in our management of soil and water.



BOB MCINTOSH

Bob McIntosh farms in Perth County, Southern Ontario. His operation is predominantly a cash crop farm of approximately 900 acres where he grows corn, soybeans, wheat and dry edible beans. As Bob initially farmed using conventional tillage practices and the removal of fence rows and other obstructions, he saw serious erosion during intense rain events. This convinced him to find solutions that included reduced tillage and building erosion control structures that today act to prevent much of the erosion that occurred earlier. Bob has been a long-time cooperator and host for research work on his farm. He was Founding President of the Innovative Farmers Association of Ontario and participated in delivery of federal and provincial soil conservation programs and the Environmental Farm Plan. He was named Innovative Farmer of the Year in 2011.



KEVIN MCKAGUE

Kevin Mckague has a Bachelor's degree in Agricultural Engineering and a Masters degree in Water Resources Engineering – both from the University of Guelph. He has worked in the area of soil and water conservation for much of his career. He began his career as a soil and water conservation engineer as part of the Joint Agricultural Soil and Water Conservation Program. In 1988 he joined Ecologistics Limited where he contributed to many national and international soil and water conservation projects. Kevin joined OMAFRA in 1999 where he is now their Water Quality Engineer. He has been accredited as a Certified Professional in Erosion and Sediment Control (CPESC) since 1992. He is part of OMAFRA's Soil Team, assists with OMAFRA's Erosion Control Structures design course and was instrumental in the development of OMAFRA's agricultural erosion control structures design software (AgErosion). He has recently completed the adaptation of the USDA's RUSLE2 model to Ontario. His work and related research interests currently includes reducing NPS pollution from agricultural tile drainage systems while maintaining crop productivity benefits of this farm practice.



JOCELYN MICHON

Jocelyn Michon started working in agriculture in 1974 and co-founded the dairy farm Ferme Mibelson Inc. with his father and brother in 1978. In 1992, he founded Ferme Jocelyn Michon Inc. to focus on grain production and his son joined the farm in 2006. In 1977, Jocelyn first tried minimum-till and replaced the mouldboard plow with offset disks in 1986. He started no-till with spring wheat and soybeans in 1994 and followed with corn in 1996. In 2002, Jocelyn tried double trash wheels mounted on a tool bar before planting corn. This equipment was subsequently modified to become a strip-till light in 2010. Cover crops were introduced in 2003 and are now used on all acres. Jocelyn achieved 100 percent continuous no-till farming in 2004. In 2008, serving as President of Action Semi-Direct, he led the launch of the "Terre Vivante" certification, and his farm was certified in 2009. In 2004-2005, he served as a Québec representative on the SCCC and he was inducted into the Canadian Soil Conservation Hall of Fame in 2009. Jocelyn received the Agri-Environment Award of Excellence from the Order of Agricultural Merit in 2010. Since 2015, he has been a consultant for Socodevi in the Ukraine.



TIM NERBAS

Tim Nerbas manages NRG Farms Ltd., a mixed farm operation, with his wife Diane. He is a director of the Saskatchewan Soil Conservation Association and the Soil Conservation Council of Canada. He was employed for five years at the University of Saskatchewan with Soil Survey. While he completed his Master of Science in soils from the U of S, he studied the impact of the boreal forest on climate change and carbon sequestration. Following this, he spent 10 years working as an agrologist with the SSCA promoting conservation agriculture in northwestern Saskatchewan.



DR. DAN PENNOCK

Dr. Dan Pennock is a Professor Emeritus in the Department of Soil Science at the University of Saskatchewan in Canada and a Fellow of the Canadian Society of Soil Science. He has published in the areas of soil erosion, human-induced soil organic carbon change, precision farming, and the dynamics of greenhouse gas emissions from agricultural, forest and wetland soils. He has served on the Intergovernmental Technical Panel on Soils (ITPS) of the Food and Agriculture Organization of the UN since its inception in 2013. As part of his work for the ITPS and the FAO, Dan has authored the initial drafts of the World Soil Charter and of the Voluntary Guidelines for Sustainable Soil Management. He was also the regional coordinating author for the chapter on North America in the 2015 Status of the World's Soil Resources report. He is currently working on a report on the effect of plant protection products on soil functions and biodiversity for the ITPS. Dan is a Past President and Fellow of the Canadian Society of Soil Science.



DR. LORI PHILLIPS

Dr. Lori Phillips is a Research Scientist in microbial ecology with Agriculture and Agri-Food Canada (AAFC), in Harrow Ontario. Lori obtained her Ph.D. from the Soil Science Department at the University of Saskatchewan and, after 5 years as a Research Scientist with the Victorian Department of Primary Industries in Australia, she joined AAFC in September 2015. Her research program at AAFC investigates the soil biological processes that maintain and enhance agro-ecosystem productivity and sustainability. She uses molecular tools to understand how the ecosystem services provided by biological communities (bacteria, fungi, archaea) can be managed or optimized at different scales, from the level of the plant through to the level of the landscape. This research is governed by three strategic objectives within the context of soil health: 1) to generate new knowledge on the role of soil biota in supporting agricultural systems that are resilient to stress, 2) to provide information that enables farmers to sustainably intensify their production systems, and 3) to provide new quantitative measures on the role of soil biology in enhancing soil and ecosystem health. Dr. Phillips undertakes this research within a collaborative framework involving other soil scientists, agronomists, and farmers, to ensure that outcomes are relevant to current stakeholder needs as well as the national and international scientific community.



DR. JANINA PLACH

Dr. Janina Plach received her PhD from McMaster University in aquatic biogeochemistry. Currently, she is working as a postdoctoral fellow at the University of Waterloo with Dr. Merrin Macrae investigating the mobility, transport and fate of phosphorus (P) in agricultural landscapes of the lower Great Lakes Region. Her research includes examining linkages between soil biogeochemical properties, storage and availability of soil P, and dynamics of P export in surface runoff and subsurface (tile) drainage from farmlands. Janina's work is part of collaborative efforts to improve predicating the availability of soil P to crops and establishing the risk of soil P loss to downstream aquatic ecosystems within agricultural watersheds.



LAURA RANCE

Laura Rance grew up on one of the first no-till farms in the Red River Valley of southern Manitoba at a time when many said it would never work on the heavy Osborne Clay soils of the region. She studied journalism and has spent the past 36 years writing about farm and rural issues. In her current role, she oversees editorial content development for the network of publications owned by Glacier FarmMedia, Canada's largest agricultural publisher. She also writes a weekly business column on agriculture for the Winnipeg Free Press. Laura has received multiple national and international awards for her work. In 2016, she was recognized by the UN-FAO and International Federation of Agricultural Journalists for excellence in global food security reporting. Her work has taken her to many parts of the world, including a five-week-long stint in 2015 writing about conservation agriculture and development in Africa.



DR. DON REICOSKY

Dr. Don Reicosky is a retired Soil Scientist from the USDA-ARS, North Central Soil Conservation Research Laboratory, Morris, MN, and adjunct Professor in the Soil, Water and Climate Department, University of Minnesota, St. Paul. He holds degrees from Ohio State University and the University of Illinois. He has conducted basic research in soil and water conservation for 42 years with the recent emphasis on carbon cycling, carbon management and tillage impacts on soil carbon. Later Research focused on environmental quality issues related to tillage and residue management with emphasis on soil carbon management and losses of carbon dioxide following intensive tillage. His research has attracted international attention through requests for reprints and scientific presentations at farmer run No Till or Direct Seed Associations around the world. Don's work helps to explain the relationship between tillage practices and carbon loss, short and long-term and the impact of biomass removal for bioenergy. This work brings focus to the value of conservation agriculture (no-till) and the use of diverse rotations and cover crops to minimize soil C loss.



HAROLD RUDY

Harold Rudy grew up on a farm in Waterloo County where he still lives today and has established a thorough understanding of grassroots agriculture. Several degrees from the University of Guelph have contributed to his 29-year career in senior management with the Ontario Soil and Crop Improvement Association (OSCIA) where his current role is Executive Officer, Research and Business Development. Harold is a strong advocate of applied research with a strong connection to the University of Guelph and with industry partners with a focus to improve soil and crop management. He is currently working on a 30-year history of OSCIA, tentatively called 'The Soil Fixers', which is expected to be released for publication sometime in 2018.



ROBERT SANDFORD

Robert Sandford, “The Winston Churchill of Water,” holds the EPCOR Chair in Water and Climate Security at the United Nations University Institute for Water Environment and Health. In this capacity Bob was the co-author of the UN Water in the World We Want report on post-2015 global sustainable development goals relating to water. In his work, Bob is committed to translating scientific research outcomes into language decision-makers can use to craft timely and meaningful public policy and to bringing international example to bear on local water issues. To this end, Bob is also senior advisor on water issues for the Interaction Council, a global public policy forum composed of more than thirty former Heads of State including Canadian Prime Minister Jean Chretien, U.S. President Bill Clinton and the former Prime Minister of Norway, Gro Brundtland. Bob is also a Fellow of the Centre for Hydrology at the University of Saskatchewan and a Fellow of the Biogeoscience Institute at the University of Calgary. He is a senior policy advisor for the Adaptation to Climate Change team at Simon Fraser University and is also a member of the Forum for Leadership on Water (FLOW), a national water policy research group centred in Toronto. In 2011, Bob was honoured with the Premier’s award for his collaboration on the Northwest Territories water stewardship strategy. Bob is the author or co-author of many high profile books and works on water.



PAUL THOROUGHGOOD

Paul Thoroughgood, P.Ag. completed his undergraduate degree in Agriculture from the University of Saskatchewan with a major in Agronomy. He is currently the Regional Agrologist for the Western Region of Canada. In this role Paul works with the agriculture industry to develop and promote agricultural production systems that are economically viable and provide improved waterfowl habitat. Prior to joining Ducks Unlimited Canada in 1997 Paul managed farmland for non-resident landowners and operated a small agricultural consulting business in southeast Saskatchewan. Paul and his wife Leanne also own and operate a grain farm near Moose Jaw. Their crop rotation includes lentil, canola, winter wheat and durum. Paul has served as a Board Member of Winter Cereals Canada, founding Director for Saskatchewan Winter Cereals Development Commission and is currently the Western Representative for the Soil Conservation Council of Canada. In addition to farming and working for DUC, Paul coaches high school and club volleyball and is a basketball official.



DR. CLAUDIA WAGNER-RIDDLE

Dr. Claudia Wagner-Riddle is a Professor in Agrometeorology in the School of Environmental Sciences, University of Guelph. She is an expert in application of micrometeorological flux techniques to measure greenhouse gas emissions (GHG; methane, nitrous oxide and carbon dioxide) from agriculture. Her research aims at better understanding the processes that lead to GHG emissions and identifying management practices that can reduce GHG emissions, and hence, decrease the environmental impact of agricultural activities. She currently leads several projects focused on evaluating how soil health impacts soil ecosystem services, including a new infrastructure using large scale soil weighing lysimeter. Prof. Wagner-Riddle is an editor of the international journal Agricultural and Forest Meteorology since 2012 and associate editor of the Journal of Environmental Quality since 2011. She is a member of the Scientific Advisory Group to the 4R Quantification Module Strategy for The Fertilizer Institute and International Plant Nutrition Institute, United States; the Technical Committee GHG Inventory; Livestock, Environment and Climate Change Canada. Prof. Wagner-Riddle has published >100 papers, has had 2897 citations and has an h-index of 27 (Google Scholar).

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DOUG WRAY

Doug Wray and his wife Linda ranch west of Irricana on land first settled by his grandfather in 1910. The mixed farm was converted to a cow-calf and yearling ranch in 1999. Since then they have focused on optimizing their pasture and forage production, which they harvest and add value to with beef cattle. A healthy landscape, including soil, water, plants and animals, is their pathway to a profitable, sustainable business. The cattle rotate through legume-grass pastures in summer and graze stockpiled native range, green feed swaths and bale grazing in the winter. Every effort is made to optimize nutrient cycling and enable natural processes to build soil health and productivity. Doug has been involved with numerous organizations and conferences, including the CCA/ARECA National Grazing Mentor Program; the Western Canadian Grazing Conference; the Alberta Forage Variety Selection Committee; the Western Forage Beef Group Producer Advisory Committee; the Expert Committee on Forages; the Canadian Forum on Forages and Rangelands; and the Canadian Beef Value Chain Roundtable. In addition to serving on the board of the Foothills Forage Co-op Association and the Alberta Forage Council, Doug was a driving force in the formation of the Canadian Forage and Grassland Association and served as its chair from 2010 to 2015. In 2016, Doug received two awards – the Alberta Forage Industry Network Leadership Award and the Canadian Forage and Grassland Association’s Leadership Award.

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