HEALTH and FOOD
Is There a Future?

The 11th Annual Banff Conference on Agriculture, Food and the Environment
Presented by the Alberta Institute of Agrologists
March 31 - April 2, 2015
# WELCOME TO THE ELEVENTH ANNUAL BANFF CONFERENCE ON AGRICULTURE, FOOD AND THE ENVIRONMENT

## Alberta Institute of Agrologists
### Annual Conference, March 31-April 2, 2015
#### Kinnear Centre (KC), Banff Centre

**Conference Theme: Health and Food: Is There a Future?**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td><strong>Tuesday, March 31</strong></td>
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<tr>
<td>7:00-09:30 AM</td>
<td>Breakfast <em>(ONLY for Participants Staying at the Banff Centre)</em> Vista Dining Room</td>
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<tr>
<td>7:45-2:30 PM</td>
<td>Registration Desk Open – KC 100 Galleria</td>
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<tr>
<td>8:00-12:00 PM</td>
<td>Continuous Refreshment Break - KC 100 Galleria</td>
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<tr>
<td>8:00-12:00 PM</td>
<td>Trade Show Set-Up - KC 201/203/205</td>
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<tr>
<td>9:00-12:00 PM</td>
<td><strong>AIA Annual General Meeting – KC Husky Great Hall or Simulcast in KC 306</strong></td>
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<tr>
<td>12:00-1:30 PM</td>
<td>Lunch - Vista Dining Hall OR KC 201/203/205 <em>(Please check your lunch ticket)</em></td>
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<tr>
<td>1:45-4:30 PM</td>
<td>Continuous Refreshment Break - KC 100 and 300 Galleria</td>
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<tr>
<td>1:45-5:00 PM</td>
<td><strong>Continuing Professional Development Workshop</strong> - KC Level 3 and Husky Great Hall</td>
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<tr>
<td>1:45-5:00 PM</td>
<td>Environmental Impact Assessment Tools, Dr. A Kennedy, PAg, P.Biol.- KC 101/103</td>
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<tr>
<td>1:45-5:00 PM</td>
<td>Legal Advice About Competent Practice and the Value of Errors and Omissions Insurance</td>
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<td>– Peacock Linder Halt &amp; Mack LLP</td>
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<td>What is Professional Liability and Why Do Consultants Need it? – HUB International Insurance - KC 105</td>
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<tr>
<td>1:45-5:00 PM</td>
<td>Plain Language for Effective Writing, Wordsmith Associates- KC 305</td>
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<tr>
<td>1:45-5:00 PM</td>
<td>Contaminants in Soils, Water, Air, Manure and Plants: Facts and Misconceptions Dr. W. Shotyk, PAg- KC 303</td>
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<tr>
<td>5:00-7:30 PM</td>
<td>Trade show set up</td>
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<tr>
<td>7:30-10:00 PM</td>
<td>Wine and Cheese Reception with Trade Show - KC 201/203/205</td>
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<tr>
<td>7:30-9:30 PM</td>
<td>Registration Desk Open – AIA Booth KC 201/203/205</td>
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<tr>
<td><strong>Wednesday, April 1</strong></td>
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<tr>
<td>7:00-09:30 AM</td>
<td>Breakfast <em>(ONLY for Participants Staying at the Banff Centre)</em> Vista Dining Room</td>
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<tr>
<td>7:00-10:00 AM</td>
<td>Registration Desk Open –KC 100 Galleria, AIA Booth</td>
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<tr>
<td>8:00-11:30 AM</td>
<td>Continuous Refreshments–KC 201/203/205</td>
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<tr>
<td>8:00-5:00 PM</td>
<td>Trade Show – KC 201/203/205</td>
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<tr>
<td>7:50-12:30 PM</td>
<td><strong>Morning Plenary Session – KC Husky Great Hall</strong></td>
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<td>7:50-08:00 AM</td>
<td>Opening Remarks and Introductions: Hon. Ric McIver, Minister of Jobs, Skills, Training and Labour</td>
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<tr>
<td>8:00-08:45 AM</td>
<td>Green Paper Presentation: Dr. Catherine Chan and Dr. Noreen Willows, University of Alberta</td>
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<tr>
<td>8:45-09:20 AM</td>
<td>“What is Out There Making Us Sick?” - Dr. Stephen Genuis, University of Alberta</td>
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<tr>
<td>9:20-9:55 AM</td>
<td>Economics and Food- Dr. Sean Cash, Tufts University</td>
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<td>Time</td>
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<tr>
<td>9:55-10:15 AM</td>
<td>Networking/Nutrient Break - KC 100 Galleria</td>
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<tr>
<td>10:15-10:50 AM</td>
<td>“Aligning the Canadian Food System with Nutrition and Health Goals” - Dr. Harvey Anderson, University of Toronto</td>
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<tr>
<td>10:50-11:25 AM</td>
<td>“The Future is Local: How City-Regions are Leading the Way on Food, Health and the Environment” - Dr. Catherine Mah, Memorial University of Newfoundland</td>
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<tr>
<td>11:25-11:55 AM</td>
<td>“Food Safety Modernization in Alberta” - Dr. Jeff Stewart, Alberta Agriculture and Rural Development</td>
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<tr>
<td>12:00-12:30 PM</td>
<td>Plenary Panel Discussion - Chaired by Dr. Stan Blade, Dean of Agriculture, Life and Environmental Sciences, University of Alberta</td>
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<tr>
<td>12:30-1:45 PM</td>
<td>Lunch - Vista Dining Hall OR KC 201/203/205 (Please check your lunch ticket)</td>
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<tr>
<td>2:00-5:00 PM</td>
<td>Breakout Sessions</td>
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<td>2:00-2:30 PM</td>
<td>‘Using Health Claims in Product Promotions: Opportunities and Obligations’ - Anne Kennedy, Agriculture and Agri-Food Canada</td>
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<td>2:00-2:30 PM</td>
<td>‘Organics in Alberta’ - Becky Lipton, Organic Alberta</td>
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<td>2:35-3:05 PM</td>
<td>‘An Update on Proposed Changes to Nutrition Labelling in Canada’ - Dr. William Yan, Health Canada</td>
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<td>2:35-3:05 PM</td>
<td>‘Circadian Rhythms: How Cycling of Plant Biology May Impact Nutrition’ - Dr. Janet Braam, Rice University</td>
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<td>3:00-3:40 PM</td>
<td>Networking/Nutrient Break: KC 201/203/205</td>
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<tr>
<td>3:45-4:15 PM</td>
<td>‘Organic Agriculture as a Sustainable Production System’ - Dr. Andrew Hammermeister, Dalhousie University</td>
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<td>3:45-4:15 PM</td>
<td>‘The Chemical Erosion of Human Health’ - Dr. Stephen Genuis, University of Alberta</td>
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<td>4:20-4:50 PM</td>
<td>‘Health Benefits of Organic Farming and Food’ - Dr. Andrew Hammermeister, Dalhousie University</td>
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<td>4:20-4:50 PM</td>
<td>‘Choline: The Forgotten Essential Nutrient’ - Erin Lewis, University of Alberta</td>
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<tr>
<td>5:00-6:30 PM</td>
<td>Trade Show Teardown - KC 201/203/206</td>
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<tr>
<td>6:30-9:30 PM</td>
<td>Banquet and Entertainment - KC Husky Great Hall</td>
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<tr>
<td>Thursday, April 2</td>
<td>Breakfast (ONLY for Participants Staying at the Banff Centre) Vista Dining Room</td>
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<tr>
<td>08:45-11:30 AM</td>
<td>Continuous Refreshment Break - KC 300 Galleria</td>
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<tr>
<td>08:45-12:00 PM</td>
<td>Continuing Professional Development Workshops</td>
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<td>08:45-12:00 PM</td>
<td>Wetland Species Plant Identification - Dr. Steven Tannas, PAg; Clare Tannas, PAg; Kathy Tannas; Eileen Tannas - KC 101/103</td>
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<tr>
<td>08:45-12:00 PM</td>
<td>Project Management Essentials, Dr. Dale Christenson, DPM, PMP, CMC - KC 303</td>
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<tr>
<td>08:45-12:00 PM</td>
<td>“Receiving Feedback: How to Hear it, Receive it, Use it” - Dr. David Chanasyk, PAg, P.Eng.; &amp; Carol Gabanna, CEC, ACC - KC 305</td>
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<tr>
<td>08:45-12:00 PM</td>
<td>Ecological Tools for Sustainable Management of Alberta Rangelands - Barry Adams, PAg; Mike Alexander, PAg; Donna Lawrence; and Craig DeMaere, PAg - KC 105</td>
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<tr>
<td>12:00-1:15 PM</td>
<td>Lunch - Lunch is only provided for those who register for the bonus cpd session</td>
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<tr>
<td>1:15-4:00 PM</td>
<td>BONUS CPD SESSION (Must register and pay separately on the events calendar): Alberta Wetland Classification—the Key to Consistency: Thorsten Hebben, P.Biol., AESRD</td>
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Sponsors are an integral part of the success of AIA’s annual conference and we sincerely thank them for their valued participation. Please take the time to mention that you are aware of their contribution to AIA’s conference any time the opportunity arises.

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Message from Honourable Jim Prentice
Premier of Alberta

It is my pleasure to bring greetings from the Government of Alberta to the members of Alberta Institute of Agrologists as you gather for your annual conference. You are the valued advisors and experts on best practices for many aspects of agricultural and environmental management and this conference is a tremendous opportunity for you to stay abreast of the latest trends, science and thinking. I wish you productive discussions revolving around your theme of ‘Health and Food – Is there a future?’

I believe we can establish our province as an environmental leader. I have made it our government’s priority to focus on some key areas, including maximizing the value of our natural resources sector – treating our abundance of water, land and other resources respectfully, with an eye to the future. As well, we will focus on increasing Albertan’s quality of life by leading in health care – and that includes supporting healthy lifestyles and nutrition.

Alberta is a leader in environmental and agricultural excellence. We have been able to achieve this through the collective expertise of our scientists and their research, the experience and innovation of generations of farmers and ranchers, and by working shoulder-to-shoulder with our industry partners.

Best wishes for a successful conference.

Jim Prentice
April 1, 2015
Message from the Honourable Kyle Fawcett
Minister of Environment and Sustainable Resource Development

Welcome to the 2015 Alberta Institute of Agrologists Annual Conference – Health and Food: Is There a Future? Clean soil, air, and water are the basic building blocks for a healthy society. Alberta’s agrologists fulfill a key role in managing our abundant resources by caring for our native rangelands, supporting our agricultural producers, and working with industry to lighten its footprint on the land.

Alberta needs productive land to produce healthy food. Environment and Sustainable Resource Development’s land-use plans and other regulatory policies for land management and land protection help to ensure Albertans have productive land.

Agrologists throughout our province often interface with agricultural and industrial producers. They balance competing needs for Alberta’s land and water, while working to protect the quality of our environment. Whether supporting agricultural producers – or managing industrial impacts on the land base – agrologists work to ensure Alberta has a healthy and productive land base, now and in the future.

Approximately eight million acres of our public land is used by livestock producers. Since the early 1900s, rangeland agrologists have worked with the livestock industry to manage this land to produce about 14 percent of Alberta’s livestock – a direct food source for Albertans.

Agrologists use their overarching knowledge of environmental and agricultural science to protect or enhance Alberta’s diverse landscapes from northern forests to native range. This land is home to a vast array of flora and fauna, provides ecological goods and services, and is vital to the forestry, livestock, and food production industry appreciated by Albertans.

On behalf of the Government of Alberta, it is my pleasure to thank the Alberta Institute of Agrologists and its members for their strong support and involvement in maintaining Alberta’s rangeland, air, and water resources for future generations.

Sincerely,

Kyle Fawcett
Minister of Environment and Sustainable Resource Development
MESSAGE FROM THE MINISTER

As Minister of Agriculture and Rural Development, it is an honour to welcome you to the 11th annual Banff Conference on Agriculture and the Environment. The theme of this year’s conference, Health and Food: Is There a Future?, focuses on the important connections between agriculture, food and healthy living.

Our government shares your commitment to a strong and sustainable agriculture sector that provides healthy food choices to Albertans and consumers around the globe. We will continue to help position the agriculture industry for growth and long-term success by enhancing access to new markets, encouraging innovation, and helping ensure consumers have confidence that Alberta is an environmental steward and leader in areas such as animal health and welfare, plant health and safe food products.

Agrologists have a significant role in advising producers on best practices with livestock, crops and environmental management of their operations. Your efforts are essential to helping the agriculture sector continue to evolve to meet the challenges of the future.

Thank-you to the Alberta Institute of Agrologists for hosting this event and for creating an opportunity to discuss important issues affecting agriculture and the environment.

Best wishes for a productive and successful conference.

Verlyn Olson, QC
Minister
Greetings from the Honourable Ric McIver
Minister of Jobs, Skills, Training and Labour

On behalf of the Government of Alberta, it is my pleasure to bring greetings to the Alberta Institute of Agrologists’ 11th Annual Banff Conference on Agriculture and the Environment.

Agrologists from across the country bring a wealth of knowledge and expertise to key areas of our economy. As certified, trained professionals, your work helps government, industry and training institutions make the best possible decisions about our resources, environment, food safety and production.

The Alberta we enjoy today is the result of ingenuity, drive, and strong work ethic. The contributions you make are no exception. Ultimately, these qualities drive investment, elevate our quality of life, and help keep our province growing. Managing this growth, in part, hinges on finding permanent solutions to our workforce challenges. The ability of workers to access employment opportunities and to pursue their chosen career across Canada helps address labour market challenges and maintain a strong economy.

I am encouraged to see accomplishments with increased national labour mobility. I look forward to continued collaboration with the Alberta Institute of Agrologists as we further create pathways for out-of-province professionals to take advantage of all Alberta has to offer.

Congratulations on your 11th anniversary and for your commitment to making Alberta and our country an even better place in which to live, work, and do business.

I wish you every success.

Ric McIver
Minister of Jobs, Skills, Training and Labour
Dr. C. B. Chan

Director, Division of Human Nutrition, Department of Agricultural, Food and Nutritional Science, Faculty of Agriculture, Life and Environmental Sciences

Dr. Catherine B. Chan is a Professor in Human Nutrition (Faculty of Agriculture, Life and Environmental Sciences) and Physiology (Faculty of Medicine and Dentistry) and is a member of the Alberta Diabetes Institute. She is also the Director of the Division of Human Nutrition.

Dr. Chan's research is at the intersection of nutrition, physiology and behavior. She is the leader of the Physical Activity and Nutrition for Diabetes in Alberta team, an interdisciplinary effort to improve health outcomes in type 2 diabetes by developing, implementing and evaluating nutrition and physical activity interventions that can be applied in clinical and community settings. In addition, she conducts laboratory-based research on insulin, its secretion and action with a current focus on nutritional modulators of these endpoints. Her work is funded by CIHR, Dairy Farmers of Canada, Alberta Innovates BioSolutions, the Alberta Livestock and Meat Agency and the Alberta Diabetes Institute.

Dr. N. Willows

Associate Professor of Community Nutrition, Faculty of Agriculture, Life and Environmental Sciences – University of Alberta

Dr. Noreen Willows received her PhD in Human Nutrition from McGill University in 2000. She is currently an Associate Professor of Community Nutrition in the faculty of ALES at the University of Alberta. Dr. Willows holds a Health Scholar award from Alberta Innovates – Health Solutions to engage in population health intervention research to enhance food security in First Nation communities in Alberta. She takes a community-based, participatory approach to research, in which community members and researchers work together to find culturally appropriate solutions to health problems. In June 2013 she received the Centrum Foundation New Scientist Award in recognition of Outstanding Research in Nutrition at the Canadian Nutrition Society Meeting.

Talk title:
Green Paper Presentation
Dr. S. Genuis
Clinical Professor Faculty of Medicine - University of Alberta

Dr. Stephen Genuis is a clinician and researcher involved in many areas of medical science. He is board certified in both Obstetrics and Gynecology as well as in Environmental Medicine and has authored over 100 scientific publications for over 50 different peer-review medical journals including Lancet, British Medical Journal, Canadian Medical Association Journal, Public Library of Science, Public Health, and Environmental Research. In addition to writing, he lectures extensively and has reviewed papers for over 70 different scientific and medical publications on issues ranging from medical ethics to environmental health, from evidence-based medicine to nutritional science, and from physician professionalism to medicine and cyberspace. He has served as the women’s health care physician for an inner city clinic, worked as an Obstetrician/Gynecologist at a University teaching hospital, and served as co-director of medical services in a West African hospital. Included in his awards are the Commemorative Medal from the Governor General in recognition of significant contribution to Canada, the 1983 ‘Resident of the Year’ award chosen by the graduating medical class at the University of Alberta medical school, and a ‘Teacher of the Year’ award from the University of Alberta – where he serves as a Clinical Professor in the Faculty of Medicine. He plays piano and sings in a doctor’s band called DixieDocs. Most importantly, he enjoys ballroom dancing with his wife Shelagh, and being his five kids’ “Pa”.

Talk title:
What is Out There Making Us Sick

Abstract:
Amid all the wonders of the modern scientific world, there continues to be many individuals, young and old, rich and poor, and of every race and creed who are crushed by the burden of debilitating physical and emotional health problems. Despite unprecedented resources, research, and manpower devoted to healthcare, the rates of chronic illness in adults and children are rising, and various forms of disability are impacting the lives of innumerable individuals and families. This session will endeavour to challenge participants with emerging research about specific contemporary factors which appear to be responsible for most chronic disease and affliction. Interventions to address chronic and degenerative health problems will be explored.

Talk title:
The Chemical Erosion of Human Health (Breakout Sessions, Wednesday April 1)
Dr. S. B. Cash

Sean B. Cash is an Associate Professor at the Friedman School of Nutrition Science and Policy at Tufts University with expertise in economics and policy of food, nutrition, and the environment. He also is an adjunct professor at the University of Alberta, and obtained his PhD in agricultural economics from the University of California – Berkeley. His research focuses on how food, nutrition, and environmental policies affect both producers and consumers. Ongoing and recent projects in this area include the efficacy of food label and price interventions as public health and environmental tools, including linkages to disease incidence; economics aspects of obesity; barriers to and incentives for adherence to dietary plans; children’s food choices in commercial and school environments; the role of agricultural policies on nutrition; how consumers value social aspects of food relative to other attributes; and how point-of-sale health messaging impacts consumers’ demand for food. He has been involved extensively in policy and public-facing work, including testimony on childhood obesity interventions to the Canadian Parliament and service on a National Academy of Sciences panel on invasive species impacts of food trade.

Talk title: Consumers, Food Policy, and Health

Abstract:

The concerns around the social costs associated with poor, inadequate diets and unhealthy food choices have received much attention lately. In response, governments are directing their attention toward the interplay between public health and the food economy. This talk begins by discuss the potential role of, and justifications for, policy interventions, and discusses how consumers and industry have responded to increasing concerns around chronic disease and food. A failure to incorporate consumer and industry response into the policymaking process has led to suboptimal outcomes in the past. How can we avoid this in the future?
Dr. G. H. Anderson

Department of Nutritional Sciences, University of Toronto, Toronto, Ontario M5S 3E2  harvey.anderson@utoronto.ca  Phone-416-978-1832.

Dr. G. Harvey Anderson is Professor of Nutritional Sciences and Physiology Faculty of Medicine, University of Toronto. He holds a BSc and from the Faculty of Agriculture, University of Alberta and PhD, Nutritional Biochemistry from the University of Illinois and completed postdoctoral studies and the Massachusetts Institute of Technology. He is Director of the University-Industry Program in Food Safety, Nutrition and Regulatory Affairs (PFSNRA) and Director of the Child Centre for Nutrition, Health and Development. He has served the University as Associate Dean, School of Graduate Studies, Dean and Associate Dean, Research, Faculty of Medicine, Chair, Department of Nutritional Sciences and as an elected member of the Governing Council. His advocacy for university, industry and government partnerships in developing food and nutrition solutions is shown by his leadership in the formation of the University of Toronto’s PFSNRA and as Chair of the Board of the International Life Sciences Institute, Washington, D.C. Dr. Anderson has held academic appointments at many Chinese universities where he led the development of an academic program in clinical and public health nutrition at Sun Yat-sen University of Medical Sciences, Guangzhou. His research on protein and amino acid metabolism, food selection and intake regulation, diet and behavior, infant nutrition, total parenteral nutrition, and diet and chronic disease (with emphasis on sugars and proteins), has led to over 350 publications and the training of more than 100 MSc and PhD students and postdoctoral fellows. His research has received continuous peer-reviewed grant support since 1970. He is a Fellow of the American Society of Nutrition.

Talk title:

**Aligning the Canadian Food System with Nutrition and Health Goals**

Abstract:

The overall burden of obesity and chronic diseases on the health system places an increasing burden on businesses through increased productivity and insurance coverage costs, and poses significant threats to the vitality of Canada’s economic future. Canada needs to synergistically scale up health and economic return by integrating health throughout the agri-food system. Health research must be integrated throughout the value added chain from breeding, production, processing, food service/retailers to dieticians and media that disseminate the nutrition information to the public. The present report will propose the development and branding of the Canadian Climate Advantage Diet as a focus to Canada’s future integrated health and agri-food strategy.
Dr. C. L. Mah, MD FRCPC

Dr. Catherine L. Mah, MD FRCPC PhD is Assistant Professor of Health Policy in the Division of Community Health and Humanities in the Faculty of Medicine at Memorial University. She is also appointed to the Dalla Lana School of Public Health at the University of Toronto, and the Social and Epidemiological Research Department at the Centre for Addiction and Mental Health. Dr. Mah leads a multidisciplinary program of research in the policy and practice of public health, with a particular interest in public health innovations in the food system. She has received funding from the Canadian Institutes of Health Research, the Public Health Agency of Canada, and the Japan Foundation. Dr. Mah holds an MD from the University of Calgary, completed residency training at Memorial University, and is a Fellow of Royal College of Physicians and Surgeons of Canada in Paediatrics. She received her PhD in health policy from the University of Toronto with postdoctoral fellowships in applied policy research at Kyoto University and Toronto Public Health.

Talk title:  
**The Future is Local: How City-Regions are Leading the Way on Food, Health, and the Environment**

Abstract:

Our contemporary food system presents substantial challenges to our individual and collective wealth and health. City-regions have emerged as a key arena for innovative thinking on and design of healthier food environments, in ways that integrate multiple policy aims including social equity, environmental sustainability, economic development and prosperity, and population health. This presentation will highlight key jurisdictional examples of local authorities across Canada adopting food system thinking and diverse policy levers to lead successful cross-sectoral interventions.
Dr. J. S. Stewart
Executive Director, Food Safety and Animal Welfare, Alberta Agriculture and Rural Development

As the Executive Director for ARD’s Food Safety and Animal Welfare Division, Dr. Jeff Stewart leads a team of multi-disciplinary professionals focused on supporting industry success and public confidence in Alberta-produced agri-food. Activities include regulatory oversight of provincial meat processing facilities, and the development of policies and the administration of funding programs to improve food safety and animal welfare. Prior to joining Alberta Agriculture and Rural Development in October 2013, Dr. Stewart worked for 32 years with Agriculture and Agri-Food Canada starting as a scientist in Charlottetown, PEI, and finishing as the Science Director for the Lethbridge and Lacombe Research Centres. Jeff lives in Edmonton and enjoys spending time with children and grandchildren in Lethbridge, travel, physical activity, and honing his culinary skills, which includes ensuring that proper food safety practices are followed.

Talk title:
Food Safety Modernization in Alberta

Abstract:

Ensuring food safety involves everyone in the farm to fork continuum, including government. A modernized food safety system requires clarification of regulatory accountabilities, operational consistency among regulatory agencies, and balancing the reduction of red tape with food safety practices. A partnership among regulatory agencies, both federal and provincial, academia, stakeholder organizations, and industry is needed to ensure the widespread adoption of a culture of food safety within Alberta. This partnership will allow SMEs to navigate through the complex food safety environment so that they can continue to have an economic advantage in the food processing economy across Canada. Alberta Agriculture and Rural Development (ARD) has always been an innovator of change for improved food safety systems and this includes a modernized approach to meat inspection. Two key components to realize this transformation are a sound, science based surveillance system and the regulatory capacity to conduct meat inspection services that ensure public safety.
Anne Kennedy

Anne Kennedy holds the title of Deputy Director, Food Industry Division of the Market and Industry Services Branch at Agriculture and Agri-Food Canada. In this capacity Anne works with food industries, associations and commodity groups to identify and resolve regulatory and policy issues that impact competitiveness and innovation. One of Anne’s key roles is to build sector awareness of the regulatory requirements for innovative new products so that companies have accounted for pre-market regulatory approvals in both their marketing and business plans. Anne has been active in the development of policies for nutrition labelling, health claims, the addition of vitamin and minerals to foods, the food-natural health product interface and food safety. She has extensive experience in policy development and nutrition promotion from both a government and non-government perspective.

Prior to joining AAFC in 2003, Ms. Kennedy held positions as President and CEO of the National Institute of Nutrition, as Manager of the Nutrition Education program for the Canadian Egg Marketing Agency and as a public health nutritionist.

Ms. Kennedy holds a Masters of Health Sciences in Community Nutrition from the University of Toronto, a Certificate in International Food Law from Michigan State University and a Bachelors of Applied Science in Human Nutrition from the University of Guelph. She was a member of the inaugural Advisory Board for the CIHR Institute of Nutrition, Metabolism and Diabetes.

Talk title: Using Health Claims in Product Promotions: Opportunities and Obligations

Abstract:

Today, whether based on choice or necessity, consumers are seeking foods and ingredients that will go beyond basic nutritional value to enhanced general well-being and even disease prevention. In response, food scientists are developing ingredients from plants, animals, marine sources and micro-organisms with the promise of improved health outcomes. Growing consumer interest, combined with a greater understanding of food–health relationships, rising healthcare costs, and an aging population, are factors driving the insatiable market for functional foods and natural health products. This session will address why health claims on packages and in advertising are an effective way of increasing consumer awareness of the health benefits found in a food product or an ingredient. It will help you better understand and navigate Canada’s food regulatory system and point you to important resources.surveillance system and the regulatory capacity to conduct meat inspection services that ensure public safety.
Becky Lipton has been working with the organic industry in Alberta since 2008. Originally brought on to coordinate the Alberta Organic Harmonization Project, she is now the Executive Director of Organic Alberta. Becky brings her experience in organizing, strategic planning, facilitation, and program coordination to the position. She also brings her expertise from past work including from her Masters’ degree (women and agriculture), her work with the New Rural Economy research group, and her experience on farms, with farmers’ markets, and agriculture education. Becky is a high energy person who is full of determination and passion for a form of agriculture that she believes has the potential to transform and cultivate a healthy food system – a system that is sustainable for our farmers, our eaters, and everyone in between.

Talk title:
Organics in Alberta, the Land of Opportunity

Abstract:
The organic market in Canada is worth $3.5 billion and 58% of Canadians buy organic weekly. In Alberta the total organic food sales in 2012 were $416 million. This growth is only spurred on by recent studies showing the health and environmental benefits of organics. Growth isn’t just on the demand side however. While total farms in Canada declined by 17% between 2001 and 2011, organic farms grew by 66.5%. Come learn more about the trends in organics, and where the opportunities could take us...
Dr. A. McAlister

Anna R. McAlister is Assistant Professor in the Department of Advertising + Public Relations at Michigan State University. Dr. McAlister’s qualifications include a PhD in Psychology (2006, University of Queensland, Australia) and three years of postdoctoral training in Marketing (2007-2009). She also holds a Graduate Certificate in Education, specializing in Higher Education. Given her training in Psychology and Marketing, Dr. McAlister’s interest area is consumer behavior. She has been teaching courses in Consumer Behavior to undergraduate, master’s, and doctoral students for 8 years. Dr. McAlister’s research focuses primarily on understanding the ways in which children and adults learn about food. In particular, Dr. McAlister studies the ways in which people’s learning is influenced by food and beverage marketing communications. Her work is largely policy-oriented. Recent papers are published in *Journal of Public Policy & Marketing*, *Journal of Advertising*, *Child Development*, and *Appetite*.

Talk title:
**Understanding Consumer Attitudes and Choice: Insights from a Consumer Psychologist**

Abstract:
This talk will provide an overview of the process of consumer attitude formation, from a theoretical perspective. It will also include presentation of results from multiple studies that examine children's food preferences, and how these preferences are shaped by marketing communications. Adults’ food choices will also be discussed. The session will conclude with discussion of the ways in which various stakeholders can use these insights to better tailor their approach to the needs of consumers.
Dr. W. Yan

Dr. William Yan obtained his Master degree in Microbiology and PhD degree in Medical Microbiology and Infectious Diseases from the University of Alberta. He completed his post-doctoral training at Tufts University Medical School, Boston, MA before beginning his career in Health Canada as a Research Scientist in 1995. He was Head of the Office of Biotechnology, Food Directorate, from 1999-2002, Chief of the Evaluation Division, Bureau of Microbial Hazards, from 2002-2008 and Director of the Health Effects Division of the Pest Management Regulatory Agency from 2008-2009. In June 2010, Dr. Yan was appointed Director of the Bureau of Nutritional Sciences in the Food Directorate. Since then, he has provided leadership in the Bureau's work on developing nutritional standards and regulations as well as pre-market assessment of novel foods, novel fibres, health claims and infant formulas. Recently, Dr. Yan led the transition of food-like natural health products to the food regulatory framework. He is currently leading the Food Directorate's work on improving how nutritional information is provided on food labels in Canada.

Talk title:
Proposed Changes to Nutrition Labelling in Canada

Abstract:

In support of Health Canada’s mission to help Canadians maintain and improve their health, the Food Directorate is the federal health authority responsible for establishing policies, setting standards and providing advice and information on the safety and nutritional value of food.

Health Canada proposed changes to specific aspects of the food label based on the most up to date scientific information and consumption habits, as well as comments received from Canadian parents and consumers during previous consultations with the Minister of Health.

These consultations were part of a broader commitment made by the Government of Canada during the 2013 Speech from the Throne to consult with Canadians on how to improve the way nutritional information is presented on food labels. The proposed changes were to the format of the Nutrition Facts table, the list of nutrients that must be declared in the table, and to update the Daily Values to reflect the most recent dietary recommendations. Health Canada also proposed changes to the way ingredients are listed, including grouping sugars together and creating an optional information box highlighting the presence of certain bioactive components, such as caffeine. Finally, another key proposal was to provide guidelines to industry to make the serving sizes displayed in the Nutrition Facts table more consistent among similar products. These serving sizes would be based on the most current information on the amounts of food that Canadians actually eat in one sitting, also known as reference amounts.

The objectives of the presentation will be to provide an update on these initiatives and to provide an overview of the changes proposed by Health Canada.
Dr. J. Braam

Janet Braam is the Wiess Chair of Biochemistry and Cell Biology at Rice University and has served as Department Chair for the past 7 years. She received her PhD in Molecular Virology and Biology from the Sloan-Kettering Division of the Cornell Graduate School of Medical Sciences, elucidating the functions of influenza viral polymerase subunits. She then joined Stanford University School of Medicine as an NSF postdoctoral fellow in plant biology. Her research at Stanford led to the discovery that plants turn on genes in response to simple touch stimulation and shed light on the importance of calcium signal transduction in mechanical perturbation responses in plants. In 1990, Janet joined the faculty at Rice University. Her research at Rice has focused on uncovering roles of calcium-binding and cell wall proteins in plant responses to environmental stress, and elucidating aspects of nitric oxide signaling, autophagy regulation, chlorophyll biosynthesis, and jasmonate dependent defense. Most recently, her research uncovered critical roles for the plant circadian clock in insect defense; this work was recognized by the 2012 Proceedings of the National Academy of Sciences Cozzarelli Prize. Following up on these findings, the Braam lab demonstrated that this circadian clock function also impacts post-harvest crops, finding that light resets the clock of post-harvest cabbage and causes rhythmic accumulation of phytochemicals important to human health. Furthermore, she showed that clock re-entrainment is a broad phenomenon; diverse fruits and vegetables remain alive with functional circadian clocks long past harvest. This work has garnered significant popular press attention because of the relevance to human health and nutrition.

Talk title:
Circadian Rhythms: How Cycling of Plant Biology May Impact Nutrition

Abstract:
Danielle Goodspeed¹, E. Wassim Chehab¹, John Liu¹, Zhengji Sheng¹, Marta Francisco², Daniel Kliebenstien², Janet Braam¹

¹BioSciences, Rice University, Houston, TX 77005; ²Plant Biology, University of California, Davis, CA 95616.

Overview. Almost all organisms have evolved internal clocks that allow them to tell time and anticipate the daily environmental changes caused by the earth’s rotation. We have discovered that the circadian clock provides selective advantage to plants through anticipation of and enhanced defense against herbivory and fungal infection. This cyclical plant behavior is also evident in crop plants, even in vegetables and fruits long after being harvested. As a consequence, phytochemicals and metabolites, including those relevant to human health and nutrition, may vary in accumulation levels depending upon the time of day.

The Circadian Clock Synchronizes Plant Defense Physiology with the Environment. Our work with Arabidopsis plants demonstrated that plants use their circadian clock to time their defense against insect herbivores so as to enhance resistance at the time of day that the insects are likely to feed. We have demonstrated that plants entrained in light-dark cycles in phase with the entrainment of insect herbivores, cabbage loopers (Trichoplusia ni), suffer only moderate tissue loss due to herbivory. In contrast, plants entrained out of phase
relative to the looper entrainment are highly susceptible to attack, with dramatic loss of tissue. Both the circadian clock and jasmonates, a major plant defense hormone, are required for this in-phase plant resistance to herbivory, as the in-phase entrainment advantage is lost in plants with arrhythmic clocks or deficient in jasmonate hormone. Our results demonstrate that the plant circadian clock controls accumulation of major defense hormones and is critical for plant defense against insect herbivory, and thereby provides a strong physiological advantage.

**Post-Harvest Circadian Entrainment Enhances Phytochemical Cycling.** Based on the findings with Arabidopsis plants, we hypothesized that harvested vegetables and fruits may retain capacity to perceive and respond to external stimuli and maintain circadian behaviors. Our data indicate that the circadian clock of post-harvest cabbage (Brassica oleracea) is entrainable by light-dark cycles and results in enhanced herbivore resistance. In addition, entrainment of the post-harvest cabbage causes cyclical accumulation of metabolites that function in plant defense. These metabolites are also relevant to human health because in edible crops these phytochemicals have potent anti-cancer properties. Furthermore, we demonstrate that the phenomena of post-harvest entrainment and enhanced herbivore resistance are widespread among diverse crops. Therefore, sustained clock entrainment of post-harvest crops may be a simple mechanism to promote pest resistance and nutritional value of plant-derived food.

This work was supported by the National Science Foundation MCB 0817976 and Rice University Institute of Biosciences and Bioengineering Medical Innovations Award.

Dr. V. Adamowicz

Vic Adamowicz is a Distinguished University Professor in the Department of Resource Economics and Environmental Sociology, Faculty of Agricultural, Life and Environmental Sciences, University of Alberta. He obtained his BSc and from the University of Alberta (1981, 1983) and his PhD from the University of Minnesota in 1988. His research has focused on the valuation of environmental amenities and ecosystem services and the incorporation of environmental values into economic analysis – with applications to forestry, water quality, air quality, endangered species and agriculture. His research also involves the analysis of choice behavior with applications to food demand, recreation, and environmental quality. He is a Fellow of the Royal Society of Canada, Academy II – Social Sciences (awarded in 2007) and of the Canadian Agricultural Economics Society (awarded 2011).

Talk title: Understanding Consumer Behaviour and Choice: An Economic Choice Behaviour Perspective

Abstract:

Economists study choice in a variety of contexts – food, transportation, health care, jobs, recreation, etc. This talk will discuss the application of the methods and models used to analyze choice behavior with applications to food. The presentation will employ examples to illustrate a variety of factors that characterize consumer choice of food including habits, heterogeneity of preferences, and the use of “heuristics” to simplify choice in a complex world. The talk will also outline the challenges of understanding food choices including the trade-offs associated with different types of data and analytical approaches.
Dr. A. Hammermeister, PAg

Director, Organic Agriculture Centre of Canada Assistant Professor,
Department of Plant and Animal Sciences Faculty of Agriculture, Dalhousie
University

#3-137 College Road, P.O. Box 550 Truro NS B2N 5E3
Ph: 902-893-8037; Fax: 902-896-7095
Email: Andrew.hammermeister@dal.ca; Website: www.dal.ca/oacc

Dr. Andy Hammermeister is the Director of the Organic Agriculture Centre of
Canada (OACC) and Assistant Professor in the Faculty of Agriculture at Dalhousie
University, Nova Scotia, Canada. Andy grew up on a mixed beef and grain farm in southeast Saskatchewan. He
has a Bachelor’s degree in Agriculture with a specialization in Soil Science from the University of Saskatchewan.
He completed his Master’s degree in land reclamation and PhD in Applied Ecology from the University of
Alberta.

Andy has worked with the Organic Agriculture Centre of Canada since 2002, conducting or collaborating
in research on grain and vegetable cropping rotations/systems, soil amendments, pesticide risk reduction
in soybean, variety trials of soybean, low-till organic production, wheat, lupin and flax, oilseed pumpkin
production, wireworm control, dairy production systems, landscape biodiversity, and most recently black
currants management.

As Director of the OACC Dr. Hammermeister also overseas Canada’s Organic Science Cluster, the coordinated
national research initiative for organic agricultural research in Canada. Visit www.dal.ca/oacc for more
information.

Talk title:
Organic Agriculture as a Sustainable Production System

Abstract:
Agricultural sustainability can be evaluated in terms of its ability to maintain productivity, farm viability
and usefulness to society while minimizing environmental impact and use of non-renewable resources.
Organic agriculture is a model of food production that is guided by principles of sustainability in terms of
environment, resources, economics and animal well-being. It is a regulated and inspected production
system driven by consumer demand domestically and internationally. It offers a defined model of addressing
agri-environmental issues. Numerous scientific papers have identified significant environmental benefits
associated with organic agriculture. The growth in consumer demand for organic products has continually
outpaced all other segments of the food industry. While initially organic production was supported by price
premiums, now the organic price advantage is driven by consumer demand. This presentation will discuss the
precautionary principle employed organic agriculture as a model of environmentally sustainable production
that can support a viable farm enterprise.
Talk title:
**Health Benefits of Organic Farming and Food**

Abstract:

One of the most common question asked relating to organic food is: “Is organic food healthier than non-organic food?” This question is somewhat misguided since the organic standards and regulations address a whole production and processing system, without addressing the quality characteristics of the end product. Regardless, the health benefits of an agri-food system can generally be discussed in terms of improving nutrition (maybe even well-being) and reducing risks. In terms of improving nutrition, research over the past decade has shown that the amounts of beneficial minerals, essential amino acids and vitamins in organic food are at least as high as in non-organic foods and often higher. In terms of risk reduction, organic foods have been demonstrated to contain fewer pesticides at lower concentrations and do not contain synthetic colors, flavors, or preservatives. Organic agriculture also reduces risk of farmer exposure to pesticides. This presentation will conclude by discussing whether these benefits of organic are significant enough to warrant an independent organic food system.
Erin Lewis

Erin Lewis is a PhD candidate in the Department of Agricultural, Food and Nutritional Science at the University of Alberta. Originally from London, Ontario, she completed a BSc at the University of Guelph in Nutritional and Nutraceutical Sciences. Erin moved to Edmonton in July 2011 to work under the supervision of Dr. Catherine Field and Dr. René Jacobs. Initially starting in a Masters program, Erin later transferred to a PhD program in December 2012. Erin’s research focuses on the role of maternal choline on infant development. She has published research on the choline intake in a cohort of Albertan women, and the choline composition of Albertan products including legumes and meat. She has won awards for her presentations on choline in the diet of pregnant and lactating women in Alberta and its role in the development of the infant’s immune system and holds several scholarships including the Queen Elizabeth II, and the Women and Children’s Health Research Institute Studentship.

Talk title: **Choline, the Forgotten Essential Nutrient**

Abstract:

Choline is a nutrient that can be synthesized in the body but is also found in the diet. Choline was only recently recognized as an essential dietary nutrient in 1998. It is not routinely supplemented therefore the diet is the main source; however epidemiological research suggests the majority of the North American population is not meeting daily intake recommendations. This presentation will discuss the role of choline in human health, the major food sources and intake of an Albertan population and how certain food commodities make major contributions to the diet. Challenges associated with estimating choline intake will be examined and how recent research at the University of Alberta is advancing our understanding of the amount and forms of choline in our food supply.
Jim Hole grew up in his family’s horticultural business and is co-owner of Hole’s Greenhouses and Gardens Ltd. in St.Albert, Alberta, Canada. Jim has a Bachelor of Science in Agriculture (Plant Science major) and is an ISA Certified Arborist.

In addition to writing bestselling books, a biweekly Edmonton Journal/Saskatoon Star-Phoenix newspaper column, Jim can be heard regularly on CBC radio.

Jim’s current challenge is the Enjoy Centre next to the Lois Hole Centennial Provincial Park. The Enjoy Centre is a 242,000 square foot facility that not only contains Hole’s Greenhouses and Gardens, but also houses a community of partners: a wellness spa, restaurant, bakery, garden centre, kitchen tools, food store and deli, wine store and convention space.

Jim is a professional speaker with the ‘Speakers Bureau of Alberta’ and is past chairman of the ‘Special Crops Committee’ with the Alberta Agricultural Research Institute.

Talk title: Building the Future

Abstract:

In 2010, the Hole family undertook construction of a one-of-a-kind facility called the Enjoy Centre.

The 242,000 square foot Enjoy Centre was completed in 2011 and was built with the family’s greenhouse and garden centre business being the core of the new structure.

The Enjoy Centre is now much more than the original greenhouse of Holes. It encompasses a unique experience that addresses health from a physical food purchase to the well-being of individuals as they experience the many and varied features around plants, food and learning.

The Wellness Centre allows individuals to reflect, relax and reconnect. With venues such as Wildearth Bakery, Amaranth Whole Foods Market, Sandview Farms and the constant changing events through the Centre, all have an opportunity to experience health and food from a new, learning experience. Jim will share his challenges, great successes and yes, occasional failures during the transformation of his small, family farm - started by his parents Lois and Ted Hole - into a multi-faceted and unique retail facility.

Jim will explain how critical it is that everyone involved in any major organizational change thoroughly understands what change truly means.

Jim will also talk about how he coped with change - on both a professional and personal level - and the valuable life lessons he learned during the journey.
CONTINUING PROFESSIONAL DEVELOPMENT SESSIONS, TUESDAY MARCH 31

Dr. A. Kennedy, PAg, P.Biol.

Talk title: Environmental Impact Assessment: A Practitioners Guide

Environmental Impact Assessment (EIA) is a recognized practice area for professional Agrologists in Alberta. It is therefore important for Agrologists interested in EIA to have a forum to better understand the basic principles and practice of EIA, to review current trends in EIA and discuss recent developments in EIA. The intention of this seminar is to provide an opportunity for Agrologists to increase their understanding of the professional practice of EIA in Alberta.

The seminar will begin by covering the conceptual basis of EIA and its history and development. The legal and institutional requirements for EIA in Alberta and Canada will be reviewed including the relevant government guidelines and procedures. A step by step review of each of the key components of EIA will be presented and discussed. Discussion of EIA and cumulative effects assessment and the relationship of EIA to land use planning will also be included. The role of public participation in EIA will be discussed. The seminar will include discussion of recent EIA case studies that demonstrate the practice of EIA. The final section of the seminar will specifically deal with professional practice and review the skills and experience requirements for working in the EIA profession.

Barb Romaniuk

Talk title: Plain Language for Technical Writing

Plain Language means writing that is direct and engaging, simple and clear. Plain Language for Technical Writing will help you with:

- Common challenges in technical writing
- Writing technical content for a lay people or readers in a different field
- Structuring documents effectively
- Separating detailed data from the overall flow of the report
- Making the writing process more efficient and less stressful for the writer
- Assessing the readability of your documents

Participants will get a taste of what is possible with plain language and leave with skills they can use right away.
**CONTINUING PROFESSIONAL DEVELOPMENT SESSIONS, TUESDAY MARCH 31**

**Dr. W. Shotyk, PAg**

Talk title: **“Contaminants” in Soils, Water, Air, Manure and Plants: Facts and Misconceptions**

Contaminants in the environment may arise from natural or anthropogenic sources; some originate from both. Contaminants may be inorganic, organic, or organometallic; some are radioactive. Potentially toxic “heavy metals” such as Ag (silver), Cd (cadmium), Pb (lead), Sb (antimony) and Tl (thallium) all occur naturally, but human activities such as mining, smelting, and refining, as well as fossil fuel combustion, have considerably increased emissions of these elements to the environment. In fact, on a global scale, emissions of heavy metals to the environment from natural sources are dwarfed by those from human activities. “Contamination” of the natural environment refers to an enrichment which significantly exceeds the range of natural abundance of that element or compound in any given geosphere (e.g. atmosphere, biosphere, pedosphere, hydrosphere). “Pollution” refers to a concentration or enrichment great enough to have a documented deleterious impact upon a specific organism.

The extent of enrichment of contaminants such as heavy metals in the environment is usually expressed by an enrichment factor: the enrichment factor (EF) is the ratio of a given heavy metal to a lithophile element such as aluminum (which is assumed to be supplied exclusively by natural sources), and normalized to the corresponding ratio in the Earth’s Crust. The potential toxicity of a contaminant, however, is related not only to its concentration or the extent of its enrichment, but also the physical and chemical form of that element or compound (i.e., the predominant chemical species). In this presentation, using peat cores from bogs and ice cores from the Arctic, examples will be provided of the changing cycles of heavy metals during the past 15,000 years caused by both natural processes as well as human activities.

Despite the release of heavy metals to the environment from three millennia of mining and metallurgy, trace metal concentrations in natural waters may be extremely low, highlighting the need for ultraclean lab methods and procedures for sampling, handling, preparation and analysis. The new ultraclean SWAMP lab at the University of Alberta, for measuring trace metals in the Soil Water Air Manure Plant system, is an example of a lab designed and constructed specifically for this purpose.
As professionals providing expert opinion and advice in a variety of disciplines falling under the umbrella of the Agrology Profession Act, agrologists are faced with potential liability for negligence, breach of contract, and breach of a variety of duties that may be owed to clients or others. There are number of ways that potential problems can be avoided from the outset, given careful attention to contracts with clients and a thorough understanding of professional duties and responsibilities. Nonetheless, every prudent professional must consider the importance of errors and omissions insurance in a legal environment which, by its very nature, will continue to evolve in ways that cannot always be foreseen.

This session will provide an overview of the professional responsibilities of agrologists pursuant to legislation, regulations and the rules of the Institute. In this context, we will consider and discuss the potential for disciplinary proceedings. We will also cover the potential pitfalls that can arise from inadequate contracts with clients, and we will discuss potential liabilities that are developing in Canadian caselaw. This legal overview will be coupled with a discussion of the importance of errors and omissions insurance, together with its important features and everything you need to know to ensure that you will have coverage if you need it.
TANNAS FAMILY- Dr. S. Tannas, PAg; Clare Tannas, PAg; Kathy Tannas; Eileen Tannas

Talk Title: Wetland Plant ID

We will be teaching wetland plant Identification. This section will involve hands on keying of wetland plants including rushes, bulrushes, sedges, willows, and grasses. We will touch on some rare species as well as many indicator species for wetland classification. We will be teaching about the importance of each species and how its presence can be utilized to understand soil and water conditions of the wetland where they are found. The course will utilize both live plants and dried samples to key out each species using the text “Common Plants of the Western Rangelands”.

Dr. D. Christenson, DPM, PMP, CMC

Talk Title: Project Management Essentials

Project Management Essentials is an introductory workshop that enables both new and current project managers to increase their likelihood of delivering their projects on time, on budget and in scope while meeting or exceeding stakeholder expectations. You will maximize your time in this workshop by using several common project management tools and templates. You will learn about project management from ‘concept to cash’ or from the initial contemplation of a project to the realization of its benefits after successful implementation. You will also learn about the methods of project selection to ensure that you do not end up doing the wrong project right. Also, consideration will be given as to whether the right project is feasible and has a positive cost benefit equation.
We get feedback every day of our lives from colleagues, bosses and clients, friends, and family. Some feedback is hard to hear, some makes us feel great, some is useful and some – you wonder what planet it came from!

Receiving feedback is challenging because it is at the intersection of two human desires…we want to learn and grow and we want to be accepted just the way we are.

In this highly interactive half-day workshop we will explore:

• How to recognize feedback when we hear it, and understand how we could benefit from
• Three ways we are triggered by feedback and how these triggers get in our way;
• Communication strategies to manage emotions when receiving feedback; and
• Strategies to find the value in feedback and understand what to do with it.

Alberta Environment and Sustainable Resource Development has a mandate to administer and sustainably manage approximately seven million acres of public rangelands in the province. Sustainable range management is achieved through the stewardship practices of about 7200 grazing disposition holders. Stewardship outcomes are guided throughout the province, at the district level, through the long standing role of professional Rangeland Agrologists as they apply the grazing disposition management policies and processes, working in collaboration with disposition holders.

A distinct body of knowledge and collection of ecological tools have been developed to support rangeland stewardship outcomes. Although originally intended for application by district Agrologists and disposition holders, this tool kit has found an expanding appeal in other sectors and professions including wildlife management, reclamation, environmental assessment and land use to name a few.
This CPD session will provide a high level overview of the Alberta Rangelands Ecological Tool kit and is designed as a primer to further study and apply the ecological tools. The three hour session will include the following components:

- an overview of Alberta Rangelands,
- the Alberta rangeland extension paradigm including range management principles and practices and the Stockmen’s Range Management Course,
- an introduction to the Alberta ecological classification system and plant community guides,
- rangeland health assessment tools and practices,
- land cover mapping including the Grassland Inventory and Primary Land Vegetation Inventory, and finally,
- an overview of three broad provincial ecosystems (Grassland/Parkland, Boreal and Foothills/Montane) with reference to key plant communities, range management practices, and resource integration issues.

**Thorsten Hebben, P.Biol.**

**Talk Title:**
**Alberta Wetland Classification – the Key to Consistency**

A provincially consistent system for classifying wetlands will support environmental policy, enable effective wetland management decisions, and enhance educational programming. To date, wetland classification in Alberta has relied on at least four different classification systems. These existing classification systems lack regional relevance, in that they do not characterize wetlands on the basis of Alberta’s unique combination of flora, soils, and other biogeochemical characteristics. To reconcile these differences, the Alberta Wetland Classification System (AWCS) has been developed as the one go-to resource for use across the province.

**Gordon Dinwoodie, P.Ag**

**Talk Title:**
**Contaminated Sites Policy Framework**

Environment and Sustainable Resource Development

Alberta Environment and Sustainable Resource Development released the Contaminated Sites Management Framework in October 2014. Alberta’s contaminated sites management program has grown since its inception in the early 1990s. A variety of management tools have been developed, including the Alberta Tier 1 and 2 remediation guidelines, Remediation Certificates, the Environmental Site Assessment Repository, and professional sign-off for remediation. More tools are envisioned as Alberta develops a more comprehensive program to encourage brownfields redevelopment and support related programs, such as land reclamation. As the contaminated sites management program grew and became more comprehensive, it became apparent that an overarching framework was necessary to tie the various program components together. This presentation will describe the Contaminated Sites Management Framework and additions to the contaminated site management toolbox that are currently under development.
Talk Title: Overview of the Alberta Energy Regulator and Updates on the Upstream Oil and Gas Reclamation Program

A year ago on March 31, 2014, the Alberta Energy Regulator became responsible for reclamation and remediation activities for specified land. The AER’s mandate is to ensure the safe, efficient, orderly, and environmentally responsible development of hydrocarbon resources over their entire life cycle. This includes allocating and conserving water resources, managing public lands, and protecting the environment while providing economic benefits for all Albertans. An overview of the AER, including its governing legislation, roles and responsibilities will be presented as well as information on the reclamation certificate program for upstream oil and gas facilities.
2014 Photo Contest Winners

FIRST PLACE:
One Lone Oat
Candice Manshreck

SECOND PLACE:
St. Albert Summer 2007
Ed Toop

THIRD PLACE:
Amazing Alberta - God’s own food country
Saikat Basu