

From Farm to Market: Finding Sustainable Climate Solutions

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March 2nd, 2022 – 8:55am EST to 10:30am EST

Moderator: Keith Currie, 1st Vice President, CFA

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Keith Currie
1st Vice President, CFA

Keith Currie, a Collingwood-area hay and sweet corn farmer, is the former President of the Ontario Federation of Agriculture. He has 25+ years of experience with the OFA. Currie has a diploma in Agriculture Production Management from Ridgeway College. Currie returned home to manage an eighth-generation dairy and cash crop farm in Simcoe County with his wife Janice and four children.

Currie's operation now focuses on production of grains and oilseed, forages for dry hay, along with a sweet corn and gladiolus flower production.

Currie has served as Director on the Simcoe County Holstein Club where he served as County Delegate for Gencor, member of the Dairy Herd Improvement Association, Simcoe District Co-Operatives, Simcoe County Milk Producers, Stayner Farmers Co-Operative and the Collingwood Agricultural Society.



Lyall Wiebe
Co-Founder & GM,
Triple Green Products

Co-Founder and GM of Triple Green Products, Lyall Wiebe is an accomplished professional with an extensive entrepreneurial background. His entrepreneurial career includes more than 30 years of experience leading various companies to success.



Maik Kindermann
Inventor & Head R&D
Program Bovaer®/ 3-NOP

(Bovaer®) and heading the R&D program for the project "Clean Cow" at DSM. As chemist by training with a background in molecular biology he is working with his team to bring cutting edge technology into the animal nutrition and health sector with a special focus on sustainability topics.



Christopher Cook
Head, Enogen, Syngenta

Chris heads the Enogen business at Syngenta. Enogen is ground-breaking technology that provides alpha-amylase delivered in the corn grain. Beyond the advantages of the alpha-amylase technology, Enogen also includes a full identity preserved system seed to grain as well as online tools that can connect soil to consumer, benefits in both livestock and biofuels, as well as traceability and sustainability opportunities.

Chris has been with Syngenta for 23 years. Prior to his current role, he headed Stewardship and Stakeholder Relations for Enogen. Chris has also held roles in agronomy including heading Agronomy across all U.S. crops and product lines, heading the U.S. Seeds agronomy group and other various roles in agronomy and sales. Prior to his career in Syngenta Chris also led a retail organization agronomy sales department. He holds a Bachelor's degree in Agronomy from South Dakota State University.

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On-Farm Measurements and Protocols



Karen Haugen-Kozyra, M.Sc., P.Ag. President, Viresco Solutions

Karen Haugen-Kozyra is President of Viresco Solutions Inc. – a network of leading advisors making sustainability real for public and private clients in the agriculture, bioenergy and sustainable food sectors across North America and globally. Our team of experts enables clients to meet their environmental, social and economic sustainability objectives by leveraging our knowledge and experience in environmental policy, markets and economics. On the Sustainability front, Karen and her firm help companies navigate the nexus between lowering their carbon footprint and developing an overall sustainability strategy.

Karen has over 30 years of experience in agricultural greenhouse gas measurement and modelling and climate change/environmental policy development – spanning her tenure at the provincial Department of Agriculture, Climate Change Central and now in the private sector. Karen began her career measuring soil organic carbon change and other greenhouse gases in a network of sustainable cropping system sites across Alberta, and was part of the Prairie Soil Carbon Balance project from 1997 to 2001 – which helped prove out the potential for carbon storage in Canadian soils. During her tenure with the provincial department of Agriculture, she developed the infrastructure and protocols necessary to support compliance level carbon credit trading in Alberta, which features the largest amount of soil carbon sequestration tonnage in the world (over 17 Mt of CO₂e reduced/removed to date under the Conservation Cropping Protocol).

Karen's company was involved with adapting 13 carbon offset protocols into the California, Quebec and Ontario linked carbon markets under the Western Climate Initiative. Recently, in conjunction with Canadian Forage and Grasslands Association, we successfully had the Climate Action Reserve approve and publish the Canadian Grasslands Project Protocol for use in Canada on a Voluntary basis (see: <http://www.climateactionreserve.org/how/protocols/canada-grassland/>). Viresco is currently working with partners (Bayer, Nutrien and others in the US and Canada) to assist in piloting carbon projects for Scope 3 Value Change Interventions and Carbon Offset protocols. The goal is to derive more cost-effective carbon reductions at scale from no till, cover cropping, N management and other climate smart practices. The Bayer Scope 3 project, funded with assistance from a USDA-NRCS grant, is the second Ag project in the world to achieve design certification under SustainCert (see: <https://www.virescosolutions.com/scalable-on-farm-greenhouse-gas-reductions-and-water-quality-improvements/>). Further, Viresco is heavily involved in adapting and testing the new beef module of the Cool Farm Tool to North American beef production systems with Alberta Beef Producers, as well as testing Emissions Reduction Alberta funded mitigation strategies on the 3-NOP feed additive at commercial scale feedlot production in Southern Alberta (Royal DSM, see: <https://eralberta.ca/projects/details/demonstration-reduced-enteric-methane-emissions-growingfinishing-beef-cattle/>).

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On-Farm Measurements and Protocols cont...



Karn Manhas
Founder & CEO, Terramera

Terramera Founder and CEO, Karn Manhas, is an AgTech industry pioneer on a mission to transform how food is grown and the economics of agriculture. With Terramera's revolutionary Actigate™ platform and a powerful suite of machine learning tools, the company is tackling audacious goals of reducing global synthetic pesticide loads 80%, increasing global farm productivity by 20%, and boosting organic soil carbon 100% by 2030. Founded in 2010, the Vancouver-based company has earned international recognition for its technologies that protect human health and the environment to ensure an earth that thrives and provides for everyone. Recognitions include: The Global Cleantech 100 list, Nutrien-Radicle Challenge Canada (winner), BDC and Business Council of Canada CLIC Challenge (winner), Fast Company World Changing Idea (finalist).

Terramera has raised over C\$100M in capital from private and public sources. The company's growth is fuelled by its ability to fuse science, nature, and artificial intelligence to support the transition to climate-smart regenerative agriculture practices that enable the natural sequestration and retention of soil organic carbon. Privately held, Terramera's international IP portfolio has grown to more than 250 patents (granted or pending).

Using game-changing technology to improve the performance of active ingredients by up to 10x, Actigate remedies conventional farming practices that can result in 50-90% of applied farm chemicals washing away into the environment. The company is also in the process of commercializing scalable, accurate, low-cost remote-sensing technology, to reliably measure the carbon content in soil. This will provide a global standard for consistent soil carbon quantification, opening a new and stable market for nature-based soil carbon credits and allowing farmers to be incentivized for the carbon they sequester.

Karn's diverse background spans being the youngest Member of the Legislative Assembly elected in British Columbia to being a TEDx speaker and sought-after thought leader on sustainability, clean food, and innovative organizations. He is a member of YPO, fellow at Unreasonable Group and was named one of Business in Vancouver's top Forty Under 40 businesspeople. Karn holds a Juris Doctor in Law from the University of British Columbia and a B.Sc. in Biology and Biotechnology from McGill University.

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Public and Private Carbon Credits



Judy Meltzer

Director General, Carbon Pricing Bureau,
Environment and Climate Change Canada

Judy Meltzer is the Director General of the Carbon Pricing Bureau within Environment and Climate Change Canada, where she works with her team to develop regulations, and new policies to address climate change, including working with provinces, territories and other stakeholders to implement protocols to generate credits under the Federal Carbon Offset System.



Alastair Handley

Founder & Board Member

Clean-tech innovator, environmental market pioneer, and temporarily landlocked surfer.

Alastair's personal mission is to help governments implement environmental market frameworks that stimulate green innovation and employment opportunities. Once successful in this, we can all expect to see (and benefit from) lasting reductions in greenhouse gas emissions. Lofty goals, but then again, he's already racked up some pretty impressive achievements.

Over his career, Alastair has become an uncontested leader in the worldwide environmental markets space. He designed and developed one of the world's first software platforms for aggregating and quantifying large-scale emission reductions in Alberta in 2008. From there he founded multiple businesses. Their success proves that emission reduction markets can simultaneously build wealth, generate jobs, create export opportunities, and protect the environment for future generations.

Environmental foresight is the foundation on which Alastair builds companies. This former teen paper route tycoon leveraged his geographic

information systems and software design experience to generate \$40 million dollars in documented carbon credits for Alberta farmers in a single decade. At the same time saving emitters \$30 million and creating an excess of another \$30 million in company equity for what would go on to become Radicle.

- World Bank Group Advisor on the Paris Agreement
- United Nations Climate Change Conference speaker, Spain, 2019
- National Carbon Farming Conference & Expo, Australia, 2019
- Energy Disruptors, Food Security Moderator, Canada, 2019
- SPARK: From Global to Local – Lessons Learned from Carbon Positive Policies and Programs, Canada, 2019

QUOTE: "There is no time for pessimism when it comes to climate change. Let's transform our reality."