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# GREENHOUSE

## CANADA

SEPTEMBER 2021

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RÉMI MAGLIONE  
Harvest Genomics



**SEEDS OF  
CHANGE**  
OCT 6&7 2021

**VIRTUAL EVENT**

Live and on-demand!

**SUSTAINABILITY**

More than a buzzword

**BIG DATA**

The future of agriculture

Presenting  
Sponsor:

**syngenta** *flowers*

# CANADIAN GREENHOUSE CONFERENCE: SEEDS OF CHANGE

**By Glenna Cairnie**

*CGC Program, Marketing and Event Coordinator*

“One virtual conference, just one, and then everything will be back to normal...” I’m pretty sure I wasn’t the only person who thought the pandemic would have run its course by this time. However, as events unfolded over the winter, it became apparent that thousands of people gathering indoors was not in the cards for a fall conference in 2021. The popularity of the 2020 online conference gave CGC organizers the confidence to go even bigger this year. The Canadian Greenhouse Conference is Canada’s premier event for protected agriculture, and we are committed to delivering another first-class event for Canadian growers.

Synced between two platforms - the CGC website and a professional event platform, the 2021 CGC will provide an experience as close to that of in-person as virtually possible (pun intended). The easy-to-navigate event platform will provide access to the live stream content and encourage guest engagement with attendees and speakers. CanadianGreenhouseConference.com will host the New Variety Showcase and the Research Poster session. While there is no formal tradeshow component, an Industry Partner Directory will be featured on both platforms. This new conference element will provide company information and videos in a unique format. Scroll through it carefully. Sprinkled in with the familiar names, are new companies eager to introduce their products and services to the greenhouse sector.

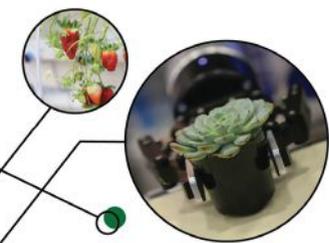
2021 sees the return of a full-strength education program. Eighteen live sessions, 40+ speakers, and on-demand content creates our most dynamic conference program to date. Find out how artificial intelligence continues to change the greenhouse sector and hear from growers who have embraced

new technologies. Gain insight from international speakers on the fight against Tomato Brown Root Fruit Virus (ToBRFV). How and why should growers embrace “Big Data”? Water, lighting, IPM-the program tackles all the hot topics facing Canadian growers. The speaker list is impressive featuring the sector’s top authorities on protected agriculture. Flip the page for an overview of the speakers on each day. The full program, with individual presentation descriptions, can be found on the CGC website.

In addition to the live webinars, there will be a library of on-demand presentations ready to be viewed at your convenience. After the conference, recordings of the live webinars will be added to this collection and be available for 90 days.

Building on the speaker program and enhancing the conference experience are several components that growers will find valuable. Debuting on the CGC website last year, this year’s virtual Research Poster Session will highlight ongoing research projects from universities and researchers across Canada. These posters provide snapshots of current work and insight into the future of the greenhouse sector. Five projects will be selected to present live in the Research Updates session on Thursday afternoon. This is a great opportunity to connect directly with those involved in research, ask questions and give feedback from the grower point of view.

The New Variety Showcase puts a spotlight on cultivars recently introduced to the Canadian market. It is a convenient one-stop shop for growers and garden centre retailers to find information and videos from vegetable and ornamental breeders. Check out the New Product Display to see what our industry partners have been up to in the last year.



Watch for your copy of the 2021 CGC digital show guide to land in your inbox October 4. Complete event information, feature articles, industry partners and more will make this a valuable resource throughout the year.

Speaking of industry partners, a big THANK YOU goes to the companies who have supported the 2021 conference through our various channels. We couldn't make the show happen (nor would we want to) without the full backing of our allied trades. Exhibitors are missing the in-person experience too, and this is one of the ways they are able to give back and support growers. Extra special appreciation to our presenting partner, Syngenta Flowers. Syngenta Flowers is a long-time friend of the Canadian Greenhouse Conference with a big presence at each show. The CGC is thankful for their ongoing support of both the conference and Canadian grower community.

#### PRESENTING SPONSOR

 **syngenta** flowers

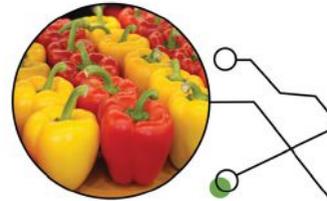
Registration is required to access the full conference program and is now open through the website.

**[CanadianGreenhouseConference.com](http://CanadianGreenhouseConference.com)**.

There are two registration options: 2-day access on October 6 & 7 or an enhanced registration package which allows for post-show access to the recorded sessions. A quick website check will reveal that registration is not free this year – that is just not a sustainable business plan. Complimentary registration was a gift to our attendee base last year but not one that can be repeated. However, we have done our best to ensure incredible value for your time and money.

While a second virtual conference was not on anyone's wishlist, let's celebrate the upside. Overall, the industry had a very good year as consumers embraced local produce and looked for ways to beautify their homes, indoors and out. A virtual event means accessibility to those who might not be able to attend in person; across Canada and internationally, showcasing our industry to the world. No rushing! The online format allows guests to build their own agenda and move around from "room to room" easily. Recorded presentations means no one needs to worry about missing a speaker due to a scheduling conflict. And finally, talks may be referenced a second (or third) time until all the valuable information is absorbed.

There will be lessons learned from this pandemic. What adjustments are temporary and which ones will be Seeds of Change are yet to be known. What we do know, is that the ability to feed a growing population and beautify the world lies with protected agriculture and that Canadian greenhouse growers are well placed to lead the world with the enterprise required to fulfill that responsibility. Attend the Canadian Greenhouse Conference, October 6 & 7 to discover how you can be part of that bright future.



# SCHEDULE

## WED, OCT 6TH – MORNING SESSIONS

Date/Time	Room 1	Room 2	Room 3
WED	<b>PRODUCTION - WATER</b>	<b>DISEASE MANAGEMENT</b>	<b>LIGHTING &amp; ABATEMENT STRATEGIES</b>
	Sponsored by: 	Sponsored by: 	Sponsored by: 
9:00 AM EST	<b>Nutrient Solution Treatment &amp; Disinfection</b> Paul Fisher <i>University of Florida, USA</i>	<b>Portable DNA Sequencing Platform for Greenhouse Pathogen Monitoring: a tool against the ToBRFV</b> Remi Maglione <i>Harvest Genomics, Guelph, ON</i>	<b>Dynamic &amp; Sustainable Lighting Strategies</b> Xiuming Hao <i>Agriculture &amp; Agri-Food Canada, Harrow Research &amp; Development Centre, ON</i>
9:30 AM EST	<b>Protected Agriculture Stewardship National Auditable Standards</b> Justine Taylor <i>CropLife Canada, ON</i>	<b>Plant Vaccines for Greenhouse Crop Protection</b> Genevieve Marchand <i>Agriculture &amp; Agri-Food Canada, Harrow Research &amp; Development Centre, ON</i>	<b>Lead With Lighting: Advancements of LEDs in greenhouse lettuce &amp; herb cultivation</b> Colin Brice <i>Signify America</i> <b>Lighting in High-Wire &amp; Umbrella Cucumbers</b> Jan Chechalk <i>Signify America</i>
10:00 AM EST	<b>Developing a Nutrient Risk Management Tool to Monitor Stormwater Retention Ponds</b> Christopher Weisener <i>University of Windsor, ON</i>	<b>ToBRFV: The discovery, the management strategies and hopefully the beginning of the end</b> Aviv Dombrovsky, ARO <i>The Volcani Center, Israel</i>	<b>To be confirmed</b>
10:30 AM EST	<b>Nutrients, Pathogens &amp; PGRs &amp; Pesticides: the Hybrid Treatment trifecta?</b> Ann Huber <i>Soil Resource Group, Guelph, ON</i>		<b>Project Report: Stray Light Abatement in Greenhouses</b> David Lubitz <i>University of Guelph, ON</i>

Titles and speakers subject to change. Visit [CanadianGreenhouseConference.com](http://CanadianGreenhouseConference.com) for up-to-date information.

### ON DEMAND PRESENTATIONS

**How & Why to Produce Your Own short Training Video for Greenhouse Growers**  
Workplace Safety & Prevention Services

**Harness the Power of Mycorrhizae in Greenhouse & Nursery Production**  
Scott Inman  
*Mycorrhizal Applications, Grants Pass, Oregon, USA*

**Blackout Curtains, Energy Capture & Microclimate**  
Quade Digweed  
*Agriculture & Agri-Food Canada, Harrow, ON*

**Use of Biostimulants to Control Greenhouse Diseases**  
Ana Pastrana  
*Vineland Research & Innovation Centre, ON*

# SCHEDULE WED, OCT 6TH – AFTERNOON SESSIONS

Date/Time	Room 1	Room 2	Room 3
WED	<b>GARDEN CENTRES/ RETAILING</b>	<b>PLANT CENTRED PRODUCTION</b>	<b>ENERGY</b>
	Sponsored by: 	Sponsored by: 	
12:00 PM EST	<b>Supporting Ontario Pollinators &amp; Growing Profits: Ornamentals for eco-conscious gardeners</b> Rodger Tschanz <i>University of Guelph, ON</i> Sarah Jandricic <i>Ontario Ministry of Agriculture, Food &amp; Rural Affairs, Vineland, ON</i>	<b>The Need for &amp; Consequences of Microclimate Measurement</b> Peter van Weel <i>Weel.Invent, The Netherlands</i>	<b>Cannabis Energy Efficiency Best Practices</b> Vicki Gagnon <i>Independent Electricity System Operator (IESO), Toronto, ON</i>
	<b>Capitalizing on the Foliage Boom</b> Roger Kehoe <i>Eason Horticultural Resources, USA</i>		<b>Dynamic Energy For Next-Gen Greenhouse Operation &amp; Expansion</b> Rupp Carriveau <i>University of Windsor, ON</i>
WED	<b>VERTICAL FARMS</b>	<b>SUSTAINABILITY</b>	<b>BIG DATA</b>
	Sponsored by: 	Sponsored by: 	Sponsored by: 
2:00 PM EST	<b>Enhancing Resource Use Efficiency in Vertical Farming</b> Murat Kacira <i>University of Arizona, Tucson, AZ</i>	<b>Shedding Light on Sustainable Packaging</b> Sonia Benoit <i>Cascades, QC</i>	<b>Towards Autonomous Greenhouses: Digital horticulture and smart sensors</b> Kenneth Tran <i>Koidra Inc., WA, USA</i>
2:30 PM EST	<b>Northern Greenhouse Program</b> Quade Digweed <i>Agriculture &amp; Agri-Food Canada, Harrow, ON</i> Adrian Schimnowski <i>Arctic Research Foundation</i>	<b>Sustainable Packaging of Greenhouse Produce</b> Emily Murracas <i>Mucci Farms, Kingsville, ON</i>	<b>Human + Machine: The future of horticulture is collaborative</b> Saber Miresmailli <i>Ecoation, Ruthven, ON</i>
3:00 PM EST	<b>Goodleaf's Journey in Vertical Farming</b> Barry Murchie <i>Goodleaf Farms, Guelph, ON</i>	<b>Sustainable Alternatives to Greenhouse Plastics</b> Amar Mohanty <i>University of Guelph, ON</i>	<b>Data in Agriculture</b> Terry Vermeer <i>ET Grow Inc., Beamsville, ON</i>
3:30 PM EST			<b>Big Data's Next Step – Tackling Private Data Silos</b> Ramen Dutta <i>TensoAI Inc., Sutton, QC</i>

Titles and speakers subject to change. Visit [CanadianGreenhouseConference.com](http://CanadianGreenhouseConference.com) for up-to-date information.

# SCHEDULE THURS, OCT 7TH – MORNING SESSIONS

Date/Time	Room 1	Room 2	Room 3
THURS	<b>LIGHTING IMPACT ON IPM</b>	<b>PROPAGATION</b>	<b>VEGETABLE BIOCONTROL</b>
	Sponsored by: 	Sponsored by: 	Sponsored by: 
9:00 AM EST	<b>Potential &amp; Pitfalls of Optical Radiation (UV-visible and infrared) in Management of Powdery Mildew &amp; Gray Mold</b> Aruppillai Suthaparan <i>Norwegian University of Life Sciences, Ås, Norway</i>	<b>Vegetative Propagation</b> Roger Kehoe <i>Eason Horticultural Resources, USA</i>	<b>Experience with ToBRFV in Germany: Infestation, eradication &amp; prevention</b> Heike Scholz-Döbelin, IPM Specialist <i>Chamber of Agriculture, Nordrhein-Westfalen, Germany</i>
9:30 AM EST	<b>Optimizing Orius Performance in Greenhouses</b> Rose Labbe <i>Agriculture &amp; Agri-Food Canada, Harrow Research &amp; Development Centre, ON</i>	<b>Getting the Most Out of Germination</b> Jerry Gorchels <i>PanAmerican Seed Co.</i>	<b>Healthy Hydroponics: A new microbiome surveillance service for food safety &amp; crop protection</b> Trevor Charles <i>Metagenom Bio Life Science Inc., University of Waterloo, ON</i>
10:00 AM EST	<b>To be confirmed</b>	<b>Biosecurity in Plant Propagation</b> Sarah Miner <i>Roelands Plant Farms, Lambton Shores, ON</i>	<b>IPM Technology Enables IPM Strategy</b> Bri-Anna Jaksic <i>IPM Scoutek, Windsor, ON</i>
10:30 AM EST	<b>Going Towards the Light: Mass trapping and LED lights</b> Sarah Jandricic <i>Ontario Ministry of Agriculture, Food &amp; Rural Affairs, Vineland, ON</i>	<b>Light Quality Regulates Growth of Young Plants</b> Erik Runkle <i>Michigan State University, East Lansing, MI</i>	

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# SCHEDULE THURS, OCT 7TH – AFTERNOON SESSIONS

Date/Time	Room 1	Room 2	Room 3
THURS	<b>GARDEN CENTRES/ RETAILING</b>	<b>SPECIAL EVENT</b>	<b>RESEARCH UPDATES</b>
	Sponsored by: 	Sponsored by:  Presented by: 	Sponsored by: 
12:00 PM EST	<b>Program &amp; Resources to Help Garden Centres SELL MORE PLANTS</b> Diane Blazek <i>All-American Selections &amp; National Garden Bureau, Downers Grove, IL</i>	<b>1:30 PM Greenhouse Technology Award Winners</b> <i>Meet the winners of the 2021 Greenhouse Technology Awards. Debuting this year, the program recognizes products or services demonstrating a high level of innovation in advancing Canada's greenhouse and controlled environment agriculture sectors.</i>	<b>Research Updates</b> Highlights from the 2021 Research Poster Session  <i>To view all the projects visit <a href="http://CanadianGreenhouseConference.com">CanadianGreenhouseConference.com</a></i>
12:30 PM EST	<b>Catching the Customers Eye - Trends in Container Gardening</b> Kerry Meyer <i>Proven Winners</i>		
THURS	<b>STRAWBERRY PRODUCTION</b>	<b>FORWARD THINKING</b>	<b>CANNABIS PRODUCTION</b>
	Sponsored by: 	Sponsored by: 	Sponsored by: 
2:00 PM EST	<b>Successful IPM in Greenhouse Strawberries: Thrips strategies</b> Brittany Harris <i>Plant Products, Leamington, ON</i>	<b>Automation at Jeffery's Greenhouses</b> Rodd Gibson <i>Jeffery's Greenhouses, St. Catharines, ON</i>	<b>Improving Cannabis Yield &amp; Potency</b> Youbin Zheng <i>University of Guelph, ON</i>
2:30 PM EST	<b>Overview of Greenhouse Strawberry Production Technologies</b> Chieri Kubota <i>Ohio State University, Columbus, OH</i>	<b>Advances in Greenhouse Structures &amp; Technology</b> Leigh Coulter <i>GGS Structures Inc., Beamsville, ON</i>	<b>Aphid Apocalypse - Biocontrol Strategies for Cannabis Aphid</b> Kevin Cullem <i>Koppert Biological Systems</i>
3:00 PM EST	<b>Greenhouse Buzziness Potential: Using bee vectoring to suppress pests on greenhouse strawberries</b> Rose Labbe <i>Agriculture &amp; Agri-Food Canada, Harrow Research &amp; Development Centre, ON</i>	<b>Automated Cucumber Harvesting</b> Brian Lynch <i>Vineland Research &amp; Innovation Centre, Vineland, ON</i>	<b>Addressing Odour, Light &amp; Noise Nuisances from Cannabis Production</b> Bill Van Heyst <i>University of Windsor, ON</i> Vicki Hilborn <i>Ontario Ministry of Agriculture, Food &amp; Rural Affairs, Guelph, ON</i>
3:30 PM EST	<b>Optimal Lighting Strategy for Winter Strawberry Cultivation in Belgium</b> Peter Melis <i>Proefcentrum Hoogstraten, Belgium</i>	<b>Nanobubble Water Treatment Technology for Better Yields</b> Warren Russel <i>Moleaer, Carson, CA</i>	<b>Emerging Diseases of Cannabis &amp; Management Approaches</b> Zamir Punja <i>Simon Fraser University, Burnaby, BC</i>

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# 2021 CONFERENCE SPEAKERS



**SONIA BENOIT**  
**Cascades**

After majoring in marketing at Sherbrooke University in Quebec, Sonia Benoit has occupied various marketing positions in addition to being an entrepreneur. Her passion for agriculture and the environment has brought her to occupy strategic leadership roles in companies such as Fafard where she looked after professional growing media products for North America. She is now senior manager at Cascades and is accountable for the new Cascades Fresh packaging solutions for produce.

Sonia is personally involved in sustainability as she has a little farm of her own where she grows fall veggies and relate very well to environmental challenges many growers face. Her ongoing mission is to constantly find packaging solutions that are better for the environment while being efficient for growers and attractive for consumers.



**DIANE BLAZEK**  
**All American Selections  
National Garden Bureau**

For more than 30 years, Diane has been immersed in gardening both personally and professionally. She brings a passion to the subject based on a history in the field of horticulture publishing as well as a love for gardening and culinary exploration. Growing up on a small family farm in northern Missouri, Diane spent years helping her parents' plant, tend and harvest a large home vegetable garden. As the president and publisher at Ball Publishing for 15 years, she led the way in connecting the commercial side of the industry with consumers via the live focus groups called Consumer Buzz Live! Diane also managed Ball Publishing's entry into consumer garden book publishing. Since December of 2009, Diane has been leading both All-America Selections and National Garden Bureau through an exciting period of growth as they establish themselves as inspirational resources in the minds of garden communicators, public gardens, growers, garden retailers and home gardeners. With both organizations, the connection to the consumer is of topmost importance and by using that connection, Blazek provides direction and insights to the industry as well as to GardenComm, an organization for Garden Communicators where she serves as a National Director.

**COLIN BRICE**  
**Signify**

Colin Brice joined Signify in March 2020 in the role of Plant Specialist; he is one of more than 20 plant specialists

supporting Philips horticulture LED team. Colin is a horticultural scientist and systems engineer with experience in greenhouse management, LED photomorphogenesis research, and electronics design. As a Plant Specialist, Brice works with a team of horticultural specialists at Signify to design and implement LED lighting strategies, supporting sales efforts in several segments – ornamental, high-wire fruits and vegetables, lettuce and leafy greens in both greenhouse and closed-environment growing, and hemp and medicinal cannabis. Brice is a graduate of University of Tennessee with a Bachelor of Science in Plant Sciences and a Master of Science in Biosystems Technology. His graduate thesis focused on indoor cultivation of leafy greens, LED lighting systems, fluid handling systems, and electrical efficiency evaluations.



**RUPP CARRIVEAU**  
**University of Windsor**

Dr. Rupp Carriveau is the Director of the Environmental Energy Institute and Co-Director of the Turbulence and Energy Lab at the University of Windsor. His research activities focus on energy systems futures. Rupp serves on the Editorial Boards of Wind Engineering, Advances in Energy Research, and the International Journal of Sustainable Energy. He recently guest-edited special editions of Energies and The Journal of Energy Storage. Rupp was a recent recipient of the University Scholar Award and has acted as a Research Ambassador for the Council of Ontario Universities. Carriveau is a Founder of the Offshore Energy and Storage Society (OSES) and recently Co-Chaired OSES2018 Ningbo China, and OSES2019 Brest France. Professor Carriveau is Chair of the IEEE Ocean Energy Technology Committee and was just named to Canada's Clean50 2020 for his contributions to clean capitalism.



**TREVOR CHARLES**  
**Metagenom Bio Life Science  
Inc/University of Waterloo**

Trevor C. Charles, Ph.D., is founder and CSO of Metagenom Bio Life Science Inc., CSO of Ceragen Inc., Director of Waterloo Centre for Microbial Research, and Professor of Biology at University of Waterloo. He was trained as a microbiologist and bacterial geneticist, with B.Sc. Microbiology from University of British Columbia, Ph.D. Molecular Biology, McMaster University, and Postdoc from University of Washington. Trevor has held faculty positions at both McGill University and University of Waterloo. His work is situated within the context of Circular Bioeconomy.



**JAN CHECHALK**  
**Signify Canada**

Jan Chechalk is one of more than 20 Plant Specialists on Signify's team. He is specifically focused on providing support to growers of high-wire tomatoes, cucumbers, peppers, and soft fruits. Chechalk has more than 15 years growing experience as a head grower of ornamental crops including Gerbera and potted plants, and high-wire tomatoes, peppers, and cucumbers. As a Plant Specialist, Jan works with the team of global horticultural specialists at Signify to design and implement LED lighting strategies. He also advises growers on how to improve growing practices of their LED-lit crops. Outside of his day-to-day role, you'll find Jan perfecting his own garlic farming techniques.



**LEIGH COULTER**  
**GGS Structures**

Leigh Coulter is the President of GGS Structures Inc. and Niagrow Ltd., a leading greenhouse manufacturer and greenhouse heating designer providing sophisticated growing solutions for commercial growers across North America and around the world. For more than 40 years, GGS has been designing and building greenhouses. Leigh took over the business in 1998 and has substantially grown the business since. Holding a business degree from the Richard Ivey School of Business at the University of Western Ontario, Leigh has been invited to speak at numerous events pertaining to manufacturing and business development. With GGS being one of the largest suppliers to the greenhouse industry in North America, Leigh places critical importance on developing as well as maintaining business partnerships with suppliers and customers alike. GGS designs and manufactures growing environments for all types of crops in addition to manufacturing high-quality, multi-purpose fabric covered structures. The company has continued to expand through new technology advancements as well as increased market penetration in indoor controlled agriculture cultivation (CEA), and vertical farming. Having worked with top growers all over the world, Leigh has developed nothing but the utmost respect for people who are committed to perfecting their craft and growing their best plants.



**KEVIN CULLUM**  
**Koppert Biological Systems**

Kevin Cullum brings a unique combination of experience spanning cannabis, greenhouse vegetable and ornamental crops over three decades. He first became involved

in the cannabis industry in the 1990's working with growers supplying two of Canada's first Compassion Clubs and later as Cultivation Writer for Cannabis Culture magazine. Since legalization, Kevin led the technical support for Biological Control and Integrated Pest Management programs in Licensed Producers across Canada for Koppert Biological Systems. Outside of cannabis Kevin has worked in the Greenhouse sector for 33 years, fulfilling various grower, consulting and commercial roles in Vegetable and Ornamental production throughout Canada. Kevin is the Commercial Manager for Koppert Biological for Western Canada.



**QUADE DIGWEED**  
Agriculture & Agri-Food Canada

Quade Digweed is a greenhouse engineering intern working for Agriculture and Agri-Food Canada at the Harrow Research and Development Centre. His field of work includes greenhouse energy efficiency, light pollution abatement and monitoring, greenhouse microclimate monitoring and modeling, and the development of vertical farming technologies for use in extreme environments. Quade has experience in HVAC, controls and electronics development focused on sensors and systems for data collection, remote food production, and use in automated plant production systems.



**AVIV DOMBROVSKY**  
Agricultural Research Organization-the Volcani Center

Dr. Aviv Dombrovsky is a Research Scientist and plant virologist at the department of plant pathology and weed research, the Agriculture Research Organization (ARO), the Volcani Center in LeZion, Israel. The Dombrovsky laboratory provides support in managing viral diseases in agriculture and vegetable industry. The laboratory specializes in the identification of new viral diseases in vegetables and studies the modes of spread/transmission of recently discovered and old viral diseases in Israel. Topics include virus characterization, plant virus interactions, insect vector transmission to developed various agro-techniques to reduce disease damage.



**RAMEN DUTTA**  
TensoAI, Inc.

Ramen Dutta is the co-founder of 2 start-ups in the agtech space. Motorleaf, focused on artificial intelligence, and his newest company TensoAI, targeting the challenges around data that fuel our machine learning models. TensoAI's mission is to maximize the value of agriculture data by powering models in a decentralized network. An Agricultural Specialist, with a keen eye on environmental engineering

practices and trends, he is a strong believer in self-sustainability by reducing our carbon footprint and improving our environment one season at a time. With 15+ years in IT consulting, specializing in data redundancy, cluster servers and automation, Ramen has a deep understanding of how technology will shape the future: synchronizing technologies and agriculture will bring unique knowledge in food production to sustain our growing population



**PAUL FISHER**  
University of Florida

Paul Fisher is a Professor and Floriculture Extension Specialist in the Environmental Horticulture Dept., at the University of Florida. He has over 30 years' experience in applied research and farm advising for the commercial greenhouse industry: Outreach lead of CleanWater3.org, a multi-university group solving problems in irrigation water quality and conservation, Director of Greenhouse Training Online which provides certificate courses for grower professional development including nutrient, water, and substrates, a director of the Floriculture Research Alliance at University of Florida (FloricultureAlliance.org), a university/industry group focused on greenhouse propagation and production efficiency. Paul has co-authored books on pH Management and Greenhouse Lighting, and over 300 articles on floricultural crops in the trade press and scientific journals. He is a consultant for horticulture-related companies in the U.S. and internationally.



**VICKI GAGNON**  
Independent Electricity System Operator

Vicki Gagnon is the Business Advisor, Energy Efficiency, for the Public Sector and Agriculture at the Independent Electricity System Operator (IESO). She has been with the IESO for 16 years. Vicki works with sector-based organizations and Energy Managers across the province to help customers actively manage their energy, enhance the energy efficiency of their facilities, and facilitate participation in Save on Energy programs.

**RODD GIBSON**  
Jeffery's Greenhouses, St. Catharines, ON

Rodd Gibson is general manager owner of Jeffery's Greenhouses, a third generation wholesale business begun by George and Anne Jeffery in 1933 and now managed by Rodd and his wife Barbara Jeffery-Gibson. With two locations – one at Lakeshore Road in St. Catharines and another in Jordan, Jeffery's has approximately 10 acres of indoor greenhouse production space at each location, with

some outdoor production in Jordan. Jeffery's primary focus is bedding plants, with most of their product propagated in house from seed or unrooted cuttings. They produce more than 100 species of annuals, perennials, spring baskets and mixed containers exclusively for the mass market. A known cyclamen producer, their other crops include poinsettias, garden mums, hydrangeas and Easter lilies.



**JERRY GORCHELS**  
PanAmerican Seed Co.

Jerry Gorchels started out in the greenhouse industry as a grower. His experience includes greenhouse, nursery, landscape design and maintenance. After 30 years as a grower, he entered the sales field as a technical product representative putting all that great experience to use as a resource. Jerry has been with PanAmerican Seed Co. for 34 years; the first 15 as the R&D greenhouse manager.



**BRITTANY HARRIS**  
Plant Products

Brittany Harris is an Integrated Pest Management Specialist for Plant Products in Leamington, Ontario. She is a graduate of the Fanshawe College Horticulture Program and, as an industry professional, brings with her a decade of experience. Brittany's favourite part of her role at Plant Products is working in various sectors of agriculture and understanding each customer. She enjoys building programs that will have the best success for the customer to reduce pesticide use and as a result boost production. Her greatest success in her role as an IPM specialist comes from her keen understanding of the relationship between prey and predator.



**XIUMING HAO**  
Agriculture & Agri-Food Canada

Dr. Xiuming Hao is a senior research scientist with Agriculture and Agri-Food Canada (AAFC) at Harrow Research and Development Centre in Harrow, Ontario. He holds a PhD in plant physiology from University of Guelph and an MSc in computer control systems from Wayne State University. Xiuming has been involved in the greenhouse research at the research centre since 1995. The focus of his research program is on greenhouse environmental physiology and energy efficiency. He has conducted numerous projects on greenhouse crop management, climate control, and energy conservation, including high-wire cucumber production systems, new greenhouse insulation technology, heat placement in greenhouse vegetable production on raised-troughs, and dynamic temperature, CO2, humidity and fertigation control strategies, and new greenhouse cover materials. Xiuming has led the AAFC national research project on dynamic plant-

based environment control to improve energy efficiency in greenhouse vegetable production. He has conducted extensive research in the last 19 years and is leading the national AAFC lighting projects on greenhouse vegetables to improve light and energy use efficiency in year-round greenhouse vegetable production.



**VICKI HILBORN**  
**Ontario Ministry of  
Agriculture, Food & Rural  
Affairs**

Vicki Hilborn is the Engineering Program Coordinator for the Ontario Ministry of Agriculture, Food and Rural Affairs. She received her Bachelors of Applied Science at the University of Waterloo and her Masters of Applied Science at the University of Guelph.



**ANN HUBER**  
**Soil Resource Group**

Dr. Ann Huber is the environmental microbiologist for The Soil Resource Group in Guelph, Ontario, with over 30 years of national and international experience in environmental and agricultural research. She is lead researcher for the Group on horticultural BMPs, process water treatment technology evaluation and development, water-borne plant pathogen management, soil health assessment, and farm-based food safety risk-management.



**BRI-ANNA JAKSIC**  
**IPM Scoutek**

Bri-Anna Jaksic's ten years' experience covers many facets of the greenhouse industry. From organic greenhouse growing, scouting and IPM management to her specialty, beneficial insect breeding and greenhouse entomology, she has found the ever-fluctuating greenhouse environment to be an especially interesting place to test various insect breeding techniques. Her recent work with IPM Scoutek is pushing Integrated Pest Management to the forefront of greenhouse technology. As scouting is essential in the development of a balanced greenhouse ecosystem, having the IPM data at your fingertips, enables the growers to make the right decision at the right time. Bri-Anna obtained a Bachelor of Science degree in Biology and Entomology from Trent University and continues her work in the greenhouse industry.



**SARAH JANDRICIC**  
**Ontario Ministry of  
Agriculture, Food & Rural  
Affairs**

Dr. Sarah Jandricic is the Greenhouse Floriculture IPM Specialist for the Ontario Ministry of Agriculture, Food and Rural Affairs

(OMAFRA) since 2015. Her career in Floriculture Entomology has led her down the east coast, gaining experience with managing floriculture pests from New York State to North Carolina. Sarah has a continuous presence in Greenhouse Canada Magazine, the Canadian Greenhouse Conference, and runs the ONFloriculture blog, to help keep growers informed about pest control advances and pest issues facing the industry. Sarah is stationed at Vineland and can be reached at 905-687-1277 or sarah.jandricic@ontario.ca.



**MURAT KACIRA**  
**University of Arizona**

Murat Kacira is director of the Controlled Environment Agriculture Center and professor in the Biosystems Engineering Department at the University of Arizona. He received his B.S. degree in Agricultural Engineering in Cukurova University in Turkey and M.Sc. and Ph.D. degrees from Food, Agricultural and Biological Engineering from Ohio State University. His research involves automation, environmental control, alternative energy integrated CEA systems and resource use optimization in controlled environment agriculture systems including greenhouses and vertical farming-based plant factories with artificial lighting. Murat is a member of American Society of Agricultural and Biological Engineers (ASABE), American Society of Horticultural Sciences (ASHS), and International Society for Horticultural Science (ISHS). He serves as Chair of the Division Precision Horticulture Engineering under ISHS.



**ROGER KEHOE**  
**Eason Horticultural  
Resources**

Roger is a true plant specialist with over 40 years of experience in the Green Industry. Having previously worked with plant breeding companies, young plant producers, and wholesale growing operations, he can offer an incredible amount of knowledge to his customers. Roger earned a Bachelor of Science degree in ornamental horticulture from Rutgers University, with a specialty in floriculture. His background makes him an excellent resource for his customers, especially with his ability to help them with plant knowledge and production methods. Some of his strongest assets are his horticulture business understanding and a broad range of relationships with our vendors and growers throughout the industry. Roger and his wife of more than 40 years have 5 children and 3 grandchildren. He enjoys swimming and golf.



**CHIERI KUBOTA**  
**Ohio State University**

Dr. Chieri Kubota is a professor in the Department of Horticulture and Crop Science, and Director of Ohio Controlled Environment Agriculture Center at the

Ohio State University. She received her Ph.D. in Horticultural Engineering and M.S. in Horticultural Science from Chiba University, Japan. Chieri worked as faculty for 6 years in Chiba University and 16 years in the School of Plant Sciences at University of Arizona. Chieri joined the faculty at the Ohio State University in 2017. She is Research Division Vice President and a Fellow of the American Society for Horticultural Science (ASHS).



**ROSE LABBE**  
**Agriculture & Agri-Food  
Canada**

Dr. Roselyne Labbe is a research scientist in greenhouse entomology at Agriculture and Agri-Food Canada's Harrow Research and Development Centre (HRDC). Her research team aims to identify both the most effective and sustainable ways to manage the diversity of pests present within Canada's greenhouse and vertically farmed crops. This includes ongoing work to assess and develop a diversity of crop protection tools such as novel biological control or reduced-risk agents and incorporating new technologies such as the sterile insect technique and artificial lights to optimize crop protection.



**DAVID LUBITZ**  
**University of Guelph**

Dr. David Lubitz is an Associate Professor in the School of Engineering at the University of Guelph. His research interests include distributed renewable energy including wind, solar and small hydropower, as well as greenhouse energy efficiency and environmental impacts due to light and noise. He has previously studied microclimate and modelled energy flows within high tunnels, and examined wind driven ventilation of large Venlo-type commercial greenhouses. David is currently part of two multi-year projects studying greenhouse light emissions and energy efficiency by combining collaborative experimental study with analysis and modeling simulations.



**BRIAN LYNCH**  
**Vineland Research &  
Innovation Centre**

Brian Lynch obtained his B. Eng., M.A.Sc., and Ph.D. degrees in aerospace engineering from Carleton University in his hometown of Ottawa, Ontario. He spent time as a research associate at the Canadian Space Agency while completing his doctoral research related to smart actuators for spacecraft systems while also working on various projects related to robotics for planetary exploration. Following the completion of his graduate studies, Brian joined the Mining Systems Laboratory at Queen's University where he worked on robotic systems for exploration and prospecting with a focus on searching for water and other minerals in space environments. He subsequently relocated to the Niagara region to join

Vineland Research and Innovation Centre as a research scientist, where he currently leads the Field Robotics team within the Automation group. Brian is currently the project leader for the Automated Cucumber Harvesting project as part of Agriculture and Agri-Food Canada's Automation Cluster. His team focuses on computer vision and robotics, with the aim to spearhead novel research and development in reducing labour costs for the horticulture industry.



**REMI MAGLIONE**  
**Harvest Genomics Inc.**

Rémi Maglione is the VP and co-founder of Harvest Genomics Inc, a Guelph-based Canadian Biotech company specializing in developing and deploying genomic technologies for food production and food safety. Rémi heads the metagenomics technology development of Harvest Genomics, with a focus on portable DNA sequencing solutions for controlled environments. In addition to vegetable greenhouse operations, Remi is currently developing new genomic technologies for the Cannabis greenhouse sector, from new cultivar development to early detection of biological threats to cannabis production.



**GENEVIEVE MARCHAND**  
**Agriculture & Agri-Food Canada**

Following a B.Sc. in Agronomy, specialized in Plant Science (2002), Genevieve obtained a Ph.D. in Plant Biology from Université Laval in 2008, working on the genetic control of the mode of action of biocontrol agent *Pseudozyma flocculosa* in the lab of Dr. Richard Bélanger. This microbial biocontrol agent targeted powdery mildew on greenhouse crops. During her post-doctoral fellowship at Health Canada in 2012-2013, Genevieve contributed to the development of a microfluidic detection system for food-borne pathogens. She has been with Agriculture and Agri-Food Canada on a permanent basis since 2014 and has previously worked at the Pest Management Centre and the Ottawa Research and Development Centre. Since December 2016, Genevieve has been leading a research program on pathology of greenhouse vegetables and other horticultural crops at the Harrow Research and Development Centre in Southwestern Ontario. Her research program focuses on methods for detection and control of plant pathogens, with a focus on integrated pest management (IPM).



**PETER MELIS**  
**Proefcentrum Hoogstraten**

Peter Melis is a researcher in the cultivation of strawberry at Proefcentrum Hoogstraten in Belgium. His team does practical and demonstrative research on all aspects of the modern strawberry cultivation, both in soil and on substrate.

At the centre, the research program works in close contact with the growers to realize quick implementations of new techniques and systems. Peter is familiar with the different cultivation systems that make year-round cultivation possible. He has developed several techniques to realize important steps in the evolution of the cultivation including: a predictive outgrowth model for short day cultivars using flower bud analysis, the implementation of assimilation light for winter production in glasshouses, the capacity calculation for drain water recuperation on trayfields, a capacity calculation for needed rain water storage, a highly effective IPM strategy with control over the most common pests and diseases, and the importance of timed and quantified fertilization during the plant production phase of short day and everbearing cultivars.



**KERRY MEYER**  
**Proven Winners**

Kerry Meyers has a Bachelor of Science degree in Horticulture from the University of Missouri, and a Masters in Science degree in Horticultural Science with a minor in Plant Breeding from the University of Minnesota. After graduation, she lived for five years on the Central Coast of California while breeding plants for Ball FloraPlant before returning to the Midwest. Today Kerry's family lives and gardens in central Missouri on 10 acres, half of which is a rocky wooded hillside. Kerry has worked for Proven Winners since 2002. She works with intellectual property, university trials, and plant tags and also answers consumer questions. Kerry is editor of Proven Winners Home Gardener newsletter, Winners Circle, where she regularly shares photos of her own garden. "I feel if you are going to write about gardening, you probably ought to show your garden."



**SARAH MINER**  
**Roelands Plant Farms**

Growing up on her family's dairy farm in rural southwestern Ontario, Sarah Miner has spent her whole life immersed in Canadian agriculture. She holds an Honours Bachelor of Science in Agriculture from the University of Guelph and has extensive agricultural experience spanning multiple industries including livestock, research, plant production, cannabis, customer service, and sales. Sarah currently works in Account Management and Sales at Roelands Plant Farms – a premium plant propagation company in Lambton Shores, Ontario. When she isn't selling premium plants, you can find her spending time with her husband and three children.



**SABER MIRESMAILLI**  
**Ecoation**

Dr. Saber Miresmailli is an Award-winning biologist with 50+ Publications, a PhD in Plant Science from UBC and more than 25 years of experience in the industry including

5 years as a greenhouse grower. He was named one of the top 40 under forty by BIV, won the innovation award at GreenTech Amsterdam in 2018 was a winner at the UN World Changing Technology Olympics in 2020 where he shared the stage with Elon Musk and Anoushe Ansari. Saber conducted his post-doctoral studies at the University of Illinois at Urbana-Champaign at the Energy Bio Science Institute. He then joined Sumatics LLC in New York as the Executive Science Officer. Prior to that, he was part of scientific advisory panel of EcoSMART Technology in Georgia and the Science advisor of Sustainability television. In 2015, Saber received the award of excellence in innovation in agriculture and agri-food from BC Investment Agriculture Foundation. He has been an Advisor to the BC Minister of Agriculture and a member of Vancouver Food Policy Council. More than a decade ago, he, along with his wife, founded Ecoation, a robotics and AI company that makes dynamic data and automation platforms for the horticultural settings and grow that company to more than 60 people with customers all over the world and offices in North Vancouver, BC and Ruthven, ON.



**AMAR MOHANTY**  
**University of Guelph**

Amar Mohanty is a Full Professor and OAC Distinguished Research Chair in Sustainable Biomaterials and is the Director of the Bioproducts Discovery & Development Centre at the University of Guelph. He is a former Michigan State University professor and is an international leader in the field of bioplastics, biocomposites and advanced biorefinery. His research focuses in engineering value-added uses of biomass wastes and industrial co-products from agro-food and biofuel industries. Circular economy, environmental sustainability, waste plastic valorization, biodegradable plastics as single-use plastic alternatives, biocarbon based composites and 3D printing of sustainable materials are other areas of his expertise. Prof. Mohanty is the Editor-in-Chief of Sustainable Composites, Composites Part C – Open Access (ELSEVIER).

He has more than 800 publications to his credit, including 415 peer-reviewed journal papers, 6 edited books, over 400 conference presentations, 25 book chapters, and 67 Patents awarded/applied (His Google Scholar citations exceed 38, 000).

Prof. Mohanty is a Fellow of the Royal Society of Canada, the American Institute of Chemical Engineers, the Royal Society of Chemistry (UK) and the Society of Plastic Engineers.

Prof. Mohanty received many awards, including the: JL White Innovation Award from the International Polymer Processing Society; Synergy Award for Innovation from Natural Sciences and Engineering Research Council of Canada (NSERC); Andrew Chase Forest Products Division Award from the American Institute of Chemical Engineers and the Lifetime Achievement Award from the BioEnvironmental Polymer Society (BEPS), USA.

**EMILY MURRACAS**

**Mucci Farms**

Emily is the Director of Marketing for Mucci Farms in Kingsville, Ontario. Mucci Farms is a grower, packer, shipper and marketer of fresh flavourful greenhouse grown produce.



**BARRY MURCHIE**

**Goodleaf Farms**

Barry Murchie is President and CEO of GoodLeaf Farms in Guelph, Ontario. With a passion for delicious, nutrient-rich greens, GoodLeaf was founded in Truro, Nova Scotia in 2011. Using innovative technology and leveraging multi-level vertical farming, GoodLeaf has created a controlled and efficient indoor farm that can grow fresh produce anywhere in the world, 365 days of the year. The system combines innovations in LED lighting with leading edge hydroponic techniques to produce sustainable, safe, pesticide-free, nutrient-dense leafy greens. GoodLeaf has ongoing R&D collaboration with the University of Guelph, McGill University and several other institutions and private enterprise.



**ANA M. PASTRANA**

**Vineland Research & Innovation Centre**

Ana M. Pastrana is a Research Scientist at Vineland Research and Innovation Centre in Canada, where she leads the Plant Pathology laboratory. She completed her PhD in 2015 at IFAPA, Spain then continued her research at the University of California at Davis, USA. She has more than ten years of experience investigating the etiology, epidemiology, and management of plant diseases in agricultural ecosystems. At Vineland, her main tasks include research efforts to control vegetable greenhouse crop diseases.



**ZAMIR PUNJA**

**Simon Fraser University**

Zamir Punja completed a BSc degree in Plant Sciences at the University of British Columbia in Vancouver, followed by MSc and PhD degrees in plant pathology from the University of California, Davis. He then joined the Campbell Soup Company and worked jointly with North Carolina State University in Raleigh on management of carrot diseases. Zamir was appointed Manager of Plant Biotechnology research for Campbell's in Davis, California to develop innovative methods for crop improvement. He joined Simon Fraser University in 1989 as Associate Professor and was promoted to Professor in 1996. His research interests include the etiology and management of plant diseases on vegetable and horticultural crops, and the applications of plant biotechnology for disease management. More recently, his work has shifted to cannabis. His group has described a range of previously unreported

pathogens affecting the crop and various methods for disease management have been evaluated. He is a Fellow of the Canadian Phytopathological Society. Zamir has received numerous research and teaching awards, including the Sterling Prize for Controversy for his work on GMO foods. He was Editor-in-Chief of the Canadian Journal of Plant Pathology for 18 years. His research has been funded jointly by NSERC (Discovery, Strategic and CRD's) and various industry partners. Zamir's research group currently focuses on cannabis pathology and methods to improve quality of greenhouse-grown cannabis.



**ERIK RUNKLE**

**Michigan State University**

Dr. Erik Runkle is a Professor and Extension Specialist in the Department of Horticulture at Michigan State University. Erik obtained a B.S. in Ornamental Horticulture from the University of Illinois and an M.S. and Ph.D. in Horticulture at Michigan State University. Since he joined the faculty in 2001, he and his graduate research team have performed numerous practical experiments indoors and in greenhouses to determine the effects of light, temperature, and other environmental factors on plant growth and development. Much of his recent work has been in the Controlled-Environment Lighting Laboratory at MSU, focused on regulating growth of leafy greens and ornamental plugs.



**WARREN RUSSEL**

**Moleaer**

Warren Russel is a co-founder of Moleaer and an experienced entrepreneur with over 15 years of business management experience in the wastewater treatment and environmental services industries of Southern Africa and the Middle East. Prior to leading the commercial efforts for Moleaer, Warren, a graduate of the University of South Africa, founded Erofit USA and Evadine Technologies, which focused on environmental consulting and designing wastewater treatment processes for municipal, industrial, oil, and gas applications.

**ADRIAN SCHIMNOWSKI**

**CEO & Operations Manager, Arctic Research Foundation**

There is no such thing as a typical day for Adrian. Responsible for the maintenance and operation of ARF's labs and research vessels, he spends much of the summer field season plying northern waterways with scientific researchers, setting up and fixing equipment in remote Arctic locations and working on a wide array of projects with local communities. As ARF's main point of contact for government agencies and other partners, Adrian spends his "down time" flying across the country to attend meetings or participate in conferences on Arctic issues. Adrian's interest in Canada's Arctic developed early on. Born in

Winnipeg, Man., Adrian and his family moved to Chesterfield Inlet and Churchill, Man., when he was a young boy. His earliest memories include fishing for Arctic char and exploring the nearby tundra. He later studied fine arts and architecture at the University of Manitoba and became a professional multimedia artist and, later, a construction business owner. He also obtained fire and paramedic training, as well as training as a commercial diver — all skills that make him an ideal person to lead ARF's operations in a part of the world where resourcefulness is paramount.



**HEIKE SCHOLZ-DOBELIN**

**Landwirtschaftskammer  
Nordrhein-Westfalen,  
Germany**

Heike Scholz-Döbelin works as a specialist advisor at the government's Plant Protection Service of the Chamber of Agriculture North-Rhine-Westphalia in Germany and is based at the Straelen Research Station in Lower Rhine. She has over 30 years experience in providing biological and integrated pest management advice to growers and crop advisors in fruiting vegetable cultures and developing and implementing complex plant protection solutions, specifically and practical adapted to the grower. She also focuses on monitoring and applied research in plant protection in greenhouse and field vegetable production. Heike has conducted the development and implementation of a protocol for disinfection, eradication, and prevention advice for growers, after Germany experienced the first ToBRFV infestation in Europe in 2018. With inputs from experts and companies in Germany and abroad, Heike facilitated a process in intensive collaboration with the affected growers. Other areas of research include biological control of Tuta absoluta and noctuid moths, control of whitefly, russet mite and aphids, powdery mildew, and Botrytis with beneficials and biopesticides. Heike also runs a farm for organic production of fruits and vegetables together with her husband. She holds a horticulture engineering degree of the University of Applied Sciences Weihenstephan, Munich-Freising/Germany combined with E.N.I.T.H.P. (École Nationale d'Ingénieurs des Techniques de l'Horticulture et du Paysage), Angers/France.



**ARUPPILLAI SUTHAPARAN**

**Norwegian University of Life Sciences**

Aruppillai Suthaparan holds a Doctor of Philosophy: Horticulture & Plant Protection and Master of Science Horticulture from the Norwegian University of Life Sciences in Ås, Norway. His work is focused on plant-fungal photobiology and the interactions between optical radiation (ultraviolet, visible, and infrared) and plant diseases. Aruppillai is particularly interested in new developments in how visible and

UV light, circadian rhythms, new technologies, and genetic methods can be exploited to suppress plant fungal diseases. He has a special interest in light and light signal perception by plants and fungi, plant and fungal photoreceptors and their role in fungal disease management in greenhouse crops.



**JUSTINE TAYLOR**  
**CropLife Canada**

Dr. Justine Taylor recently assumed the role of director of stewardship and sustainability for CropLife Canada. In this role Justine supports both industry stewardship efforts as the executive director of the Agrichemical Warehousing Standards Association and contributes to the larger sustainability efforts of Canada's plant science sector. Justine comes to this role after nearly 10 years in the greenhouse sector and was most recently the science and government relations manager for the Ontario Greenhouse Vegetable Growers. A keen supporter of collaboration, Justine has contributed to several cross-sectoral initiatives in her previous role and continues to sit on several local volunteer boards in her hometown of Windsor, Ontario. Justine holds a Ph.D. from the University of Alberta with a focus on analytical chemistry.



**KENNETH TRAN**  
**Koidra Inc.**

Kenneth Tran is the founding CEO of Koidra. Koidra is an AgTech startup with a mission of transforming greenhouses and sustainable agriculture through innovations in AI and IoT. It provides IoT Suite and Iuto Growing platforms for indoor farms to operate more autonomously and more efficiently. Before founding Koidra, Kenneth was a Principal Applied Scientist in the Machine Learning Group, Microsoft Research. In 2018, he led a cross-organization research team winning the 1st autonomous greenhouse challenge, organized in the Netherlands. His Sonoma team was the only AI team that outperformed the expert Dutch growers with 6% increase in yield and 17% increase in net profit. Kenneth's expertise and experience includes AI algorithms with a bias for whole system optimization. Kenneth received his Ph.D. in Computational & Applied Mathematics from the University of Texas at Austin in 2012.



**RODGER TSCHANZ**  
**University of Guelph**

Rodger Tszanz has worked as a technician at the University of Guelph since 1989. In 2001, he was asked by the Department of Plant Agriculture to create and manage the University's Ornamental Trial Garden program. The trial garden locations have expanded over the years to currently include ground bed and container trials at the Guelph Turfgrass Institute in Guelph, the Landscape Ontario site in

Milton and the Royal Botanical Gardens in Burlington. At the Guelph site, Tszanz is a judge for the annual and perennial entries of the All-America Selections organization. A large, multi-year perennial trial has also been recently established at the Landscape Ontario trial site. In addition to the Trial Garden duties, Tszanz is a technician for the ornamental plant breeding program in Guelph, teaches ornamental plant uses and identification, assists with the management of Plant Agriculture's growth facilities and is part of the student liaison and undergraduate recruitment team for the Department of Plant Agriculture.



**BILL VAN HEYST**  
**University of Windsor**

Bill Van Heyst is a professor in Environmental Engineering and the incoming Dean of the Faculty of Engineering at the University of Windsor (effective September 2021). Prior to his post at UWindsor, Bill spent 19 years as a professor at the University of Guelph and five years before that as an environmental consultant in a leading Toronto-based air quality firm. Bill's research has been focused on agricultural air quality issues, especially emissions of ammonia and particulate matter from animal housing facilities and, more recently, odour from cannabis production.



**PETER VAN WEEL**  
**Weel.Invent**

During his 42-year career as a researcher at Wageningen University & Research Peter van Weel developed systems that are now commonplace in today's greenhouses; such as ebb and flood watering, roof cleaner, movable benches and aquaponic systems. Together with Jan Voogt he developed a climate control strategy based on sensors and laws of physics, known as 'Next Generation Growing'. After his retirement in 2016 Peter started his private company Weel.Invent to develop integrated, robust, low-investment and uncomplicated production systems for greenhouses. Peter has co-authored a book about Plant Empowerment, which is the next step of NGG with even more emphasis on the relation between air movement, the reduction of risk on fungal diseases and the transpiration of the crop. Peter gives workshops, trains users and analyzes data for growers who use the Plant Empowerment method.



**TERRY VERMEER**  
**ET Grow Inc.**

Terry is a Licensed Professional Computer Systems Engineer (P.Eng) with over 14 years of professional experience across many industries. He grew up working in a family-owned greenhouse business in Grimsby, Ontario. (Westbrook Group of Companies)



**CHRISTOPHER WEISENER**  
**University of Windsor**

Dr. Christopher Weisener is a Professor at the University of Windsor Ontario. He is an established multidisciplinary researcher at the Great Lakes Institute for Environmental Research (GLIER) and is recognized for his contributions in the field of environmental geomicrobiology. His research programs link multidisciplinary themes (i.e. microbiology, geochemistry and molecular ecology) within both applied and fundamental research frameworks for habitat restoration. He specializes in developing cutting edge science which correlates an understanding of microbial community function influenced by contaminate stress at the terrestrial/aquatic interface. In particular his group focuses on the mobility and bioavailability of nutrients (e.g. carbon, nitrogen, sulfur and phosphorous) and toxic metals in aqueous sediments. This research helps inform design and sustainable solutions for waste and water management and ecosystem services.



**YOUBIN ZHENG**  
**University of Guelph**

Dr. Youbin Zheng is a professor at the University of Guelph, the vice president of the Canadian Society for Horticultural Science. He has more than 25 years research and hands-on experiences in controlled environment plant production. Dr. Zheng's team has been actively involved in controlled environment cannabis production research, mostly collaborative work with licensed producers, in the past years. His group has published North America's first few peer-reviewed scientific papers on controlled environment cannabis production. He has developed and been teaching a Cannabis Production course for senior university students. He is passionate at training graduate students for the controlled environment plant production industry. Youbin is frequently invited to speak about his research nationally and internationally.