



Welcome to the 2023 IFAO Conference

What Does 30% Look Like?

Deep Dives Only.

Presentations have already been recorded and uploaded to www.ifao.com/agenda for you to watch NOW or at our watch parties every night before each day of the conference.

This is so you can ask the deep questions and dive in to the nitty gritty in a 100% audience-engaged discussion.

Step 1: Watch the presentations

- head to www.ifao.com/agenda
 - click on “sign in” for the session you want to watch
 - enter the password you got in your confirmation email
- OR* come to out watch parties @8pm on the 14th & 15th

Step 2: Jot down your questions

Step 3: Dive in with 45 minutes of discussion

There is one virtually livestreamed session for each session stream and 44 session to choose from in-person! Virtual presentations and livestreams will stay on the website forever

Your tickets and passwords will all be in your inbox from our Eventbrite listserv—just search: “Your Tickets for 2023 Innovative Farmers Conference” in your inbox :)

Session Descriptions

The Future of Robotics February 15th, 9:30am Crystal Ballroom <i>Livestreamed</i>		Hear all about the Ag Robotics Working Group, the robotics they've been testing out and what's worked, what hasn't, and why. Grant Elgie
Nitrogen Management February 15th Chelsea	Deep Dive Q&A 10:30am <i>Livestreamed</i>	Dive deep on managing nitrogen more effectively for better economic, agronomic & environmental outcomes. We'll discuss "hot spots", "hot moments", the 5th R, & using OM & water budgets to make quick decisions when weather happens. Claudia Wagner-Riddell (UofG), John Lauzon (UofG), Caleb Niemeyer (Woodrill)
	Most Economical Rate of Nitrogen 11:15am	When we improve source, timing and placement, your most economical rate will be at a lower N rate. But if you only protect yourself from one type of loss, then you'll just lose it in a different way. Bring your burning questions about predicting & adapting your nitrogen as your operation, soils and the weather changes. John Lauzon (UofG)
	Nitrogen Emissions 1:45 pm	Hot spots. Hot moments. The 5th R? Discuss the most current research findings on how you might be losing Nitrogen to get the biggest bang out of your buck. Claudia Wagner-Riddell (UofG)
	Predicting Rates with Organic Matter & Rainfall 3:00 pm	Weather happens. Understanding your water budget is so important for understanding hot moments. And this is where your soil type and soil health play a big roll too. The greater the water holding capacity, the slower a field will lose nitrogen to leaching, but also because it's wetter – that means more nitrification. Caleb Niemeyer (Woodrill)
Nitrogen Inhibitors February 15th Regency A	Deep Dive Q&A 11:15 am <i>Livestreamed</i>	Dive deep with Mark and Lori on Nitrogen Inhibitors. Mark has thought carefully about the ROI of using nitrogen inhibitors and Lori has some cool research to share about how nitrogen inhibitors interact (or don't) with soil biology. Mark Richards (Dresden), Lori Phillips (AAFC)
	Effects On and Of Soil Biology 1:45 pm	How do nitrogen inhibitors affect soil biology and how does soil biology affect nitrogen inhibitors? With a focus on urease and nitrogen inhibitors, Lori will delve into how the make-up of nitrifiers in the soil is important for understanding when something is going to work and when it's not. Lori Phillips (AAFC)
	Economics and Agronomics 3:00 pm	Mark has built some thoughtful 4R decision-making models. He'll crunch the economics of using nitrification inhibitors instead of adding more nitrogen and how he considers the volatility of market prices when coming up with a plan. Mark Richards (Dresden)
	Effects On and Of Soil Biology 3:45 pm	How do nitrogen inhibitors affect soil biology and how does soil biology affect nitrogen inhibitors? With a focus on urease and nitrogen inhibitors, Lori will delve into how the make-up of nitrifiers in the soil is important for understanding when something is going to work and when it's not. Lori Phillips (AAFC)

Session Descriptions

Manage, Measure & Market your Carbon February 15th, 1:00 pm Crystal Ballroom <i>Livestreamed</i>		We'll paint a big picture of carbon markets before diving all the way in to each topic tomorrow. We'll cover the ways carbon is sold, how protocols are evolving to address the challenges in implementing them, how Canada's doing on a global scale & how it will affect Ontario agriculture. Jamie Mackinnon (Anew carbon), Alfons Weersink (UofG), Katie Sullivan (IETA)
Energy Sources and Alternative Fuels February 15th Regency B	Grain Drying & Hydrogen 10:30 am	We did a hydrogen feasibility study! James will answer some of your questions about it when it comes to grain drying and expand on how to reduce drying costs. James Dyck (OMAFRA)
	Deep Dive Q&A 1:45 pm <i>Livestreamed</i>	To save on energy, you might have to get some skin in the game. Chat with OMAFRA engineers and one farmer that's powering an impressive amount of homes in Ilderton! James Dyck & Jake Debruyn (OMAFRA), Laurie Stanton (Stanton Bros)
	On-farm Energy Generation 3:00 pm	Dive deep on the partnerships, infrastructure & opportunities that Laurie has built over 20 years of innovating and building this part of his business model. Laurie Stanton (Stanton Farms)
	Feedstocks and Anaerobic Digestors 3:45 pm	Dive deep into the opportunities presented in feedstocks for anaerobic digestors and putting them on your farm. Jake Debruyn (OMAFRA)
Living Lab—Ontario February 15th Crystal Ballroom & Chelsea	Rotational Grazing 10:30 am Crystal Ballroom	Learn all about using weigh scales and rising plate meters for rotational grazing decision-making in a field crop rotation. Andy Van Niekerk (IFAO), Mike Groot (Crediton)
	Socioeconomic Research Crystal Ballroom 10:30 am & 11:15 am	Learn about estimating adoption and the barriers and Incentives to adopting covers crops and 4R Nutrient Management that AAFC found. Margot McComb (AAFC)
	Water Quality Crystal Ballroom, 10:30 am	Discuss water quality differences across different farming operations that they found in LL-ON and ONFARM projects. Colin Little (LTVCA)
	Relay Cropping Crystal Ballroom, 11:15 am	Hash out the agronomics & economics of relay cropping, plus learn about what soil types it works best in. Greg Vermeersch (Tilsonburg), Eric Paige (AAFC)
	Pollinators 11:15 am Crystal Ballroom	Lauren studies the effects on pollinator abundance and diversity amongst different farm landscapes Lauren Des Marteaux (AAFC)
	Water, Pollinators & Agronomics Crystal, 3pm <i>Livestreamed</i>	Discuss research Findings from the Living Lab—Ontario projects covering pollinators, water quality and agronomics Colin Little (LTVCA), Eric Paige (AAFC), Andy Van Niekerk (IFAO), Lauren Des Marteaux (AAFC)
	Relays, Perennial Covers & Grazing Chelsea, 3:45 pm	Farmer Round Table: Observations from the Field Greg Vermeersch (Tilsonburg), Woody Van Arkel (Dresden), Mike Groot (Crediton)

Session Descriptions

Let's Talk Soil with the Soil Network February 15th Regency C	Planting Green & Perennial Cover Crops 10:30 am	Dive in to managing never ending living roots! Woody Van Arkel (Dresden), Larry Dyck (Campden)
	The Business of Cover Crops 11:15 am	Chat with Rick and Dan about the business prop of cover crops Rick Kootstra (Clinton), Dan Petker (Port Rowan)
	Rotational Grazing 1:45 pm	Talk grazing with Mike & Peter Peter Kotzeff (Chesley), Mike Groot (Crediton)
	Cover Crops & Multi-species cropping 3:45 pm <i>Livestreamed</i>	60" corn multi-cropping & cover crops are just some of the ways Patrick is packing more in to his rotation. Patrick Verkley (Kerwood)
Equipment for the Future February 16th, 9:30 am <i>Livestreamed</i> Crystal Ballroom		Mods, CTF & MOAR AXLES—chat through first step fixes & design elements to guide you to better equipment set-ups Mark Richards (Dresden), Henry Denotter (Kingsville), Alex Barrie (OMAFRA), Ian McDonald (OMAFRA)
Equipment Deep Dives February 16th Crystal Ballroom & Regency B	Biostripping Set ups Crystal , 10:30 am <i>Livestreamed</i>	Hear all about Lawrence and Nick's set up for biostripping and the process that got them to where they are today. Ian McDonald(OMAFRA), Lawrence Hogan(Lucknow), Nick Stokman(Strathroy)
	Bold New Redesigns for Preventing Compaction Regency B, 11:15 am	Find the sweet spot between time savings & compaction prevention with design elements and ideas for equipment. Alex Barrie (OMAFRA)
	Equipment for Manure Management Regency B, 2:30 pm	Dive in to the innovations in manure application equipment and learn more about how it works on the ground for Adrian. Christine Brown (OMAFRA), Adrian Guntensburger (Guntensperger Farm Services)
	Equipment Modification Shop Talk Regency B, 3:15 pm	Mark & Henry have been building their soil & improving profitability with mods - plan your own mods with them here. Mark Richards (Dresden), Henry Dennotter (Kingsville)
The Good, the Bad and the Innovative of Organic Amendments February 16th Regency A	Organic Amendments & Soil Biology 10:30 am	Bio-based fertilizers use organic feedstocks to turn into nutrients that hit N&P targets while improving soil health—but they have to mean better profitability and reduced nutrient losses—how do they stack up? Hugh MacGillivray (ANUVIA)
	Deep Dive Q&A 11:15 am <i>Livestreamed</i>	Dive in to bio-based fertilizers, insights on the potential problem of microplastics in composts and the Johnson Su Bioreactor method being put to work in Ontario. Adam Gillespie (UofG), Hugh MacGillivray (ANUVIA), Mike Stangl (Stangl Lawn Care)
	Microplastics in Compost 2:30 pm	Microplastics have been found in composts and biosolids—but what are they, how much is there, how to we reduce or remove them and what does their presence mean for soil? Adam Gillespie (UofG)
	Johnson-Su Bioreactor Method & lactobacillus serums 3:15 pm	Mike will dive into the Johnson Su compost method and LAB serum that he's been making over the years and join Larry in talking through the tips and tricks of using them. Mike Stangl (Stangl Lawn Care), Larry Dyck (Campden)

Session Descriptions

Carbon Management Deep Dive February 16th, 1:00 pm Crystal Ballroom <i>Livestreamed</i>		Adam will dive in to practice and environmental factors affecting soil organic matter dynamics, how soil health affects carbon and organic matter and where nutrients fit in. Seb will root all that in to practice, detailing strategies for building carbon and what to expect in different regions of Ontario. Adam Gillespie (UofG) & Sebastian Belliard (OMAFRA)
Navigating Carbon Markets February 16th Crystal Ballroom	Selling Carbon Credits 11:15 am	How is carbon is sold? What are charismatic credits? Where does the data go? Jamie will give us the lay of the landscape. Jamie Mackinnon (Anew carbon)
	Deep Dive Q&A 2:30 pm <i>Livestreamed</i>	How programs are evolving to address some of the challenges in implementing them in Ag and what impact the influx of programs will have on our sector. Jamie Mackinnon (Anew carbon), Alfons Weersink (UofG)
	Implications for Ontario Ag 3:15 pm	Around the world, interest in carbon markets is growing because if held to high standards of integrity and transparency, carbon markets can help accelerate the transformation needed. But what does this mean for Ontario Ag? Alfons Weersink (UofG)
Modeling On-Farm Greenhouse Gas Emissions February 16th Regency C	Estimating Emissions in Agrisuite 10:30 am	You can estimate your farm's emissions and see how changing things up will change it! Check it out with James. James Dyck (OMAFRA)
	Modelling Agriculture 11:15 am	Ward is working on building models that represent all the processes that happen in your soils and how one thing affects the other. These models will eventually feed in and develop emissions calculators, but what the gaps or limits and what is being worked on in Canada? Ward Smith (AAFC)
	Policies that Reflect Farmer Realities 2:30 pm	Farmer realities are complex, with lots of trade-offs & regional differences. How do farmers & policy makers best harness the capabilities that we currently have and guide the development of models and calculators to address those realities? Al Mussel (Canadian Agri-Policy Institute)
	Deep Dive Q&A 3:15 pm <i>Livestreamed</i>	How can you estimate your farm's carbon footprint, how can we all work together to guide the development of models & policies that address our realities, recognize our accomplishments and support Ag to the best it can be? Ward Smith (AAFC), Al Mussel (Canadian Agri-Policy Institute), James Dyck (OMAFRA)

Schedule Wednesday Feb 15th

8:30	Atrium	Doors Open & Coffee	
9:00	Crystal	Welcoming Remarks	Mark Richards
9:30	Crystal	The Future of Robotics <i>Live</i>	Grant Elgie (Haggerty Ag Robotics)
10	Atrium	Break	
10:30	Chelsea	Nitrogen Management: Deep Dive Q&A <i>Live</i>	Claudia Wagner-Riddel & John Lauzon (UofG), Caleb Niemeyer (Woodrill)
	Regency B	Energy Sources and Alternative Fuel: Grain Drying & Hydrogen	James Dyck (OMAFRA)
	Crystal	Living Lab - Ontario: Rotational Grazing	Andy Van Niekerk (IFAO), Mike Groot (Crediton)
		Living Lab - Ontario: Socioeconomic Research	Margot McComb (AAFC)
		Living Lab - Ontario: Water Quality Monitoring	Colin Little (LTVCA)
	Regency C	Let's Talk Soil: Plantgreen & Perennial Covers	Woody Van Arkel (Dresden), Larry Dyck (Campden)
11:15	Chelsea	Nitrogen Management: Most Economical Rate of Nitrogen	John Lauzon (UofG)
	Regency A	Nitrogen Inhibitors: Deep Dive Q&A <i>Live</i>	Mark Richards (Dresden), Lori Phillips (AAFC)
	Crystal	Living Lab - Ontario: Socioeconomic Research	Margot McComb (AAFC)
		Living Lab - Ontario: Relay Cropping	Greg Vermeersch (Tilsonburg), Eric Paige (AAFC)
		Living Lab - Ontario: Pollinators	Lauren Des Marteaux (AAFC)
	Regency C	Let's Talk Soil: The Business of Cover Crops	Rick Kootstra (Clinton), Dan Petker (Port Rowan)
12	Crystal	Lunch	
1:00	Crystal	Manage, Measure & Market your Carbon <i>Live</i>	Jamie Mackinnon (Anew carbon), Alfons Weersink (UofG), Katie Sullivan (IETA)
1:45	Chelsea	Nitrogen Management: Nitrogen Emissions	Claudia Wagner-Riddel (UofG)
	Regency A	Nitrogen Inhibitors: Soil Biology	Lori Phillips (AAFC)
	Regency B	Energy Sources and Alternative Fuels: Deep Dive Q&A <i>Live</i>	James Dyck (OMAFRA), Jake Debruyn (OMAFRA), Laurie Stanton (Stanton Bros)
	Crystal	Let's Talk Soil: Rotational Grazing	Peter Kotzeff (Chesley), Mike Groot (Crediton)
2:30	Atrium	Break	
3:00	Chelsea	N Management: Predicting Rates w/ OM & Rain	Caleb Niemeyer (Woodrill)
	Regency A	Nitrogen Inhibitors: Economics & Agronomics	Mark Richards (Dresden)
	Regency B	Energy Sources and Alternative Fuels: On-farm Energy	Laurie Stanton (Stanton Bros)
	Crystal	Living Lab - Ontario: Water quality, Pollinators & Agronomics <i>Live</i>	Colin Little (LTVCA), Eric Paige (AAFC), Andy Van Niekerk (IFAO), Lauren Des Marteaux (AAFC)
3:45	Chelsea	Living Lab - Ontario: Relays, Perennial Covers & grazing	Greg Vermeersch (Tilsonburg), Woody Van Arkel (Dresden), Mike Groot (Crediton)
	Regency B	Energy Sources and Alternative Fuels: Anaerobic Digestors	Jake Debruyn (OMAFRA)
	Regency A	Nitrogen Inhibitors: Soil Biology	Lori Phillips (AAFC)
	Regency C	Let's Talk Soil: cover crops & intercropping <i>Live</i>	Patrick Verkley (Kerwood)
4:30	Atrium	Break	
6:00	Crystal	Banquet, FIRE program, Innovative Farmer of the Year Award	
8:00	Crystal	IFAO Watch Party	

Schedule Thursday Feb 16th

8:30	Atrium	Breakfast		
9:30	Crystal	Equipment for the Future <i>Live</i>	Mark Richards (Dresden), Henry Denotter (Kingsville), Alex Barrie & Ian McDonald (OMAFRA)	Rick Kootstra
10:00	Atrium	Break		
10:30	Crystal	Equipment Deep Dive: Biostripping Set ups <i>Live</i>	Ian McDonald (OMAFRA), Lawrence Hogan (Lucknow), Nick Stokman(Strathroy)	Dave Gowan
	Regency A	The Good, the Bad and the Innovative of Organic Amendments: Organic Amendments and Soil Biology	Hugh MacGillivray (ANUVIA)	Mike Verdonck
	Regency C	Modelling On-Farm Greenhouse Gas Emissions: Estimating Emissions in Agrisuite	James Dyck (OMAFRA)	Rick Kootstra
11:15	Regency B	Equipment Deep Dive: Redesigning equipment	Alex Barrie (OMAFRA)	Soils@Guelph
	Regency A	The Good, the Bad and the Innovative of Organic Amendments: Deep Dive Q&A <i>Live</i>	Adam Gillespie (UofG), Hugh MacGillivray (ANUVIA), Mike Stangl (Stangl's Enviro Lawn Care)	Beth Hunter
	Crystal	Navigating Carbon Markets: Selling Carbon Credits	Jamie Mackinnon (Anew carbon)	Mark Richards
	Regency C	Modelling On-Farm Greenhouse Gas Emissions: Modelling Agriculture	Ward Smith (AAFC)	Andy Van Niekerk
12:00	Crystal	Lunch		
1:00	Crystal	Carbon Management Deep Dive <i>Live</i>	Adam Gillespie (UofG) & Sebastian Belliard (OMAFRA)	Dan Petker
2:00	Atrium	Break		
2:30	Regency B	Equipment Deep Dive: Manure Management	Christine Brown (OMAFRA), Adrian Guntensburger (Guntensperger Farm Services)	Tim Webster
	Regency A	The Good, the Bad and the Innovative of Organic Amendments: Microplastics in Compost	Adam Gillespie (UofG)	Soils@Guelph
	Crystal	Navigating Carbon Markets: Deep Dive Q&A <i>Live</i>	Jamie Mackinnon (Anew carbon), Alfons Weersink (UofG)	Andy Van Niekerk
	Regency C	Modelling On-Farm GHG Emissions: Policies that Reflect Farmer Realities	Al Mussel (Canadian Agri-Policy Institute)	Beth Hunter
3:15	Regency B	Equipment Deep Dive: Shop Talk	Mark Richards (Dresden), Henry Dennotter (Kingsville)	Beth Hunter
	Regency A	The Good, the Bad and the Innovative of Organic Amendments: Johnson-Su Bioreactor Method & Lactobacillus Serum	Mike Stangl (Stangl Lawn Care), Larry Dyck (Campden)	Stefan Zehetner
	Crystal	Navigating Carbon Markets: Implications for Ontario Ag	Alfons Weersink (UofG)	Dan Petker
	Regency C	Modelling On-Farm Greenhouse Gas Emissions: Deep Dive Q&A <i>Live</i>	Ward Smith (AAFC), Al Mussel (Canadian Agri-Policy Institute), James Dyck (OMAFRA)	Rick Kootstra

Meet the Speakers



WOODY VAN ARKEL, DRESDEN

Trialling perennial cover crops in row crops.



MIKE GROOT, CREDITON

Running a trial rotationally grazing on field crops.



ERIC PAIGE, AAFC

Dr. Page assesses the agronomics of various cropping systems.



LAUREN DESMARTEAUX, AAFC

Lauren is involved in insect & pest monitoring, integrated pest management, and biodiversity surveying.



GREG VERMEERSCH, TILSONBURG

Exploring relay vs. double-cropping winter cereals & soybeans.

ANDY VAN NIEKERK

Andy coordinates research & agronomic assessments for IFAO's projects

MARGOT MCCOMB, AAFC

Margot conducts economic research for AAFC's policy branch

COLIN LITTLE, LTVCA

Colin monitors water quality on farms in living lab & On-farm projects.



ALEX BARRIE, OMAFRA

Alex is a soil management engineer with a passion for compaction.



NICK STOKMAN, STRATHROY

Nick has been fine tuning and perfecting his biostripping system and his whole farm operation around it.



HENRY DENOTTER, KINGSVILLE

Henry has been no-tilling over 25 years, with a diverse crop rotation and cover crops in the mix.



IAN MCDONALD, OMAFRA

Ian organizes innovative on-farm research, pushing the envelop in every project.



ADRIAN GUNTENSBERGER

Adrian is the owner of Guntensperger Farm Services, offering custom forage harvesting, and specializes in dry manure application.



CHRIS BROWN, OMAFRA

The unrivaled queen of manure, Chris has been supporting all things manure to be more efficient and open up doors to better soil health and bottom lines.

LAWRENCE HOGAN, LUCKNOW

Lawrence has been fine tuning and perfecting his biostripping system and his whole farm operation around it.

Meet the Speakers



DR. CLAUDIA WAGNER-RIDDLE, UNIVERSITY OF GUELPH

Professor at the school of Environmental Sciences and world-renowned researcher focusing on ag-related greenhouse gases.

DR. JOHN LAUZON, UNIVERSITY OF GUELPH

Professor researching nutrient cycling & management.

CALEB NIEMEYER, WOODRILL

Precision Ag Specialist focusing on mapping and diagnostics for soil health and nutrient management



MARK RICHARDS, DRESDEN

Mark produces processing tomatoes, sugar beets, corn, soybeans and wheat on 2000 acres. Mark's vision for the farm is long-term viability and profitability.

DR. LORI PHILLIPS, AAFC

Dr. Phillips is a microbial ecologist who investigates the soil biological processes that maintain and enhance agro-ecosystem productivity and sustainability.



KATIE SULLIVAN, IETA

Katie is the managing director of a global business voice for the markets and climate change.

JAMIE MACKINNON, ANEW CLIMATE

Jamie is a carbon market expert with over 20 years of international experience leads Anew's Agri-carbon business.

DR. ALFONS WEERSINK, UNIVERSITY OF GUELPH

Alfons' work informs government, policy makers and producer organizations of the expected impacts of policies & practices.



JAKE DEBRUYN, OMAFRA

Jake works on energy and bioeconomy opportunities for the agrifood sector as an engineer of new technology integration.

JAMES DYCK, OMAFRA

James' work focuses on practices & innovations in grain drying and storage, field equipment and precision ag.

LAURIE STANTON, STANTON FARMS

Laurie built on-farm energy generation into his farm operation, innovating & participating in research for over 20 years.



DR. ADAM GILLESPIE, UNIVERSITY OF GUELPH

Adam's research focuses on soil organic matter and soil health. His research examines land use and ecosystem influences on SOM dynamics and their relationship with soil fertility and carbon cycling in both the lab and field settings.

SEBASTIAN BELLARD, OMAFRA

Sebastian is a soil scientist supporting farmers to manage healthy soils.

Meet the Speakers



DAN PETKER, PORT ROWAN

Dan looked at the finances and it just made sense to switch to a combo strip and no-till set up.

RICK KOOTSTRA, CLINTON

Rick strip tills corn & white beans, no-tills wheat & soys, and cover crops

PETER KOTZEFF, CHESLEY

Peter grazes his field cropped acres, using cover crops and minimal tillage to prevent erosion

PATRICK VERKLEY, KERWOOD

Patrick has been experimenting with multi-species cropping: relay wheat & soys, and 60" corn.

LARRY DYCK, CAMPDEN

Larry Dyck is trying to make tough soil a little less difficult. He started no-tilling soybeans and wheat in his heavy



HUGH MACGILLIVRAY, ANUVIA

Hugh works on bringing new & innovative ways of manufacturing sustainable, high-efficiency plant nutrients

MICHAEL STANGL, STANGL'S ENVIRO LAWN CARE

Mike works to incorporate regenerative principles into the landscapes that he works in, implementing composting using the Johnson Su Bioreactor method, making vermicast & extracts, and monitoring his soil biology.



AL MUSSEL, CANADIAN AGRI-POLICY INSTITUTE

A policy expert in farm management systems, Al builds policies that reflect the complexity of environmental stewardship

DR. WARD SMITH, AAFC

As an expert in agro-ecosystem modelling, Ward leads research to assess the resilience and sustainability of cropping systems.

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