



Canadian Agricultural
Economics Society (CAES)
Société canadienne
d'agroéconomie (SCAÉ)

14TH ANNUAL CANADIAN AGRI-FOOD POLICY CONFERENCE

14TH CONFÉRENCE ANNUELLE SUR LES POLITIQUES AGRICOLE CANADIENNES



**FOSTERING INNOVATION,
PRODUCTIVITY, AND INFORMED
AGRI-FOOD POLICY**

**ENCOURAGER L'INNOVATION,
LA PRODUCTIVITÉ ET LES
POLITIQUES
AGROALIMENTAIRE ÉCLAIRÉE**

**25 - 26
JANUARY
2024**

**INFINITY
CONVENTION
CENTRE**

**OTTAWA, ON,
CANADA**

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WELCOME! | BIENVENUE !

Greetings and a warm welcome to the 14th edition of the Canadian Agri-Food Policy Conference, organized by the Canadian Agricultural Economics Society! First held in 2011, the Annual Canadian Agri-Food Policy Conference has evolved into a preeminent national forum informing the policy landscape for the agri-food sector. Since its inaugural year, the conference has grown significantly, attracting key stakeholders, thought leaders, and industry experts. It is an important platform for engaging in dialogue, sharing insights, and fostering collaboration to address the complex challenges and opportunities inherent in the agri-food sector.

The 2024 conference theme is “Fostering Innovation, Productivity, and Informed Agri-Food Policy.” Over the next two days, our speakers will delve into a spectrum of topics, including but not limited to productivity, innovation, inflation, environment, pandemic, and food security. Each session will feature ample time for engaging Q&A, providing a platform for insightful discussions, and breaks will offer networking opportunities.

We invite you to join us on Thursday evening for the Reception and the Annual Graduate Research Poster Competition. This event offers a unique chance to interact with the presenters of cutting-edge research posters, showcasing Canada’s forefront of graduate student research. Take the time to evaluate the posters displayed throughout Thursday, and during the reception, cast your vote for the top three. On Friday morning, the finalists will present their research, culminating in the selection of the grand prize winner by a panel of judges.

The conference will also highlight the Graduate Student Colloquium, where three panelists will share their insights and experiences regarding

Bonjour et chaleureuse bienvenue à la 14e édition de la Conférence canadienne sur les politiques agroalimentaires, organisée par la Société canadienne d'agroéconomie! Tenue pour la première fois en 2011, la Conférence annuelle sur les politiques agroalimentaires au Canada est devenue un forum national de premier plan informant le paysage politique du secteur agroalimentaire. Depuis sa première année, la conférence a considérablement évolué, attirant des parties prenantes clés, des leaders d'opinion et des experts de l'industrie. Il s'agit d'une plateforme importante pour engager le dialogue, partager des idées et favoriser la collaboration afin de relever les défis complexes et les opportunités inhérents au secteur agroalimentaire.

Le thème de la conférence de 2024 est "Promouvoir l'innovation, la productivité et une politique agroalimentaire éclairée". Au cours des deux prochains jours, nos intervenants exploreront une gamme de sujets, notamment, mais sans s'y limiter, la productivité, l'innovation, l'inflation, l'environnement, la pandémie et la sécurité alimentaire. Chaque session offrira un temps généreux pour des questions-réponses engageantes, fournissant une plateforme pour des discussions perspicaces, et des pauses offriront des opportunités de réseautage. Nous vous invitons à nous rejoindre jeudi soir pour la réception et la compétition annuelle d'affiches de recherche des diplômés. Cet événement offre une chance unique d'interagir avec les présentateurs d'affiches de recherche de pointe, mettant en valeur les recherches des étudiants aux cycles supérieurs du Canada. Prenez le temps d'évaluer les affiches exposées tout au long de la journée de jeudi, et lors de la réception, exprimez votre vote pour les trois meilleures. Le vendredi matin, les finalists présenteront leurs recherches, aboutissant à la sélection du

career paths, providing valuable advice to graduate students.

In addition to this, Agriculture and Agri-Food Canada has organized a Student Policy Brief Competition, adding another layer of excitement to the conference. The winners of both competitions will be honoured at lunch on Friday.

New this year, we are experimenting with a Lightning Talk by academic members of the CAES. These talks will provide a platform for academic speakers to succinctly address a range of pertinent topics related to the current challenges, opportunities, and advancements in the food, agricultural, resource and environmental economics landscape in less than 10 minutes.

We extend our heartfelt appreciation to all our sponsors whose generous support has been instrumental in making this significant conference a reality. A comprehensive list of our sponsors can be found on the back cover of this program.

Have a very productive time!

Getu Hailu
CAES Past-President

grand lauréat par un panel de juges.

La conférence mettra également en avant le Colloque des étudiants diplômés, où trois panélistes partageront leurs idées et expériences concernant les parcours professionnels, offrant des conseils précieux aux étudiants diplômés.

En plus de cela, Agriculture et Agroalimentaire Canada a organisé une compétition étudiante de notes de politiques, ajoutant une couche d'excitation supplémentaire à la conférence. Les vainqueurs des deux compétitions seront honorés à la clôture de la conférence le vendredi.

Cette année, nouveauté, nous expérimentons une Présentation éclair par des membres académiques de la SCAÉ. Ces présentations offriront une plateforme aux conférenciers académiques pour aborder de manière succincte une gamme de sujets pertinents liés aux défis actuels, aux opportunités et aux avancées dans le domaine de l'économie alimentaire, agricole, des ressources et de l'environnement, le tout en moins de 10 minutes.

Nous exprimons notre sincère gratitude à tous nos sponsors dont le généreux soutien a été essentiel pour faire de cette importante conférence une réalité. Une liste complète de nos sponsors se trouve à la page arrière de ce programme.

Passez un moment très productif !

Getu Hailu
Ancien Président de la SCAÉ

THE HOST ORGANIZATION | ORGANISATION HÔTE

Who We Are



The Canadian Agricultural Economics Society is an association of individuals with a professional interest in topics related to the economics of agriculture, food, natural resources, and the environment. Established in 1929 to advance knowledge in agricultural economics through various activities, the CAES has evolved to include the study and application of food, resource and environmental economics issues. Members are economists and other social science professionals in universities, government, non-government agencies and the private sector, as well as undergraduate and graduate students in Canada and elsewhere.

What We Do

The CAES provides opportunities for professional development, association, and networking among individuals who make contributions to solving important agricultural, food, environmental, and resource problems of the day and anticipate new challenges and opportunities. The principal activities of the Society include publishing the Canadian Journal of Agricultural Economics; convening an annual summer meeting to share research results and to conduct Society affairs; hosting the Canadian Agri-Food Policy Conference on topics of interest to members (e.g., agricultural, food, resource, environment, policy); sponsoring awards for academic excellence, including the best theses related to agricultural, food, and resource economics at Canadian universities; and maintaining a website and Newsletter designed to facilitate the communication of information, ideas and research results by CAES members and other

Qui nous sommes

La Société canadienne d'agroéconomie est une association d'individus ayant un intérêt professionnel pour les sujets liés à l'économie de l'agriculture, de l'alimentation, des ressources naturelles et de l'environnement. Fondée en 1929 pour faire avancer la connaissance en économie agricole à travers diverses activités, l'SCAÉ s'est développée pour inclure l'étude et l'application des enjeux d'économie alimentaire, des ressources et de l'environnement. Les membres sont des économistes et d'autres professionnels des sciences sociales dans des universités, le gouvernement, des agences non gouvernementales et le secteur privé, ainsi que des étudiants de premier cycle et des cycles supérieurs au Canada et ailleurs.

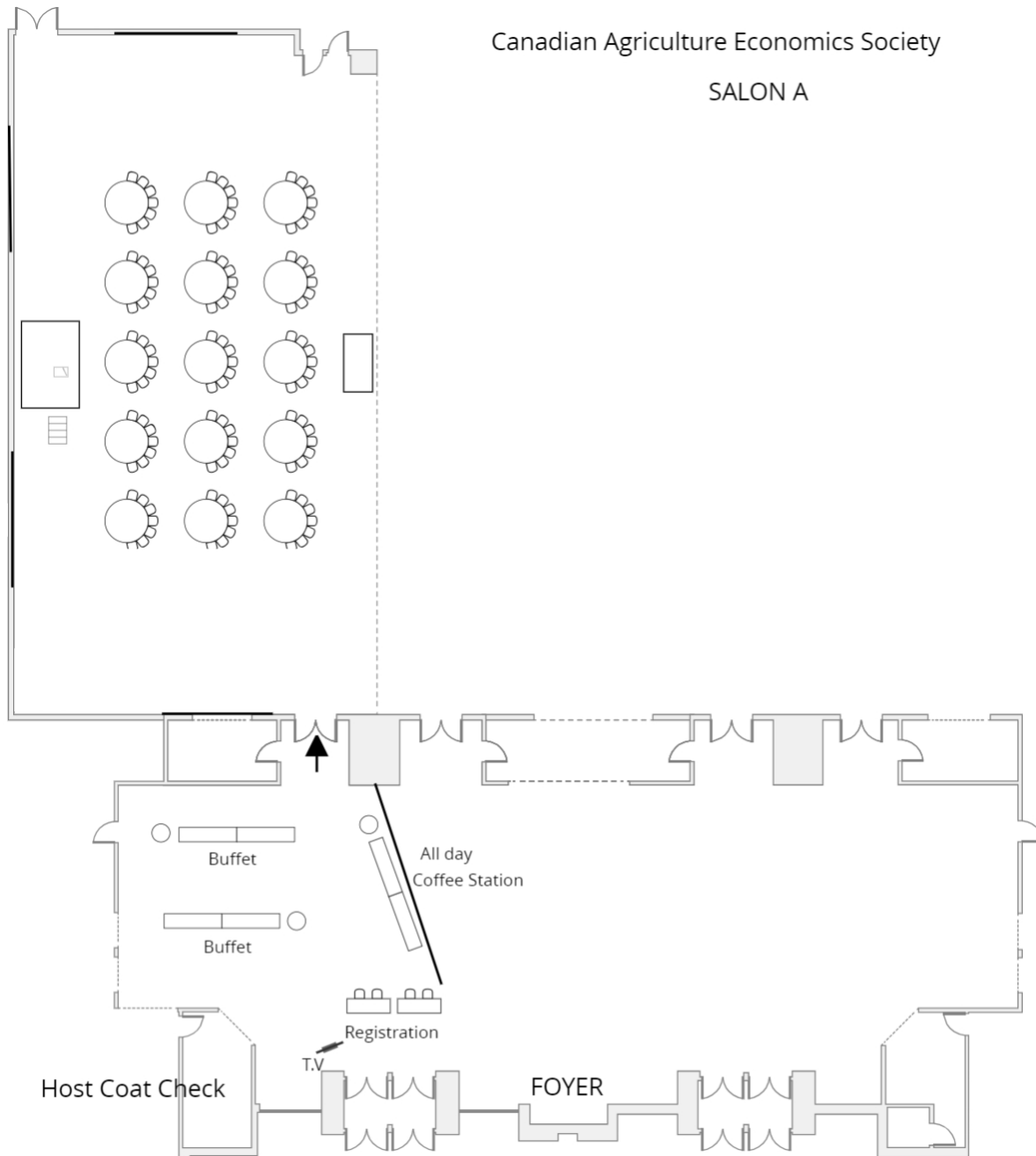
Ce que nous faisons

L'SCAÉ offre des opportunités de développement professionnel, d'association et de réseautage parmi les individus qui contribuent à résoudre des problèmes importants liés à l'agriculture, à l'alimentation, à l'environnement et aux ressources actuels et anticipent de nouveaux défis et opportunités. Les activités principales de la Société comprennent la publication du Journal canadien d'économie agricole; l'organisation d'une rencontre estivale annuelle pour partager les résultats de recherche et pour conduire les affaires de la Société; l'accueil de la Conférence canadienne sur la politique agroalimentaire sur des sujets d'intérêt pour les membres (par exemple, agriculture, alimentation, ressources, environnement, politique); le parrainage de prix d'excellence académique, y compris les meilleures thèses liées à l'économie agricole, alimentaire et des ressources dans les universités canadiennes; et le maintien d'un site

professionals. Members of the CAES manage the affairs of the Canadian Agricultural Economics and Farm Management Foundation. Our activities support research excellence, professional development and knowledge exchange and let you get involved, stay informed – and be part of the conversation. If you are interested in topics related to the economics of agriculture, food, natural resources, and the environment, and you would like to network, share your work and learn from others who are solving problems and anticipating new challenges in these areas, the CAES is your professional home.

web et d'un Bulletin conçus pour faciliter la communication d'informations, d'idées et de résultats de recherche par les membres de l'SCAÉ et d'autres professionnels. Les membres de l'SCAÉ gèrent les affaires de la Fondation canadienne d'économie agricole et de gestion agricole. Nos activités soutiennent l'excellence en recherche, le développement professionnel et l'échange de connaissances et vous permettent de vous impliquer, de rester informé – et de faire partie de la conversation. Si vous êtes intéressé par les sujets liés à l'économie de l'agriculture, de l'alimentation, des ressources naturelles et de l'environnement, et que vous souhaitez réseauter, partager votre travail et apprendre des autres qui résolvent des problèmes et anticipent de nouveaux défis dans ces domaines, l'SCAÉ est votre foyer professionnel.

FLOOR PLAN | PLAN D'ÉTAGE



CONFERENCE AGENDA | ORDRE DU JOUR

THURSDAY | JEUDI

January 25 janvier

8:00 AM - 8:45 AM

BREAKFAST AND REGISTRATION | PETIT DÉJEUNER ET INSCRIPTION

8:45 AM – 9:00 AM

WELCOME AND OPENING REMARKS | BIENVENUE ET OUVERTURE

9:00 AM - 10:00 AM

KEYNOTE I | CONFÉRENCIER PRINCIPALE I

Beyond income: The measurement, policy and politics of poverty in Canada

Moderator: Brady J. Deaton, University of Guelph

Speaker: Dr. Geranda Notten, University of Ottawa

Discussant: Sarah Stern, Executive Director, Maple Leaf Centre for Food Security

Sponsor: McCain Family Chair in Food Security, University of Guelph

In this keynote lecture, Dr. Geranda Notten discusses material poverty from the perspective of income, food insecurity and material deprivation. These perspectives provide related, yet distinct insights on poverty in Canada. Drawing from her ongoing research, Dr. Notten shares evidence on long-term and current trends and discusses their use in poverty reduction policymaking and politics.

10:00 AM - 10:30 AM

NETWORKING BREAK | PAUSE RÉSEAUTAGE

Sponsor: University of Saskatchewan, Department of Agricultural and Resource Economics

10:30 AM - 12:00 PM

SESSION I :

Productivity, Competition and Affordability

Moderator: Bruno Larue, Laval University

Speakers: Marc Bellemare, University of Minnesota; Danny Leung, Finance Canada; Ellen Goddard, University of Alberta

Marc Bellemare, Research and Policy for the Food-Delivery Revolution

Since the turn of the century, consumers globally have been cooking fewer meals at home, and they have been doing so at an increasing rate. More recently, consumers in high-income countries have increasingly been getting the food they consume delivered by third parties such as Doordash, Grubhub, Instacart, or UberEats—a trend which sharply accelerated as a consequence of the lockdowns resulting from the global COVID-19 pandemic. We refer to this as the 'delivery revolution.' This presentation will discuss the implications of this revolution for policy and research.

Danny Leung, Zombie Firms Over the Pandemic

Economic downturns have a cleansing effect whereby the weakest firms are forced to exit. However, some commentators have raised concerns that the widespread implementation of business support programs during the pandemic may have prevented this from occurring, leading to the zombification of the economy. This article examines zombie firms using administrative data up to 2021, finding that the share of zombie firms in the economy declined from pre-pandemic levels. This decline was not due to support measures temporarily revitalizing these firms, but rather due to zombie firms exiting the economy. Consequently, they had a positive impact on the change in aggregate labour productivity.

Ellen Goddard, Canadian Food Prices, Inflation and Actions

It would be hard to deny that inflation has been a major challenge for Canadians over the past 18 months. The biggest concerns have been housing and food costs. Looking back at Canadian history, inflation, in particular inflation in food prices, has resulted in royal commissions and other political responses at least back to 1913. With a 2023 lens, it is clear that causes of inflation are in general very similar across time, and the implementations of various recommendations across time have been inconsistent. The research focus on causes and results of food price inflation grows with inflation and as a result is more erratic than it could be and difficult to use as a resource when political decisions need to be made. An overview of food price inflation and what could have been and has been done about it until 2023 will be provided. Would anyone be surprised that the behaviour of food industries – processors, retailers – has been examined in many inflationary periods? Without spoiling the story, in most periods across history, food industry behavior is not found to be the big culprit.

12:00 PM – 1:00 PM
**BUFFET LUNCH AND NETWORKING BREAK | DÉJEUNER ET PAUSE
RÉSEAUTAGE**

1:30 PM - 3:00 PM
SESSION II:

The Broadening Face of Food and Agriculture in Canada

Moderator: Warren Goodlet, Agriculture and Agri-food Canada, Director General

Panelists: Rickey Yada, University of British Columbia, Dean; Angela K. Bedard-Haughn, University of Saskatchewan, Dean; Steven Jurgutis, Agriculture and Agri-food Canada, Director General; John Cranfield, OAC, University of Guelph, Dean

The Broadening Face of Food and Agriculture in Canada - A Panel Discussion with University, Government and Industry. In an era of evolving technologies, shifting demographics, and global sustainability concerns, the face of food and agriculture in Canada is broadening. At the same time, government mandate is also broadening beyond the traditional territory of primary agriculture – i.e., primarily agriculture, food and beverage processing, food wholesale and retail, and food service – and topics (e.g., labour, immigration, funding, student, training, EDI, AI and smart agriculture, climate change and environment, etc.). We plan to put together a panel discussion with leaders from leading agricultural universities in Canada, agri-food policy experts from Federal or provincial government and industry leaders to shed light on these intricate issues. This panel discussion aims to explore the multifaceted dimensions of the ongoing transformation and discover the roles of academic institutions and government policies in shaping the future of Canadian agriculture. This panel discussion will serve as a testament to the diverse and interconnected challenges and opportunities that lie ahead and offer insight into Canada's promising path in food and agriculture. In a broadening face of agriculture and a rapidly changing world, the dialogue and cooperation between academic institutions, government bodies, and industry stakeholders will ensure that Canada's food and agricultural sector remains at the forefront of global food production.

3:00 PM - 3:30 PM
NETWORKING BREAK | PAUSE RÉSEAUTAGE

3:30 PM - 5:00 PM

SESSION III:

Behavioural Strategies for Adoption of Agrifood Innovations and Best Management Practices

Moderator: Kelleen Wiseman, University of British Columbia

Speakers: Mary Doidge, McGill University; Steve Duff, Ontario Ministry of Agriculture, Food and Rural Affairs; Darcie Doan, Agriculture and Agrifood Canada, Canadian Centre of Food Integrity and the Canadian Agri-Food Policy Institute; Tongzhe Li, University of Guelph

Stephen Duff, Gains from BMPs – Evidence from Ontario

The federal-provincial-territorial Sustainable Canadian Agricultural Partnership has introduced the Resilient Agricultural Landscape Program (RALP). RALP is a \$250-million cost-shared program to help producers conserve and enhance the resiliency of agricultural landscapes. This program will use an ecological goods and services payment approach to support on-farm adoption of best management practices (BMP). This work examines BMP adoption by Ontario farms in two key ways. First by using the Census of Agriculture to quantify current adoption levels of several of the BMPs supported under RALP and second by comparing the profitability of producers adopting these BMPs compared to those that do not.

Mary Doidge, Consumer willingness to switch to climate-friendly meat products.

Agriculture accounts for a significant proportion of Canada's greenhouse gas emissions. Meat production in particular has gained attention for its negative environmental impact, largely from the methane from cattle. Proposed solutions include novel feed additives, gene editing, and cell cultured meat (i.e., meat grown in a lab from animal stem cells). Despite the potential environmental benefits, these practices are often met with reluctance by consumers as they are seen as unnatural. This work examines consumers' willingness to consume and pay for meat produced with these innovative practices, paying particular attention to the role of their conceptions of naturalness, the role of technology in the Canadian food industry, and media portrayal of food technology.

Darcie Doan, Industry Implications of Evolving Consumer Behaviour

Food choices matter to Canadians. Consumers are interested in how food is produced, how it influences their health, and how to ensure reliable access to affordable food. This presentation will provide an overview of Canadian consumers' attitudes and preoccupations with respect to food purchases, as well as the opportunities and challenges that these trends pose for the agri-food sector. It will explore the evolving expectations and behaviours of Canadian consumers, particularly as they relate to sustainable agriculture.

Tongzhe Li, Randomized Controlled Trials on Cost-effectiveness of Reverse Auctions

Building upon various field experiments with Canadian farmers, evidence cautions us against wishful thinking that farmers' decision-making with respect to BMP adoption are generally predictable. Collaborating with the Ecological Farmers Association of Ontario's Small Grain Program, we design a reverse auction that is theoretically more efficient than flat-payment subsidization mechanisms. We then implement a series of randomized controlled trials (RCTs) to examine whether agricultural producers in Ontario behave consistently with economic theory and to test how various economic incentives, behavioural instruments and mechanism designs affect the reverse auction's cost effectiveness.

5:00 PM - 7:00 PM

RECEPTION AND STUDENT POSTER PRESENTATION | RÉCEPTION ET PRÉSENTATION D'AFFICHES PAR LES ÉTUDIANTS

Student Poster Session Sponsor: Faculty of Agricultural and Food Sciences, University of
Manitoba

FRIDAY | VENDREDI
January 26 janvier

8:00 AM - 8:30 AM

BREAKFAST | PETIT DÉJEUNER

8:30 AM - 9:45 AM

KEYNOTE II | CONFÉRENCIER PRINCIPALE II

Agricultural Innovation, Productivity, and Sustainable Growth

Moderator: Derek Brewin, University of Manitoba

Speaker: Dr. Keith Fuglie, U.S. Department of Agriculture

Sponsor: Solomon Sinclair Institute, University of Manitoba

World agricultural production has quadrupled since 1960, largely due to increases in productivity. But agriculture is under increasing pressure to reduce its environmental footprint and adapt to a changing climate. Over the last several decades technical change in world agriculture helped conserve environmental resources and at the same time improve global food security. However, the rate of productivity growth in agriculture slowed in the last decade, putting at risk these gains. Investment in agricultural research and development (R&D) has been the primary source of new technologies for raising agricultural productivity. While agricultural R&D investment continues to grow in developing countries, it has stagnated in many high-income countries.

9:45 AM - 10:00 AM
**POSTER FINALIST PRESENTATIONS | PRÉSENTATIONS DES
FINALISTES DES AFFICHES**

10:00 AM - 10:30 AM
NETWORKING BREAK | PAUSE RÉSEAUTAGE

10:30 AM - 12:00 PM
**SESSION IV :
Rekindling Canadian Agricultural Productivity - a 30 billion dollar
opportunity!**

Moderator: Jean-Philippe Gervais, Farm Credit Canada

Panelists: Scott Ross, Canadian Federation of Agriculture; Alfons Weersink, University of Guelph; Brett Maxwell, Agriculture and Agri-Food Canada

Recent research from Farm Credit Canada suggests that rekindling Canadian agricultural productivity growth can be as much as a \$30 billion opportunity over the next ten years. The stakes have never been higher: Canada can exercise its leadership position in agriculture to feed a growing world population, enhance global food security, and reduce its carbon footprint.

12:00 PM - 12:40 PM
**BUFFET LUNCH AND CONTEST WINNERS | COMMENTAIRES DE
CLÔTURE ET GAGNANTS DU CONOURS**

12:45 PM - 2:45 PM
LIGHTNING TALK SESSION | SESSION DE PRÉSENTATIONS ÉCLAIR

Moderator: Ryan Cardwell

**Jamie Naylor, University of Guelph, Identifying Strategic Under-reporting of Compliance
Status by Drinking Water Systems**

Under the Safe Drinking Water Act, drinking water systems in the United States must regularly report their compliance with water quality standards. We examine whether water systems intentionally incur penalties for failing to self-report in order to avoid larger penalties that occur if they violate a water quality standard. Utilizing naturally occurring variation of arsenic in

groundwater and temporal variation in allowable arsenic levels, we find evidence of strategic under-reporting by water systems with elevated risks of arsenic contamination. We also find that privately owned water systems are more likely to strategically under-report than publicly owned systems.

José Nuño, University of Guelph, On the Implications of Informal Contracting for Farmland Rentals

Farmland relationships have formal and informal elements. Ignoring the informal aspects leads to impoverished understanding of this market. We posit that relational contract theory is a useful tool to better understand landowner-tenant relations. Unlike the textbook contracting model where agreements are strictly formal and third-party verifiable, a relational contracting model can explain how tenants adjust their investment behaviors, especially in tasks that yield returns over time like the use of cover crops, in reaction to the type of landowner and the anticipated duration of the relationship.

Feng Qiu, University of Alberta, Lower-grade canola oil for biofuel: production capacity and potential impacts on food supply and price

In her talk, Qiu will share insights from her team's research on the use of lower-grade canola oil for biofuel production in Alberta, primarily focusing on production capacity. They are currently developing plans for future research to assess how canola-based biofuels could impact food supply and prices. Qiu will discuss the wider implications of this shift to canola oil biofuels, examining its potential effects on food market dynamics and availability. This ongoing research initiative is expected to provide valuable contributions to policy evaluations, offering deeper understanding of how biofuel production intersects with food security concerns.

Alankrita Goswami, University of Manitoba, Environmental factors and the interconnected nature of multipurpose commodity markets

We explore how agricultural futures markets, which by design reflect current supply and demand, also account for anticipations of future supply by examining the impact of Vegetation Health Index (VHI) on futures markets of Canadian canola, U.S. soybean oil, and Malaysian palm oil. VHI as an indicator of stressed vegetation under sub-optimal biophysical conditions, is linked to volatility in these commodity markets, which are key substitutes in the biofuel and food sectors. The findings confirm VHI's influence on daily volatility and long-run correlations in market returns, highlighting the broader implications of climate change-induced weather extremes on food and energy prices.

Xiaoli Fan, University of Alberta, Towards Sustainable Beef: The Role of Altruistic Preference in Value Chain Transformation

Transformative changes in the beef value chain are crucial for achieving various United Nations Sustainable Development Goals but face major challenges. Altruistic preferences exhibited by beef packers and retailers might play a positive role in transforming the beef value chain to improve its sustainability. We employ a game-theoretical framework to investigate the strategic behaviors of the beef value chain participants. Our results show that altruistic preference from the beef packer

and retailer alliance can motivate ranchers to adopt sustainable practices and improve beef value chain sustainability and efficiency.

Nicholas Tyack, University of Saskatchewan, The Economics of Climate-Smart Agriculture and its Measurement Challenge

Around 10 percent of Canada's greenhouse gas emissions are associated with its agriculture sector, and thus the reduction of agricultural emissions is an important part of the Canadian government's overall efforts to combat climate change. One strategy for reducing agricultural emissions is climate-smart agriculture, which aims to increase both resilience (through adaptation) as well as mitigation of agricultural emissions. However, approximation of agricultural emissions (particularly nitrous oxide emissions) are notoriously difficult to measure as they can differ based on spatial factors (such as soil type), season, and weather. In this presentation, I discuss some of the measurement challenges associated with agricultural emissions and how improved measurement might help to better support adoption of new climate-smart technologies by serving as the foundation of mitigation policies, such as offsets, government payments, and climate-smart certification systems.

Peter Slade, University of Saskatchewan, Plant-based foods: implications for the environment, nutrition, and the future of agriculture

This presentation will overview the consumption of plant-based foods in North America and examine the environmental, health, and economic implications of shifts to plant-based eating.

Sabine Liebenehm, University of Saskatchewan, Nutrient Stewardship and Sustainable Fertilizer Use in sub-Saharan Africa: An Interplay between the Public and Private Sector

Fertilizer use is a key factor in increasing crop productivity, yet fertilizer application in sub-Saharan Africa (SSA) is low. In addition, farms are small, plots are non-contiguous, and public extension capacity is rather weak. While management practices encapsulated in the 4R Nutrient Stewardship have been critical for targeting sustainable fertilizer use in Canada, there is potential for a sustainable scale-up of 4R practices in SSA. This talk identifies potential entry points for policy and programming that may stimulate private initiatives and ultimately, enhance 4R uptake in SSA.

Bruno Wichmann, University of Alberta, Technical Efficiency of Wildfire Detection and Machine Learning Predictions in Alberta

Wildfire management agencies develop wildfire detection and suppression programs in the context of a changing climate and tight budget constraints. In this context, there is an increasing need for studies that examine the performance of detection systems. We offer two contributions. First, we employ a production economics approach to estimate bias-corrected detection efficiency using a non-parametric envelopment estimator. Second, we develop machine learning models that use local weather to classify detection units as technically efficient or not. We find that local weather can successfully predict efficiency class, suggesting that there is a strong association between non-discriminatory inputs and detection efficiency.

Lota D. Tamini, Université Laval, R&D investment, productivity dynamics and export performances

Investment in research and development (R&D) enable firms to innovate and better organize their operations, effectively manage risks and uncertainties with an impact on their performances. However, support from the Canadian government affect their propensity to invest in R&D and its intensity. Empirical results confirm that investment in R&D has a positive impact on total factor productivity progress with, as expected, a positive impact on export performances. However, in the analyzes, one should consider that the internationalization of firms' activities increases their propensity to invest in innovation implying a potential relationship of circularity between R&D and exportations.

James Vercammen, University of British Columbia, How weather swaps can help manage agricultural production risk in light of increasing yield volatility.

Crop insurance is designed to provide protection on an occasional basis rather than a frequent basis. This is partly because it is costly to verify an insurance claim. In contrast, when farmers use futures and option contracts to hedge against price drops, payouts are typically frequent and there is no requirement to verify that a price drop was experienced. Weather derivatives such as cooling degree day (CDD) swap contracts straddle both of these approaches. Specifically, they are designed to cover financial losses which result from both moderate and severe weather events while at the same time not requiring losses to be claimed and verified. My lightning talk will discuss the potential value of CDD swap contracts in light of more volatile growing season temperatures.

02:45 PM - 3:00 PM

CLOSING COMMENTS | COMMENTAIRES DE CLÔTURE

Tristan Skolrud, University of Saskatchewan, President CAES-SCAE

3:00 PM - 4:00 PM

**GRADUATE STUDENT COLLOQUIUM | COLLOQUE DES ÉTUDIANTS
DIPLOMÉS**

Moderator: Yu Na Lee, University of Guelph;

Panelists: Marc Bellemare, University of Minnesota; Amanda Norris, Agriculture and Agri-Food Canada; Alessandro Alasia, Statistics Canada

The Graduate Student Colloquium this year will feature three panelists, consisting of professionals at different stages of their careers in academia and the policy area, with expertise in agrifood policy, agricultural and applied economics, and related fields. The panelists will share their perspectives on their career paths, experiences, and advice for graduate students navigating their

career paths. The panel discussion will be followed by an informal networking session among the participants, offering them an opportunity to connect with each other.

SPEAKER AND MODERATOR BIOS | BIOGRAPHIES DE L'INTERVENANT ET DU MODÉRATEUR



Alankrita Goswami is an assistant professor in the Department of Agribusiness and Agricultural Economics at the University of Manitoba, Canada. She completed her Ph.D. at the University of Georgia, USA. Before starting her Ph.D., she worked as a Pre-Doctoral Fellow at the International Water Management Institute (IWMI)-TATA Policy Program in Anand, Gujarat (India). She also holds a master's degree in Rural Management from the Institute of Rural Management Anand (IRMA), and an engineering degree in Biotechnology from Amity University, India. Her research interests include price analysis, agricultural commodity markets, and market microstructure.



Alessandro Alasia is Assistant Director at the Centre for Special Business Projects (CSBP), Statistics Canada. He joined this agency in 2007, to work with the Rural Research Group of the Agriculture Division, and moved to the Centre in 2012, where he has led and contributed to numerous innovative data development and research projects aimed to improve local statistics; for instance through data crowdsourcing, open micro data, real-time local indicators, definitions of local labour markets, and measures of remoteness and proximity. Since 2017, Alessandro is Chair of the Working Party on Territorial Indicators at the OECD and has contributed to several OECD Territorial Reviews. Prior to joining Statistics Canada, Alessandro has led research projects with the agency and the Rural and Co-operatives Secretariat (AAFC) as consultant and post-doctoral fellow, while also working as consultant in agriculture and rural development research projects, mainly in Southern Africa, with international organizations. Alessandro has taught at the graduate and undergraduate levels at the University of Bologna (Italy), the Eduardo Mondlane University (Mozambique), and the International Comparative Rural Policies Studies program. Alessandro graduated in Economics from the University of Torino (Italy), earned a MSc from the School of Specialization in Agriculture Economics and Business of the Catholic University (Italy), and a PhD in Agricultural Economics with specialization in Rural Studies from the University of Guelph.



Alfons Weersink is a Professor in the Department of Food, Agricultural and Resource Economics at the University of Guelph. He has been at Guelph since completion of his PhD at Cornell University. His research focuses on the impact of new technology and government policy on the decisions made by farmers and the resulting impact on markets and the environment. He is a Fellow of the Canadian Agricultural Economics Society and of the Agricultural and Resource Economics Review. He has received the Ontario

Agricultural College Alumni Foundation Distinguished Teaching Award and Distinguished Research Award. Recently, he has been named class of 2024 AAFA Fellow.



Amanda Norris is an agricultural economist with the Strategic Policy Branch at Agriculture and Agri-Food Canada. With a degree in Food, Agriculture and Resource Economics from the University of Guelph, Amanda started her career with Agriculture and Agri-Food Canada in 2020. She is on the CAES-SCAE Board of Directors and an active member of the Society since 2017.



Dr. Angela Bedard-Haughn is a Professor and Dean of the College of Agriculture and Bioresources at the University of Saskatchewan. She received both her BSc in Physical Geography and her MSc in Soil Science from the University of Saskatchewan. She attended the University of California at Davis, where she received her PhD in Soil Science and Biogeochemistry in 2004. Dr. Bedard-Haughn specializes in soil science research, focusing on two main areas: management of wetland soils and predictive soil mapping. She is active in experiential training, teaching field courses on soil and landscape classification at both undergraduate and graduate levels.



Dr. Brady James Deaton, Jr. is Professor and McCain Family Chair in Food Security in the Department of Food, Agricultural and Resource Economics at the University of Guelph. He received his Ph.D. in Agricultural Economics from Michigan State University. His expertise is in Natural Resource Economics, Property Rights, Food Security, Land Economics and his research, teaching and outreach efforts focus on food security and natural resources in food production, rural development, and environmental quality. In 2023, he was named a Fellow of the Canadian Agricultural Economics Society.



Brett Maxwell is the Director of Innovation and Growth Policy in the Strategic Policy Branch at Agriculture and Agri-Food Canada. His responsibilities include helping shape science and innovation policy for the department including in the areas of emerging technologies, regulatory policy, and innovation. In over 15 years in the federal public service, Brett has worked in a range of areas most notably in innovation, business risk management and macroeconomic analysis. He began his professional career in the private sector working in the biotechnology, chemical and seed business in Canada, Switzerland and the USA. Brett has Masters of Science and Bachelors of Science degrees in Agricultural and Applied Economics. Originally from a grain and oilseeds farm in Grandview, Manitoba, Brett now lives in Ottawa with his wife and three young daughters.



Bruno Larue is a professor of agricultural economics at Laval University since 1991. For 14 years, he held the Tier 1 Canada Research Chair in International Agri-food Trade at Laval University. He is the founding director of the Center for Research on the Economics of environment, Agri-food, Transport and Energy (CREATE). He served as councillor and president of the Canadian Agricultural Economics Society and was editor of the Canadian Journal of Agricultural Economics. He has published over 100 refereed articles in agricultural economics and economics journals, mainly on international trade, agricultural policy and production and consumer economics.



Danny Leung: After graduating with a Ph.D in Economics from Western University, he worked at Lakehead University, the Bank of Canada, and Statistics Canada before moving to Finance Canada in 2023. Over his career Danny has worked in a number of areas. Recently, he has been focusing on business dynamics, firm financing and patenting.



Darcie Doan is a principal consultant for this collaborative project with the Canadian Centre of Food Integrity (CCFI) and the Canadian Agri-Food Policy Institute (CAPI). Darcie is an agricultural economist by training, with a background in survey research and over 20 years of experience advising governments and industry stakeholders on policy issues facing the agri-food sector.



Derek Brewin is a Professor and Head of the Department of Agribusiness and Agricultural Economics at the University of Manitoba. He has a Ph.D. from Penn State University in Agricultural, Environmental and Regional Economics. His recent research has focused on spatial grain and oilseed markets as well as innovation in crop production. Derek has served on numerous boards and committees. He is a Past President of the Canadian

Agricultural Economics Society and a current Director of Farm Management Canada. Derek is also the chair of the Sol Sinclair Institute for Farm Management at the University of Manitoba. He has served as a Senator at the University of Manitoba and as a director of the Manitoba Rural Adaptation Council. Prior to his academic career Derek was a Policy Economist for AAFC and a farm lender with FCC.



Ellen Goddard is Professor Emerita, University of Alberta, since August 2022. She has a BSc, an MSc (University of Guelph) and a Ph.D. in Agricultural Economics (LaTrobe University, Melbourne). Her continuing research includes behavioural research with consumers, farmers, outfitters, veterinarians and others in food supply chains. Recently, she has been a social science researcher (GE³LS lead) in six livestock genomics projects (Genome Canada) –on animal disease resilience, on feed efficiency and on methane

emissions. Her research is focused on understanding how responses by the public and others can enhance or impede the adoption of technology and innovation.



Dr. Feng Qiu is an economist specializing in agricultural and energy subjects, and she serves as an Associate Professor in the Department of Resource Economics and Environmental Sociology (REES) at the University of Alberta. Dr. Qiu completed her Ph.D. in Economics, with a minor in Statistics, at North Carolina State University in 2012. Her research is primarily focused on biofuels, energy policy and economics, land use, price and market analysis, and community food environments. She leads a research team at the University of Alberta, focusing on the economic and policy aspects of the low-carbon energy transition. Dr. Qiu has published 41 peer-reviewed journal articles and, as a Principal Investigator (PI), has secured over \$1.8 million in research funding for her program in the past six years. Starting in January 2024, Dr. Qiu will take on the role of an editor for *Agribusiness: An International Journal*.



Geranda Notten works as a Full Professor in Comparative Public Policy at University of Ottawa's Graduate School of Public and International Affairs. Her fields of interest include public policy, public administration, and economics. She has a strong interest in poverty and social policy, with her current research focusing on jurisdictions in Europe and North America. She studies the influence of poverty reduction policymaking on poverty and food insecurity. Her expertise in measuring poverty includes monetary and non-monetary indicators, including income poverty and material deprivation. Dr. Notten has been a visiting researcher at the Luxembourg Institute of Socio-Economic Research (LISER), the School for Public Policy & Administration at Carleton University (Ottawa), CEPS/INSTEAD (Luxembourg), the Kennedy School of Government (United States) and the Maastricht Graduate School of Governance (Netherlands). She has worked on consultancy projects for the World Bank, European Union and UNICEF on countries such as Mauritius, Congo Brazzaville and Russia. Dr. Notten holds a PhD in economics from Maastricht University (Netherlands).



James Vercammen completed a BSc and MSc in Agricultural Economics at the University of Saskatchewan, and a PhD in Agriculture and Resource Economics at the University of California at Berkeley. He is currently jointly appointed in the Food and Resource Economics (FRE) Group and the Sauder School of Business at the University of British Columbia. James was a previous co-editor of the *Canadian Journal of Agricultural Economics* (CJAE) and president of the Canadian Agricultural Economics Society (CAES). His research interests include commodity markets, food prices and agri-environmental contracts.



Jamie Naylor is a Ph.D candidate in the department of Food, Agriculture and Resource Economics at the University of Guelph, where he has previously completed a BSc and MSc. His research includes food security, drinking water safety, industrial organization, and the economics of compliance.



J.P. Gervais is Vice-President and Chief Economist at FCC. He has over 25 years of experience analyzing economic trends in agriculture and food markets, and his insights help guide strategy and monitor risk throughout the corporation. He's frequently a featured speaker at national and international conferences related to the agriculture and food industry. In addition to acting as an FCC spokesperson on economic matters, J.P. provides timely commentary through videos and the FCC Economics blog. Prior to joining FCC in 2010, J.P. was a professor of agricultural economics at North Carolina State University and Laval University. He also held the Canada Research Chair in Agri-Industries and International Trade at Laval. J.P. is a past president of the Canadian Agricultural Economics Society. He obtained his Ph.D. in economics from Iowa State University in 1999.



John Cranfield is the Acting Dean of the Ontario Agricultural College at the University of Guelph, and a Professor in the Department of Food, Agricultural and Resource Economics. His training includes undergraduate and Master's degrees in agricultural economics from the University of Guelph, and a Ph.D. in agricultural economics from Purdue University. His research focuses on the economics of consumer behaviour and demand analysis at the individual, household and market level. An important aspect of his research involves understanding the factors that drive what people buy and consume, such as the influence of advertising programs. As Acting Dean, John focuses on forging strategic partnerships that create opportunity, contribute to the development of human potential, and serve the needs of broader civil society.



José Nuño is an Assistant Professor in the department of Food Agricultural and Resource Economics at the University of Guelph. He studies retail pricing strategies and the administrative arrangements that organizations use to solve a wide range of coordination problems. His work intersects with subfields like nutrition policy, natural resource management, international trade, and labour economics. José has taught macroeconomics, environmental economics, supply chain management, and food market economics in the United States and Canada. Prior to joining Guelph, he worked as an economic specialist for the Central Bank of Mexico. After earning a bachelor's degree in economics from the Universidad de Guadalajara (Mexico), he obtained an M.Sc. in Applied Economics from the University of Minnesota with support from a Fulbright scholarship, and a Ph.D. in Agricultural Economics from Purdue University.



Keith Fuglie is a senior economist with the Economic Research Service, U.S. Department of Agriculture (USDA), where he conducts research on the economics of technical change and science policy for agriculture. He has also served as senior economist with the U.S. Agency for International Development (USAID) and the White House Council of Economic Advisors, and spent 10 years in Asia and Africa with the International Potato Center (CIP), an international agricultural research institute. Keith is a Fellow of the Agricultural and Applied Economics Association (AAEA) and an Honorary Life Member of the International Association of Agricultural Economists (IAAE). Keith received

his M.S. and Ph.D. in Agricultural and Applied Economics from the University of Minnesota and a BA from Concordia College, Moorhead, Minnesota.



Kelleen Wiseman is the Director of the Master of Food and Resource Economics (MFRE) program at The University of British Columbia. Her research and teaching focuses on sustainable entrepreneurship, green financing, and sustainable reporting in the climate, food, and agri-business sector. In addition, Dr. Wiseman has cross-cutting industry experience in the agri-food production/processing sector, banking, and marketing sectors in Canada and the United States. She has recently launched a UBC Micro-

Certificate in Environmental Metrics for Sustainability Reporting that aims to train working professionals in the design of environmental metrics to track the impact of an organization's activity and sustainability management practices.



Lota D. Tamini is a professor at Laval University (Department of Agri-Food Economics and Consumer Sciences) and is a member and director of Center for Research on the Economics of the Environment, Agri-food, Transports and Energy (CREATE). His research focuses on production economics and producers' behavior, consumers' behavior, international trade, and environmental and natural resource economics.



Marc F. Bellemare is Distinguished McKnight University Professor, Distinguished University Teaching Professor, and Northrop Professor in the Department of Applied Economics at the University of Minnesota, where he also directs the Center for International Food and Agricultural Policy. He currently serves as one of four co-editors of the American Journal of Agricultural Economics. Prior to that, he served as one of two co-editors of Food Policy, from 2015 to 2019. From 2018 to 2021, he served on the Board of Directors of the Agricultural and Applied Economics Association's

(AAEA). His research focuses on agricultural economics and applied econometrics. A few specific areas in which he has been conducting research include agricultural value chains, risk and uncertainty, and the consequences of high and volatile food prices. For his research, he has won the AAEA's Outstanding Doctoral Dissertation Award in 2007, the AAEA's Outstanding American Journal of Agricultural Economics Article award in 2011, and the AAEA's Quality of Research Discovery awards in 2014. That same year, he also won the European Association of Agricultural Economists' Quality of Research Discovery Award. In 2022, he was identified by Clarivate as one of "the world's most influential researchers—the select few who have been most frequently cited by their peers over the last decade. In 2022, fewer than 7,000, or about 0.1%, of the world's researchers ... have earned this exclusive distinction." In early 2023, Prof. Bellemare was elected Fellow of the Agricultural and Applied Economics Association. His work has so far been featured in media outlets such as The Economist, the New York Times, National Public Radio, and the Wall Street Journal.



Mary Doidge is an assistant professor of agricultural economics at McGill University. She completed her bachelor's and master's degrees at the University of Guelph, and her Ph.D. at Michigan State University. Her research examines behaviour and decision-making at both the producer and consumer levels, including farmers' adoption of best management practices and consumer willingness to pay for environmentally produced food products.



Nicholas Tyack is the Van Vliet Assistant Professor of Agricultural Economics in the University of Saskatchewan's Department of Agricultural and Resource Economics. His research focuses on the economics of genetic resources and innovation in agriculture, and how crop breeding and the use of diverse genetic resources can help to both adapt agriculture to climatic changes and contribute to emissions reductions in the sector. He is currently leading or co-leading the GE3LS research components of two Genome Canada grants focused on how greater adoption of improved pulse varieties and nitrogen-efficient wheat can help to reduce the GHG emissions associated with Canadian agriculture. One area of research he is particularly interested in is how better measurement of agricultural emissions (e.g., nitrous oxide) can support better mitigation policies, such as offsets, government payments, and climate-smart certification systems.



Peter Slade is an associate professor and Canadian Canola Growers Association chair in agricultural policy. His research centers on two areas: the effects of Canadian agricultural policy and adoption plant-based foods and diets. Peter has published widely in food, economics, and agricultural economics journals. He holds a PhD from the University of Guelph and is a member of the editorial board of the *Canadian Journal of Agricultural Economics*.



Professor Rickey Yada was appointed Dean of the Faculty of Land and Food Systems at the University of British Columbia in 2014. Prior to UBC, Dr. Yada was at the University of Guelph, where he held numerous leadership roles, including Chair of the Department of Food Science, Assistant Vice President of Research, Canada Research Chair in Food Protein Structure, and Scientific Director of the Advanced Foods and Materials Network (Networks of Centres of Excellence). He is currently one of the co-editors of *Trends in Food Science and Technology* and serves on the editorial board of several journals. Dr. Yada is an advisor to many research and industry organizations, serving on the Board of the Canadian Food Innovation Network and the Board of the Canadian Agri-Food Automation and Intelligence Network, to name a few. Other positions include External Advisory Committee Member – Arrell Food Institute; Member of the Scientific Advisory Panels – Riddet Institute (New Zealand) and AgResearch (New Zealand). Dr. Yada is the Past President of the Deans Council of the Faculties of Agriculture, Food and Veterinary Medicine in Canada; Past President and Fellow of the Canadian Institute of Food Science and Technology, and the International Academy of the International Union of Food Science and Technology; as well as a Fellow of the Institute of Food

Technologists, and Agricultural and Food Chemistry Division of the American Chemical Society. Dr. Yada has an honorary DSc (Doctor of Science) from the University of Guelph.



Ryan Cardwell is a professor in the Department of Agribusiness & Agricultural Economics at the University of Manitoba, currently on sabbatical in the Department of Food & Resource Economics at the University of British Columbia. He is the Managing Editor of the *Canadian Journal of Agricultural Economics*. Ryan's research interests include the economics of food policy, international trade regulation, and foreign aid, with a focus on international food aid. Current research topics include understanding support for economic policies, the effects of government regulations on firm-level productivity, and the effects of tariff barriers on international food assistance. Ryan has a M.A. in Economics from the University of British Columbia and a Ph.D. in Agricultural Economics from the University of Saskatchewan. He worked as a private-sector economist at Moody's Analytics in Philadelphia before his PhD studies.



Sabine Liebenehm is an Assistant Professor in Agricultural and Development Economics with a joint appointment with the Agricultural and Resource Economics Department and the Economics Department at the University of Saskatchewan. Sabine obtained her PhD from the Leibniz University Hannover, Germany. In her research, Sabine seeks to improve the understanding of the economic decision-making among households living in rural and remote settings often exposed to an adverse environment with limited access to formal safety net mechanisms. She focuses on two aspects that determine the risk management decision: (i) the impact of adverse risks, and (ii) the interaction with people's preferences and perceptions. To assess the research questions, Sabine applies empirical microeconomic strategies, leveraging rich data sets obtained from household surveys, lab-in-the-field experiments, social network studies, and climate data observations. Geographically, Sabine works primarily with rural agricultural households in Southeast Asia and West Africa, and more recently with remote First Nation communities in Northern Canada.



Sarah Stern leads Community Involvement for Maple Leaf Foods and also the Maple Leaf Centre for Food Security (www.feedopportunity.com). The Centre works to increase reliable access to good food and reduce food insecurity for all Canadians. This includes increasing public awareness and engagement, building collaboration across all sectors, investing in community-based interventions, and advocating for policies that provide structural solutions. She is responsible for management and operations of the Centre including building the portfolio of projects which it supports. Sarah has spent the majority of her career in the non-profit sector working for Right To Play, The Heart & Stroke Foundation of Ontario and United Way of Greater Toronto and has a history of building cross-sectoral partnerships to create social change. Sarah has an MBA from the Rotman School of Management and a BA from Mount Alison University.



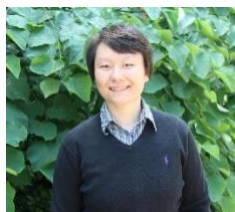
Scott Ross: After serving as CFA's Assistant Executive Director since 2018, Scott Ross was promoted to the Executive Director position in 2022. Prior to that Scott served as CFA's Director of BRM and Farm Policy for six years, where he covered a wide variety of agricultural issues. Scott's policy work has given him a unique insight on how to develop and implement policy, while balancing a diversity of stakeholder interests. Scott has extensive experience in collaborating across the agri-food sector to achieve ambitious goals, most recently including co-founding the Agriculture Carbon Alliance, a coalition of 15 national farm associations advocating on behalf of farmers with regard to carbon pricing and environmental policies. Prior to his role at the CFA, Scott worked with the Economic Developers Council of Ontario and the University of Waterloo researching how municipal and regional governments can raise the profile of agriculture as an economic development priority.



Stephen Duff: Coming from a dairy and beef background in Northumberland County, Steve completed a Master in Ag Economics from the University of Guelph in 1996. Steve joined OMAFRA in late 1997 and for close to 15 years, Steve was OMAFRA's lead on business risk management programs such as AgriStability and Crop Insurance. In 2016, Steve was the recipient of the FARE Distinguished Alumni Award. Steve is currently OMAFRA's Chief Economist. Steve is lecturer at the University of Guelph and farmer Vice-Chair of Farm Management Canada. Steve and his wife, Robyn, also operate a beef and cash crop operation near Colborne, Ontario.



Steven Jurgutis was born in Montréal where he lived with his parents and brother and sister, he moved to London, Ontario then to Ottawa where he completed school and attended the University of Ottawa, receiving an Undergraduate degree in Communications with a Concentration in Political Science. He spent a few years working for marketing communication companies and on various contracts with the federal government before becoming a public servant at National Defence where he worked for nearly seven years in various communications positions, including as the Press Secretary to the Minister. For the past sixteen years, he has worked at Agriculture and Agri-Food Canada. Twelve of those years were in communications positions, including seven at the executive level. For the past four years, he has been the Director General, Policy Planning and Integration in the Policy Branch where he is responsible for the forward planning and integration of departmental policy, developing the next agricultural policy framework, federal-provincial-territorial relations, Cabinet Affairs and numerous policy files including Indigenous and Diversity policy, innovation, labour and regulations. Married with two kids, he spends his free time playing drums and percussion in a band, biking, skiing, and spending time in his new workshop.



Tongzhe Li is an associate professor at the Department for Food, Agricultural and Resource Economics (FARE), University of Guelph. She is the Arrell Family Chair in Behavioural and Experimental Economics and founding director for the FARE Laboratory for Experimental and Applied Economics. Tongzhe obtained her Ph.D. in Economics at Washington State University in 2015. Tongzhe's passion is combining economic theory and behavioural

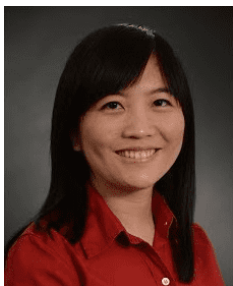
approaches, including field or laboratory experiments, to understand the complex economic, political, and social context of a problem. She has published extensively using lab and field experiments to address agri-food-environmental issues.



Tristan Skolrud is an associate professor in the Department of Agricultural and Resource Economics at the University of Saskatchewan and is the current president of the Canadian Agricultural Economics Society. His research focuses on the intersection between farm-level decision-making, agri-environmental policy and the role of institutions in achieving welfare-maximizing outcomes. Tristan has published in the leading journals of agricultural and resource economics on a range of topics including carbon pricing, environmental taxes and subsidies, management practice adoption, and cellulosic biofuels. Born and raised in Washington State, Tristan received a Ph.D. in economics from Washington State University in 2015 and an MA in economics from the University of Washington in 2011. At the University of Saskatchewan, Tristan teaches courses in agricultural finance and microeconomic theory.



Warren Goodlet joined Agriculture and Agri-Food Canada (AAFC) in 2020 as the Director General of the Research and Analysis Directorate. He leads a team that provides economic analysis, information, and forecasts related to the domestic and international agriculture and agri-food sectors, including economic and social trends, and the structure and performance of the Canadian agriculture and agri-food sector. Prior to joining AAFC he worked at Environment and Climate Change Canada from 2009 to 2020 on a number of regulatory initiatives addressing air pollutants and greenhouse gas emissions, as well as spending over a year in the Deputy Minister's Office as a policy advisor. He also spent five years in the Economic Analysis Directorate as a Director, Executive Director, and Acting Director General, overseeing teams of economists and policy analysts to provide economic analysis and advice on the design and competitiveness implications of environmental policies. Warren has also worked at Finance Canada as an economist on climate change files and spent two years as a public school teacher. He holds a BSc in Biological Science and an MA in Economics from the University of Guelph, as well as a BEd from St. Thomas University.



Xiaoli Fan is an Assistant Professor at the Department of Resource Economics and Environmental Sociology, University of Alberta. Xiaoli's research focuses on understanding consumer and producer behavior to inform better agricultural policies and decision-making. Her specific research interests include consumer preference for emerging food issues, agrifood sustainability, agrifood value chain coordination, antibiotic use in livestock, bioeconomic modeling, and agent-based modeling.



Yu Na Lee is an Assistant Professor in the Department of Food, Agricultural & Resource Economics at the University of Guelph. She received a Bachelor's degree in Business Administration from Yonsei University in Seoul, Korea, an MS in Agricultural Economics from Cornell University, and a Ph.D. in Applied Economics from the University of Minnesota. She joined the University of Guelph in 2017. Yu Na's research area lies in the fields of agricultural, development, and experimental economics, and she has published in the Canadian Journal of Agricultural Economics (CJAE), American Journal of Agricultural Economics (AJAE), Food Policy, World Development, and other journals. Yu Na is the current President-Elect of the CAES, and she has served as a CJAE Editorial Board member, and a member of the CAES Board of Directors as a Councillor between 2020-23. She has also been an active member of the Agricultural & Applied Economics Association (AAEA) and is currently serving as a Chair of the Experimental Economics (EXECON) group.

RESEARCH POSTER ABSTRACTS | AFFICHES DE RECHERCHES

Public Perceptions of Carbon Capture and Storage for Greenhouse Gas Mitigation

Presenting Author: Abdul-Hamid Mohammed, University of Alberta

Co-Authors: Sven Anders, University of Alberta; Nimanthika Lokuge, University of Alberta



Carbon capture and storage (CCS) is a component of Canada's net-zero CO₂ strategies. However, public perceptions and support for CCS remain controversial. This study investigated the reasons for the heterogeneity in support for CCS in Canada. We estimated random effects models using vignette data. Our findings indicate that cross-border import of CO₂ for storage has a strong effect on the acceptance of CCS plant scenarios. Consultation, compensation, proximity, knowledge, risks, and trust are critical drivers of CCS acceptance. The study concluded that communication efforts to improve public understanding of CCS should focus on demystifying the

risks of CCS.

Consumer Perspectives on Genetically Modified Hemp Textile Products

Presenting Author: Abigail Boahemaa, University of Alberta

Co-Authors: Ellen Goddard, University of Alberta; Patricia Dolez, University of Alberta; Jane Kolodinsky, Western Colorado University



With a global rise in sustainability concerns about textiles, public purchasing intentions for textile products, made from hemp, in Canada and the USA are examined. As a source for textiles, hemp has high sustainability and can be improved with genetic tools. Using data collected in online surveys in 2022, we examine whether consumers will purchase genetically modified hemp textile products. Approximately 69% of Canadian survey respondents were neutral to very positive about buying clothing or sheets made from genetically modified hemp, more positive than about GM food. We will present results showing whether demographics, knowledge, trust and attitudes toward

technology influence purchase intentions for genetically modified hemp textile products.

Predicting Land Use Transitions in the Riding Mountain National Park Area

Presenting Author: Amirreza Siadati, University of Manitoba

This study examines the influence of geophysical and economic factors on the conversion of wetlands and grassland to cropland in the agricultural production region surrounding Riding Mountain National Park. An econometric land use share model is specified, using annual (2011-2021) parcel-level observations of crop share derived from the AAFC Cropland Inventory. Results suggest a positive correlation between crop revenue and cropland share, along with strong relationships between the geophysical characteristics of the parcel and cropland share. Notably, income has a greater impact on cropland share on parcels with higher productivity soil. The parameters of the model are used to identify parcels that are at highest risk of conversion.

Too Hot to Work? Temperature and Household Labor Allocation in the Tropics

Presenting Author: Andu Berha, University of Alberta



The anticipated impacts of climate change appear to be particularly pronounced in low-income counties, where weather-exposed sectors are major sources of people's livelihoods. In this study, we seek to estimate the impacts of temperature on labour allocation in rural Nigeria using a micro-panel survey and a flexible econometric approach that exploits exogenous variation in temperature within household locations over time. We not only investigate the impact of extreme temperatures on on-farm activities but also consider its implications for local labour market dynamics and migration decisions. Furthermore, we aim to identify the potential channels through which extreme temperature conditions affect the labour market outcomes in rural Nigeria. Finally, our study aims to provide new insight into impact heterogeneity across households and geographic areas. Our contribution lies in providing causal confirmation of the long-standing premise that economic rational agents respond to productivity shocks by reallocating flexible factors of production in a unique context and under broader considerations.

Profitability of Growth-Enhancing Technologies in Canadian Feeder Cattle

Presenting Author: Breanne Smith, University of Manitoba

Co-Authors: Jared Carlberg, University of Manitoba; Jon Biermacher, North Dakota State University; Gabriel Ribeiro, University of Saskatchewan



Use of growth-enhancing technologies (GETs) has the potential to increase cattle feeder profitability. Previous research found positive impacts of GETs on growth performance (Ribeiro et al. 2021) and environmental sustainability (Aboagye et al. 2022) for Canadian feeder cattle; however, economic dimensions remain unexplored. Four-year trial data from the AAFC Lethbridge Research and Development Center are used to determine the relative profitability of feedlot GET use (trenbolone acetate, melengestrol acetate and ractopamine hydrochloride) through partial budgeting and sensitivity analysis. Results indicate trenbolone acetate is most economical for both heifers and steers, providing an 83.06% and 188.38% increase in net returns, respectively.

A sectoral-level analysis of COVID-19's impact on Canada's agri-food exports: Did FTAs mitigate this impact?

Presenting Author: Esther Odiriawodia Metieh, University of Guelph

Advisors: Sylvanus Kwaku Afesorgbor (advisor), University of Guelph; Andreas Boecker (co-advisor), University of Guelph



We undertake a nuanced sectoral analysis of COVID-19's impact on Canada's agri-food exports, focusing on the role of FTAs in mitigating this impact. Utilizing a gravity model with monthly export from Canada to 216 partners spanning 2018 to 2022, we investigate the effects of COVID-19 variables - cases, deaths, tests, vaccinations, and stringency index—on various segments of agri-food exports; bulk, intermediate, high-value, crop, horticulture, livestock, food, and beverages. We use the new and state-of-the art approach

to control for multilateral resistance. The findings primarily indicate an overall insignificant impact on total agrifood exports yet reveal diverse significant positive and negative impacts within specific sectors. Moreover, the comparison between FTA and non-FTA countries demonstrates less pronounced negative effects and more substantial positive influences on certain segments of agrifood exports.

Understanding the adoption of conservation agricultural practices in Quebec

Presenting Author: Jiaying Song, McGill University

Co-Authors: Aurelie Harou, McGill University; Mary Doidge, McGill University



In Quebec, declining soil carbon due to changing farming practices is being addressed through programs supporting conservation practices. However, economic studies have found that, without accounting for other behavioural factors, financial incentives are often insufficient in achieving desired adoption levels. This research focuses on Quebec farmers' behaviours toward adopting conservation practices and the effectiveness of various incentives. An economic experiment will explore how risk and ambiguity influence grain producers' decisions to adopt cover crops and their preferences for subsidy structures. The findings aim to enhance agri-environment policy and educational programs specific to Quebec's agricultural context.

The impact of loyalty points on Canadian consumers' preferences for low sodium bread choice

Presenting Author: Mariam Abu-El-Magd, University of Guelph

Co-Authors: Yu Na Lee, University of Guelph; Michael von Massow, University of Guelph



Bread is a widely consumed staple food in the Canadian diet. However, bread leads the bakery products category as a top contributor to sodium intake for Canadians. This research explores the impact of loyalty points on preferences for low-sodium bread. A discrete choice experiment was conducted in November 2023 utilizing a stated choice model survey to collect data from 1249 respondents across Canada. Preliminary results indicate a preference among survey respondents for lower-sodium bread. Further analysis will focus on better understanding the socio-demographic characteristics of respondents that determine preferences for high-sodium bread and how the introduction of loyalty points or a low-sodium label can impact purchasing behaviours.

Assessing the effect of climate change on Canadian farmland values: A Ricardian Approach

Presenting Author: Nicholas Bannon, University of Guelph

Co-Authors: Christopher Kimmerer, University of Guelph; Brady J. Deaton, University of Guelph



The Ricardian method was introduced in 1994 by Mendelsohn, Nordhaus and Shaw to estimate the impacts of climate change on farmland values. Since its introduction, the Ricardian approach has been applied routinely in the United States, yet Canadian-specific Ricardian studies remain underrepresented. This research addresses this gap and provides a contemporary estimate of the impacts of climate change on Canadian farmland values using parcel-level observations of farmland transactions. Across multiple model specifications and climate change scenarios, climate change is estimated to have a large positive impact on Canadian farmland values.

The Impact of Nitrogen Inhibitors on Financial Returns and Nitrous Oxide Emissions

Presenting Author: Obed Teye Sappor, University of Guelph

Supervisor: Alfons Weersink, University of Guelph

One of the means to achieve the 30% reduction in GHG emissions from fertilizer use is with nitrogen inhibitors. This study evaluates the profitability of using nitrogen inhibitors in the production of corn in Ontario. Using data generated by the DNDC biophysical simulation model, nitrification inhibitors reduce N₂O levels depending on the N rate and type of fertilizer. Inhibitors also increase corn yield by 3 bushels per acre at lower application rates of nitrogen, with the effect diminishing at higher rates. While yield enhancements may justify inhibitor costs for UAN at reduced nitrogen rates, but not for urea.

E-commerce Resilience in Canada's Agrifood Trade Amidst COVID-19

Presenting Author: Promesse Essolema, University of Guelph

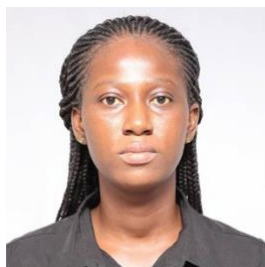


The COVID-19 outbreak has sparked an unprecedented global health crisis and economic downturn, impacting various sectors. The distinctive effects on agrifood trade, marked by unique policy measures disrupting the supply chain, set it apart from previous viral outbreaks. Canada, a major global agrifood player, directly felt the pandemic's repercussions due to its significant exports and labour-intensive nature. This thesis explores the impact of the COVID-19 pandemic on Canada's agri-food trade, with a specific focus on the resilience of e-commerce. Utilizing data spanning from 2018 to 2022, including agrifood export data, domestic e-commerce statistics, UNCTAD's e-commerce readiness rankings, and COVID-19 indicators, the study employs the Poisson Pseudo Maximum Likelihood method applied to the gravity equation. The findings reveal that increased e-commerce significantly increases agrifood export and mitigates the pandemic's adverse effects on Canada's international trade. The research provides insights into strategies adopted by Canadian agri-food businesses, emphasizing e-commerce's role in buffering against disruptions, changing consumer behaviors, and evolving trade regulations.

Game Meat Motivation Among Hunters in Alberta

Presenting Author: Sandra Odame, University of Alberta

Co-Authors: Wendy Wismer, University of Alberta; Sven Anders, University of Alberta



Views of hunting and hunters are changing within Canadian society. Divergent perceptions of the activity influence hunters who feel increasingly ambiguous about their participation in hunting. This study investigates, among other factors, the role game meat plays in motivating hunting participation. We survey Alberta WIN card holders and conduct a best-worst scaling experiment to test how game meat ranks in individuals' hunting decisions. The study result will help conservation agencies with programs aimed at information campaign designs that address knowledge gaps regarding hunting for food and the inclusion of wild game meat in diets.

Economic Implications of a Wildfire Monitoring satellite for Canada Including water Treatment and Infrastructure cost

Presenting Author: Susan Subedi, University of Guelph

Co-Authors: Dan McKenny, Natural Resources Canada; Alfons Weersink, University of Guelph; Getu Hailu, University of Guelph

The increasing frequency of wildfires due to climate change poses significant economic challenges to all sectors of Canadian society, including agriculture. This study examines the economic impact of Canada's WildFireSat mission, a novel satellite system designed to support wildfire management in Canada, focusing on wildfire-related costs, including suppression expenditures, water treatment costs, evacuations, and timber losses from escalating wildfires in these recent years. This research integrates these costs into existing economic models, conducting a cost-benefit analysis of possible cost savings in relation to investments in the satellite system and examining the relative share of water costs. The outcome of the study will enhance the wildfire management strategies, particularly in the face of increasing challenges, guiding sustainable solutions for Canada's economic resilience.

Food Prices and Intimate Partner Violence (IPV)

Presenting Author: Xinyan (Yoko) Yang, University of Guelph



This study aims to explore whether rising food prices and food price volatility have significant impacts on intimate partner violence (IPV). Violence against women and rising food prices remain evident major global issues, both of which are concerned with the welfare and basic demands of daily life. Using the dataset from four countries in Sub-Saharan Africa between 2007 to 2018, we explore the relationship between rising food prices, price volatility, and incidences of IPV against women. Preliminary results indicate that both rising food prices and price volatility are associated with higher incidences of IPV.

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