

# ANNUAL REPORT

SEPTEMBER 2020 – AUGUST 2021



# OUR VISION

A future where people in all communities have secure access to safe and healthful food through transparent, competitive, and sustainable food systems.

## **Land Acknowledgments**

The University of Guelph is on the territory of the Mississaugas of the Credit and is part of the Land Between the Lakes Purchase (Treaty number 3). The Dish with One Spoon Covenant made between the Anishinaabe, Haudenosaunee and Mississaugas, is an agreement to share territory and protect these lands, now known as parts of Ontario, Quebec and New York State. The Covenant reminds us of our common connection to the land and to each other. Recognizing the contributions and importance of First Nations, Métis and Inuit peoples is an important part of our collective commitment to make the promise of Truth and Reconciliation real in our communities.

## **Words of Gratitude**

We are extremely fortunate to be surrounded by a huge range of wonderful and supportive colleagues at the University of Guelph, Canada's Food University, without whose support driving the mission of Arrell Food Institute – to improve global food systems – would be impossible. Special thanks to the Arrell Family Foundation for the ongoing support of Arrell Food Institute.

## **Statement of Inclusion**

A world where all communities have access to safe and healthful food is a world where the voices of all communities are uplifted. AFI is an equal opportunity employer and does not tolerate, ignore, or condone any form of discrimination. We work to support people from communities historically and structurally excluded, including BIPOC communities, people with disabilities, LGBTQIA2 and those with caring responsibilities. AFI strives to be inclusive in its events and projects so that diverse perspectives are presented, and a full range of individuals have equal opportunity to participate in discussions and conversations. AFI ensures that its resources recognize both non-traditional and traditional excellence. We welcome further feedback and dialogue.



# CONTENTS

Letter from the Director	4
Transforming Food	7
Enhancing Communities	13
Enriching Food Networks	19
Education	24
Awards	30
Events & Outreach	34
AFI People & Contact	43



A PLACE TO TALK ABOUT FOOD

ARRELL FOOD INSTITUTE  
MEDICINE • GULPH

# LETTER FROM THE DIRECTOR

If there is one lesson I hope we have learned in the last year it is that things are connected.

Humanity pushing into wilderness areas connects us to reservoirs of zoonotic pathogens that cause pandemics. Cybercrime originating in distant lands halts meat processing facilities, hurting farmers and consumers alike. A ship running aground in a Middle Eastern canal reverberates through markets everywhere and causes commodity prices to rise.

But though we often think about these connections as exposing us to risks and vulnerabilities, the opposite is also true.

For instance, the current drought in California is spurring interest in agricultural innovation in Canada. Concerns over food price inflation is connecting poverty and food security groups with government in ways never before imagined. There is a widespread realization that solving food system problems requires tremendous connectedness and that looking for systemic change demands folks from across the agri-food continuum to come together and connect.

This is why the team at AFI has directed much of our energy this year to try and overcome the isolation of the lockdown by bringing people together from different disciplines, different perspectives, and different backgrounds.

While never straying from our mission of improving global food systems and our core themes of transforming food, enhancing community security, and strengthening food networks, we have chosen to listen and give a platform to those who continue to be systematically marginalized. We also help build spaces where our scientific expertise and the energy of our Scholars can be used to foster innovative conversations that lead to fulsome change.

For instance, the Food Price Report, which is the annual exploration of food price inflation in Canada, connects academics across the country and includes agricultural experts, business professors and scientists working on artificial intelligence.



The Social FIShtancing podcast connects senior policymakers with community members and provides a platform for exploring sustainable and equitable strategies to manage small-scale fisheries.

Our Spotlight reports connect the University of Guelph's tremendous expertise in food systems with relevant experts from outside the academy to tackle such important issues as school nutrition, food waste, and food packaging.

Supporting federal and international bodies such as the Canadian Food Policy Advisory Council and the European Commission's High-level Expert Group on Food Systems Science means AFI's expertise is utilized and deployed by decision makers at the highest national and global levels.

And, thankfully, our work confirming effective protocols really do limit COVID-19's spread in grocery stores shows us that not everything is connected.

In the end, one of the lessons of the year must be a reminder that we humans are connected, and need to remain connected, whether it is through screens and technology, in community gardens, or in boardrooms. As such, it is a profound honour and pleasure to be starting a second term as AFI's director where we will continue the collaborations that ensure our platform keeps connecting people from all walks of life such that we tackle the tough issues confronting the food system today.

**Evan Fraser**  
*Director, Arrell Food Institute*



# TRANSFORMING FOOD

We are working to reduce the environmental impact of our food systems by exploring new ways of meeting the needs of the growing human population without destroying the ecosystems on which we depend for life. As the digital agricultural revolution continues, we are working to discover new ways to protect the planet while providing even safer food than ever before. We also pay attention to the consequences that new technologies and approaches to farming bring, especially to jobs and communities.

## TRANSFORMING FOOD

# A Brand-New Solution

**W**hen it comes to transforming agriculture, the Green Revolution of the 1960s is often used as a way of understanding the scale of the changes coming to our food systems through innovations. But the solutions being dreamed up today address new problems, never before faced, and so it should be no surprise that the solutions require food systems to change too.

The discovery of hexanal as a treatment for fruit blights and spoilage, originally found by the university's Dr. Gopinadhan Paliyath, is one such solution. Hexanal is already naturally generated by plants and safe to eat, so scientists like Arrell PhD Scholar Karthika Sriskantharajah and supervisor Dr. Jayasankar Subramanian have tested this nature-provided treatment at large scales to address serious food waste problems – itself a \$50 billion issue in Canada.



**Arrell PhD Scholar Karthika Sriskantharajah (above left) has shown that hexanol can help fruit retention on Honeycrisp apples (opposite) by 20%.**

Karthika's research focuses on Honeycrisp apples, a widely popular variety with some major production problems that keep prices high and farmers less inclined to cultivate despite consumer demands. The fruit drops from the trees prematurely causing 10-50% of these apples to spoil before harvest even begins, and once in storage, the Honeycrisp tends to develop "bitter pit", an unattractive and less than tasty breakdown of the fruit. Karthika's work shows hexanal can help fruit retention by 20% and limit bitter pit development by 18%. At farm scale, that could be a major economic boon for apple growers.

While farmers are clamouring for this transformative technology, hexanal's unique nature has slowed its adoption. Since it doesn't fit into well-worn agriculture solution categories like "fertilizer" or "pesticide", passing through the regulatory system in Canada and elsewhere has been glacially slow.

Karthika and Jayasankar have not been discouraged by these roadblocks, instead becoming passionate advocates and communicators. Throughout her time as an Arrell Scholar, Karthika has written and spoken widely about hexanal's potential, and with the institute's support continues to identify new ways to advocate for solutions that don't fit in a tidy box.

"Food research is essential to unlocking the potential of agriculture," she says, "thus enhancing the livelihoods of marginal communities in developing as well as developed countries."

Without such new and creative solutions, addressing food loss – itself a significant contributor to climate change – may be limited. However, Arrell Scholars are working to improve the food system through a combination of the high-quality scientific training and carefully honed skills in advocacy and knowledge mobilization that they receive at the University of Guelph.



## TRANSFORMING FOOD

# Research Highlights

Unlike past transformative moments in our food history, the current reshaping of the food system demands more of us. It will not be enough to just produce more food, or even higher quality food. We must do so in a way that restores the planet and must not come at the expense of communities or workers. Thanks to the interdisciplinary expertise of AFI's researchers, the institute is making progress on these high standards of change.

### NATIONAL FOOD POLICY ADVISORY COUNCIL

Five years ago, the federal government announced its intention to create a food policy for Canada but needed a means to bring the stakeholders together to provide advice, test ideas, and workshop concepts. Arrell Food Institute worked with key partners and leveraged a network that lobbied for the creation of a National Food Policy Advisory Council. As a direct result of this work, the minister of Agriculture and Agri-food Canada announced the National Food Policy Council at an AFI event in February 2021, naming AFI Director, Evan Fraser as co-chair of the new body.

Developing strategies that protect the environment while also boosting production is at the heart of Dr. Evan Fraser's research this year that includes collaborations with many Arrell Scholars and Chairs as well as colleagues all over the world. Dr. Phil Loring has published on similar themes in prestigious journals, like *Nature Sustainability*, where his lab develops models for how best to conceptualize these system interactions.

Harnessing digital technology for maximum benefit has been at the heart of all four AFI faculty's work this year.

Dr. Simon Somogyi's examination of smart retailing is revealing new opportunities for efficiency and sustainability

where retailers and consumers interact. He's also focused on how digital technologies are reshaping the aquaculture sector in Atlantic Canada.

Dr. Maria Corradini is putting technologies like 3-D printing to work in her lab by mapping the complex ways that foods deteriorate, with the goal of putting another hurdle in the path that leads to food waste. She's also challenging the food system to ensure new food solutions are safe and better than the original. She's held bioplastic food packaging up for scrutiny to ensure our newest convenience doesn't lead us right back where we started: overdrawing resources and polluting our environments.

### SPACE SNACKS

While most humans won't be heading to space any time soon, researching

how humans may nourish themselves with a view from the stars can reveal ideas and techniques useful here on Earth. Dr. Fraser has joined a Canadian Space Agency funded team lead by Drs. Thomas Graham and Mike Dixon on developing food systems for the moon and is now writing a new book with Dr. Lenore Newman (a past AFI Food Hero) tentatively called *Dinner on Mars: How Learning to Farm Another Planet may Save This One*.





Students in Dr. Maria Corradini's lab using 3-D printing to map the complex ways foods deteriorate.



Feeding 9 Billion Peer Helpers help harvest at a local community food initiative

# ENHANCING COMMUNITIES

We are working to enhance community food security and food sovereignty in Canada and abroad. Food is never just fuel but plays an integral role in culture both as a source of unity and of conflict. At the same time, we live in a world of stunning inequalities where both the number of hungry and the number of obese people is rising. Therefore, we can see that food sits at the foundation of community, personal and planetary health. By exploring the links between food safety, sustainability, culture, and security we are working with our partners to create the foundations of better future.

## ENHANCING COMMUNITIES

# Shop Surfaces Safe and Secure

**W**hen COVID-19 caused businesses across Canada to close, one of the only public spaces remaining open were tied to our basic human need to eat. Grocery stores were both a necessary and acceptable destination for Canadians and yet fear persisted. Were these safe spaces?

Dr. Maria Corradini, Arrell Chair in Food Quality and Dr. Robert Hanner (a newly appointed Arrell Fellow), along with collaborators Drs. Lawrence Goodridge and Steve Newmaster, asked this question themselves and were uniquely equipped to find an answer. Along with a team of graduate students, including Arrell Scholars Maleeka Singh and Sujani Rathnayake, they designed a project to

test for the presence of SARS-CoV-2 on high-traffic surfaces in food retail stores.

Nearly 1,000 samples were collected over four weeks from shopping carts, deli counters, pay terminals and freezer doors. Sites were chosen because they see high-touch traffic from shoppers.

A sigh of relief met the results: all negative for signs of the virus. The cleaning protocols and

physical distancing measures put in place seemed to keep the virus off these surfaces. Canadians could take one more worry off their mind as they learned how to protect themselves best from the virus.

The results of the project emphasized that preparation and prevention are key to keeping shoppers safe and fed. This project also shows how important it is for academics to build strong relationships with non-academic partners. While retailers were understandably nervous about what

this study was going to show, the research team was able to build trust and solid relationships with some of Canada's largest food vendors and this team worked together to bring peace of mind to consumers and businesses alike.

“Advancing the wellbeing and safety of communities in an effective manner requires solid partnerships among scholars and with industry,” says Dr. Corradini. “Although COVID-19 is still here, the evidence we collected shows us that careful public health-based practices can help us remain safe.”

Enhancing community food security requires bringing together and connecting many fields of science with partners from outside the university setting. The experts supported by Arrell Food Institute not only have important information to offer the food system, but also the vision and skills to help address our most disruptive challenges.



**This project showed how important it is for academics to build strong relationships with non-academic partners.**







# ENHANCING COMMUNITIES

## Research Highlights

**B**y examining food systems at the community level, we can quickly see how diverse human-food interactions are, and why communities are an important focal point for making progress on big issues like food security, climate change and health.

Dr. Loring’s work, for instance, shows communities’ unique considerations and universal needs. This year, he and his team made significant progress on mapping the mental models people use to reconcile demands on Prairie landscapes where wetlands and farmlands meet. His other research ranged

from looking at food systems in arctic landscapes in Alaska to the Ecuadorian Amazon. Everywhere his research goes, his team asks questions about the relationship between food, the environment, tourism, and Indigenous sovereignty.

Throughout AFI research, community focus is a cross-cutting theme. Dr. Somogyi’s OMAFRA-funded project is focused on understanding barriers of trust and drivers of commitment in Ontario’s food value chains.

Focusing on enhancing communities works best when working with those



**Focusing on enhancing communities works best when working with those communities.**

communities, as our researchers often do. Dr. Loring built a new connection this year with the community of practice Local Catch Network, comprised of fishers, organizations, researchers and technicians. The work has yielded new research, publications, proposals, and outreach where the community is a true partner.

Not all community research will be comfortable. Dr. Fraser and university colleagues published research that showed tax credits for donating surplus food to charities doesn’t really address food insecurity. While the intentions of those donating food are good, this research challenges governments and communities to address the root causes of food insecurity.

### FOOD FELLOWS

Four experts have joined AFI as the first cohort of Arrell Food Fellows. Dr. Robert Hanner, Associate Professor of Integrative Biology at the University of Guelph, Danil Kerimi, COO of Edgelands Institute, David McInnes, Principal of DMci Strategies and Dr. Silvia Leonor Sarapura, Assistant Professor of Rural Planning and Development began their tenure in March 2021. They will expand the Institute’s work into key food spaces by carrying out projects during their two-year term.



**Robert Hanner**



**Danil Kerimi**



**David McInnes**



**Silvia Leonor Sarapura**



# ENRICHING FOOD NETWORKS

We are working to make global food networks safer, more efficient, more transparent, and more sustainable. Canada is a country that both imports and exports large amounts of food and so we are working to identify pressure points that can be resolved by policy, markets, or awareness. This will ensure that our global food networks continue to improve the way they offer safety, health, and affordability for all consumers.

## ENRICHING FOOD NETWORKS

# Global Connection Through Dialogue

**T**he global pandemic forced the disposal of old ways of working, and in their place ignited creativity and connections across the planet that allowed for new voices to build a new agenda on food systems.

With traditional meetings and consultations canceled, the United Nations Food Systems Summit planners activated networks across the globe to digitally convene food stakeholders for conversations that would prioritize issues needing attention from the highest governing bodies.



**AFI connected well over 250 farmers, researchers, politicians, policy makers, youth, restaurateurs, and NGO representatives.**

Arrell Food Institute took up this request from friends and partners at the UN and quickly convened four Food System Summit Dialogues, a perfect fit for addressing the institute's goal of building to enrich food networks through transparency and identifying pressure points.

Using insight gathered from last year's Growing Stronger project, where a national network

identified roadblocks to Canada's post-pandemic recovery, AFI focused the dialogues on addressing the root causes of food insecurity; positioning agriculture as a driver of green economic recovery; and developing novel governance mechanisms to address the needs of the food system. The fourth dialogue, co-hosted with McGill and the University of British Columbia, was led by youth and focused on elevating the voices of those who will be leading on these issues in the next generation.

Between these four events, AFI connected well over 250 farmers, researchers, politicians, policy makers, youth, restaurateurs, and NGO representatives. While their perspectives and ideas were diverse, strong themes emerged from the dialogues including the need for greater transparency, engagement, and inclusiveness in developing food systems policy.

Another theme that emerged during dialogues is the idea that Canada should follow the UN's lead, and make bold, ambitious commitments to reducing food insecurity by hard deadlines. Food insecurity is an issue interwoven with the health and effectiveness of economic and social systems, so governments should work more closely with community and business partners to create an impact.

Third, dialogue participants expressed Canada has a singular opportunity in the global community to be a food sustainability leader but needs some sort of national sustainability benchmarking process to measure and market progress.

The dialogue model that brings together varied actors is one that will help ensure no individual is left behind in the food system. As such, AFI is proud to have been able to partner with leading national and international bodies to build collaborative food systems governance.





Arrell Scholar alumna Nasrin Husseini shares her experience with new graduate students.

Ontario farmers share insight during wheat harvest.





## ENRICHING FOOD NETWORKS

# Research Highlights

**F**rom its rawest state to its final forms, our food often has an international journey before it reaches our plates. Not only does the food itself make these trips, but so do the technologies, policies, and ideas that support this system. AFI researchers study these processes and how they also impact the shape and function of food systems inside borders.

Dr. Somogyi's SSHRC-funded research aims to identify barriers to adopting tools that could simplify the system. He also continues to discuss the pricing and availability of products, an issue that came to the forefront of Canadians' minds during pandemic-induced supply chain disruptions. This work has led to partnerships with industry advocates and governmental departments that liaise with industry and shape policy.

### INTERNATIONAL ADVISORY PANEL

Dr. Fraser has recently been invited to join a high-level panel of experts advising the European Commission on food systems. The group, comprised of 19 international experts, will work for the next 18 months to recommend a global approach for addressing food system science governance.

Dr. Corradini is making important contributions to keeping these global networks safe and transparent. Using chemical fingerprinting, Dr. Corradini is studying how to rapidly collect, analyze, and interpret data to ensure our food stays nutritious and safe and our food value chains become more transparent. This collaboration with Arrell Fellow Dr. Hanner could add a new tool to the fight against food fraud, a serious issue that keeps food networks from best serving consumers across the globe.

Dr. Loring and his research team have invested significant time in understanding the impact of COVID-19 on U.S. and Canadian small-scale fisheries, models that feed millions around the world. How these fisheries weathered the global pandemic and adapted their marketing models, can provide important lessons for other supply chains throughout the food system.

Global idea exchange is vital to enriching these food networks. All chairs have spoken to audiences around the world through digital means and participated in cross-institution collaborations. This included invitations to join Food System Summit Dialogues beyond those hosted by AFI, as well as speaking to industry players such as 3M, the Canadian Institute of Food Science and Technology and the *Globe and Mail*.

### AFI RESEARCH SUCCESS



# \$5.5M

in grants won by research collaborations with Arrell Chairs in 2021

# 31

peer-reviewed publications

# 25

graduate students were funded by earned research grants



AFI expertise, people and projects were covered this year in the *Globe & Mail*, *Financial Post*, *CBC*, *Toronto Star*, *Grocery Business*, *City News*, *National Post*, *Hill Times*, *The Vancouver Sun* and more.

 **EDUCATION**

**AWARDS**

**EVENTS &  
OUTREACH**



**Arrell Scholar Sabrina Rondeau**  
conducting wild bee research.

## EDUCATION

# Arrell Scholars

Despite the limitations COVID-19 placed on the academic and personal lives of the Scholars, the graduate students continued to display healthy progress on their research and outreach, making important contributions to improving global food systems. They also went above and beyond expectations, finding ways to support their local and home communities through the pandemic, including **Jessica Castellanos Labarcena** who has been volunteering at local vaccination clinics.

### Industry Contributions

Scholars are selected not because they will make great agri-food leaders, but because they are *already* demonstrating their leadership potential when they apply. These efforts continued in 2020-2021, when Scholars collaborated with industry, government, and NGOs to turn knowledge into action as soon as possible.

Scholars were asked to join advisory councils and roundtables, and provided academic oversight for industry and policy proposals, and toolkits. **Sujani Rathnayake** provided species identification expertise with her lab to international organizations including Oceana, while **Regan Zink** shared insights on enhancing communities through the Food Systems Roundtable of the Waterloo Region.

**“This prestigious scholarship provided me with exceptional learning experiences and opportunities to pursue my passion.”**

**— Kathleen Johnson,  
Arrell Scholar 2017–2021**



**Arrell Scholar Roshan Pudasaini co-authored the Chatham House report, *Food system impacts on biodiversity loss*.**

Scholars, including **Andrew Nixon** and **Fatemeh Fazel**, are building collaborative research projects aimed at expanding global food networks through new export and growth opportunities for the agriculture sector.

### Progress, Recognition and Publications

Several Scholars met important milestones this year, including four PhD level scholars passing the demanding qualifying exams to become PhD candidates. Scholars also demonstrated their academic excellence by bringing home awards and prizes. **Katya Kudashkina** was awarded the Tim Price Alumni Community Award from NEXT for her entrepreneurial efforts, **Maleeka Singh** and **Sujani Rathnayake** contributed to the first-place winning video for the Ontario Food Protecting Association on retail food safety. **Karthika Sriskantharajah** took home first place at the first Impact Case Competition for her team's practical sustainability solution. **Sugandha Raj** earned a first place for her presentation on avian influenza virus at a sustainable development conference.

Scholars played a significant role in advancing agri-food publications. An international launch of the Chatham House report, *Food system impacts on biodiversity loss*, co-authored by Scholar **Roshan Pudasaini** was met with widespread media coverage. **Sujani Rathnayake** and her team generated a paper on fresh food prescriptions, an extra-curricular

result of the community partnership work completed for the AFI-led UNIV\*6050 course.

### Knowledge Mobilization Leaders

With an expanded investment in knowledge mobilization and carefully designed networking opportunities, the Scholars are sharing more research and insight than ever before.

Thoughtful critiques and encouragement for industry, policy and the public on agri-food from Arrell Scholars made the pages of many publications this year. **Abdul Rahim Abdulai's** *Globe and Mail* op-ed, "Being a Black farmer in a field of white opened my eyes to Canada's agriculture diversity problem" was an intimate and honest reflection still unique in the agri-food space. **Amberley Ruetz** and **Katherine Eckert** both

### SCHOLARS MAKE GLOBAL CONNECTIONS

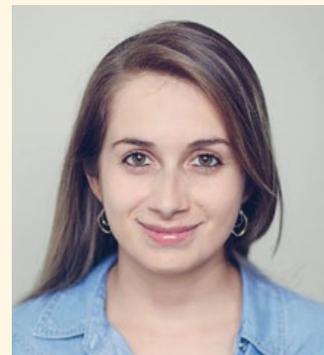
Maleeka Singh and Katherine Eckert received the rare opportunity to engage in an interview with the Honourable Marie-Claude Bibeau, Minister of Agriculture and Agri-Food. Others participated in a question-and-answer session with Dr. Agnes Kalibata, UN Secretary-General's Special Envoy to the 2021 Food Systems Summit.

### NEW SCHOLARS

Four new Scholars will join Arrell Food Institute in the fall of 2021. **Rosemary Brockett, Maria Margarita Fontecha, Zahra Saghafi** and **Evan Tollenaar** will expand AFI's reach through their research contributions to transforming food and community food security by studying vertical farming, plant-based foods and community development.



**Rosemary Brockett**



**Maria Margarita Fontecha**



**Zahra Saghafi**



**Evan Tollenaar**

continued to advocate for healthier food systems for young people and families through op-eds, interviews, and podcasts.

Scholars are ensuring their research insights are expanding and far-reaching. **Sabrina Rondeau** helped design and lead a French-language webinar on wild bee

conservation while **Guilherme Madureira** had teaching materials on dairy management translated into Spanish and Portuguese to reach more farmers and students. Taking the traditional conference model out of the box, **Emily Kaliei** brought her insights beyond the academic community by presenting at a Twitter-based conference.

## EDUCATION

# Community Partner Projects

Scholars entering the program participate in the UNIV\*6050 course, which is taught by a team that includes AFI's education coordinator Jeanna Rex, Dr. Somogyi and Dr. Fraser. In this course, Arrell Scholars work in interdisciplinary groups to solve a problem for their partner and in the process build industry relationships and add valuable project management experience to their resumes.



### Agriculture and Agri-Food Canada

To better understand the approaches community organizations used to increase access to food during Covid-19, the student team reviewed food insecurity initiatives that emerged across the country and invited some of those organizations to participate in further study.



### Smart Cities Initiative: Our Food Future

The Nutritious Food Workstream is a Smart Cities Our Food Future initiative increasing access to affordable, nutritious food by 50% by 2025. To learn more about food availability, affordability, and marketing of nutritious foods in food retail settings, students interviewed managers, owners and operators of local grocery and convenience stores gauging interest for future interventions.



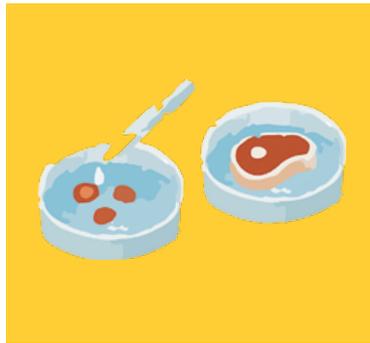
### Sustainable Agriculture Initiative (SAI) Platform

SAI Platform was created by the food and beverage sector's desire for a pre-competitive platform to discuss common sustainability challenges across the agricultural supply chain. The student team conducted interviews with sustainability managers, farmers, and other actors at every level of the supply chain to compile positive examples showcasing farming's ability to be part of the solution.



### Seed Voyage

Seed Voyage is a digital platform created to share the bounty of urban gardens by connecting growers to eaters. The student team partnered with an established local community organization and created an outreach plan to establish a user group in SW Ontario that has enough participants to promote regular activity on the digital platform.



### Cellular Agriculture and New Harvest

Cellular Agriculture is a not-for-profit organization shaping the cellular agriculture industry in Canada. New Harvest is a non-profit research institute that supports open, public cultured meat research. To inform business models that can transform or complement current animal-based models, the student teams created and distributed surveys to consumers, livestock farmers, meat processors, and retailers to understand their thoughts about cellular agriculture.

### MENTORSHIP

In 2020, AFI launched the Arrell Food Institute Mentorship Program to further connect Scholars to agri-food influencers who can help them shape their own career trajectories and impact. The carefully selected mentors come from a variety of sectors with experience in societal change, big foundational work, and small start-ups.



# 23

Arrell Scholars supported since 2017 from 11 countries (5 continents)



# 69

published and in-progress articles by Arrell Scholars

# 55

conferences and presentations given by Scholars

**EDUCATION**

 **AWARDS**

**EVENTS &  
OUTREACH**



**ARRELL  
GLOBAL FOOD  
INNOVATION  
AWARD  
2020**

## AWARDS

# 2021 Arrell Global Food Innovation Awards

The Arrell Global Food Innovation Awards continue to be a program that enriches global networks by uplifting innovators as models for addressing food problems around the globe.



### 2021 RESEARCH AWARD WINNER

#### Dr. Shakuntala Haraksingh Thilsted

Dr. Thilsted is a true innovator, whose lifetime of work finding and designing holistic food security solutions through nutrition science has served millions of vulnerable peoples in Asia and Africa. Dr. Thilsted identified a small fish species as a nutritional powerhouse and worked with communities to create sustainable and acceptable ways for producing and processing it in existing food systems. Dr. Thilsted is the Global Lead for Nutrition and Public Health at WorldFish, and has taken on international advocacy work, such as her role as Vice-Chair of the U.N. Food Systems Summit 2021 Action Track 4: Advance Equitable Livelihoods.



### 2021 COMMUNITY AWARD WINNER

#### The Food Heritage Foundation

Uniquely embracing culinary traditions as a vehicle for community food security, the Food Heritage Foundation in Lebanon has grown its community kitchens and gardens to be economic drivers as well as spaces for connection across the country. With an emphasis on empowerment, relief and sustainability, the Food Heritage Foundation addresses the needs of their community today, while building a more resilient future. They have also used food as a tool to build relationships in conflict-affected spaces, including for the many Syrian refugees and their host communities.

## Adjudicators



**Deidre Adams**

is the Fund Development Manager for South Africa's largest food distribution non-profit organization, FoodForward SA (a previous Arrell Global Food Innovation Award winner). She previously served as a fundraising and development lead at the University of Cape Town.



**Api'soomaahka (Running Coyote) – William Singer III**

is a member of the Kainai Nation of the Blackfoot Confederacy. He is an artist and illustrator, as well as an entrepreneur and an environmental activist, utilizing Blackfoot Ecological Knowledge and protocol. He currently operates Naapi's Garden and Katoyiss Seed Bank and is a member Kainai Ecosystem Protection Association (KEPA) and the Oldman Watershed Council (OWC).



**Kevin Groh**

is Senior Vice President, Corporate Affairs at Loblaw Companies Limited and a member of the company's Management Board. He leads a team responsible for corporate communication, government relations, industry and NGO relations, corporate social responsibility, and community investment.



**Dr. Rattan Lal**

is a world-leading soil scientist and previous Innovation Award winner with a tremendous body of published work used by students around the world. Dr. Rattan is currently a Distinguished University Professor at The Ohio State University, and his career has spanned over fifty years and across six continents. His award-winning research focused on a soil-centric approach to agriculture sustainability and prosperity that has become even more vital in the context of climate change mitigation and adaptation.



**Danielle Nierenberg**

is the co-founder of Food Tank, a non-profit organization acting as a global convener, research organization, and non-biased creator of original research impacting the food system. She has an M.S. in Agriculture, Food, and Environment from the Tufts University Friedman School of Nutrition Science and Policy.



The 2020 Award Winner Announcement was the most visited page on the AFI website this year, with over 10,000 views and the highest interest from international visitors.



Dr. Rattan Lal, 2020 Arrell Food Innovation Award (Research) winner, was interviewed by Piya Chattopadhyay on CBC's *Sunday Magazine*.

# EDUCATION AWARDS



## EVENTS & OUTREACH



Behind the scenes of Chef Suzanne Barr's recording for the UN Voice of the Food System 24-hour Relay.

# EVENTS & OUTREACH

## Summit 2020

After a challenging year, AFI's annual cornerstone event, the Arrell Food Summit, provided the sector, the community, and the 300+ participants with hope and vision for thriving into the future. The annual event attracts agri-food experts from across Canada, including food producers and processors, government and corporate leaders, entrepreneurs, and academics. By bringing these diverse actors together, AFI is able to help each participant grasp their own potential and even responsibility in dealing with system-wide challenges.



**Ertharin Cousin, former Executive Director of the United Nations World Food Programme speaks with Dr. Carmen Ho, Assistant Professor in Political Science at U of G.**

### A Global Conversation

Where geography might once have created limitations, the Arrell Food Summit 2020 took advantage of the remote format the pandemic required to bring many world-renowned thought leaders to our attendees' screens over three days. Keynote speakers Ertharin Cousin, former Executive Director of the United Nations World Food Programme, and Dr. Agnes Kalibata, UN Secretary-General's Special Envoy to the 2021 Food Systems Summit, brought participants into international conversations happening on food systems, and provided insight on how to collaborate across borders.

**“Congratulations to your Arrell Food Institute team for a very successful conference. Thanks to the many speakers who added significantly to the ongoing dialogue. You are making a difference!”**

**– Senator Rob Black,  
Senate of Canada**

### The Big Challenges

AFI facilitated an opportunity for attendees to learn and engage with important conversations shaping community food security and food system health through panels on BIPOC participation in the food system as well as agriculture's potential to mitigate climate change.

### Federal Food Waste Announcement

Food waste is a \$50 billion problem in Canada. The honourable Minister Marie-Claude Bibeau joined the Summit to announce the launch of the Canadian government's Food Waste Reduction Challenge, intended to support innovative solutions to address food waste in Canada, as well as chat about a federal vision for building better food systems.

### IN THE MEDIA

- Journalists attended from *National Post* and *Macleans*.
- Minister Bibeau's announcement of the federal government's Food Waste Reduction Challenge was covered by the *Financial Post*.



**“You, the attendees and speakers, are the ingredients that will make food systems thrive beyond 2020!”**  
 – Dr. Evan Fraser



AFI Summit Speakers called in from Nunavut to Ethiopia.



**300+**

attendees

**86%**

rated the event  
good or excellent

**92%**

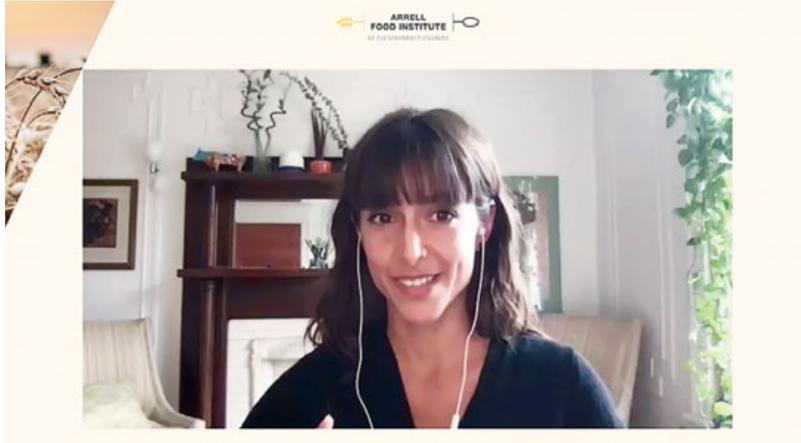
said they would attend  
again in 2021

**750,000+**

people reached  
by content or media  
coverage

# EVENTS & OUTREACH

## Summit 2020



**Gabrielle Bastien of Regeneration Canada joined the Green Recovery session.**

### The Business Lens

The Summit was an opportunity to hear the lived reality of the business leaders who steered their organizations through a disrupted food system in the first months of the pandemic. The speakers, who represented food processing and food retail sectors, shared how prioritizing community connection made their employees and businesses more resilient to the pandemic's devastation on global food networks.

### Youth Leadership

Arrell Scholars were key contributors to the virtual content of the AFI Summit in November 2020. A podcast series by senior AFI Scholars in conversation with emerging leaders was offered as a part of on-demand material. These interviews captured the challenges and impacts of COVID-19 across the food industry. A rich library of on-demand materials provided insight on transformative food work attendees could absorb at their own pace.

### MOST POPULAR SUMMIT SESSIONS:

- In Conversation with Dr. Agnes Kalibata
- BIPOC Perspectives in Food Production
- The Politics of Hunger with Ertharin Cousin



**Dishes enjoyed at previous Arrell Food Summits.**

### PUTTING FUN IN FOOD

While the meals served during past Summits have intended to continue the conversation onto the plate, this year's event got creative by including chefs, instructors, and recipes in the line-up so participants could recreate some of that connection at home.



## EVENTS & OUTREACH

# AFI Forums and Other Events

At the start of the pandemic, AFI was quick to embrace a new model for facilitating vital conversations that will transform agri-food, enhance communities, and enrich global networks. That creativity and conviction continued into the fall and 2021 with events that brought together new and important participants for pushing these agendas.



### UN Voice of the Food System 24-hour Relay

In October 2020, AFI was one of 24 organizations from around the world, including CGIAR, WWF and the Future Food Institute, selected to host a 24-hour relay to kick-off the United Nations' countdown to the UN Food Systems Summit. In collaboration with internationally recognized partners including the

Future Food Institute, AFI took the opportunity to showcase innovation in food waste solutions, including research conducted by Arrell Scholars, a demonstration by world-renowned chef Suzanne Barr, and strategies suggested by Indigenous and agri-food leaders, including Maple Leaf Food's Michael McCain.

**The #VoicesofFoodSystems campaign reached over 2.5 million people and marked the beginning of several collaborations between AFI and the UN Food System Summit.**



**Keynote speaker Teemu Salmi of Stora Enso.**

### Arrell Food Business and Technology Forum

Transforming food and agriculture, as well as building prosperous international commerce, often requires partnership and collaboration between industry, government, and academia. The Arrell Food Business Technology Forum created an intersection point for these actors and their unique expertise on emerging innovation trends. In May 2021, Drs. Corradini and Somogyi with event lead Muriel O'Doherty, curated panels of business leaders and scientists from Finland, Canada and the United States to reveal the potential of smart retailing to the business-focused community.

The successful event acted as a preview for a full-day event to be hosted in 2022 and initiated new partnerships for future collaborations for AFI researchers.

## EVENTS & OUTREACH

# Outreach

### New Website

In late January 2021, AFI launched a refreshed web presence, continuing to prioritize providing the best in agri-food insights while updating the look, navigation, accessibility, and function.

The new site refocused institute activities and expertise around the three themes of work carried out at AFI: transforming food, enhancing communities, and enriching food networks. It also made university expertise more visible and easier to sort by theme and topic of study, further emphasizing the University of Guelph as Canada's Food University.

Since the launch, the site has already attracted increased traffic from around the world and the AFI team continues to develop events and content that will reach new audiences through the digital landscape.

### Spotlights

In 2021 AFI wrapped up the first phase of the Spotlights, a knowledge mobilization partnership delivering state-of-the-science insight to the agri-food community and advancing knowledge on how to transform agri-food, enhance communities and enrich global networks.

The seven areas of focus, including ecosystem services, food safety and school food programs, were explored through a suite of accessible products including a report, infographics, op-eds and videos. Scientific leads from across the university worked with industry, government, and NGO leaders to address blockages to progress and highlight opportunities for intervention to advance Canadian agri-food. The Spotlights have been shared with agri-food leaders across the country and attracted nearly 5000 web visitors and growing.

### Food Day Canada

While Canada's agri-food community suffered the loss of the university's food laureate Anita Stewart in the fall of 2020, the academic, hospitality, and farming sectors have continued to celebrate Anita's legacy through Food Day Canada celebrations. Arrell Food Institute is a partner in bringing new food activities to the university by working with the newly opened Anita Stewart Memorial Food Laboratory, a kitchen teaching space equipped to record and stream cooking demonstrations. AFI was also an important partner in sharing the University of Guelph's agri-food contributions as part of the lead up to Food Day Canada, creating a digital home for Canada's Food University stories.



**A University of Guelph student tends to pepper plants that will eventually supply hot sauce made on-site.**

## Highlights

- Dr. Corradini continues to distribute **STEM training kits** to underserved or remote populations during the pandemic, ensuring more future scientists have access to the means to discover and explore the field. The materials included in the self-contained kit focus on food processing, food biopolymers, surface tension, food additives and food powders, and are being and deployed to 250 participants (2021-2022).
- The **Coastal Routes** team, led by Dr. Loring, continues to provide high quality insight into the challenges faced by fisheries and those who depend upon them. The Social FIShtancing podcast has over 5,000 downloads, has been nominated for awards, and has been picked up by several podcasting aggregators for further distribution.
- As in years past, AFI played an important part in the University of Guelph's presence at the **Royal Agricultural Winter Fair**. While the 2020 event could not be held in person, an online platform and related events brought visitors to the university's digital space and helped the public see the work being conducted to ensure a safe, secure and sustainable food supply.
- Dr. Evan Fraser served as an expert for the **National Research Council's** "horizons scanning" exercise that resulted in a white paper on major challenges facing Canada over the next generation.

### FOOD PRICE REPORT

In December 2020 the *11th Annual Food Price Report*, co-authored by Dr Simon Somogyi, predicted a 5% rise in Canadian food prices. This hit the front page of the *National Post*, and the message reached 587 million people through multiple interviews, articles, and social media.

### IMPACT

Policy insight sought from AFI Chairs and Scholars on the emerging topic of cellular agriculture (also known as lab-grown animal products) and school food nutrition.



# 40%

growth in website views  
this year

# 17

op-eds, well beyond  
yearly targets

# 30k

followers of AFI and  
team members on  
social media

# 105

media hits

### MOST POPULAR WEB PAGES

Arrell Food Innovation Award; Arrell Scholars; Arrell Food Summit & Events; collectively reaching towards 20,000 pageviews



## **AFI PEOPLE**

### **Director**

**Evan Fraser**

### **Chairs**

**Maria Corradini**, Arrell Chair in Food Quality

**Philip Loring**, Arrell Chair in Food, Policy and Society

**Simon Somogyi**, Arrell Chair in the Business of Food

### **Staff**

**Nina Berry**, Financial Officer

**Maggie McCormick**, Communications Manager

**Muriel O'Doherty**, Events Manager

**Alice Raine**, Director of Operations

**Jeanna Rex**, Education Coordinator

**Sweni Sabaratnam**, Administrative Officer

### **Scholars**

**Abdul-Rahim Abdulai**

**Katherine Eckert**

**Fatemeh Fazel**

**Emily Kaliel**

**Katya Kudashkina**

**Jessica Castellanos Labarcena**

**Guilherme Madureira**

**Andrew Nixon**

**Roshan Pudasaini**

**Sugandha Raj**

**Sujani Rathnayake**

**Sabrina Rondeau**

**Amberley Ruetz**

**Maleeka Singh**

**Karthika Sriskantharajah**

**Regan Zink**

### **Food Fellows**

**Robert Hanner**

**Danil Kerimi**

**David McInnes**

**Silvia Sarapura-Escobar**

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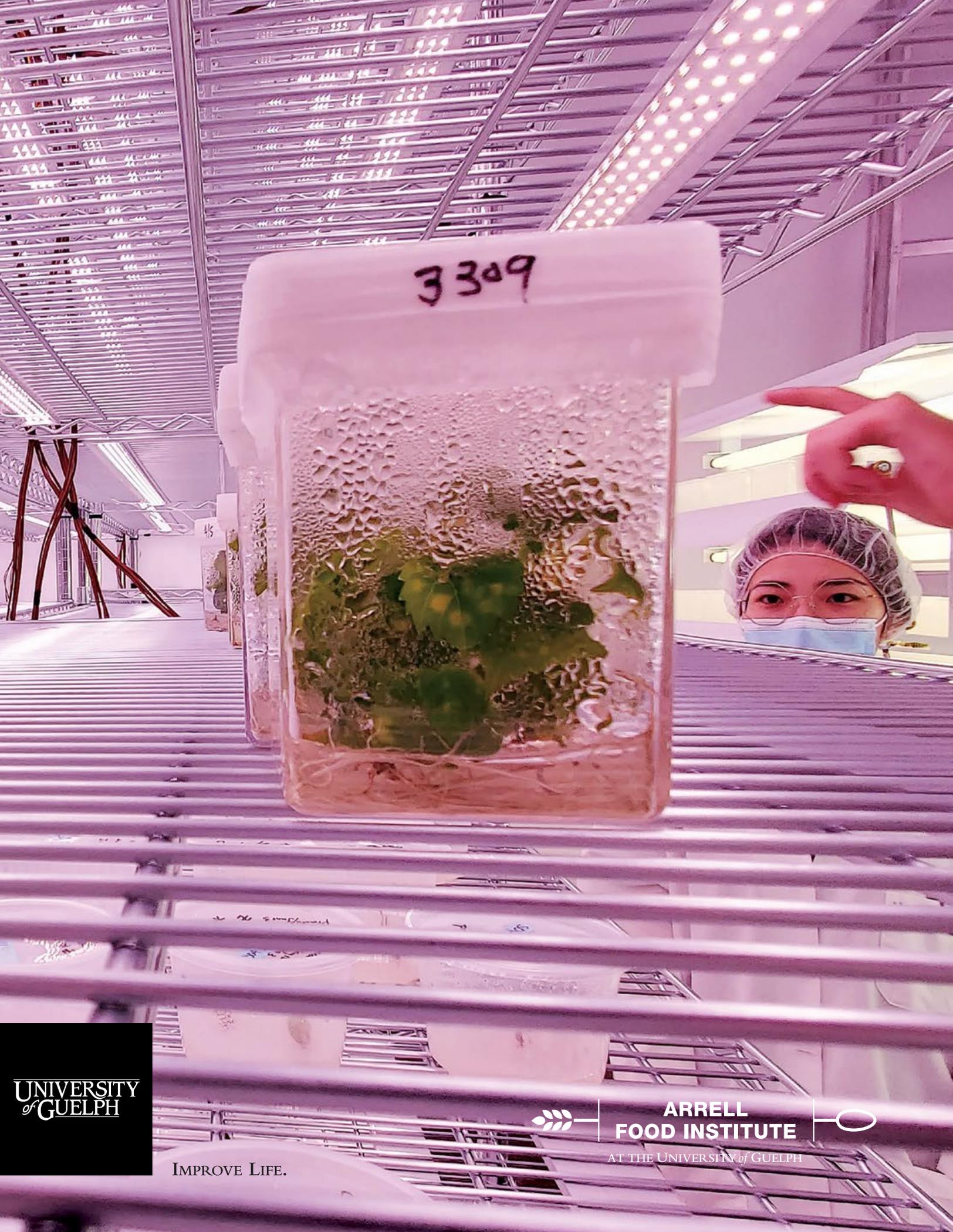
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