



WORKSHOP SUMMARY REPORT:

Scaling Circular Food Systems in Canada

2022

ACKNOWLEDGEMENTS

The Scaling Circular Food Systems in Canada workshop was co-hosted by



Supporting documents for the workshop include the [Discussion Paper](#) and the [Circular Food Solutions in Canada: A Coast to Coast Landscape Scan](#). All video recordings for the workshop can be found [here](#).

The National Zero Waste Council is a collaborative, leadership initiative of Metro Vancouver that brings together business, government and the community to advance waste prevention and the circular economy in Canada. Food loss and waste continues to be a key focus area for the Council. This workshop builds on the Council's [A Food Loss and Waste Strategy for Canada](#).

This workshop is part of [Circular Economy Leadership Canada's CE Solution Series](#) and the [Circular Food Systems](#) work stream.

Background

On April 28, 2022, the [National Zero Waste Council](#) - in collaboration with [Circular Economy Leadership Canada](#), [Save-On-Foods](#), Guelph-Wellington's [Our Food Future](#) and the [Vancouver Economic Commission](#) - co-hosted a virtual workshop that brought together more than 150 thought leaders, practitioners and industry experts from across Canada to explore the current efforts, opportunities and challenges for accelerating and scaling the transition to a more circular food system in Canada.

There were four key objectives for the workshop:

1. Share information from recent research on the current state of the circular food system in Canada.
2. Explore key barriers and opportunities for advancing a more circular food system in Canada, for communities of all shapes and sizes and from coast to coast to coast.
3. Ground-truth key actions that shift current linear practices to more circular approaches and business models.
4. Identify points of connection and potential collaboration opportunities for participants as they look to ramp up circular solutions, with an eye to identifying commonalities and next steps for action.

Keynote presenters, responding speakers and case study presenters highlighted the current context and state of Canada's linear food system, offered a vision for what a circular food system could look like, and provided examples of on-the-ground circular solutions. Two breakout sessions allowed participants to:

- Validate key issues, challenges and opportunities facing those involved in the current food system, from producers through to consumers, and
- Confirm and prioritize focus areas for future action.


This report summarizes the main points presented by the speakers, as well as the main takeaways and themes that emerged in the breakout group discussions.

Agenda

See the [Appendix](#) for the full agenda, which is summarized below:

- 9:00 **Welcome** and introductions
- 9:15 **Keynote** on the current food system in Canada, presented by Dr. Sylvain Charlebois, with reflections provided by three industry leaders
- 9:40 **Keynote** on the vision for a circular food system in Canada, presented by Dr. Tammara Soma
- 9:50 **Breakout discussion** on key issues emerging from the keynotes and discussion paper
- 10:50 **Spark talks** from five industry leaders on examples of work being done in their organizations that exemplifies cross-cutting themes
- 11:20 **Breakout discussion** to prioritize focus areas for future action
- 12:20 **Summary** of next steps and wrap-up

Plenary session

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|---|--|
| Presenter: | Dr. Sylvain Charlebois, Professor and Director of Agri-Food Analytics Lab at Dalhousie University |
| Topic: | A profile of the current linear food value chain in Canada, including key trends and drivers, as it relates to moving to a more circular system. |
|  | View a recording of Dr. Sylvain Charlebois' presentation. |

The current food system in Canada

In the spring of 2022, **food inflation** in grocery stores was up 8.7 per cent, leaving many consumers struggling to stretch their budgets. While the just-in-time model has long dominated the food industry – getting the best prices possible and getting products as quickly as possible to stores and consumers – the supply-chain issues that emerged with COVID-19 challenged this paradigm and revealed its limitations. We see “shelf-flation” – waste at retail triggered by supply chain issues. Consumers have noticed that products are not as fresh and there is lots of waste in the system and homes. We need to change the way we think about food systems and to manage resources more effectively. That need for efficiency could push the industry to change behaviour and evolve in new directions.

Although **partnerships** do not always come naturally in the food business, in a circular economy, partnerships and collaboration are key. No one organization can do this on its own: companies must work together to find solutions to reduce waste. There’s a growing emphasis on vertical co-ordination in the industry as stakeholders seek ways to be more efficient and sustainable.

In the end, consumers are the most important player in the **supply chain** and they need to be on board with the goals of shifting to a circular economy. We cannot accomplish ambitious goals without market currency. Traceability and accountability play a role here, and **innovations** like QR codes can be used to capture and share data to show the consumer the history and traceability of their food. QR codes give industry a powerful tool to make things more transparent, which can help build the market currency that the circular economy agenda needs to be successful.

Reflections on the current food system in Canada

The following three industry leaders reflected on Dr. Charlebois's presentation:

- Julie Dickson, Managing Director, Public Affairs and Corporate Responsibility, Save-On-Foods
- Tim Faveri, Vice President, Sustainability and Shared Values, Maple Leaf Foods
- Jason Baillargeon, Director for Agriculture, Agriculture and Agri-food Canada



View a recording of the three responses to Sylvain's opening remarks.

The three speakers affirmed that innovation can only happen through partnerships, and that governments, industry and competitors need to use their shared resources for the common good. This is already happening for food waste and packaging, as we can see in successful partnerships between food manufacturers and retailers, as well as partnerships between farmers and manufacturers that encourage regenerative agricultural practices.

The three also talked about the economic impact of food waste, agreeing that Canada's food system needs to encourage upcycling and other food diversion opportunities that can be monetized to generate jobs, cost savings and new revenues. Food loss is a function of inefficiency within an organization or system. Discussions need to showcase that beyond the environmental benefits that accrue from reducing food loss, there are also economic, social and other benefits that can be achieved.

Presenting a vision for a circular food system in Canada

Presenter: Dr. Tammara Soma, Research Director and Co-Founder of the Food Systems Lab and Assistant Professor of the School of Resource and Environmental Management at Simon Fraser University

Topic: What a values-based circular food system might look like.



View a recording of Dr. Tammara Soma's presentation.

A traditional food system model looks at the systems and infrastructure across the value chain needed for food production, processing, packaging, distribution, consumption and disposal. Yet our food system is also about relationships – about considering the responsibilities and obligations we have to other people, the land and natural environment, and animals. These relationships are often hidden behind traditional supply chain depictions. We need to ask whether these relationships within and across sectors are based on good relations.

We currently have a two-tiered food system. Some people have ready access to good food while others have to rely on the charitable food infrastructure that accepts and redistributes food donations.

As we move to a circular system, we do not want to replicate this inequity. How can we dream differently and build better?

We need a new approach that repairs the broken relationships that are at the root of wastefulness, exploitation and injustice. We need an approach that connects agents across the sector and challenges or transforms the current two-tiered system.

Figure 1. Diagram adapted from the EPA Food Recovery Hierarchy

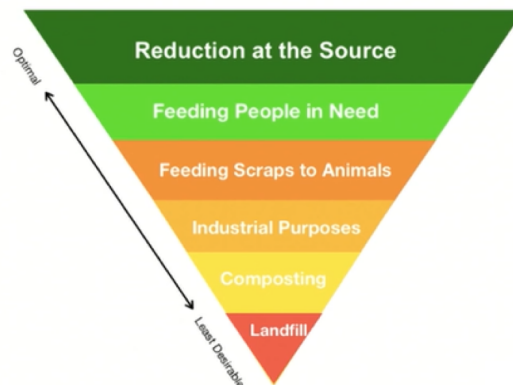




Figure 2. Diagram from Dr. Tammara Soma's Keynote: Presenting a Vision for a Circular Food System in Canada

The closed-loop food system depicted above is grounded in six key areas:

- **Economic justice:** We've been too focused on connecting the global supply chain rather than connecting the missing infrastructure of the small and medium-sized agri-food companies. We also need to adopt a right-to-food approach where a living wage is the norm rather than the exception.
- **Reconciliation and decolonization:** We need to recognize that colonization has harmed Indigenous food sovereignty and local food systems. We need to respect and learn from Indigenous teachings that foster circularity, such as the seven generations philosophy. Food is valued for its relationships and its medicines: it is not a commodity.
- **Environmental sustainability:** We need to take into account scale to embrace the deep sustainability that respects biodiversity and nature-based solutions.
- **Education:** We need to increase food literacy and appreciation – to celebrate the work of growers, fishers, harvesters and educators. We need to share skills to grow, process and compost food. Food education should be seen as crucial education, celebrating the cultural geniuses of diverse nations and their lessons.
- **Health:** We need a holistic approach to health that encompasses people, plants and animals. While we can upcycle or transform food into something else, we must always ask whether the innovation is nutritious, healthful and fosters well-being.
- **Systems thinking:** This is easy to say, but hard to do. It's not just about connecting silos. It's about understanding the positive and negative spillover effects of decisions, of how policies in one area might affect others. We need to examine feedback loops, trade-offs and externalities.

Spark Talks

Five presenters took the virtual stage to talk about the work being done in their organizations that exemplifies cross-cutting themes:

- **Regenerative agriculture and circular production:** Antonious Petro, Interim Executive Director of Regeneration Canada
- **Infrastructure and localized manufacturing:** Stuart Lilley, CEO & CVO of ReFeed Canada
- **Business model innovation:** Ben Wiper, Founder & CEO of ³F Waste Recovery
- **Technology innovation:** Jessica Regan, CEO & Co-Founder of FoodMesh
- **Social equity and supply chain resiliency:** Shianne McKay, Senior Project Manager, Centre for Indigenous Environmental Resources



Head to the [Workshop Recordings](#) page to view these talks, which are also summarized below.

Regenerative agriculture and circular production

- **Regeneration Canada** raises awareness of regenerative agricultural practices, builds networks and conducts educational activities.
- As a society we will never achieve our economic, social, environmental and justice goals without regenerating soils, farms and ecosystems.
- The circularity of our food system depends on our capacity to regenerate.
- The shift from extraction to regeneration cannot be linear. Regenerative agriculture by definition and in practice is a circular system.

Infrastructure and localized manufacturing

- **ReFeed Farms** works with the food industry to collect unused food and food waste, which it then redirects to community partners, first to feed people and then for use as livestock feed or to process through ReFeed's vertical

worm farm to turn waste into nutrient-rich soil used in organic farms and to strengthen the growing cycle.

- The focus is on closing the loop by returning nutrients to the soil on an industrial scale.
- ReFeed also works with local dairy farms to centrifuge manure cakes to access phosphorous and nitrogen, thereby turning a by-product problem into an opportunity.

Business model innovation

- **³F Waste Recovery** takes a by-product-first approach to waste from fisheries, farms and forests to create 10 times more profit from seafood, lumber or meat with no additional pressure on the resource.
- The company currently processes fisheries waste into high-value ingredients used in pet treats, cosmetics and pharmaceuticals.



Technology innovation

- **FoodMesh** has a food recovery platform/ wholesale marketplace that matches edible surplus food with local charities and to upcycling opportunities.
- They work with grocery stores and retailers to manage the network and ensure unsellable food is diverted quickly.
- Data is essential: you can't change what you don't measure. There are significant data gaps in this space and the company is seeking ways to collect and monitor meaningful data.

Social equity and supply chain resiliency

- The **Centre for Indigenous Resources** ran a pilot project at several remote Indigenous communities in Manitoba, based on work that had been done in a northern food sovereignty report.
- Partners arranged for the purchase of gardening equipment and a flash freezer so communities could grow gardens and preserve harvested food.
- Future plans include modifying a shipping container to be used as a dressing station for hunted meat.

Breakout discussions

Participants gathered in 13 facilitated breakout groups to discuss and validate the key issues, challenges and opportunities presented in the opening remarks, research and discussion paper. Facilitators led participants through a discussion of three overarching questions; the conversations that ensued were lively and far-ranging, grounded in participants' diverse experiences of Canada's food system.

Breakout A

Question 1:
Based on what you heard during the first round of presentations, what resonated most with you about a circular food system in Canada and why?

Answers to this question have been grouped into the main themes shown below.

We need to bring values into the value chain

Participants felt that Dr. Soma's framework humanized and deepened their understanding of Canada's food system. We need to challenge the status quo to get to the core issues and come up with the innovative solutions that will move us from a linear to a circular food system.

Food interconnects with everything, and work in one dimension of the food system impacts all other dimensions. The closed loop food system diagram is values-based and gets to the heart of the transformations needed. It asks us to consider how relationships might be different in a circular economy. We can't just focus on reducing waste – we need a more holistic and comprehensive vision. This can be achieved when we bring values into the supply chain and integrate them into procurement practices and policies. Keeping values front and centre is also important for

avoiding unintended consequences.

Dr. Soma's emphasis on the importance of social impacts resonated with many participants, who felt that current approaches often overlook social impacts in favour of environmental and economic benefits. Similarly, her framework provided a way to think about the impact of food systems, not just on the climate crisis, but on the biodiversity and pollution crises.

Consumers have to care about circularity

Circularity has to matter to consumers or this work is purely conceptual. We can do this by raising awareness among the general public about life-cycle emissions and impacts associated with purchase decisions. We also need to understand what might motivate customers to gravitate to circular solutions. These education programs can begin in school. Participants noted that marketing "ugly food" has seen success and consumer uptake as it has changed perceptions.

Circular Food Leadership in Action

LOOP Mission upcycles food waste into in-demand food and products

Montreal-based LOOP Mission uses "ugly" fruits and vegetables that don't have the shape, size or shelf life to be distributed and sold as the basis for their cold-pressed juices. They also brew beer using day-old bread, and distill gin from potato cuttings from a potato chip factory. Finally, they make soaps from rejected cooking oil.

Small and mid-sized producers can have a big impact

Small and mid-sized enterprises (SMEs) and producers could be the heroes of the system: taken together, they are a powerful force for achieving a circular food system. Participants pointed to examples of success during the COVID-19 pandemic, with SMEs helping communities and families survive. Yet so much of our focus is on large-scale corporations and food banks. An investment in smaller operators is a way to future-proof the system. Cumulatively, all the SMEs together could have a greater and more timely impact than the bigger players as they tend to have greater flexibility than large corporations to pivot and implement new practices and enhance the resiliency of the food system and supply chains.

Our siloed food systems prevent collaboration

Collaboration is essential and we will only achieve a circular food system when there is collaboration across the value chain. Yet the current food system is fragmented and siloed. How can we make people more aware of the opportunities and conversations that need to happen across the supply chain? Innovation can occur when we have more opportunities to learn about organizations trying new things, which requires organizations and businesses to be vulnerable and open about their attempts. Partnerships can be difficult to achieve in the private sector – we need pre-competitive collaboration spaces for true innovation to flourish.

Just-in-time versus just-in-case model

A just-in-time paradigm has long dominated the industry. In this model, retailers or food manufacturers deliberately keep inventory levels low. However, COVID-19 exposed the fragility of this model, as did the supply chain issues that challenged BC's Lower Mainland when severe storms in November 2021 cut off rail and road access. A just-in-case model takes a different approach by stocking up on inventory as a way to manage risk. Adopting elements of this model requires a shift in perspective and re-evaluating the importance of local supply chains. This intersects with issues of land and land use and the importance of being intentional in growing nutritious and affordable food.

The need for data

Participants agreed that benchmarking is needed to make the shift to a new system. The first step is to measure food waste, although this is a challenging endeavour. Most food waste data is being collected privately; major food distribution companies may have a lot of data but do not want to share it. There is also a lack of harmonized data collection – there are different definitions being used to identify food that is edible or non-edible, or whether certain end-of-life destinations contribute to re-defining what is considered food waste. There are also challenges with disaggregating the data we have into categories that make it more valuable to SMEs.

Economic incentives are important

Money is often the driving force for companies and public policies. We can unlock the economic value in food waste, but we need to shift the narrative and terminology from “food waste” to “wasted resource.” From a corporate perspective, tackling food waste is also a solid opportunity to make progress on environmental, social and governance objectives.

The scale of the challenge

Participants returned repeatedly to the statistic that only six per cent of Canada’s food system could be considered circular. This points to the considerable progress that can be made and the “low-hanging fruit” that offers opportunities for meaningful change. Our country has specific challenges of geography. How do we “Canadianize” circularity given our vast geographical size? How do we scale up from local and regional successes? We also face challenges of time. How quickly can we adopt circularity? The scale of the challenge is immense and there’s a need for urgent action now. Finally, participants noted the need to resist simplicity as we move to smarter systems that emphasize the interconnected elements of the food system. We can’t think “mono” – we need to think “diversity.”

Local supply chains matter

Citing the example of BC’s Lower Mainland being cut off from the rest of Canada by road and rail routes as a result of the storms in November 2021, participants talked about the need to keep food as local possible. Grocery chains have a lot of power to change the supply chain. However, the downside is that local food can be more expensive. While some customers may be willing to pay slightly more for a comparatively “better” product, this is not always an option for all.

Question 2A:

Were there key opportunities and/or challenges flagged in the discussion paper and/or opening presentations that align with your own knowledge and experiences?

BARRIERS AND CHALLENGES

In the breakout session, participants discussed some of the barriers and challenges that are preventing the development of a circular food system in Canada and contributing to food waste. These barriers are grouped by theme below.

Measuring food loss is hard

Many companies don’t see that they have a problem with food loss or don’t see the benefit of investing the time required to make changes. We need to measure food loss and waste as part of the business case for investment.

Small producers face challenging profit margins

Small farming operations have small profit margins and have livelihood priorities. How can we help these small producers manage or reduce waste without burdening them with extra costs and complexities? Farmers who provide regenerative agriculture services are also not being compensated for doing so as there is no opportunity to include these added costs in the prices of the commodities they sell. Many farmers have good intentions but do not have the capital or bandwidth to focus on circularity and greater sustainability efforts.

Our patchwork approach limits us

Different municipalities manage waste differently. Some communities have programs and vendors that deal with different kinds of waste, while others do not.

Existing infrastructure perpetuates “business as usual”

Large-scale infrastructure investments in hauling and composting may prevent the development of alternative circular solutions, and low tipping fees are a key driver of food loss and waste.

Circular Food Leadership in Action

Guelph’s Our Food Future is a success story worth emulating

Guelph-Wellington is creating Canada’s first circular food economy. **Our Food Future** is a catalyst for change by promoting collaborations that involve the entire community. Nine pathfinder projects are creating tools, resources and funding channels for business; educating the community on the value of waste; and increasing the circularity of carbon credits in the system. Funding supports businesses in the transition to circularity, and programs encourage organizations and community groups to test and scale innovative circular good economy ideas.

We are working with limited and inconsistent data

Industry stakeholders do not always want to share data, which means governments and organizations have limited data for making decisions or setting policies. The lack of consistent data standards also makes it challenging to both collect and disaggregate data in useful ways – which in turn makes it hard to set benchmarks for establishing targets and measuring progress. We need more funding to delve into the data we do have.

Consumers are key, but it is hard to change behaviour

Regenerative agriculture and the circular economy can be abstract concepts for consumers. How can we communicate these ideas to consumers in relatable ways? Consumers do not always understand the cumulative impact of their seemingly insignificant daily choices.

Change management is difficult

This is particularly true in a food system with so many actors and distributed responsibilities. Behaviour change is needed across the supply chain, including the manufacturing industry, retail and hospitality sectors. It’s hard to identify what actions to take because we just don’t have the data. One approach is to start by establishing a good process, rather than focusing on a solution. We can improve over time, but the process could be as important as the destination.

OPPORTUNITIES

Participants discussed some of the opportunities raised in the discussion paper and presentations that align with their own experiences. These opportunities are grouped by theme below.

Local solutions for local problems

Smaller associations and networks tend to be more effective and generate better discussions that lead to good outcomes. COVID-19 exposed the fragility of large-scale food systems and the need to develop resilient domestic supply chains. We have an opportunity to pursue the possibilities of regenerative agriculture and support local farmers, and change the nature of our relationships with international supply chains and associated infrastructure.

We can learn from other industries

We've seen big changes in other industries, like the automotive sector's shift to electric vehicles. What lessons can we learn about how stakeholders set the stage for change and laid out a path to get there? There could be opportunities to use funding to promote innovation in land use and production, in the same way that funding has been used to support the cleantech sector.

Education shifts behaviour

We know that education can shift behaviour. Education is everyone's responsibility and offers a way to empower local communities and change our cultural values around food over time.

Procurement is a powerful force

Procurement has the potential to support the shift to a circular economy. Institutional procurement policies can set values around buying fair trade products, organic or sustainable products, and local food. Procurement policies need to weigh these factors rather than focusing solely on cost. Food manufacturers like Maple Leaf also play a role: they can stipulate that their suppliers must follow specific practices to work with them, giving Maple Leaf influence over farmers' practices.

Circular Food Leadership in Action

Feed BC brings local food to health-care facilities

Through Feed BC, British Columbia's Ministry of Agriculture and Food and the Ministry of Health are aiming to increase the purchase of BC-produced food for the province's health authorities. Started in 2018/19, after only one year there was an increase of \$3.5 million in purchases of BC-produced or BC-processed food, representing 30.8% of health authority expenditures, up from 27.3% in the first year.

The circular economy offers an opportunity for reconciliation

The transition to Indigenous control of resources and processes is a positive move toward circularity. New Indigenous businesses are more likely to set up processes in ways that account for waste. Settlers and newcomers can learn a lot about local food systems and resilient food practices from local Indigenous peoples. This education will also serve to improve understanding and appreciation for Indigenous cultures.

We can leverage learnings from A Food Policy for Canada

The work the federal government is doing with **A Food Policy for Canada** is a good start. The work coming out of those working groups could help the provinces analyze what's happening in a comparable way.

Circularity can address the affordability barrier

The circular economy can address the affordability barrier by using end-of-life waste and not solely relying on expensive raw materials for primary inputs. That industrial symbiosis can lead to new business models that were otherwise ignored in a linear economy. Making the very most out of available food and rejecting the conventional practice of accepting “shrinkage” as a cost of business will contribute to cost savings and efficiencies, which should help bring down the cost of food.

Question 2B: Was anything critical missed in the information you've heard so far?

Participants were asked to reflect if there were any topics that had not been touched on in the presentations, breakout conversations or discussion paper. The topics they identified point to potential directions for future actions, research or next steps.

Participants noted that the following topics could be explored further:

- The tools that are currently available to help measure food waste
- Alternative farm-direct food channels, such as community-supported agriculture
- Food sovereignty and governance
- Successful strategies to prompt behaviour change
- How Canada's licensing, quotas and subsidy regimes create barriers to innovative practices

Breakout B

Question 3:

What are the key actions we need to advance a more circular food system in Canada? What existing efforts should these actions align with?

Participants joined breakout sessions of their choice to identify the actions and next steps needed, in seven main categories, to advance a circular food system in Canada. The actions they proposed are summarized below.

Actions to advance collaboration models and systems thinking

- Develop shared indicators across the social, health and economic components of food systems so we can work towards common objectives. This will also require being more transparent with data.
- Invest in virtual and physical platforms that allow direct connections between consumers and supply chain actors.
- Leverage e-commerce platforms to support business-to-business and business-to-consumer innovations.
- Form regional coalitions to support environmental, economic and social outcomes through procurement.
- Support the development of regional hubs that connect organizations to identify opportunities to upcycle food waste and connect vendors to people.

Good practices:

- **Susgrainable** offers circular economy workshops to high schools that include a fundraising model to add upcycled food companies to school food offerings. The organization developed the workshop and then partnered with students at UBC Sauder School of Business who helped develop it further.
- **Sandown Centre for Regenerative Agriculture** on Vancouver Island is bringing together seven farmers in its Farmpreneur program who are sharing amenities, learning how to farm regeneratively and collaborating with researchers from the University of Victoria in biology and soil science.

Actions needed to support behaviour shifts

- Measure behaviour change so we can understand the impact of specific initiatives and can develop and implement data- and evidence-based interventions.
- Encourage senior managers in businesses to champion the culture shifts needed to make this a reality.
- Recognize that community organizations – rather than governments – should be leaders in this field.

Good practices:

- The [York Region Ontario Food Collaborative](#) is using culturally appropriate language to promote behaviour change and reduce food waste at the consumer level.
- The National Zero Waste Council's [Love Food Hate Waste](#) initiative offers simple tips to help Canadians make the most of their food and reduce waste.

Actions needed to improve data and information

- Develop a consistent platform that businesses can report into by segment to overcome the challenges of the current system where data is inconsistent and fragmented.
- Measure the true costs of food recovery for non-profits.
- Recognize that farms and distributors may be unwilling to share data if doing so is seen as a threat to their competitive advantage.

Good practices:

- The City of Toronto is committed to reducing greenhouse gas emissions associated with the food it procures by 25 per cent relative to 2015. This will require collecting data on greenhouse gas emissions calculations, which will be incorporated into procurement decisions for food distributors.
- Barcodes could be used to capture nutrient data, weight and other useful information.

Actions needed to advance technology and innovation

- Develop a clear picture of the supply chain so we can implement new technology solutions.
- Develop technologies that support food waste prevention rather than upcycling.
- Align investment in applied research, help suppliers create new technology and ensure innovators are using good science to inform decisions.

Good practices:

- Canada's **Agricultural Clean Technologies Program** offers funding through both a research and innovation stream and adoption stream to promote the development and implementation of clean technology to support sustainable growth in Canada's agriculture and agri-food sector.
- **Recyc-Quebec** launched an agriculture as infrastructure project for food banks and funded up to 70 per cent of food in circulation for pilots at food relief organizations.

Actions needed to develop supportive policy and regulation

- Recognize that developing a singular food waste regulation would be impossible given that food waste falls under so many different regulatory jurisdictions and is managed by so many different parties.
- Remove buying licences and quotas.
- Harmonize and strengthen extended producer responsibility programs across sectors nationally.
- Establish a working group to represent all government levels and co-ordinate efforts.
- Consider how low carbon policies could provide one avenue to harmonize existing policy efforts, while being aware of potential unintended negative externalities that may arise.

Good practices:

- Iceland's online live auction market and individual transferrable quota system has enabled small fishers and producers to thrive. Harvesters have to provide very specific information about how fish was harvested, which has shifted away from gillnets to longline and handline. All bycatch must be kept and it is now used.

Actions needed to advance critical infrastructure

- Strengthen and scale-up local food infrastructure, such as community gardens and modular farming for urban and rural use.
- Recognize that more robust infrastructure in rural communities may require greater demands on energy and other inputs outside of physical greenhouses or storage.
- Explore the potential of reverse logistics systems, putting infrastructure in place for easy drop off and collection, similar to recycling depots. This could involve adding an extra “reuse stream” to current recycling and composting systems. It could also involve integrated materials exchange platforms so waste management companies can directly repurpose their products.

Good practices:

- **Manucycle** is developing a materials exchange platform that incentivizes circular solutions by monetizing “last leg” products.
- The City of Guelph’s **ReSource Exchange** is a free app that connects businesses who have – or want – extra food, food waste, by-products and coproducts.
- **CubicFarm Systems** has developed modular, automated indoor growing technologies that can be set up (and easily scaled) in rural and urban locations – shortening supply chains and preventing waste.

Actions needed to improve funding and investment options

- Provide funding to help small local farmers get produce into mainstream grocery stores.
- Develop land share programs to enable farmers to use land that isn’t being cultivated by owners.
- Support young farmers interested in agricultural careers with start-up costs.

Good practices:

- BC’s regional district farmland trusts provide financial support to new farmers, including farmland acres for young farmers to work and cultivate.

Next steps

This workshop brought together many businesses, community organizations and government bodies from across Canada that are already engaged, in some way or another, in advancing circular food solutions. The energy and enthusiasm among participants reaffirmed that this workshop was held at the right time, with the right people. From the discussions, it also became apparent that there are areas where further research, dialogue and the development and sharing of specific tools is critical. For example, there needs to be active engagement and support for place-based hubs of circular activity, allowing businesses to test and refine how they can become more symbiotic, and for governments to test enabling policy. There needs to be more research and discussion around food sovereignty and governance. There needs to be opportunities for peer-to-peer learning around existing and emerging tools for food waste measurement and behaviour change strategies.

In 2022-2024, the partnerships that brought this workshop together will be focused on delivering additional research and peer-to-peer learning on the issues and gaps identified in this workshop. It is apparent that there is a strong need to support clusters of place-based circular activity. Further evaluation of how to effectively provide that support will be undertaken, and consideration will be given to identifying pilots. Additional details on these activities will be shared in the late fall or early winter of 2022.

Finally, the most important next steps are for the connections that were made during the workshop to grow in strength and practice, building out a network of circular agents across Canada. In this way, we can start to “bend” what has been linear lines of activity and connect them, close the loop and make the circle.

If you have additional questions, successes to share or suggestions for additional next steps, please contact either:

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Appendix: Workshop agenda

| Start | Item | Format |
|--------------------------------|---|---------|
| 9:00am PDT | Meeting Begins | |
| 9:00- 9:15am 15 mins | <p>Welcome & Introductions: Setting the stage for a productive and collaborative workshop</p> <ul style="list-style-type: none"> ○ Paul Shorthouse, Managing Director, Circular Economy Leadership Canada (CELC) ○ Denise Philippe, Senior Policy Advisor, National Zero Waste Council (NZWC) <p>Opening Context: Why are circular food systems critical to our low-carbon, socially just, and sustainable future? Setting the stage based on recent research / Discussion Paper and learning from Guelph's experience. (10 mins)</p> <ul style="list-style-type: none"> ○ Denise Philippe, Senior Policy Advisor, National Zero Waste Council (NZWC) ○ Barb Swartzentruber, City of Guelph/Our Food Future | Plenary |
| 9:15- 9:40am 25 mins | <p>Current Food System in Canada: Overview & Circular Economy Trends</p> <ul style="list-style-type: none"> • Profile of the current linear food value chain in Canada, including key trends and drivers as it relates to moving to a more circular system, as well as key barriers and challenges. <ul style="list-style-type: none"> ○ Dr. Sylvain Charlebois, Professor, Director, Agri-Food Analytics Lab and Former Dean of the Faculty of Management, Dalhousie University • Reflections <ul style="list-style-type: none"> ○ Julie Dickson, Managing Director, Public Affairs & Corporate Responsibility, Save On Foods ○ Tim Faveri, Vice President, Sustainability & Shared Value, Maple Leaf Foods ○ Jason Baillargeon, Director for Agriculture, Agriculture & Agri-food Canada | Plenary |

| Start | Item | Format |
|------------------------------|---|----------------------------------|
| 9:40-9:50am 10 mins | <p>Presenting a Vision for a Circular Food System in Canada</p> <ul style="list-style-type: none"> ○ Dr. Tammara Soma, Research Director / Co-Founder, Food Systems Lab & Assistant Professor, School of Resource and Environmental Management, Simon Fraser University | Plenary |
| 9:50-10:40am 50 mins | <p>Breakout 1: Interactive Exercise on Circular Food Systems in Canada</p> <ul style="list-style-type: none"> • Participants discuss and validate the key issues, challenges, and opportunities presented in opening remarks, research and discussion paper. | Facilitated Breakout Discussions |
| 10:40-10:50am | Break | |
| 10:50-11:20am 30 mins | <p>Spark talks on specific cross-cutting themes (i.e., climate action, supply chain resiliency, technology and business model innovation, and social equity)</p> <p><u>Regenerative Agriculture & Circular Production</u></p> <ul style="list-style-type: none"> ○ Antonious Petro, Interim Executive Director, Regeneration Canada <p><u>Infrastructure & Localized Manufacturing</u></p> <ul style="list-style-type: none"> ○ Stuart Lilley, CEO & CVO, ReFeed Canada <p><u>Business Model Innovation</u></p> <ul style="list-style-type: none"> ○ Ben Wiper, Founder & CEO, 3F Waste Recovery <p><u>Technology Innovation</u></p> <ul style="list-style-type: none"> ○ Jessica Regan, CEO & Co-Founder, FoodMesh <p><u>Social Equity & Supply Chain Resiliency</u></p> <ul style="list-style-type: none"> ○ Shianne McKay, Senior Project Manager, Centre for Indigenous Environmental Resources (CIER) | Plenary |
| 11:20-12:20pm 60 mins | <p>Breakout 2: Interactive Exercise to Prioritize Focus Areas for Future Action</p> <ul style="list-style-type: none"> • Breakouts as selected by registrants: <ul style="list-style-type: none"> ○ Advancing collaboration models and systems thinking ○ Behaviour shifts ○ Improved data and information ○ Advancing technology and innovation ○ Supportive policy and regulation ○ Advancing critical infrastructure ○ Improved funding and investment options | Facilitated Breakout Discussions |
| 12:20pm-12:30pm | Summary of next steps and wrap-up | Plenary |
| 12:30pm | Meeting Adjourned | |

