

# Bioenterprise Canada's Food & Agri-Tech Engine

## Highlights and achievements 2022

Celebrating 20 years of innovation  
and commercialization success





# Overview

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## A message from our CEO

# Setting Canada up for ag innovation success

It's hard to believe it's been 20 years since Dr. Larry Milligan, then Vice President of Research at the University of Guelph, first had the vision of an organization that could help farmers solve important problems facing their businesses through the commercialization of promising agri-tech solutions.

Right from the start, the focus of Bioenterprise was advancing innovation in food and agriculture – and that's what it still is today, even though our approach, scope, services and areas of expertise have evolved dramatically since those humble, early days.

You can get a flavour of that journey on page 8 of this report where long-time Bioenterprise Chair and former board member Dr. Warren Libby reflects on how this organization has evolved over the last two decades, adapting to the needs of the sector as those too have changed and gone in new directions.

In our early days, for example, we were heavily focused on building a bioeconomy and finding bio-based energy sources to help us transition away from fossil fuels. Today, food security and sustainability rank highly on the Bioenterprise list of strategic priorities, as does finding climate change solutions – still with the focus of moving away from fossil fuels but now with the ultimate goal of achieving carbon net zero production.

Two years ago, we launched Canada's Food & Agri-Tech Engine with the vision of creating a truly national and united innovation ecosystem for the sector. The goal: unlocking Canada's homegrown innovation potential by supporting the commercialization of promising tech solutions for both primary agriculture and throughout the food supply chain, and boosting our international standing as an innovative country.

In doing so, we can simultaneously address food security challenges here and abroad, advance sustainable agri-tech and clean-tech innovations that will help our agricultural sector be competitive on the global stage, and help Canada make progress towards achieving its climate change and emissions targets through innovative solutions.

The Engine and its focus on collaboration and ecosystem development are one of our two pillars of core services; the other is innovation program delivery, where we work with organizations in different provinces to provide funding and mentorship support to entrepreneurs and growing businesses in the food and agri-tech sector.

Although Canada is known around the world as a leading agricultural producer, the global ranking of our ability to move innovation into the marketplace is not nearly as high. To move that needle, we've long known that we need to address the challenge of a fragmented and



underfunded innovation ecosystem and bring like-minded organizations together to collaborate instead of competing.

It's been gratifying to see the widespread response across the country to the creation of the Engine over the last two years and to welcome the more than 350 members, partners, and sponsors to our growing national network.

We know that collaboration is key to advancing sustainable innovation and opening doors for more people to join this industry, including women, young people, and Indigenous and northern entrepreneurs.

To support this collaboration, however, this national innovation ecosystem must also be consistently and sustainably well-resourced by both public and private partnerships. Over the last 20 years, Bioenterprise has established a proven track record of success in helping government and industry partners meet and deliver on their objectives.

Globally, we've just come through one of the largest disruptor events in recent memory in the form of the COVID-19 pandemic. As we all emerge and rebuild, new challenges lie ahead but we also have a collective opportunity to reimagine the kind of future we want for our sector, our country, and our planet.

As we look ahead to the next 20 years, I'd like to thank everyone who has played a role in our journey so far. I'm proud of everything this organization has accomplished in the last two decades, and I'm intrigued and excited at the possibilities of what is yet to come as we work together to connect, innovate and grow.



*Dave Smardon*

**Dave Smardon,**  
*President & CEO, Bioenterprise*



“

*We know that collaboration is key to advancing sustainable innovation and opening doors for more people to join this industry, including women, young people, and Indigenous and northern entrepreneurs.*

# 20 years of proven national experience

Bioenterprise by the numbers

## Economic Impact

**#1**

Agriculture and food accelerator in Canada

**200:1**

Return on invested dollars

**2000**

Technologies launched

## Employment Growth

**2500+**

Innovative ag-tech companies

**\$268**

Million in revenue

**\$285**

In follow-on investment in Canadian agriculture and agri-food

## Economic Impact

**\$1 = \$200+**

Invested

Returned

Over half a billion  
in economic value

---

## Employment Growth

**\$4.4M = \$23.5M**

Invested

Generated in  
tax revenue

20th anniversary reflections

# Celebrating 20 years of innovation without borders

Former Bioenterprise Canada Chair Dr. Warren Libby reflects on the journey from Ontario innovation organization to Canada's Food & Agri-Tech Engine



When Bioenterprise Canada first opened its doors in 2003, it was a small, local organization whose main aim was to help commercialize agriculture and food-focused research from the University of Guelph. It didn't take long for the Bioenterprise board to realize that such a small-scale focus was not conducive to true agri-food innovation. That's when Bioenterprise began to adopt a fresh, new vision of the future of food – one where innovation had no borders.

“One of my first roles after joining the board in 2004 was to work with the then chairman to bring on a new president,” recalls Dr. Warren Libby, who spent 15 years on the board and served as Chair from 2011 to 2019.

In late 2004, Dave Smardon was appointed President & CEO, bringing with him the enthusiasm and vision necessary to expand Bioenterprise's role in Canadian agriculture and food.

In the early years, funding insecurity limited the quantity and scope of projects the organization could support. However, its sharp focus on the success of every client made Bioenterprise attractive to the many innovative agri-food and agri-technology entrepreneurs, first in Ontario and soon on a national scale.

From evaluating an initial concept, to patent protection, financial strategy guidance and sales and marketing support, Bioenterprise's





growing lineup of mentors, business analysts and top-ranked researchers was there to provide sound mentorship to clients and inform on the latest advancements in over a dozen agri-food and agri-technology subsectors.

“Over the years, the Bioenterprise business model evolved to provide expert consultation in virtually all areas of business,” explains Libby.

As Bioenterprise helped launch and scale exciting innovation ventures, key early milestones included the formation of the Bioenterprise Science and Innovation Advisory Committee (SIAC) in 2007 and the creation of the Agri-Technology Commercialization Centre in 2008.

“Bioenterprise expanded its scope of clients from basic producers and crop inputs to include food, animal health, farm equipment and agricultural bio-products companies,” explains Libby. “As the broader agriculture industry evolved, so did Bioenterprise.”

Despite its success, however, the organization hit a stumbling block in 2018 when the Ontario government unexpectedly ended its long-time financial support for Bioenterprise and other similar organizations. Many were forced to close their doors, but that was simply not an option for Bioenterprise.

“It is often said that adversity sparks innovation, and that was certainly the case with Bioenterprise,” Libby recalls.

“

*Over the years, the Bioenterprise business model evolved to provide expert consultation in virtually all areas of business.*

**Dr. Warren Libby, Former Bioenterprise Canada Chair**

Led by CEO Dave Smardon, the team vigorously – and successfully – pursued new avenues of funding in hopes of advancing their national and international strategy.

“Not only was new funding secured but an entirely new service model was created which expanded Bioenterprise to become truly national in scope,” notes Libby.

In 2020, Bioenterprise Canada rebranded as Canada’s Food & Agri-Tech Engine, signing formal cooperation agreements with dozens of universities, farm organizations, business incubators and accelerators and key start-up service providers across the country. Today, the Engine is a robust and growing network of like-minded organizations in the Canadian agri-food innovation ecosystem.

“True innovation knows no boundaries and Bioenterprise understood this sooner than most organizations,” comments Libby.

As it marks its 20th anniversary, Bioenterprise Canada is firmly committed to supporting the Canadian food and agri-tech ecosystem

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*True innovation knows no boundaries and Bioenterprise understood this sooner than most organizations.*

**Dr. Warren Libby, Former  
Bioenterprise Canada Chair**



and helping entrepreneurs with their commercialization journeys that will grow economic prosperity and help Canada meet its climate change and sustainability goals.

To support those aspirations, Bioenterprise Canada just recently launched its Sustainable Innovation Sponsorship program and is now leading the development of a national strategy for sustainable agri-food innovation.

“Very few similar organizations in Canada have had the continuity of leadership and vision that Bioenterprise has enjoyed,” concludes Libby. “I see no limit to the number of exciting innovations in agriculture over the next few decades and I believe Bioenterprise will be at the forefront of many of them.”



## Bioenterprise's key achievement milestones

# Two decades of growth

### 2003

Bioenterprise is founded to commercialize ag and food research from the University of Guelph

### 2005

Bioenterprise receives commercialization support from Agriculture and Agri-Food Canada under the Agriculture Policy Framework, the beginning of a long-term relationship with AAFC

### 2008

Bioenterprise launches Agri-Technology Commercialization Centre, an internationally recognized cluster of agricultural innovation resources with partnerships in five continents

### 2013

Bioenterprise opens first regional office, in Nova Scotia



### 2004

Dave Smardon joins Bioenterprise as President and CEO

### 2007

Bioenterprise's Science and Innovation Advisory Committee is formed

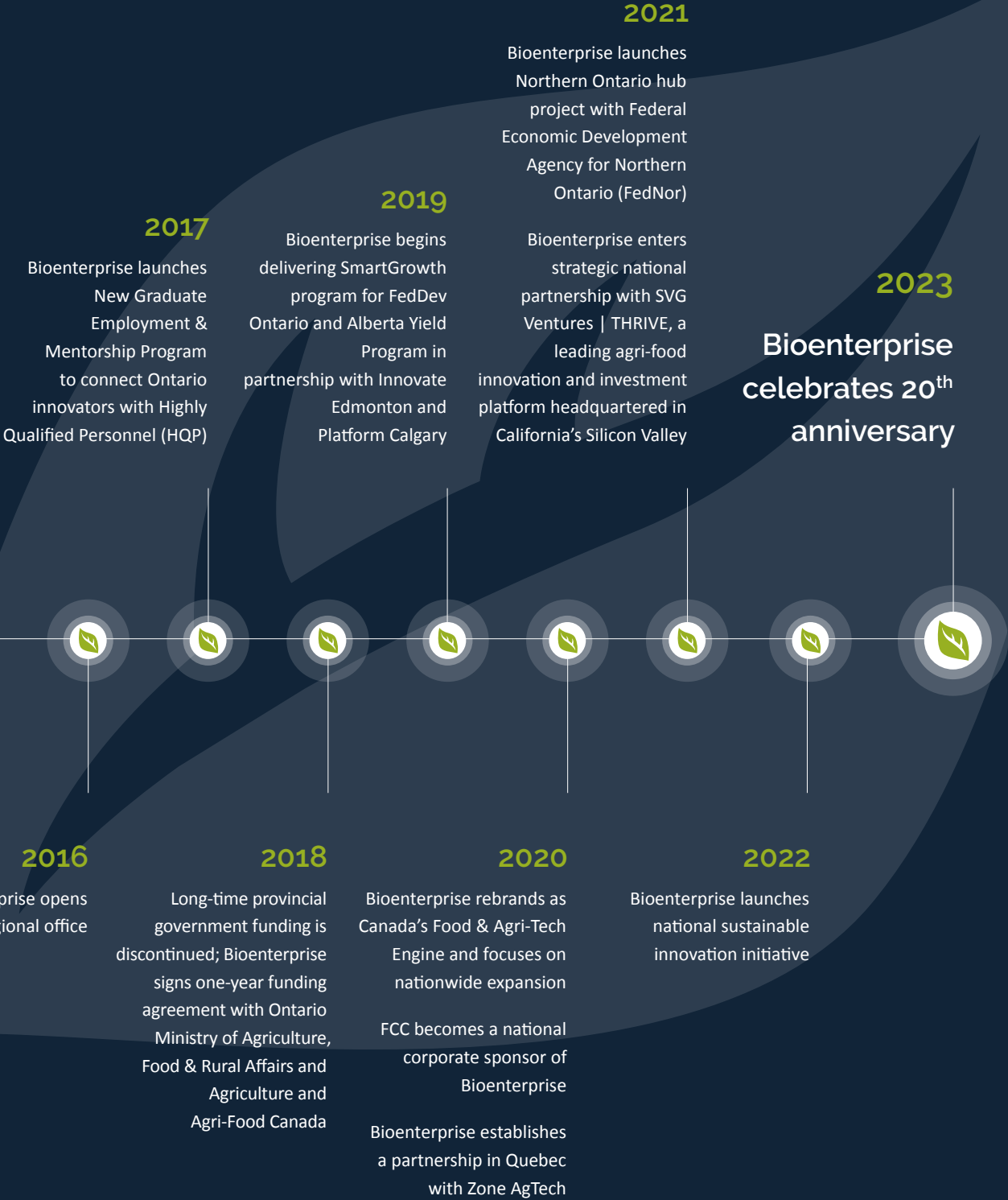
Bioenterprise begins delivering its first innovation program, the Ontario Research Commercialization Program for Ministry of Research and Innovation

### 2010

Bioenterprise begins innovation program delivery partnership with Federal Economic Development Agency for Southern Ontario (FedDev Ontario), launching five-year Seed Funding program with Innovation Guelph

### 2015

Bioenterprise begins four-year national expansion agreement with National Research Council of Canada Industrial Research Assistance Program (NRC-IRAP)



# Where are they now?

A look at companies Bioenterprise has supported over the last two decades

**PlantForm Corporation** 2003–2008

**Agri-Neo** 2009–2013

**SomaDetect** 2014–2018

**Wittaya Aqua** 2019–2023





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*When we first connected with Dave Smardon, we needed resources that could help us understand the funding landscape, introduce us to top-rated researchers and give us insight on market dynamics, to name a few.*

**Robert Wong, Agri-Neo's President  
and Co-founder**

2003 – 2008

## The PlantForm Corporation Story

Fulfilling the power of ag-pharma in life-saving medications



“

*Our long-term relationship with Bioenterprise has had significant impact on helping us move some projects forward.*

**Don Stewart,  
PlantForm's CEO**

University of Guelph spin-off PlantForm Corporation uses the power of plants to combat medical needs for human and animal health. Their revolutionary plant-based vivoXPRESS® platform makes it simpler, quicker, and less expensive to develop approved biologic pharmaceuticals for new markets.

PlantForm uses *Nicotiana benthamiana* plants to create low-cost biosimilar and/or biobetter plant-based versions of medications on the market. On the innovative side, one of the products the company is developing stems from a project proposed by the Department of National Defence for a drug as an antidote to ricin, a powerful biological warfare agent. Today, this project is backed by the Canadian, United Kingdom and Australian governments to be marketed internationally within the next few years.

“Our long-term relationship with Bioenterprise has had significant impact on helping us move some projects forward,” says PlantForm CEO Don Stewart.

Plantform also recently entered the animal health sector, with two products in development and another undergoing regulatory approvals.

“Most recently, Bioenterprise proposed that we should apply for a spot to pitch at the 2022 Animal Health Corridor conference in Kansas,” explains Stewart. Bioenterprise helped with the initial application to speak as well as developing a strong pitch presentation for the event, where the technology was well received and has generated interest among animal health companies.



2009 – 2013

## The Agri-Neo Story

Shaping a new era of food safety across the value chain

“

*The 3 Cs: capital, connections and content.*

**Robert Wong, Agri-Neo's President and Co-founder**

**NEO-PURE™**  
Market Leader in Pasteurisation for Nuts, Seeds, Grains, and Spices



Agri-Neo was founded in 2009 with a bold mission to safely feed the world. Today, they are well on their way to setting new food safety standards globally, particularly for food categories which historically lacked effective solutions. Their breakthrough technologies are proven to be effective in eliminating dangerous pathogens, while preserving the nutrition and quality of the treated food products.

First to market was Neo-Pure in 2014, created to treat nuts, seeds, grains and spices. In 2020, Neo-Temper was launched for use on wheat flour. These biodegradable solutions are science-based blends of organic “actives” that help to rid food of disease-causing bacteria, viruses, mould and yeast, reducing food waste and lessening the chance of recalls.

“When we first connected with Dave Smardon, we needed resources that could help us understand the funding landscape, introduce us to top-rated researchers and give us insight on market dynamics, to name a few,” explains Robert Wong, President and Co-founder. “At that time, associations offering that type of support were few and far between, but Bioenterprise was one of them.”

For the clean tech start-up, Bioenterprise provided what Wong describes as “the 3 Cs: capital, connections and content.”

Over the years, Agri-Neo received support through several Bioenterprise-administered funding programs, got connected to pivotal investors and food science experts, and accessed valuable mentorship support. Currently, Agri-Neo is undergoing pilot scale validation for a food safety solution to eliminate toxins in low-moisture foods, through the Ontario Agri-Food Research Initiative, another Bioenterprise-administered program. With their innovations accepted and used in five countries, this globally recognized food safety technology company is showing no signs of slowing down.

2014 – 2018

## The SomaDetect Story

Measuring more in milk, instantly



“

*You absolutely need that support. It makes such an incredible difference.*

**Dr. Bethany Deshpande,**  
SomaDetect's CEO

SomaDetect's technology promises to revolutionize how dairy farmers receive information about their cows and the milk they produce. Hooking right into the milking system, the compact device uses optical sensors, computer vision and machine learning to measure fat, protein, somatic cell counts and other important indicators from every cow at every milking — without the use of chemicals.

SomaDetect delivers results in seconds, rather than the days it typically takes to get samples tested at a lab, giving farmers an early heads up about possible disease problems and ensuring only the highest quality milk leaves the farm.

“It's like being able to diagnose something as a cold rather than as pneumonia,” says SomaDetect CEO Dr. Bethany Deshpande of the early alert system.

When the start-up was founded back in 2016, Deshpande knew she would need help navigating the unfamiliar world of the dairy industry, so she reached out to the experts at Bioenterprise. The team provided funding support, mentoring services and introduced her to strategic partners, as well as helped her prepare for investment pitches by reviewing pitch decks, hosting rehearsal sessions, and offering feedback on the start-up's valuation and financials.

“You absolutely need that support,” says Deshpande. “It makes such an incredible difference.”

Today, the company's 15-person team is piloting the technology, working out manufacturing logistics and clearing the necessary regulatory hurdles to get the product to market. With offices in Halifax and Buffalo and potential customers around the world, they are poised to be a key player in the future of dairy.

Read the full success story at [Bioenterprise.ca](https://www.bioenterprise.ca).

2019 – 2023

## The Wittaya Aqua Story

Managing data for better aquaculture sustainability and profitability

“

*They're a sounding board of resources at my fingertips.*

**Evan Hall, Wittaya Aqua's Co-founder**



Wittaya Aqua’s innovative farm and feed data solutions is expanding possibilities for improved sustainability in aquaculture industries globally. By leveraging the power of data, and simplifying data management, their tailored data solutions can be used to track valuable insights, allowing for feed optimization, efficient resource use, and improved traceability.

The young Toronto-based company provides software and services for three customer groups in the global aquaculture industry: feed ingredient providers and manufacturers, and aquaculture farms.

“What we’re looking to accomplish is allowing more collaboration and information-sharing throughout the industry,” says co-founder Evan Hall.

According to Hall, the company can trace its origins back to some matchmaking by Bioenterprise, Canada’s Food & Agri-Tech Engine, who originally introduced him to co-founder Dr. Dominique Bureau. In 2018-19, Wittaya received seed funding from Bioenterprise that helped it launch the first prototype of its farm software – attracting external investment and access into the Hatch Aquaculture Accelerator.

“Since then, Bioenterprise has introduced us to other CEOs and people in the agri-food and investment space,” he says. “They’re a sounding board of resources at my fingertips.”

So far, Wittaya Aqua has grown to clients in 12 countries on four continents and is currently expanding its farm management software to allow for more integration with hardware and software being used in the industry. On the feed side, they’re working on including more sustainability components, for example, the carbon pricing of an ingredient.

“We quite literally wouldn’t be here if it wasn’t for Bioenterprise,” says Hall.

Read the full success story at [Bioenterprise.ca](https://www.bioenterprise.ca).

## Core services

# Canada's Food & Agri-Tech Engine

Bioenterprise Canada's activities are divided into two pillars of core activities: Canada's Food & Agri-Tech Engine (The Engine) and innovation program delivery.

With the Engine, we've built a national network of entrepreneurs, accelerators, partners and stakeholders whose commitment to driving innovation in Canada's agri-tech and agri-food industry matches our own.

The Engine harnesses the skills, experiences and networks of key players in the food and agri-tech ecosystem to support start-ups in their journeys from market entry to global expansion.

From coast to coast, our highly qualified staff team, our members and our partners are dedicated to supporting the Canadian food and agri-tech innovation ecosystem and working with entrepreneurs and businesses to help make their innovative visions a reality.

This unmatched level of national collaboration across the ecosystem stimulates growth in the Canadian economy and is an instrumental building block in helping Canada meet its climate change obligations and sustainability goals.

## Memberships and partnerships

Start-ups and growth-oriented companies can become members of the Engine to benefit from its services at two different levels:

**Access Members:** mentorship, funding guidance and strategic partner identification services to best position businesses in the food and agri-tech sector.

**Access Plus Members:** as above plus reality check sessions and financial evaluations with a panel of industry experts to ensure businesses are in the best position to move forward.





The Engine also welcomes partners to join the growing national network of organizations focused on accelerating economic growth through the food and agri-tech ecosystem. The goal is to expand the ability of regional stakeholders and organizations so that the entire ecosystem is stronger and with greater capacity to do more.

**Collaborative partners:** accelerators, economic development agencies, incubators, not-for-profit organizations

**National partners:** national or regional companies interested in the food and agri-tech markets

**Knowledge & development partners:** academia and applied research facilities

**Industry partners:** agricultural and producer organizations

**Service partners:** companies interested in offering business services to the Engine's food and agri-tech network

### The Engine at a glance:

- 350+** Engine members and partners nationwide
- 6** locations across Canada
- 13** Innovation Advisors
- 20** Science and Innovation Advisory Committee members

**Core services**

# Innovation program delivery

Bioenterprise Canada administers a suite of strategic funding and acceleration/mentorship programs across Canada to advance commercialization and scale up of promising food and agri-tech companies. With the help of regional partners from Nova Scotia to Alberta, Bioenterprise offers grants and support for food and agriculture businesses at various stages of development, from concept to commercialization.

## Newly launched in 2022

**Fertilizer Accelerating Solutions & Technology Challenge**, which provides funding for Ontario-based alternative fertilizer solutions. Funded by the Ontario Ministry of Agriculture, Food & Rural Affairs.

**FoodShift**, a program offering support for Ontario food & beverage processors. Funded by the Federal Economic Development Agency for Southern Ontario.

You'll find additional information on some of these programs on page 42/our Regional Round-Up section.



## Greenshoots

Together with Innovacorp and Nova Scotia Innovation Hub, provides funding and support for high potential, early-stage start-up businesses in Nova Scotia.

- ✓ *27 businesses supported to date*
- ✓ *\$32.4 million in add-on investment secured*

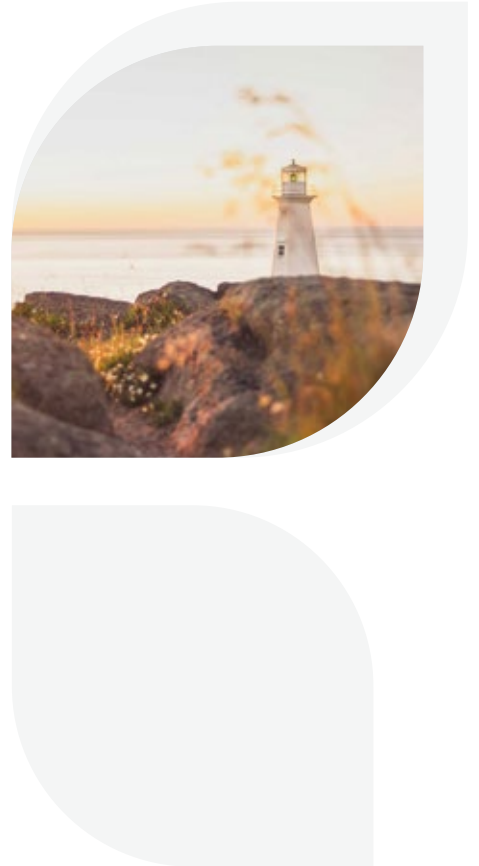
Liven Proteins, an early-stage start-up that produces sustainable, animal-free functional protein ingredients for the plant-based food industry.

*“GreenShoots has helped us move forward and hire someone to help us with development work as well as start our scale-up at Verschuren Centre. And all of the knowledge shared by Bioenterprise and the experts that they’ve introduced us to has been great to help us generate more leads in the food industry and get a better understanding of what that market is looking for.”*

Fei Luo, Co-Founder and CEO, Liven Proteins

- ✓ *Sustainability*
- ✓ *Food security*
- ✓ *Female founder*

Read the full Liven Proteins success story at [Bioenterprise.ca](https://www.bioenterprise.ca).



## Quebec AgTech Acceleration Program

Provides mentorship and support for Quebec companies with innovative solutions for reducing the agricultural sector's environmental footprint. The AgTech Acceleration Program is supported by Zone AgTech, Cycle Momentum and Bioenterprise Canada.

✓ *11 businesses supported to date*

Blanc de Gris, Montreal's first mushroom farm, uses food waste to grow high quality mushrooms for local restaurants

*"Since I participated in this program, I am a better entrepreneur; it's been very helpful. And my mentor had experience in mushroom growing so he was able to give me ideas on how to improve yield and lower my costs. This has helped me make a better product and improve my value proposition."*

Dominique Lynch-Gauthier, Co-Founder, Blanc de Gris

- ✓ *Food security*
- ✓ *Sustainability*
- ✓ *Female founder*

Learn more about Blanc de Gris on page 45 of this report or at [Bioenterprise.ca](https://www.bioenterprise.ca).







## Ontario Agri-Food Research Initiative Commercialization Stream

Provides funding for Ontario businesses to lead market validation and product development projects. Funded by the Canadian Agricultural Partnership, a federal-provincial-territorial initiative.

✓ *21 projects supported*

Oshawa robotics start-up Korechi Innovations Inc. is preparing to launch its latest innovation – a vineyard robot designed specifically for mowing, spraying and weeding vineyards and orchards that received support from the OAFRI Commercialization Stream.

*“Bioenterprise has been a key partner in our growth over the last several years, and the ongoing support and mentorship we’ve been able to access has been invaluable in identifying key collaborators and making connections with farmers keen to help in the development of robotic solutions.”*

Sougata Pahari, Founder and CEO, Korechi Innovations Inc.

✓ *Food security*

✓ *Sustainability*

Read the full Korechi Innovations success story at [Bioenterprise.ca](https://www.bioenterprise.ca).



## SmartGrowth

Financial support for food and agri-tech businesses in Ontario with innovative technologies. SmartGrowth is funded by the Federal Economic Development Agency for Southern Ontario.

- ✓ 22 businesses supported to date
- ✓ \$28.6 million in add-on investment secured

The Growcer develops and sells modular hydroponic farms that let people grow fresh, healthy food in any climate year-round, from lettuce leafy greens and cultural crops to herbs and microgreens.

*“We now have about 40 sites across Canada and we’re adding about three per month. We were chipping away at it slowly before, but the SmartGrowth funding really let us put these efforts into hyperdrive.”*

Corey Ellis, Co-Founder and CEO, The Growcer

- ✓ Food security
- ✓ Sustainability
- ✓ Climate change
- ✓ Northern & Indigenous innovation

Read the full The Growcer success story at [Bioenterprise.ca](https://www.bioenterprise.ca).





## AlbertaYield

In partnership with Platform Calgary and Innovate Edmonton, provides mentorship for innovative companies in Alberta whose founders or leaders are looking to establish or grow a business, access investment or expand their networks.

✓ *32 businesses supported*

Gaia Protein combines cricket production and recaptured energy to produce sustainable protein.

*“They learned the intricacies of our business and made a huge effort to support us and help us reach our goals at the time. The Alberta Yield program was great, but their efforts on technical contribution and encouragement, which is important in the innovation world, were incredible.”*

Claudia Koch, Co-Founder and Chief Science Officer, Gaia Protein

- ✓ Food security
- ✓ Climate change
- ✓ Sustainability
- ✓ Female founder

Read the full Gaia Protein success story at [Bioenterprise.ca](https://www.bioenterprise.ca).

Our core services

# Meet the team

The Bioenterprise Canada team has grown in its strength, diversity and expertise over the last year, welcoming four new board members, adding new staff, and expanding both the number of highly qualified Innovation Advisors and the areas of knowledge they bring to the organization.

## Board Members



**Selena Basi**



**Italo Cerra**  
Board Secretary  
and Treasurer



**Colin Farnum**  
Chair



**Nevin McDougall**



**James Meddings**



**Olga Pawluczyk**



**Dave Smardon**  
President & CEO



**Dr. Rickey Yada**



# Innovation Advisors

Our team of innovation advisors is located in different parts of the country and has a wide range of expertise in key areas.



**Terry Clark**  
Animal health technologies



**Richard Cloutier**  
Investment and development strategies



**Neil Currie**  
Primary agriculture, value chain and governance



**Denise Dewar**  
Crop agriculture, value chain and regulatory affairs



**Colin Farnum**  
Food technology and corporate affairs



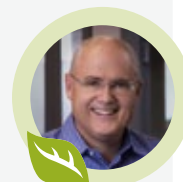
**Gabe Gusmini**  
Agri-tech innovation, food crops research and development, commercialization



**Doug Knox**  
Agri-food equipment and technology



**Mike Manion**  
Agri-tech and agri-business



**Michael McGee**  
Agri-tech, venture capital and governance



**Dr. Murray McLaughlin**  
Bioeconomy (agriculture and forestry)



**Paul Richards**  
Venture capital investment strategies



**Johanne Sévigny**  
Start-ups, investment and business strategies



**Mike Williams**  
Consumer packaged goods products and specialty pet food



# Science and Innovation Advisory Committee

The Science and Innovation Advisory Committee taps into the expertise of industry leaders, stakeholders, and top researchers to drive industry innovation.



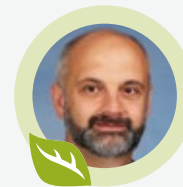
**Dr. Lord Abbey**  
Dalhousie University



**Dr. Franco Berruti**  
Western University



**Dr. Jim Brandle**  
Canopy Growth Corporation



**Dr. David Bressler**  
University of Alberta



**Dr. Dominique Bureau**  
University of Guelph



**Kimberley Cathline**  
Niagara College



**Dr. Sylvain Charlebois**  
Dalhousie University



**Dr. Mike Dixon**  
University of Guelph



**Dr. Alison Duncan**  
University of Guelph



**Dr. Paul Hoekstra**  
Grain Farmers of Ontario



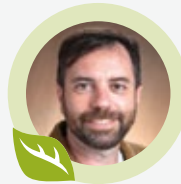
**Dr. Marney Isaac**  
University of Toronto



**Dr. Nuwan Sella Kapu**  
University of  
British Columbia



**Dr. Mike Lohuis**  
Semex



**Dr. Yuri Montanholi**  
Universidad de la  
Republica Uruguay



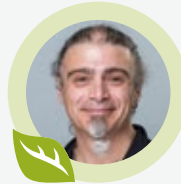
**Dr. Al Mussell**  
Agri-Food  
Economic Systems



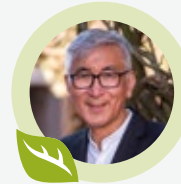
**Dr. Lenore Newman**  
University of the  
Fraser Valley



**Dr. Tarlok Sahota**  
Lakehead University



**Dr. Tim Sharbel**  
University of Saskatchewan



**Dr. Rickey Yada**  
University of  
British Columbia



**Dr. Colin Yates**  
Fanshawe College

Strategic priorities

# Bioenterprise's strategic priorities for innovation

Bioenterprise Canada's overarching mandate is to support the food and agri-tech ecosystem across Canada and to unite its fragmented resources into a single strong, national network that will boost the country's global innovation performance, strengthen the national economy and advance sustainable innovation in areas like climate change and food security.





## Strategic priorities

# Sustainable innovation

Although Canada has already made great strides in reducing the carbon footprint of its food and agriculture production, innovation offers tremendous opportunities to do even more to ensure a better, more sustainable future.

Bioenterprise Canada is committed to helping Canada meet its environmental goals by placing a priority on sustainable innovation throughout the food system, particularly in the areas of climate change and food security. This means a focus on reducing the national environmental footprint and supporting net zero production through clean technology while strengthening food production and safety.

Sustainable innovation in particular also offers unique opportunities to put Canada on the map globally as not just an agricultural but also an agri-tech innovation powerhouse.

## What we've accomplished

### Sustainable innovation sponsors

In 2022, Bioenterprise unveiled its commitment to supporting Canada's climate goals by launching its sustainable innovation initiative and welcoming its first sustainability sponsors:

Aramark, AVAC Group, Bayer, BASF, Grand River Agricultural Society

These companies and organizations are providing input and sharing sustainable practices with other food and agri-tech businesses, participating in projects and programs to promote Canada's global efforts in food sustainability and security, and actively engaging in positive impacts on social issues.

They're also playing key roles in helping to bring innovations to market and working with the Engine's national network of businesses, advisors, and researchers to advance their own corporate sustainability initiatives.

"It is critical to have many different voices at the table to share expertise and challenge conventional thinking about what our collective future can and should be."

Denise Dewar, Bioenterprise Innovation Advisor



### Sponsor snapshot: Aramark

Global food service and facilities management company Aramark serves thousands of people every day at venues ranging from schools and sports facilities to remote mining operations. The company has a strong interest in sustainability both in its internal operations and across its entire supply chain and is taking a regional approach to sustainable innovation – supporting local communities by supporting local food entrepreneurs.

“Instead of waiting for distributors to tell us what they have available, we want to be able to identify and connect with up-and-coming innovators and technologies that are coming into the marketplace. We want to do more to support local communities so for us, part of the value is to be the first one in – giving innovators a helping hand, tracking their progress and telling their story.”

Michael Yarymowich, Director of Sustainability at Aramark

### National Index of Agri-Food Performance

Bioenterprise Canada is a supporting partner of Canada’s new National Index of Agri-Food Performance. The Index, currently in collaborative development, will present an integrated picture of sustainability in Canada’s agri-food sector from the farm to retail so Canada can credibly demonstrate its leadership and progress in its sustainability credentials.

The Index will include high quality, science-based metrics covering four sustainability indicators: environment, economic, food integrity, and societal well-being. It will be cross-referenced to global sustainable innovation goals, relevant to both the Canadian context and the global situation, and outcomes focused. The pilot Index 1.0 is expected to be released in 2023.

## What we're working towards

### National strategy for agri-food innovation and sustainability

In 2022, Canada ranked 15th overall on the Global Innovation Index of the world's most innovative countries, with many much smaller countries holding similar or even higher rankings.

At the same time, Canada is one of the world's leading agricultural producers – and with agriculture and food as one of the key drivers of Canada's national economy, the potential for domestic and global growth driven by innovation is significant.

This is particularly true for innovations in the agri-tech and cleantech space that will help Canada and other countries meet sustainability goals and climate change targets and support the drive to net-zero production. Canada does not, however, have a national strategy for agri-food innovation and sustainability that will provide the roadmap needed to achieve these objectives.

To accelerate sustainable innovation on a national scale, Bioenterprise Canada is leading the development of a five-year strategy in collaboration with its national partner and member network.

This includes hosting discovery meetings and consultations with experts from Bioenterprise's Innovation & Sustainability sponsors to advise on best practices and emerging and new key performance indicators to create an actionable and measurable national agri-food innovation and sustainability strategy.

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*To accelerate sustainable innovation on a national scale, Bioenterprise Canada is leading the development of a five-year strategy in collaboration with its national partner and member network.*



### Strategic priorities

## Northern and Indigenous innovation

Food security is a priority for countries around the world as the climate changes, populations grow and resources become scarcer. In northern regions, where growing seasons are short and weather extremes limit local food production capacity, food security is a particular focus.



That's why supporting emerging businesses in northern Canada or those supporting northern regions, as well as those led by Indigenous entrepreneurs, is a key strategic pillar for Bioenterprise Canada. It's also part of its efforts to encourage innovation and economic development across all regions of the country and support equality, diversity and inclusion in its programming and service delivery.

### What we've accomplished

#### New support for northern entrepreneurs

This past year marked a milestone for the Engine as it welcomed its first partner in northern Canada – Innovation & Entrepreneurship (I&E) at Yukon University, Canada's only university north of 60. I&E supports innovators and entrepreneurs through funding, expertise and incubation to help start, grow, and market their innovations.

I&E's business incubation program IncubateNorth assists start-ups and entrepreneurs with shared workspace, support and programming, and is funded by the Canadian Northern Economic Development Agency and the TD Ready Commitment initiative.

Bioenterprise is the first agri-tech accelerator to be active in northern Canada and will provide innovation support, resources and commercialization services to start-ups, entrepreneurs, research organizations and businesses in the food and agriculture sector in the Yukon.

#### Northern Ontario Innovation Challenge

This past year, Bioenterprise Canada ran the Northern Ontario Innovation Challenge, to help identify and give profile to innovative businesses and start-ups in Northern Ontario who are active in the food and agri-tech sector. Seven businesses were chosen as finalists, and five participated in a pitch session with a judging panel on a public demo day.

The Challenge winner was Thunder Bay biotech company BioNorth Solutions, a developer of microbe-based products that encourage plant growth, including in crops like barley and wheat. Second place went to Agri-Tech North of Dryden, an indoor vertical farm and social enterprise that is the first of its kind year-round wholesale-scale grower of fresh produce in Northwestern Ontario. TECC Agriculture Ltd., a precision agriculture company in New Liskeard, rounded out the top three.

The Challenge is part of Bioenterprise's programming to support innovation and economic development in Northern Ontario's agri-food sector. Bioenterprise offers a unique service to Northern Ontario as the only agri-food accelerator serving the region, providing emerging businesses and entrepreneurs with sector-specific collaboration opportunities and business acceleration services through its extensive network of industry experts.

Funding for Bioenterprise activities in Northern Ontario is provided through FedNor's Regional Economic Growth Through Innovation Fund, which supports the growth of Northern Ontario businesses.

#### **Challenge winner: BioNorth Solutions**

BioNorth Solutions of Thunder Bay has launched trials to test its plant growth promoting (PGP) bacteria in barley and wheat crops at the Lakehead University Agriculture Research Station (LUARS) in Thunder Bay. The research will help gather the data needed to take their product to market. A connection with Bioenterprise Canada introduced BioNorth to the OAFRI program, which is providing funding for the trials.

"We have this terrific opportunity at LUARS to do plots and use our microbes, which we couldn't do on our own. Our products are sustainable and our whole goal is to keep everything as sustainable as possible, even in using as little packaging as possible."

Amber Kivisto, Co-Founder and President, BioNorth Solutions

Read the full BioNorth Solutions success story at [Bioenterprise.ca](https://www.bioenterprise.ca).



- ✓ *Food security*
- ✓ *Climate change*
- ✓ *Sustainability*
- ✓ *Female founder*
- ✓ *Northern & Indigenous innovation*

## Northern events

The Bioenterprise team participated in various events in northern Ontario this past year, all designed to support and showcase agri-food innovation in the region. Highlights include:

- Northern Ontario Ag Conference 2022
- Lakehead University Research and Innovation Week 2022
- Ontario Aquaculture tour
- Lakehead University Agricultural Research Station (LUARS) Field Trials Tour

## What we're working towards

### Expanding our reach across the North

The focus for the coming year is on expansion – building out Bioenterprise's reach and range of support through collaborations with existing Northern partner organizations including Collège Boréal, Canadore College, Center for Research and Innovation in the Bio-Economy (CRIBE) Lakehead University and the Northern Policy Institute.

At the same time, Bioenterprise will be strengthening its presence in the North by building a community of members, collaborative partners such as the Yukon Agricultural Association, and knowledge and development partners like First Nations University.

This also includes building on the success of the first Northern innovation challenge by launching additional challenges that will be enhanced by collaborations with other programs focused on agri-food initiatives in the North.



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*Bioenterprise will be strengthening its presence in the North by building a community of members, collaborative partners.*



## Strategic priorities

### Inclusivity and equal opportunity

Bioenterprise also has a standing mandate to provide equal opportunity to all Canadians, including supporting female entrepreneurs and women-led businesses and encouraging opportunities to engage young people and attract them to careers in the sector.

## What we've accomplished

### Canadian Women's Network partnership

Through its partnership with Connect Silicon Valley, Bioenterprise has also become a partner of the Canadian Women's Network (CWN) in California. The Network connects Canadian female founders with its influential network of U.S. investors, operators and executive leaders to help them grow locally and scale globally.

Bioenterprise members can access a six-month Growth Membership to the Network for free, linking them to a community of Canadian female tech founders as well as a U.S. investor network, and to leadership guidance from the Network's Experts in Residence program.

CWN's annual "Founded in Canada" founder showcase of start-ups in climate, food and agtech provides pitch feedback and support to Canadian based female founders who are given the opportunity to present their company to select investors and industry experts.

Engine members Vivid Machines, Nurture Growth and SomaDetect participated in the showcase in 2021.

Vivid Machines is developing the Vivid X vision system that will automate predicting and managing apple yield and quality and eventually also provide early detection of pests, diseases, and nutrient deficiencies. The company is preparing for a fundraising seed round to help fund additional development phases.

"This was a really targeted program to help refine and sharpen pitching skills set to the expectations of U.S. investors. The hours we spent with the network were transformative. The investors gave feedback about what they didn't understand or what wasn't clear, so our story has gotten so much better, going from something engineering-focused to something an average person could understand."

Jenny Lemieux, Co-Founder and CEO, Vivid Machines

- ✓ *Food security*
- ✓ *Climate change*
- ✓ *Sustainability*
- ✓ *Female founder*



## Advancing Women in Agriculture Conference

Female founders can also access support through the Advancing Women in Agriculture conferences in eastern and western Canada. The events offer networking opportunities as well as a high-quality speakers' program featuring business experts, motivational and inspiration leaders, and industry representatives.

## What we're working towards

### Women Entrepreneurship Strategy

Bioenterprise is actively pursuing funding opportunities for programming focused on female entrepreneurs. This is in support of a vision to break barriers of access and provide the mentorship and support that female entrepreneurs need to translate technology and innovation into commercial success.

A successful project proposal would focus on delivering programming for both start-up and scaleup businesses looking to establish or grow in the food and agri-tech sectors. Additional objectives include reducing barriers to market entry and increasing visibility through event and communications support and sponsorship and increasing access and support in the venture capital space for women-led businesses.



Photo by Eric Forrest,  
courtesy The Grower

Regional program delivery

# Bioenterprise from coast to coast

Canada's Food & Agri-Tech Engine is a growing, nationwide innovation network focused on mentorship, networking and resources to support start-ups, entrepreneurs and growth-oriented companies in the agri-food and agri-tech ecosystem.

Bioenterprise's national corporate sponsor FCC is a cornerstone partner in supporting the expansion of Bioenterprise's national accelerator services, which includes a network of regional agri-tech hubs across the country with staff to provide commercialization support.



## Atlantic Canada

**Regional office:** Halifax, Nova Scotia

## Quebec

**Regional office:** Repentigny, Quebec

## Ontario

**Regional office:** Guelph, Ontario (Corporate Headquarters)

## The Prairies

**Regional offices:** Winnipeg, Manitoba; Calgary, Alberta

## British Columbia

**Regional office:** Kelowna, British Columbia



# Atlantic Canada

## Regional office

Halifax, Nova Scotia

## Strategic Regional Partners

**Innovacorp** is an early-stage venture capital organization that finds, funds and fosters innovative Nova Scotia start-ups, with a particular focus on information technology, cleantech, life sciences and ocean technology.

**Nova Scotia Innovation Hub** focuses on the province's bioeconomy and helps clients commercialize their businesses by supporting scale-up activities and identifying and addressing research and regulator gaps in the sector.

## Collaborative Partners

**Bio Food Tech** in PEI helps food and bioprocessing companies commercialize their innovation by supporting them with professional technical services.

**BioNB** supports the development of New Brunswick's bioeconomy and helps companies grow and commercialize their bioscience ideas.

**Verschuren Centre** in Cape Breton supports a transition to a green and circular economy through the commercialization of innovative clean technologies.

## Industry Partner

**Horticulture Nova Scotia** is a member-based promotion and advocacy organization that represents vegetable, greenhouse vegetable, strawberry, highbush blueberry, bramble, and related nursery stock growers in the province.

## Knowledge & Development Partner

**Springboard Atlantic** is a network of 19 post secondary institutions in Atlantic Canada that supports the commercialization of research and strengthens the competitiveness of Canada's industries.

## Program delivery

### GreenShoots

Developed jointly by Innovacorp, Nova Scotia Innovation Hub and Bioenterprise Canada, GreenShoots provides support for early-stage Nova Scotia companies in the agri-tech and bioeconomy sectors. Program participants receive up to \$40,000 in funding and business guidance from a network of mentors and experts to help support scale-up and commercialization activities.



## Success story

### OzoneBio

#### Start-up uses waste to create world's first emissions-free bio-nylon

- ✓ *Sustainability*
- ✓ *Climate change*
- ✓ *Female founder*

A Canadian green tech company has developed a technology to create the world's first emissions-free nylon 66 – and they're upcycling waste from the pulp and paper industry to do so. It's a remarkable breakthrough from start-up OzoneBio that has game changer potential in the fight against climate change.

Nylon 66 is a plastic strengthener found in everything from car parts and food packaging to clothing and shoes. Its main building block is a compound called adipic acid and the petrochemical refineries that manufacture it produce high volumes of nitrous oxide emissions, a greenhouse gas that is 300 times worse for the atmosphere than carbon dioxide.

OzoneBio's co-founders Khorcheska Batyrova and Anna Khusnutdinova have discovered a way to make zero-emissions adipic acid using biocatalysts and enzymes using a process that is much cheaper and simpler than conventional production.

It was while participating in IndieBio, a green tech accelerator in California's Silicon Valley, that they met Paul Richards from Innovacorp, who helped them secure lab space at the Verschuren Centre, introduced them to the Bioenterprise Canada team and connected them with GreenShoots.

"Innovacorp and the Verschuren Centre have been very helpful and supportive, and provided us the facility we needed in order to deliver our technical milestones for successful graduation from one of the most intense bio-programs in Silicon Valley, Indie Bio SF11," says Khorcheska.

The full OzoneBio success story is available at [Bioenterprise.ca](https://bioenterprise.ca).



# Quebec

## Regional office

Repentigny, Quebec

## Strategic Regional Partner

**Zone AgTech** near Montreal is the first Canadian innovation hub dedicated to agri-tech and plant-based bioproducts innovation, and is an incubator for know-how, entrepreneurship and innovation.

## Collaborative Partner

**District 3: Genome Foundry – AvanceBio** is a Québec-wide collaborative center of excellence for talent training, research, infrastructure and commercialization in biomanufacturing focusing on food and sustainability based at Concordia University.

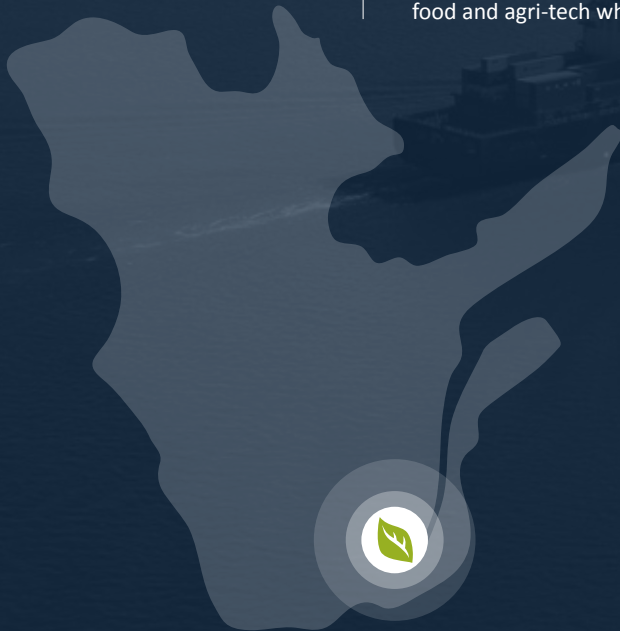
## Knowledge & Development Partner

**INO** is the largest centre of expertise in optics and photonics in Canada, a leading global technology research centre and developer of emerging technology solutions relevant to the agri-food sector.

## Program delivery

### AgTech Acceleration Program

Powered by Zone AgTech, this program helps innovative, sustainable Quebec companies in agri-food and agri-tech who are poised for scale-up and growth.



## Success story

### Blanc de Gris

#### Using food waste to grow more food

- ✓ *Food security*
- ✓ *Sustainability*
- ✓ *Female founder*

When mushroom lovers Dominique Lynch-Gauthier and Lysiane Roy Maheu realized it was possible to grow mushrooms using food by-products, they launched Montreal's first mushroom farm.

Blanc de Gris grows oyster mushrooms in substrates they make by repurposing food waste, like grain leftover after beer brewing by local microbreweries, coffee chaff from local coffee roasters, and even sawdust from a local furniture business. Their mushrooms are grown in reusable buckets instead of single use plastic bags and are sold primarily to high end restaurants in Montreal.

It was while doing research for an upcoming expansion that Lynch-Gauthier discovered Quebec's ZoneAgTech and their partner Bioenterprise, Canada's Food & Agri-Tech Engine. She's part of the Cycle Momentum Agtech Acceleration Program, which is run by ZoneAgTech, an incubator in the Montreal area that supports innovation-focused start-ups and entrepreneurs, and a member of the Engine.

"Since I participated in this program, I am a better entrepreneur; it's been very helpful. And my mentor had experience in mushroom growing so he was able to give me ideas on how to improve yield and lower my costs," she says. "This has helped me make a better product and improve my value proposition."

The full Blanc de Gris success story is available at [Bioenterprise.ca](https://bioenterprise.ca).



# Ontario

## Regional office

Guelph, Ontario  
Corporate Headquarters

## Collaborative Partners

**1855 Technology Accelerator** is located east of Toronto in Durham Region and focuses on using its business expertise to help tech start-ups scale revenue and grow operations quickly.

**Cleantech Commons**, a research park at Trent University's main campus in Peterborough, focuses on clean, green, low-carb and sustainable technologies.

**Innovation York** is the innovation and entrepreneurship support centre at York University.

**Meat & Poultry Ontario** is an industry association that represents the interests of meat and poultry processors, abattoirs, butcher shops and retail meat outlets in the province, as well as related suppliers.

**Northumberland Community Futures Development Corporation** is a non-government innovation and entrepreneurship organization based in Cobourg, Ontario that provides financing and strategy services for entrepreneurs and supports SMEs in advanced manufacturing, cleantech and agri-food with growth and job creation.

**Vineland Research & Innovation Centre** is Canada's leader in horticultural research and innovation.

## Industry Partners

**Canadian Federation of Agriculture** is a farmer-funded, national umbrella organization based in Ottawa that represents producers of all commodities operating farms of all sizes from coast to coast.

**Cider Canada**, based in Ottawa, represents Canadian cider makers and their provincial associations, and is active in six main areas, including lobbying, advocacy, education, member services and more.

**Grain Farmers of Ontario** is the province's largest commodity organization, representing Ontario's 28,000 barley, corn, oat, soybean and wheat farmers.





## Knowledge & Development Partners

**Conestoga College** in Waterloo Region is one of Canada's top research colleges and a provincial leader in apprenticeship training.

**Fanshawe College** in London is one of Ontario's largest colleges. The Centre for Research and Innovation is the institution's applied research arm, working with companies of all sizes to develop or improve products and services, with a particular focus on food innovation.

**Food Innovation and Research Studio** is a George Brown College research facility in downtown Toronto that specializes in getting new food products to market and offers industry access to technical resources, state of the art facilities and networking opportunities for small and medium-sized businesses in the Greater Toronto Area.

**Life Sciences Ontario** is an industry association representing the collective voice of the pharmaceutical, medical device, agri-food, agri-tech, biotech and medicinal cannabis industries in Ontario and providing advocacy, mentorship, education and networking for its members.

**Loyalist College** in Belleville has extensive experiential, industry cluster-based education, training and applied research programs.

**Niagara College** is a leader in food, beverage and agri-environmental research and innovation.

**University of Guelph** is known as Canada's Food University and a national and global leader in agricultural research and innovation.

## Program delivery

### SmartGrowth

This program gives small and medium enterprises in Southern Ontario's food and agri-technology sectors access to matching, non-repayable funding and mentorship services that support scale-up and expansion projects. SmartGrowth is funded by the Government of Canada through the Federal Economic Development Agency for Southern Ontario.

## Success story

### BioLiNE Corp.

## Turning mushroom compost into a sustainable crop additive

- ✓ *Food security*
- ✓ *Sustainability*
- ✓ *Climate change*

BioLiNE Corp., a southwestern Ontario company, has developed a fulvic acid made from used mushroom compost. The product is a biostimulant which supports a plant's natural nutrition processes to help it use nutrients more effectively and better tolerate environmental stressors like heat and drought.

Fulvic acids are a small but important group of naturally formed soil organic matter known as humus and are quite susceptible to erosion and leaching loss. Supplementing soil with fulvic acids can help farmers to maximize their productivity, but most commercial sources of fulvic acids have traditionally been produced by melting and treating leonardite or brown coal.

BioLiNE has developed a sustainable and proprietary purification process to extract fulvic acid from spent mushroom compost, the peat-based material that mushroom farms use to grow their crops that is usually discarded after mushrooms are harvested.

BioLiNE has been a member of the Engine for the past two years and last year was a recipient of SmartGrowth funding, that supported field demonstrations and drought studies on canola in Western Canada, the development of marketing materials, and the hiring of a business development specialist who has helped BioLiNE gain a strong foothold in Western Canada more rapidly than would otherwise have been possible.

“Our experience with Bioenterprise has been fantastic. A lot of people tend to steer away from funding programs because of the administrative burden, and we want to commend Bioenterprise for putting something together that keeps company needs in mind as well as having the staff and resources available to manage the program,” says Rahbari. “We’ve also had tremendous opportunities to network through the Engine, and we highly recommend anyone in biotech commercialization to do this.”

The full BioLiNE Corp. success story is available at [Bioenterprise.ca](https://www.bioenterprise.ca).



# The Prairies

## Regional offices

Winnipeg, Manitoba;  
Calgary, Alberta

## Strategic Regional Partners

**Enterprise Machine Intelligence & Learning Initiative (EMILI)** is an agriculture artificial intelligence accelerator based in Manitoba that was founded to support agriculture in the province.

**Platform Calgary** is a hub that brings together the resources of Calgary's tech ecosystem across various sectors to give start-ups the tools they need to launch and grow.

## Collaborative Partner

**Glacier Farm Media Discovery Farm** in Langham SK, home of Ag in Motion, and its sister operation Discovery Farm Woodstock ON, home of Canada's Outdoor Farm Show, are unique and innovative sites that offer demonstration research, event and knowledge transfer for Canadian farmers.



## Knowledge & Development Partners

**Agricultural Manufacturers of Canada**, headquartered in Manitoba, is an association representing more than 250 agricultural equipment manufacturers and their suppliers.

**Canadian Association of Farm Advisors** is a professional organization based in Manitoba dedicated to assisting farm businesses by increasing the skills and knowledge of farm advisors through continuing education, networking and business development opportunities.

**First Nations University of Canada** specializes in Indigenous knowledge, providing post-secondary education for Indigenous and non-Indigenous students alike within a culturally supportive environment.

**Richardson Centre for Food Technology and Research** at the University of Manitoba connects researchers from the Faculty of Agricultural and Food Sciences with the food and agriculture value chain through collaborative research and development activities and focusing on advancing food quality and human nutrition through traditional and innovative food processing techniques.

**Olds College** is one of Canada's leading agricultural schools, offering high-tech, hands-on learning experiences that lay the foundation for solving real world problems in farming, food and land.

**Biosciences Association Manitoba** is the voice of Manitoba's bioscience industry, supporting 110 members in agricultural biotechnology, health biotechnology and cleantech biotechnology with resources and training opportunities.

## Program delivery

### Alberta Yield

This program pairs founders and leaders of start-up businesses with experienced business and tech advisors who provide them with mentorship and coaching.

## Success story

### Sultech Global

## Canadian company offers homegrown alternative to sulphates

- ✓ *Food security*
- ✓ *Sustainability*
- ✓ *Climate change*

Calgary-based Sultech Global Innovation Corp. has developed a micronized elemental sulphur to replace conventional ammonium sulphates found in agricultural fertilizer programs. It's their non-synthetic, made-in-Canada SulGro product that they say can address climate change and supply chain issues without compromising crop performance.

The company's feedstock is elemental sulphur recovered from the oil and gas industry that is often sold at a loss to global customers as a bulk commodity. Sultech's goal is two-fold: take a bio-product from a major Canadian industry and turn it into a value-added product that can help Canadian farmers while also offering an environmentally-friendly alternative that will help improve the sustainability of crop production.

Last year, after being deemed too advanced to participate in the Alberta Yield accelerator program, the company entered into an Alberta Yield Coach Service which connected them to Michael McGee, Director of Innovation at Bioenterprise Canada as their new mentor.

McGee and the Bioenterprise team were instrumental in helping Sultech determine how to pitch their company and refine their messaging before connecting them with various innovation-focused opportunities.

"We were too far down into the weeds throwing data points at people - we were positioning ourselves as an alternative vitamin when we needed to be a painkiller," says Sultech's Conor Wrafter. "When you're trying to bring a disruptive technology to the market, that's a whole different challenge than just being an entrepreneur and it would've been hard to keep going without them."

The full Sultech Global success story is available at [Bioenterprise.ca](https://www.bioenterprise.ca).



# British Columbia

## Regional office

Kelowna,  
British Columbia

## Collaborative Partners

**SFU VentureLabs** is a world-class technology business accelerator program delivered by Simon Fraser University with partners across Canada.

**Riipen** is the world's leading online work-integrated learning platform, connecting educators and learners with employers through highly flexible and scalable solutions.

## Industry Partner

**The Small Scale Food Processors Association** located in BC, supports independent food processors and growers across Canada with advocacy and government relations, marketing, networking, education and a member benefit program.

## Knowledge & Development Partners

**BC Tech Association** is the largest member-led technology non-profit in British Columbia and is dedicated to turning start-ups into scaleups by helping members expand and diversify their talent pools, acquire new customers, and access capital.

Kwantlen Polytechnic University is based at five campuses across Richmond, Surrey and Langley, offering a comprehensive range of sought-after programs in business, arts, design, health, science and horticulture, trades and technology, and academic and career

## Program delivery

Bioenterprise is actively exploring program delivery options in British Columbia with a particular focus on opportunities that support underrepresented groups, address new industry challenges and build capacity in agriculture.



# North & International

Includes Northern Ontario, northern Canadian territories and international partners.

For more information on Bioenterprise Canada's activities in the North, visit page 36.

## North

### Collaborative Partners

**Centre of Excellence in Next Generation Networks** drives technology innovation and industry growth by facilitating collaboration between tech businesses, industry leaders, academia and government.

**Centre for Research & Innovation in the Bio-Economy** is an independent research corporation that supports turning research results and innovative business opportunities into reality.

**Ingenuity Accelerator** is Lakehead University's first student business incubator space that help-stake start-up concepts from ideation to innovation.

### Knowledge & Development Partners

**Canadore College**, with four northern Ontario campuses, has identified various research priority areas including social innovation, health sciences, water and wastewater management, and agri-food.

**Collège Boréal** is a French language post-secondary institution based in Northern Ontario with research expertise in agricultural sciences, new agri-food technologies and biodiversity protection.

**Innovation & Entrepreneurship** is a Yukon University service that supports innovators and entrepreneurs through funding, resources, expertise and incubation.

**Lakehead University**, with campuses in Thunder Bay and Orillia, is a comprehensive university with high-quality programming and a focus on research and innovation.

**Yukon Agricultural Association** represents the agricultural sector in the Yukon and provides cross-commodity support for its development.

## International Partners

Bioenterprise Canada and the Engine also have international partners whose special ties to Canada offer innovation and commercialization collaboration and support opportunities for Canadian entrepreneurs.

**Canadian Women's Network** community founded by Connection Silicon Valley to connect Canadian female entrepreneurs with its influential Silicon Valley network.

**Connection Silicon Valley** is an independent management consulting company that helps emerging businesses and entrepreneurs build meaningful networks in Silicon Valley and across Canada.

**SVG Ventures | THRIVE** is the leading global agrifood investment and innovation platform headquartered in California's Silicon Valley, with a community of over 5,000 startups from 100 countries and is recognized as the world's most active agtech investor.

# Events and activities

With COVID restrictions loosening, 2022 marked a return to in-person events for the Bioenterprise Canada team. The year's calendar included events in various parts of the country as well as activities hosted online.

The goal behind all event participation, whether virtual or in-person, is two-fold: to provide networking opportunities for Engine members to make important connections and help them advance their businesses; and to raise awareness of Bioenterprise Canada, its national network and the services and support it can provide to agri-food and agri-tech innovators.





Here are a few highlights from the past year



### Agri-Tech Venture Forum 2022

In addition to sponsoring the event, Bioenterprise Canada was front and centre with a booth and a presentation by CEO Dave Smardon, who also moderated a panel. The Bioenterprise team also helped innovative start-ups from its network participate in the event's pitch session. The Forum attracted several hundred delegates and included pitch presentations by 20 companies.

### Atlantic Venture Forum 2022

Similar to the Agri-Tech Venture Forum, this event is curated to meet the needs of Atlantic Canada. Along with participating as a sponsor of the event, Bioenterprise Canada nominated companies to participate in the innovation showcase, and provided speakers and a moderator for a panel discussion. The event attracted 314 participants and 22 companies took part in the Showcase.

### Banff Venture Forum 2022

Bioenterprise participates in the Banff Venture Forum to build relationships with stakeholders who are either tech innovators, or are supporting technology advancement. The goal is to make strategic connections to early-stage investors and identify areas they're most interested in supporting, as well as nominate Bioenterprise members to the event's Showcase. Bioenterprise also organized and moderated a panel discussion and gave a presentation introducing the Engine to participants. Over 350 delegates attended, and the innovation Showcase featured 24 companies.

### Ag in Motion and Canada's Outdoor Farm Show

Bioenterprise Canada hosted AgTech Breakfasts at Ag in Motion in Saskatchewan and at Canada's Outdoor Farm Show in Ontario, events designed to connect agtech start-ups with farmers. Bioenterprise also had a booth in the Innovation Pavilion at the Ontario show and used the opportunity to raise awareness about the Engine and its services, and the need for a national agri-food innovation network in Canada.

### Future of Food 2.0

Together with Enterprise Machine Intelligence & Learning Initiative (EMILI), Bioenterprise again co-sponsored Future of Food 2.0, a three-part virtual event series delivered by Bioenterprise collaborator CityAge. Session topics included: Farming for the Future, Building a Circular Food Future, and Agtech building food's future. In total, the series attracted over 1000 participants from across Canada and the United States.

Future facing

# Looking ahead

As Bioenterprise Canada enters its third decade, the need for unity around innovation in agriculture, food and agri-tech has never been stronger. Food security, climate change and sustainability are big themes – and critical issues – for farmers and food producers around the world.

Canada is already a global agricultural production powerhouse and has the expertise and potential to also become a top 10 global leader in agricultural innovation. This requires collaboration, partnership, resources and a single, unified commitment to putting Canada on the global innovation map – and this is what Bioenterprise, Canada's Food & Agri-Tech Engine, is trying to accomplish.

Bioenterprise Canada, with its coast-to-coast network of partners, members and like-minded organizations, along with a highly qualified staff team is well positioned to help make this happen. This collaborative focus on global excellence in agri-food innovation will also create jobs and economic growth here at home and help Canada meet its climate change and sustainability goals.

Together, we can build a more resilient economy, a more inclusive society, and a cleaner, better future for our planet.



“

*Together, we can build a more resilient economy, a more inclusive society, and a cleaner, better future for our planet.*

“

*This collaborative focus on global excellence in agri-food innovation will also create jobs and economic growth here at home and help Canada meet its climate change and sustainability goals.*



# Thank you to our funders, sponsors, and partners

## Funders, sponsors and partners



## Sustainable innovation sponsors



## Corporate partners



## Regional partners



## Industry partners



## Collaborative partners



## Knowledge & Development partners



## Service partners



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Visit us at [www.bioenterprise.ca](http://www.bioenterprise.ca).

### Acknowledgements

Bioenterprise Canada is situated on the Treaty Lands and Territory of the Mississaugas of the Credit First Nation as well as the traditional territory of the Huron-Wendat and Haudenosaunee peoples.

Bioenterprise appreciates the support of all its partners and members who are contributing to the growth and success of Canada's Food & Agri-Tech Engine.

In particular:

#### **Funding partners**

Farm Credit Canada (FCC)  
Federal Economic Development Agency for Southern Ontario (FEDEV)  
Federal Economic Development Agency for Northern Ontario (FEDNOR)



