



EIGHT CANADIAN STARTUPS SECURE \$1.9M TO PILOT FOODTECH INNOVATIONS

The Canadian Food Innovation Network funding will enable the companies to demonstrate their innovation in operational environments and validate the return on investment for the food sector

GUELPH, ON, JANUARY 29, 2024 — The [Canadian Food Innovation Network \(CFIN\)](#) is awarding \$1,932,000 to eight foodtech projects through its [FoodTech Next Program](#). These projects will pilot their innovations in real-world conditions to validate their market fit within the food sector. The combined value of the projects is just under \$4M.

The 2024 FoodTech Next ultimate recipients are:

Project Lead: Index Biosystems (Ontario)

Project Title: BioTags for Advanced Food System Processing Analytics and Supply Chain Traceability

Pilot Partner: A Leading North American Milling Company

Funding: \$249,999

Index Biosystems has developed BioTags, which are microscopic barcodes made from baker's yeast. Applied to foods and ingredients, these BioTags offer orders of magnitude improvements to traceability and food safety. The Ontario foodtech company is developing a risk-management platform with BioTags at its core. This platform will enable food processors to collect unprecedented insights into their raw materials journey through processing into finished products and beyond. Partnering with a leading North American milling company, these BioTags will be applied to grains and measured through processing to finished products. This generates molecular-level insights into production lines with the added benefit of always knowing where that product and even its ingredients came from when all else fails. This project aims to revolutionize recall efficiency, substantially narrowing the range and duration of interventions needed when issues arise, thereby safeguarding both the industry and consumers from extensive recall-related repercussions.

Project Lead: Harvest Moon Foods (Quebec)

Project Title: Pilot Demonstration of Recombinant Casein Production and Applications

Pilot Partner: Leading Dairy Manufacture and Food Ingredients Companies

Funding: \$244,469

Harvest Moon is the first company in Canada to produce animal-free casein through precision fermentation. Their proprietary proteins aim to revolutionize alternative dairy by providing the functionality, sensory attributes, and nutrition of conventional dairy, but without lactose and cholesterol and at a fraction of the environmental costs. Over the next 18 months, Harvest Moon will conduct a pilot-scale demonstration that will optimize their process, confirm the scalability of their system, and assess the characteristics and applications of their recombinant proteins within operational settings. The outcomes of this project will allow Harvest Moon to refine their process and product attributes, validate their economic model, advance their regulatory pathway, and build corporate partnerships to make their proteins widely available and create a more sustainable food system.

Project Lead: CanDry Technologies (British Columbia)

Project Title: Enhancing Canadian Agri-Food Sustainability Through Evolutionary Low-Temperature Dehydration

Pilot Partner: Blueridge Produce, Susgrainable Health Foods Inc., and the British Columbia Blueberry Council

Funding: \$238,337

CanDry Technologies has successfully harnessed the synergies of vacuum, microwave, and infrared technologies to develop a pioneering patented dehydration system. Their low-temperature technology preserves nutrients and significantly cuts dehydration costs, making it accessible to various industries. Equipped with a fully operational 15 kg/cycle prototype unit, CanDry has systematically tested and refined its technology within controlled laboratory settings but using industrial feedstocks. This project is dedicated to the precise customization of this prototype to meet the specific requirements of the Canadian agri-food sector, with their primary focus revolving around optimizing the dehydration process for berry products and spent grains.

Project Lead: Real Life Robotics (Ontario)

Project Title: Robotic Short-haul Food Delivery in an Urban Environment

Pilot Partner: Confidential

Funding: \$242,127

In the current economic landscape, Canadian businesses grapple with increased customer demands for last-mile delivery, striving to balance the equation of profitability. This challenge intensifies within the food sector, where the dynamics of food delivery economics compound the struggles faced by restaurants dealing with escalating wages, elevated food costs, and pandemic-induced debt. Currently, most rely on third-party companies like Skip The Dishes, DoorDash, and Uber Eats, which charge 20% to 35% commissions on each order, restrict customer data access, and struggle to maintain a consistently high-quality delivery experience for customers. Real Life Robotics, in response to these challenges, is on a mission to redefine the Canadian delivery landscape from "clicks to rips". Enter BUBS, a revolutionary robot adept at navigating urban environments with minimal tele-supervision, promising secure, economical, and environmentally sustainable last-mile delivery. In this project, the second-generation prototype is set to undergo testing in multiple Canadian cities. The aim is to not only make delivery viable for Canadian business owners, but to also bring affordability and convenience to the doorsteps of everyday Canadians. Real Life Robotics is at the forefront of transforming the delivery game, offering a solution that not only meets business needs but enhances the everyday lives of Canadians across the nation.

Project Lead: DeepSight Réalité Augmentée (Quebec)

Project Title: Deploying Augmented Reality Solutions for Industrial Training

Pilot Partner: Groupe St-Hubert

Funding: \$233,967

DeepSight leverages augmented reality to accelerate learning and training in the industrial sector. This project will deploy their technology in the food processing and food service sectors with their partner St-Hubert. Whether frontline workers are factory production teams performing changeovers on automated lines or technicians performing maintenance tasks, augmented reality-assisted training accelerates the onboarding of new employees and the development of experienced employees. The DeepSight platform allows you to create and consult 3D instruction guides that are precisely superimposed on the work environment. These holographic guides are used in operations using smart glasses and tablets to allow employees to quickly qualify and share knowledge across the company.

Project Lead: Renaissance BioScience Corp. (British Columbia)

Project Title: Revolutionizing Taste: Harnessing the Power of Yeast to Reduce Undesirable Flavours and Aromas in Plant-based Protein Products

Pilot Partner: C-Merak and Big Mountain Foods

Funding: \$232,239

Plant-based proteins are lower in saturated fats and better for the environment than traditional animal-based proteins. Plant-based flours provide higher levels of protein, fibre, minerals, and micronutrients than typical grain-based flours. However, these products inherently contain unpleasant flavour and odour compounds which limit consumer acceptance. Current methods to address this involve extensive processing or the use of flavour-masking additives, which can be costly, inefficient, and contradict consumer preferences. Renaissance BioScience addresses this challenge by applying their proprietary clean-label, non-GMO yeast technology to convert off-flavours in plant-based proteins to more acceptable neutral compounds, using natural fermentation. They have developed methods to identify key unwanted flavour compounds through chemical analysis and sensory evaluation and are collaborating with industrial partners to ensure efficacy in manufacturing settings. The goal is to increase the consumer appeal and versatility of plant-based proteins, while ensuring cost-effectiveness, environmental sustainability, and alignment with industry practices.

Project Lead: Maia Farms Inc. (British Columbia)

Project Title: Protein Technology to Improve Plant-based Foods: Operational Ingredient Testing

Pilot Partner: Big Mountain Foods

Funding: \$226,119

Plant-based food manufacturers face a shortage of quality texturized protein products (TPP). Big Mountain Foods (BMF) and other Canadian plant-based brands are forced to outsource to the USA and Asia due to challenges in sourcing locally. Collaborating with the National Research Council of Canada and utilizing extrusion technology at the Saskatchewan Food Centre, Maia Farms will produce CanPro -- a blended mushroom protein ingredient with higher protein density than meat and superior texture to TPP alternatives. Rigorous tests will be conducted, including protein content, hydration, colour, and microbial assessments. BMF will evaluate CanPro in its operational setting, addressing technical hurdles in hydration, pumping, mixing, and cooking to identify the ideal TPP for their recipes.

Project Lead: RFINE Biomass Solutions Inc. (Nova Scotia)

Project Title: Canadian Pre-Commercial Pilot Demonstration Project of Kaffika Process

Pilot Partner: Regional and National Coffee Chains

Funding: \$205,505

RFINE is set to conduct a ten-store commercial pilot demonstration of their Kaffika Drying Appliance in collaboration with a major national coffee chain. Following beta testing with five quick-service coffee vendors in RFINE's Q1, 2024, the pilot aims to showcase the appliance's effectiveness in drying Spent Coffee Grounds (SCG) to a food-grade state. This process involves backhauling SCG to a central location and converting it into food for both humans and animals. The resulting food ingredients will be utilized by project partners for both human foods and animal feed. RFINE's offtake agreements with appropriate partners ensure the full circularity of their solution, demonstrating the transition from waste diversion to food production.

To date, 13 projects have secured \$3M in funding through CFIN's FoodTech Next Program. In addition to the funding, the FoodTech Next Program creates supportive innovation communities around each company to help their project succeed and move their business to scale readiness.

Across all programs, CFIN has awarded more than \$19M to 65 Canadian foodtech projects.

QUOTES

"At CFIN, we believe in the transformative power of innovation to pave the way for a more sustainable and resilient food sector. These industry pilots will not only validate the potential of Canadian foodtech innovations, but also ensure they meet the rigorous demands of practical application, driving meaningful advancements in the industry."

– **Dana McCauley**

CEO, Canadian Food Innovation Network

"Testing is an essential step in product development, and CFIN's initiatives, such as the 'FoodTech Next' program, play a vital role in enabling this. Our government takes pride in championing Canadian entrepreneurs, supporting them in validating their concepts in real-

world market conditions, and fostering the creation of cutting-edge technology for the food industry."

– The Honourable François-Philippe Champagne

Minister of Innovation, Science and Industry

"Canada is a leader in foodtech because of investments like these. These innovations are addressing real industry challenges with unique solutions that promote sustainability and resilience in the sector. I look forward to seeing these projects progress and create results for the sector."

- The Honourable Lawrence MacAulay

Minister of Agriculture and Agri-Food

"We're extremely thankful to the Canadian Food Innovation Network for their support, which is accelerating the commercialization of Index's risk-management platform powered by BioTags. This contribution allows us to expand the scope of key initiatives, while expediting access to the unprecedented operational insights and advanced food safety measures that our platform provides, ultimately contributing to greater consumer safety."

– Mike Borg

Founder and CEO, Index Biosystems

"Harvest Moon was founded to create a more resilient, sustainable and humane food system, and we are thrilled to partner with CFIN in this critical project. This funding will accelerate Harvest Moon's efforts to optimize and scale our technology and demonstrate its potential with leading food companies in this space."

– Mike Bernard

Co-Founder and COO, Harvest Moon Foods

"High-quality dehydration is our passion, and with the support of CFIN, we're committed to enhancing food quality, sustainability, and utilizing clean energy, as we collaborate with diverse clients and materials, propelling our business into new horizons."

– Maddie Aliasl

CTO, CanDry Technologies

“There is no debate in Canada that delivery is here to stay. This is an opportunity for innovators like the team at Real Life Robotics to roll up our sleeves and figure out how BUBS can offer economical and environmentally sustainable delivery that makes sense for Canadian business owners and their customers.”

– **Cameron Waite**

CEO, Real Life Robotics

“DeepSight is really happy to collaborate with the Canadian Food Innovation Network to bring new solutions to the problem of knowledge transfer throughout the industry. Our easy-to-use platform democratizes access to innovative technologies like augmented reality and helps companies train a workforce that is more resilient, versatile and efficient. We truly believe this project will bring positive outcomes to the Canadian food ecosystem and will allow our companies to be more competitive in their markets.”

– **Nicolas Bearzatto**

President, DeepSight Réalité Augmentée

“We’re pleased to receive this funding from CFIN for our clean-label, non-GMO yeast technology to remove undesirable flavours and aromas from plant-based protein products. We’re excited to be working with leading Canadian food and ingredient companies on this project, and we look forward to mutually beneficial outcomes for both us and our partners. Our innovative yeast platform technology will contribute to Canada’s role as a global leader in plant-based foods and sustainable protein innovation.”

– **John Husnick**

Office of the CEO and CSO, Renaissance BioScience Corp.

“Maia Farms is a pioneering BC company committed to transforming global food security in the 21st century. We believe that our fermentation process to produce mushroom based protein will be as important to agriculture in the 21st century as the Haber process was to the 20th. The generous support of the Canadian Food Innovation Network will greatly help Maia scale their technology, making ethical, mycelium-based protein available first in BC and later on a global stage. Thank you for supporting us on this journey towards building a third pillar of protein that is capable of nourishing billions of brains and bodies while respecting planetary boundaries”

– **Gavin Schneider**

CEO and Co-Founder, Maia Farms

“We are sincerely grateful for the recognition and support from the Canadian Food Innovation Network as RFINE Biomass Solutions embarks on this groundbreaking journey. The upcoming ten-store commercial pilot demonstration of our Kaffika Appliances in collaboration with a major national coffee chain marks a significant milestone for the company. We are dedicated to showcasing the effectiveness of our appliance in turning Spent Coffee Grounds (SCG) into food-grade ingredients for both humans and animals.”

– **Gordon Neal**

General Manager, RFINE Biomass Solutions Inc.

ABOUT THE PROGRAM

FoodTech Next is a unique funding opportunity for early-stage Canadian technology firms who seek to be part of, or sell to, the wider food industry. The program allows companies to demonstrate and pilot their innovation in operational environments to prove their solutions and validate the return on investment for the food sector. The overarching goal of FoodTech Next is to accelerate the commercialization of Canadian innovation by generating first demonstration opportunities.

The program is administered by CFIN, which is supported by the Government of Canada’s [Strategic Innovation Fund](#).

ABOUT THE CANADIAN FOOD INNOVATION NETWORK

The Canadian Food Innovation Network (CFIN) is a national organization that’s stimulating transformative and transferrable innovation within the Canadian food sector. CFIN has over 4,000 members from across the food value chain -- including manufacturers, processors, distributors, operators, tech companies, funders, and innovators – and connects the Canadian food ecosystem to fresh insights, ideas, and technologies to grow their business and increase their innovation capacity. [CFIN’s free membership](#) includes access to exclusive funding programs, five Regional Innovation Directors, and [YODL](#).

CFIN was established in 2021 and is supported by Government of Canada’s Strategic Innovation Fund and Canadian Agricultural Strategic Priorities Program.

RELEVANT LINKS

[FoodTech Next Program Page](#)

[CFIN Membership](#)

[CFIN Media Page](#)

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