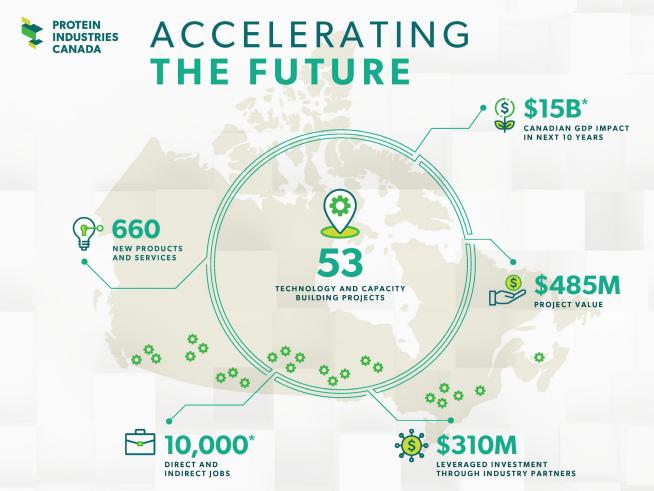
GLOBAL INNOVATION CLUSTER

Protein Industries Canada Proposal Overview



The demand for plant-based food is increasing. Driven by a growing global population and an expanding middle-class, combined with consumers choosing plant-based foods for health, environmental and animal welfare reasons, it is expected that by 2035 the annual global market will be worth upwards of more than \$250 B.

Canada has the potential – and is well on our way – of being a global leader in plant-based ingredients and finished food products. Building on our strength as an agricultural powerhouse; with more than 28 M hectares of arable land and a leading producer of high-protein crops such as peas and canola, we have opportunity to turn this global demand into a long-term, sustainable economic driver for Canada. In fact, at Protein Industries Canada, we believe that by 2035, Canada will provide 10 per cent of the plant-based ingredients to the world – a goal, that when achieved, will contribute upwards of \$25 B a year to Canada's economy, supported by 17,000 jobs.

In the first four years of operations, Protein Industries Canada demonstrated our ability to connect the ecosystem and catalyze innovation. With co-investments into 53 technology and capacity building projects. Protein Industries Canada has met or exceeded every goal of the program set out by the Government of Canada. In addition to executing on projects, we have made significant progress in attracting capital into the ecosystem, helped companies leverage and commercialize their IP and created new products and services that have the potential to provide solutions to some of the most pressing challenges facing humanity: food security and climate change.

In Fund II, with a requested renewed investment of \$200 M, Protein Industries Canada will build off the foundation of Fund I to achieve even more. We believe that by 2028, Protein Industries Canada will have facilitated the investment of more than \$2 B into Canada's plant-based food and feed ecosystem and supported the creation of almost 1,500 new products and services, while reducing the GHG emissions associated with agricultural production and food processing.

In Fund II, Protein Industries Canada will work to achieve the following outcomes:

- Economic Growth: we will support the prosperity of every Canadian by creating a reliable, sustainable, and long-term industry for Canada's economy that will be worth \$25 B by 2035 and will employ upwards of 17,000 Canadians from coast-to-coast.
- Reduce GHG Emissions: we will decrease GHG reductions related to agriculture and food processing.
- Scaling Canadian Companies: we will support Canadian companies to grow and be successful, achieving \$25 B in annual revenue from Canadian innovation and IP.
- Global Impact: we will anchor Canada as a global force in the plant-based revolution increasing recognition, investment, sales and leadership.
- Food security: we will contribute to domestic and international food security by building out an integrated and
 resilient value chain that allows Canada to make our own ingredients and food and export high-value, nutritious
 products to countries around the world.
- Economic Reconciliation: we will support the prosperity of Indigenous people through meaningful partnerships and mutually beneficial opportunities that lead to shared prosperity.

To reach these outcomes, Protein Industries Canada will:

- Re-balance the distribution of investment to focus on the priority of ingredient processing and the linkage to consumer ready product, the largest value creation opportunity for Canada.
- Earmark investment specific to GHG reduction, while also incorporating specific evaluation criteria and tracking progress towards the net-zero target;
- Execute on our Access to Capital Strategy to support the investment of \$800 million into Canadian businesses;

- Ensure a path to commercialization through comprehensive business and risk assessments;
- Lead regulatory modernization through our Regulatory Centre of Excellence, focusing on regulations associated with labeling; mandatory fortification and novel food approval;
- Support the advancement of up to eight new ingredient processing facilities to increase domestic processing;
- Increase investment and focus on total-seed utilization specifically on innovation related to bio-industrial products that have the potential to reduce single-use plastics and petroleum-based products;
- Diversify our investment portfolio to include the next generation of food products including whole muscle cuts, non-dairy and egg alternatives, and bakery items;
- Further leverage Fund I investments by stacking IP to accelerate innovation and create new IP assets;
- Build relationships with key international markets to further increase Canada's global presence and to attract FDI and new customers for Canadian products;
- Support the creation of new post-secondary courses related to food science, chemical engineering, that will lead to newly trained workers; and
- Continue focusing on re-skilling and introducing youth, Indigenous Peoples and New Canadians to the opportunities provided by the agriculture and food-processing sector.

To reach these outcomes, creating economic growth and prosperity for Canadians, Protein Industries Canada is requesting \$200 M from the Global Innovation Cluster Program. The strong growth of Canada's plant-based food and ingredient sector, combined with Protein Industries Canada's demonstrated support by the sector, ability to create connections and execute on projects is evidence that a \$200 M investment will generate measurable and demonstrated returns for the Government of Canada.

Fund II Technology Program

In Fund II, Protein Industries Canada's investment portfolio will continue to focus on the value chain, with an increased emphasis on ingredient processing and selling at every point in the value chain.

The proposed areas of investment and the associated investment percentage are:



Genetics (15%): advanced breeding technologies and germplasm development to improve protein content, quality and functionality, with an aim to improve processing efficiency and the development of novel ingredients.



Crops (10%): technologies related to data and predictive analytics, artificial intelligence, traceability systems, automation and sensor technology, to increase primary production efficiency and improve information flow along the value chain



Ingredients (50%): the development, scaling and optimization of novel plant-based ingredients through the development of new technologies and the improvement of existing ingredient manufacturing processes.



Products (25%): the creation of consumption-ready goods in the form of consumer packaged foods, animal feeds and industrial bio products.

In addition to the four areas of investment, in Fund II, Protein Industries Canada will entertain proposals from across TRL levels to ensure a pipeline of projects to support innovation for the next decade.

Increasing Capacity and Building the Ecosystem

A well-developed ecosystem is necessary to support the long-term success of the sector. In Fund II, Protein Industries Canada will continue to invest into projects that contribute to the success of companies and work to advance areas of priorities on behalf of the ecosystem. Ecosystem priorities can be divided into two categories:

- 1. Activities that support the scale-up of companies and commercialization of projects
- 2. Activities that build capacity in the sector as a whole

GROWING AND SCALING CANADIAN COMPANIES

As a Global Innovation Cluster, the critical role of Protein Industries Canada is to guide and support Canadian companies as they scale. We will do this by:

- Fostering Collaborative Innovation: through our Technology Leadership Fund, Protein Industries Canada will
 support companies in scaling on collaborative innovation, supply chain integration and the multiplication of
 wealth across the value-chain.
- Delivering on a Capital Growth Strategy: Despite the well-known and accepted value of the plant-based food sector, insufficient capital has flowed into the Canadian sector. Protein Industries Canada will continue to evolve and deliver our comprehensive Capital Growth Strategy, including further support the Canadian Plant Protein Fund, working with federal lending agencies, and working to attract more foreign direct investment into Canadian companies.
- Leveraging IP assets: Protein Industries Canada's members hold an impressive suite of IP. The focus of the Fund II will be to scale these technologies and the follow-on innovations they generate. We will build upon the success of our IP Hub and support the competitiveness of companies to reach scale.
- Creating a Competitive Business Environment: Countries around the world are aggressively working to establish
 plant-based ingredient and food processing value-chains. Canada needs to offer a competitive business
 environment to attract and retain companies. Protein Industries Canada will work with all levels of governments to
 design and communicate competitive investment attraction policies.
- Supporting Commercialization and Prosperity: The most successful companies share three common traits: strong
 business acumen, a solid business plan and a robust customer acquisition strategy. Protein Industries Canada will
 work with our member companies to ensure they have all three, increasing competitiveness and the likelihood of
 long-term success.

BUILDING THE INNOVATION ECOSYSTEM

- Like what individual companies need to scale, ecosystems need the right supports to thrive. A robust ecosystem is a magnet for talent and investment and will foster collaboration between public and private entities. A globally relevant ecosystem thrives at the nexus of deep market knowledge, acute understanding of sector needs and fostering the right partnerships. How companies work in ecosystems and how companies support ecosystems is Protein Industries Canada's part.
- Market Knowledge: The plant-based food, feed and ingredient sector is developing at an extremely rapid pace.
 To be relevant and competitive, our ecosystem requires deep insight into consumer trends and intelligence

- about other jurisdictions. Protein Industries Canada will continue to source and disseminate market research and support our members in strategic planning efforts.
- Innovation Infrastructure: As the Canadian sector grows, so does the need for increased access to research and
 product-scaling infrastructure. We are approaching a critical mass that would justify private investment into
 contract research, toll processing, co-manufacturing, and co-packing facilities. Protein Industries Canada will
 work to gain a deep understanding of current infrastructure and capacity to support companies in accessing
 current facilities and then work to establish more facilities in Canada.
- Supportive Regulatory Framework: Modernizing Canada's regulatory system can help support continued innovation of plant-based foods. Protein Industries Canada will continue to build upon the Regulatory Centre of Excellence created in 2020, funding research in support of regulatory modernization in the areas of labelling, nomenclature, and fortification.
- Creating an Inclusive Sector: Protein Industries Canada will will focus our effort to increase awareness amongst
 both the agrifood sector and Indigenous populations about the opportunities and benefits of collaboration. This
 will primarily be achieved by acting as a catalyst for engagement and creating opportunities for participation,
 including with post-secondary institutions, through events and educational sessions.

OTHER AREAS OF PRIORITY

- An Enhanced Global Presence: Canada can be firmly established as a globally relevant, reliable and strategic
 partner in global value-chains for plant-based products. To take advantage of this opportunity, we need to
 connect global processors and multinational food brands to Canadian companies. Protein Industries Canada
 will continue to work with the Trade Commission Service, Global Affairs Canada and Invest in Canada to attract
 Foreign Direct Investment, develop key markets and advance international innovation collaborations.
- GHG Reduction: The reduction of GHG emissions is an ever-increasing priority for companies and for consumers. It is one of the foundational trends driving the demand for plant-based foods. Plant-based food innovation and growing the Canada ingredient and food processing sector can help change the trajectory for agri-food emissions. Protein Industries Canada will focus its efforts in four areas:
 - Measure-Verify-Report
 - Advancing the Pulse Industry
 - Reducing Food Miles
 - Bio-industrial innovations
- Supply Chain Resiliency: To avoid disruption to our food supply chain, Canada has the responsibility to strengthen domestic processing capacity. As a net exporter of food, we need to strengthen integration into global supply chains. The key to supply chain resiliency lies in:
 - Improving information flow
 - Scaling ingredient manufacturing capacity
 - Expanding the value chain approach to innovation.

