



Investment Tools to Grow Alberta's Plant Protein Sector

Background

BioAlberta wishes to thank our member companies and all the participants in the consultation process for their generous contribution of time and insights that have made this project possible. This paper is continuation of BioAlberta's efforts for plant-based ingredients that started in 2019 with the assistance of Alberta Innovates that resulted in publishing a preliminary action plan titled Plant-Based Ingredients: Charting a Bold Path Forward. Following that paper, BioAlberta has continued to be an advocate for alternate proteins and functional ingredients, which led BioAlberta to organize multiple industry development initiatives including roundtables, networking events, and investor events.

BioAlberta has also offered advice to governments regarding investment options to support Alberta's life sciences sector, including a 2020 submission to the Innovation Capital Working Group written collaboratively with Nanocluster Alberta and Alberta Clean Technology Industry Association, as well as a presentation to the Deputy Minister Committee on Jobs and the Economy on tools for economic recovery.

In the development of this report and its recommendations we have tried to present your perspectives fairly. While every effort has been made to ensure that the information contained in this document has been obtained from reliable sources, BioAlberta is not responsible for any errors or omissions in the contents of this work or for the results obtained from the use of this report.



ALBERTA IS GROWING THE FUTURE OF FOOD

The plant-based food sector is growing at an unprecedented rate with the world demanding more plant-based protein. Who better to help fill this rapidly growing demand than Alberta?

Human consumption of plant-based protein is projected to double by 2028 to USD \$93.92 Billion. This growth trajectory is supported by an increasing global population, a growing middle class, changes in western diets, and increased requirements for livestock and aquaculture feed and companion animal food. International firms have assessed the Canadian Prairies as best suited to meet this significant demand.

Alberta's competitive advantage is its production of high protein crops, specifically canola and pulses. This plant protein space is characterized by technology-driven startups, scale-ready SMEs, and large anchor companies with capital and global market access. Alberta has a well-connected road/rail/air transportation system, almost 70 per cent of Canada's irrigated farmland, innovative producers applying next-generation production practices, and a low-carbon agriculture production footprint. The result of this competitive advantage is improved productivity, profitability, and sustainability.

With its sustainably-produced crops supported by globally recognized research and development infrastructure — that links its entire value chain, from genetic researchers and breeders through to the producer and onto the ingredient processors and food manufacturers — few jurisdictions can replicate this competitive advantage, but many in the market are moving ahead of Alberta by leveraging other strengths. Those in the industry believe the necessary plants to fill the need will be built in the next five to 10 years, requiring \$27 billion in capital investment¹. Alberta needs to move now to attract some of that capital and ensure facilities are built here.

A market study by Ernst & Young, looking at the global plant protein spaces, forecasts a \$250 Billion industry by 2035, and Protein Industries Canada has set an objective of creating a \$25 Billion industry for plant-based food, feed, and ingredients. Alberta has the potential to become the plant protein ingredients hub of Canada and beyond and stands to capture 20 per cent of an anticipated \$25 Billion Canadian market share by 2035. Like our oil sands energy sector in its infancy, all the plant proteins industry requires to grow and thrive is accelerated action from the Province, followed by commitment from the investment community.

THE OPPORTUNITY

“There's been very few trends in the food industry in the last 25 years that have given this level of opportunity,” says Bill Greuel, CEO of Protein Industries Canada (PIC), tasked with driving Canada's plant protein and plant-based product sector to becoming a major global provider.

¹ Maria Troya, 2022



Alberta is a Canadian leader in the production of pulses: chickpeas, lentils, and most importantly, the increasingly popular plant-based food ingredient — dry peas. According to Agriculture Canada’s crop production projections, Alberta is expected to produce 41 per cent of the dry pea crop in 2022-23 and to generate the second-largest share of dry peas, lentils, and chickpeas. But Alberta has not staked its claim as a leader in processing these raw materials into plant-based food products and the ingredients needed to do so.

In 2019, the total global food ingredients market was valued at 37.68 billion dollars and North America’s share was 10.9%; for context whole of Asia was accounted for 12.9%². Considering that North America has only 4.7% of total world population, it indicates much higher spending power and preference for premium ingredients. Plant proteins along with other health foods fall into this category.

Plant-based proteins continue to gain traction, particularly in North America and Europe. As more consumers adopt a flexitarian lifestyle, demand for plant-based meats is soaring.³ In the US, 45 per cent of consumers have tried, or regularly eat, plant-based beef.⁴ Mintel reports 54 per cent of US consumers think restaurants should carry more plant-based protein options.⁵

Plant-based dairy also continues to do well globally, and its top consumption drivers are environmental sustainability, perceived health benefits, and newer products having pleasant taste.⁶ Soy protein remains the go-to plant protein for nutrition products, but issues with GM crop contamination, especially in Europe, and concerns around allergens and phytoestrogens are driving a shift toward non-soy plant proteins.

Asia-Pacific presents a lucrative opportunity for Alberta with a value-added plant protein strategy. With a continued expansion of middle-class there, a diet improvement will concomitantly happen. Large parts of the population in Asia eat a plant-based diet due to religious, historical, and cultural preferences, and Canada continues to be a leading supplier of protein crops there. This can be an important strategic opportunity for Canada.

Pea protein is the fastest growing plant protein of choice since 2004⁷ for manufacturers that wish to sidestep the issues surrounding soy. Though the pea protein market is still small, at just a fraction of the soy protein market, it’s rapidly expanding to meet demand. The global pea protein market is projected to grow from \$464.60 million in 2021 to \$1,026.12 million by 2028 at a CAGR of 12 per cent in the forecast period, 2021-2028.⁸ For plant proteins, both

² Emergen Research, 2020

³ Good Food Institute (GFI), 2021

⁴ Glanbia Nutritionals, 2021

⁵ Mintel, 2020

⁶ FMCG Gurus, 2021

⁷ Bashi, 2019

⁸ Fortune Business Insights , 2021



concentrates and isolates, North America has more than a 44 per cent share of the global demand.⁹

This means that for Pea Proteins alone, the North American market would need more than 50,000 metric tons in additional supply, by the current prices.¹⁰ The current processing capacity will fall short, with very few operational wet fractionation plants capable of processing plant-based proteins across USA and Canada. When accounting for other novel proteins, including fava, lupin, canola, and chickpea, this will increase the demand even more, presenting a lucrative opportunity for Alberta, where the target of 25,000 tons of plant proteins production capacity is sustainable.

Canola also presents a unique opportunity in Alberta. It can give a massive scale of the crop in the province as Canola is an underdeveloped source of high value protein. The protein is of better nutritional quality than pea/pulse crops and offers a much larger scale. Significant plant breeding investments have developed high protein varieties that will improve process efficiencies and industry margins. As the crop also contains high value oil, it brings a higher value co-product stream than pulse crops (75% of the seed is low value starch).

Apart from Pea and Canola Proteins, there are other emerging plant proteins in Alberta including Chickpea, Fava, Lupin, Canola, Wheat, and Potato. However, a key challenge will be in finding an industry outlet for the pea starch produced as a by-product to help bring down the cost. Starch is a very versatile ingredient on its own and has a wide range of applications in the food industry. However, some novel applications like biomaterial and biofuels are also emerging. A great example of such an offtake opportunity is the bioplastic industry which uses starch as a primary raw material. With a nationwide ban on single-use plastics, its demand will only increase. Ethanol from starch fermentation is another avenue being explored by many researchers.

In the plant proteins industry, attracting one manufacturer will lead to byproduct opportunities like starch, which are a feedstock for edible starch, soluble dietary fibers, ethanol, biomaterial, and bioplastic industries. Both the industries are also showing increasing trends of co-generation to increase green credentials. This will not only ensure Alberta gets more manufacturing capacity, but CPG and other industries will be automatically attracted here due to the proximity of finished goods.

Now is the time for the Government of Alberta to publicly champion another of our province's natural resources and do everything it can to promote its value-add potential.

Value Addition by Agri-Food Processing

⁹ Grand View Research, 2020

¹⁰ Bashi, 2019



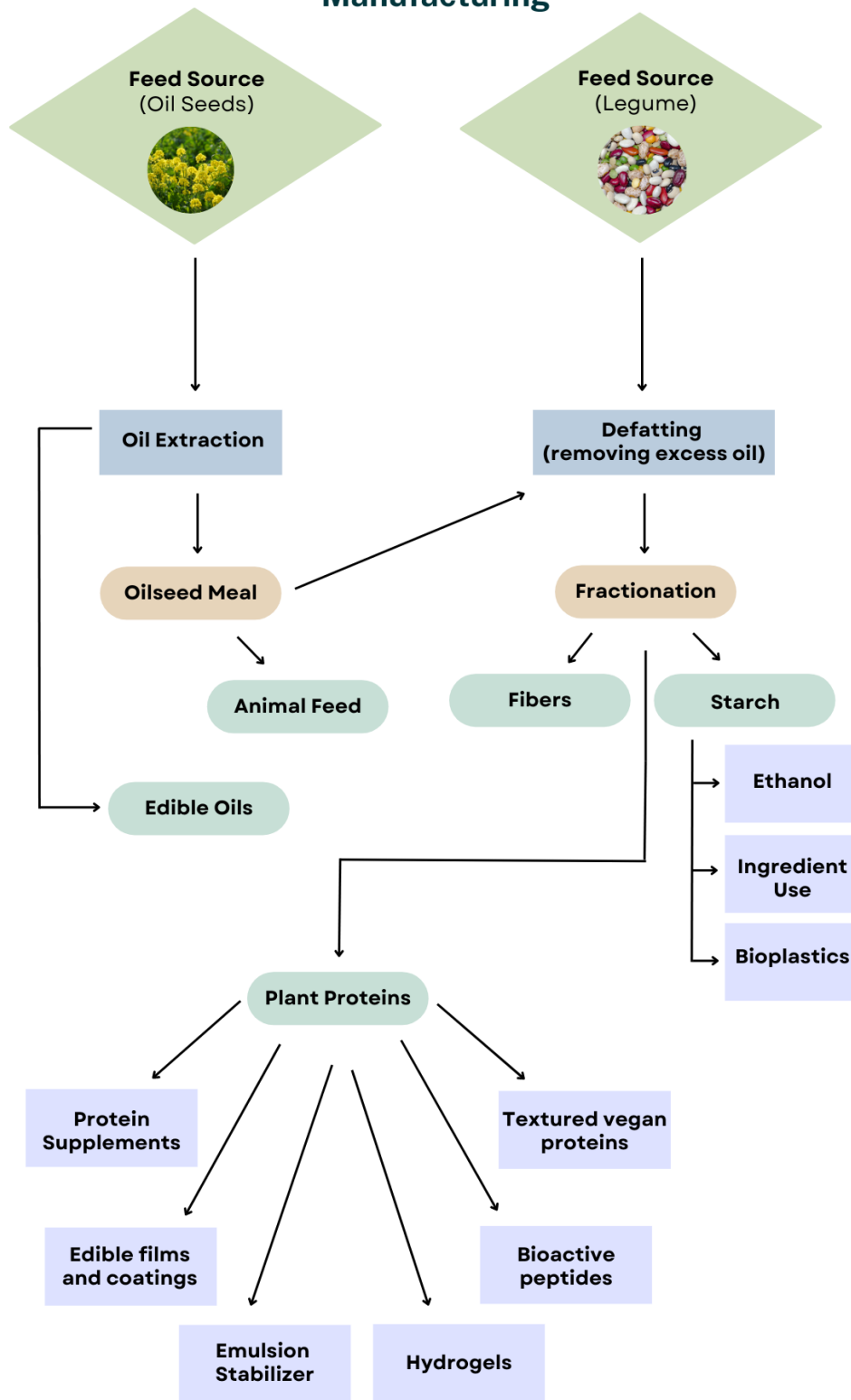
Plant protein manufacturing is a key component in the Agri-Food processing sector, providing plant proteins — a valuable commodity in the current market — and creating secondary value streams in the forms of starch, animal feed, and ingredients including food fortification and food and beverage ingredient applications used in multiple industrial applications.

The plant protein sector has broad potential to expand the growing plant-based food market through value added offerings:

1. Plant-based retail brands
2. Plant-based ingredients
3. Plant-based protein blends for nutraceutical applications and novel foods
4. Enhancement of existing foods, food ingredients, and supplements
5. R&D in novel protein sources and exploration of their potential for niche applications



Plant Protein Manufacturing



The plant proteins industry is closely linked with the Natural Health Products and Functional Ingredients (NHPFI) industry in Alberta and when both are fully developed, will result in the following Alberta scenarios:

- Alberta-based products and exports are benefitting from value-added opportunities and taking greater control of their supply chain and demand cycle.
- Producers, processors, researchers, technology developers, and manufacturers working collaboratively to meet consumer needs by producing superior quality, safe, and effective products.
- Established international collaborations and partnerships across the supply chain are benefitting Alberta companies.
- Alberta companies accessing the necessary expertise, infrastructure, and essential information and support and successfully navigating Alberta's research, innovation, regulatory, and commercialization systems.
- Alberta's post-secondary students enrolling in areas of study including agriculture, bioprocessing, and food science, supporting the plant proteins sector through knowledge and skills development.
- Alberta continuing to grow and being recognized as a key *go-to* jurisdiction for specific products, technologies, and ingredients desired by national and international companies.

Current State of the Industry

From discussions with experts and end-users, it was suggested that, even by the most conservative demand estimation, the opportunity is big enough to support more than five Alberta plants, with an approximate capacity of 5,000-10,000 metric tonnes per year. These would also serve as an anchor for other food processing industries in Alberta like texturized proteins, food and health ingredient manufacturers, and consumer products manufacturing.

Globally, Agri-Food processing is mostly dominated by multinational corporations with integrated supply chains. In Alberta, most of the companies working in this space are startups with novel processing technologies but no access to a pilot scale facility or proven offtake interest. There are some major problems in Alberta, including a lack of sufficient investments and investment-readiness in Alberta-based startups, that are preventing the sector from realizing its full potential.

In the past five years Alberta has not attracted any major canola crushing projects. With the right attraction strategy, more canola crushing projects will not only add value to our exports, but will also provide canola meal, a valuable by-product in the ecosystem. Canola meal will drive



feedstock opportunities for the biofuels and plant proteins industries. A similar opportunity for the plant proteins industry lies in attracting one manufacturer; this will lead to by-product opportunities like starch — a feedstock for edible starch, soluble dietary fibers, ethanol, biomaterial, and bioplastic industries. Alberta produces 40.2 per cent of Canadian peas in Canada¹¹ and is a leader in other plant protein crops like wheat, chickpea, and canola. Capitalizing on this opportunity by building processing facilities would create feedstock availability and resilient supply chains. There are also established handling and transport facilities in the province which can benefit the plant proteins industry.

Both the canola and plant proteins industries are also showing growing trends of co-generation to increase green credentials. This not only ensures Alberta sees more manufacturing capacity, but it will attract Consumer Packaged Goods (CPG) and other industries due to proximity to finished goods.

THE NEED

Increased investment in Alberta's plant protein industry is necessary to create a sustaining ecosystem that helps meet the ever-growing global demand for plant proteins. To remain competitive, we must grow beyond a commodities producer to a value-added product producer. It's time for us to partner up and collaborate to build the capacity, infrastructure, and innovative thinking needed to help put Alberta's value-added ingredients into foods on the collective global plate.

Alberta is lacking a champion to support and grow the potential of its plant proteins industry by raising awareness of its existence and linking suppliers with the global supply chain.

THE PROBLEM

Alberta's Disadvantages:

1) Absence of a core Alberta Protein Strategy

Alberta is not being marketed as a major global plant protein supplier as part of Alberta's protein industry. Plant proteins are not competition for the meat industry but are an additional choice for the consumer. Plant proteins support the meat industry and ultimately broaden the product offerings from Alberta, bringing more export opportunities.

There is more focus on attracting an established multinational player to set up operations in Alberta and leverage our envied supply chain advantage. This has been unsuccessful as it pits Alberta against other prairie provinces and global jurisdictions offering much better investor incentives. It would be more strategic to support Alberta-

¹¹ Statistics Canada, 2020



based plant protein startups through value-creating as opposed to the continuation of only bringing in finished products. Alberta is giving away an entire ecosystem that exists right within its own borders.

2) Lack of programs identifying export and offtake opportunities

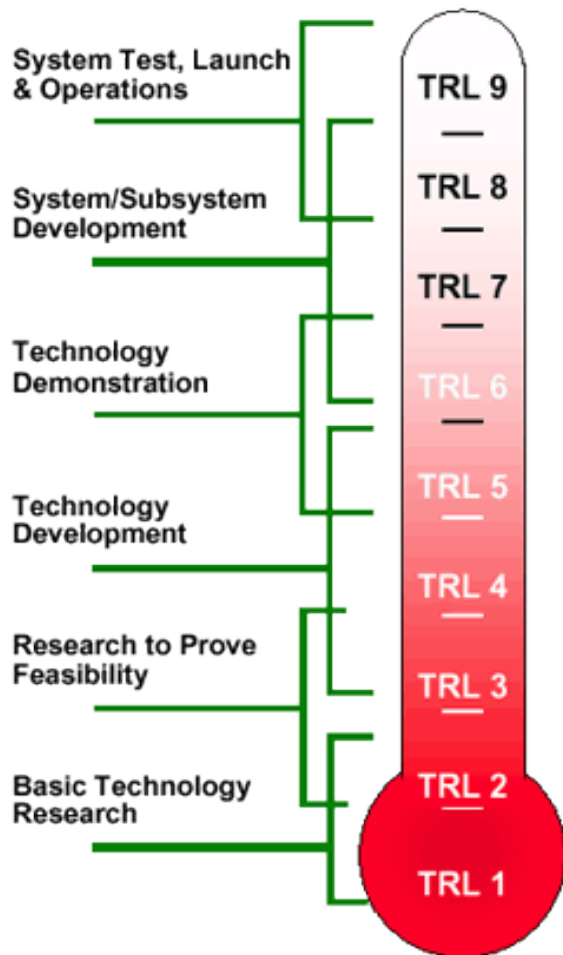
Alberta organizations are not receiving adequate support in putting up a common stage and providing market exploration activities which organizations like STEP have done for Saskatchewan based manufacturers. The Government of Alberta can play an expanded role in building such international connections to diversify end-user markets and expand revenue streams and export potential for the province.

3) Lack of quantifiable industry data

In the Canadian Prairies, most of the processing is done by multinationals and on ground level there is a disconnect in relationships with suppliers. The problem is more complex for Alberta, where most companies in the space are startups. They struggle to forge connections with suppliers and end users due to their limited resources and still underdeveloped product offerings. With the plant proteins sector still in a state of infancy, it is difficult to find historical pricing, demands, and trends. It is also difficult to quantify a demand that is currently not here but will be exponential upon arrival. These large supply-demand disparities make it difficult to quantify the investment potential for prospective investors. Apart from this, 15-18 months of construction time adds to project uncertainties in the project. Without firm offtake commitment, it is hard to convince investors to support the opportunity.

There is also a perceived technological risk. The technology itself is proven but the difficulties in scaling it up and successfully running it cause more doubts for investors. Most startups working towards establishing fractionation facilities have moderately mature technology (Technology Readiness Levels 5-6) and will need assistance developing a market-ready product and manufacturing process. There are no current funding opportunities in Alberta for technology demonstration or commercialization.





Technology Readiness Levels (TRL)

4) Lack of Investor incentives

There are few front-end and back-end incentives for the Agri-Food industry in Alberta. These short-term incentives are necessary to attract more investors and build the processing infrastructure to its full potential.

5) Hesitancy from institutional lenders

In the project finance phase, institutional lenders are conservative when financing new ventures with high capital expenditure requirements in a new industry segment that has no historical reference points for sales volumes and profit margins. A solution to this problem would be de-risking it with a guaranteed minimum offtake price along with equity. For Energy sector businesses, institutional lenders backed some of the debt, recognizing the exports it would bring. But for the Agri-Food processing sector, such initiatives are absent. In the short term, some measure of debt support will become necessary to kickstart major activities to realize appreciable long-term returns.



Available resources in the ecosystem

- Availability of resources like the Bio Processing Innovation Centre (BPIC) and the Food Processing Development Centre (FPDC) which may help in product development and provide a workable path prior to pilot scale-up and later, when the plant is realized.
- Introduction of a new non-refundable 12% investment tax credit for investments of \$10+ million in the capacity building
- Canada Revenue Agency's Scientific Research and Experimental Development (SR&ED) Program: eligible SR&ED work results in an investment tax credit being at least 15% and can be as much as 35% of qualified SR&ED expenditures. Any unused investment tax credits can be carried back three years or forward 20 years.
- Alberta's Labour and Immigration Jobs Now Program: employers can apply for a grant covering 25 per cent of an employee's salary for a 52-week period, up to a maximum of \$25,000 per employee. The grant can be used to cover salary or training costs. Employers who hire persons with disabilities receive a grant 1.5 times higher than the amount they receive for other new employees.
- An Alberta research and manufacturing process talent pool.
- Established logistics for end-user markets and proximity to feedstock.

Gaps

- Since most of the local ecosystem is in startup phase, the actual problem is of a successful scale-up i.e., reaching pilot scale, where product and process demonstration becomes easier and business model becomes predictable. This stage is currently not supported by any incentives for investors or capacity-building grants.
- Companies with more access to novel process and technologies have a higher survival rate and successful scaleup as it is easier for them to differentiate in the market. Alberta is not competitive in terms of new research incentives and tax credits.
- Agri-Food Processing facilities generally do not yield any revenues or profits in the first couple of years due to longer construction and production trial periods. For startups, any incentives that help with cash-flow ensure higher survival rates.
- The investor tax credit is a helpful step in attracting more investment to the sector, however it is only useful if the investment is more than \$10 Million. Most Alberta-based companies have not reached this point and the non-refundable nature does not help solve the immediate cash-flow problem.
- Infrastructure to support sites for plant protein production, including water, transportation, and land.

Recommendations:

Based on the analysis of the current situation and gaps, and multiple discussions with various stakeholders from Industry, Investors, and Institutional lenders, the following recommendations are suggested to provide credible support to Alberta's Agri-Food Processing sector, especially for plant proteins.



The recommendations are meant to bridge the following gaps and provide faster communication and capacity-building in Alberta's Agri-Food and Plant Proteins industry.

- 1) Increase investment in Agri-Food processing sector in Alberta.
- 2) Improve access to capital for Alberta-based ventures in the Agri-Food sector.
- 3) Provide a glide path to Alberta SMEs by increasing their cashflow in the short term by providing tax credits and employment benefits. These incentives can ensure longer survivability of ventures and make their path to scale-up easier.
- 4) Encourage more R&D in Alberta's application and processing.

Long Term:

- 1) Place more emphasis on Alberta's ability to provide the complete protein spectrum: from meat and lab-grown meats to plant proteins and their products.

The global population is expected to grow to 9.7 billion by 2050. The population of the world is changing with the rapid growth of the middle class which by 2030 will account for two-thirds of the global population. As incomes rise, individuals are moving toward more energy-dense diets that include more protein. Current estimates predict the world will require approximately 70 per cent more food than is currently produced.¹² With only finite resources, this will create higher dependence of efficiency in producing all types of foods, including meat, poultry, fish, dairy, fermentation, plant-based, edible insects, and lab-grown meat.

Alberta will have a distinct advantage in such a scenario with the ability to provide the complete spectrum of dietary needs with high quality and lower environmental impact. Hence, it will be important to not project any component of the food industry as competition to the others but instead, complementary to the others, for the global market.

- 2) Government and Economic Development agencies should focus more on the end user of plant proteins to create positive pressure on investors and manufacturers to set up infrastructure projects rapidly.

Plant Proteins, and the entire Agri-Food processing sector, relies on an extensive supply and value chain that starts at genetics and ends on the kitchen plate. It relies on multiple and supporting industries that aid in cultivation, processing, packaging, and transportation.

Alberta already enjoys an advantage in raw material supply which is crucial for the success of the Plant Proteins industry and Agri-Food industry in general. However, if

¹² Colgrave, 2021



Economic Development efforts simultaneously attract the downstream industries in the region, then it de-risks all the plant proteins and agri-food processing facilities with potential off-take partnerships. This advantage will not only come from geographic proximity to a predictable supply chain, but also higher collaboration due to sharing an ecosystem.

Short-term:

1) Improving Access to Capital:

Front-End vs. Back-End Incentives for investors

Most incentive initiatives in place in Canada to stimulate angel, seed, or venture investments have focused on de-risking investors at the front-end of investment commitments. For example, tax credits committed to a certain percentage of the total investment made, reduces risk up-front. Some analysts believe back-end incentives (enhanced returns when an investor exits) have the potential to do more.

The elimination of Alberta's Investor Tax Credit (AIRC) removed a meaningful front-end incentive for equity investment in pre-revenue ventures, that is present in BC and Saskatchewan, as well as in over 24 US states including New York, Oklahoma, and Georgia. The AIRC offered a 30 per cent tax credit to qualified individuals or corporations who invested in eligible Alberta SMEs doing research, development, or commercialization of new technology, new products, or new processes. Its introduction was an encouragement for start-ups and venture capital in the province, that was not replaced with new incentives.

Alberta made the right step in this direction by introducing the Agri-processing Investment Tax Credit that provides a 12 per cent non-refundable tax credit against eligible capital expenditures for corporations investing \$10 million or more to build or expand Agri-processing facilities in Alberta.

However, it will still present many challenges for Alberta-based companies to achieve their goals to build large-scale Agri-processing facilities. The threshold of \$10 million or more will prevent most Alberta based companies working in the sector benefiting from it. If a lower threshold and expansion in expenditure criteria can be considered, then it would better serve its purpose.

A back-end incentive for investment in early-stage ventures could be achieved through more generous capital gains deductibility, more commonly known as tax relief, on future returns that would only be realized during a capital event (e.g., IPO or acquisition). In the US, Internal Revenue Code Section 1202 (the Small Business Stock Gains Exclusion) states that any purchase of small business stock after September 27, 2010, qualifies for 100% tax exclusion of any capital gains up to \$10 million, if it is held for at least five years. In Canada, the Lifetime Capital Gains provision is limited to ~\$860,000 per person. In BC, this is topped up with a Small Business Venture Tax Credit of up to \$120,000 in each calendar year.”



Recommendation:

- a) Lower the threshold of investor tax credit to \$5 million, to cover the pilot and scaling-up activities in this sector.
- b) Make the tax-credits refundable in nature to ensure higher cash availability for startups.

Flow-Through Shares (FTSs)

FTSs have been used successfully in the past for corporations in the mining, oil and gas, and renewable energy and energy conservation sectors to help finance their exploration and project development activities. The Agri-Food processing industry in Alberta would also benefit greatly from FTSs to support their scaleup journey by increased access to strategic investors and their networks.

Junior resource corporations often have difficulty raising capital to finance their exploration and development activities. Moreover, many are in a non-taxable position and do not need to deduct their resource expenses. The FTS mechanism allows the issuer corporation to transfer the resource expenses to the investor. A junior resource corporation benefits greatly from FTS financing.

The FTS program provides tax incentives to investors who acquire FTSs by allowing:

- Deductions for resource expenses renounced by eligible corporations.
- Investment tax credits for individuals (excluding trusts) on resource expenses in the mining sector that qualify as flow-through mining expenditures.

The Canada Revenue Agency (CRA) reviews all FTS arrangements and audits monitor the program.

Recommendation:

- a) Flow-Through Shares should be considered as an investment tool for Plant protein projects in the Agri-Food processing sectors.

Increase the Ability to Finance Alberta projects with Public Bonds

Most Agri-Food processing projects require higher capital expenditure because acquiring land, facility construction, and equipment purchase are the main project costs. A key challenge in this sector is the difficulty of scaling up from lab to pilot scale and from pilot scale to production facility as each step requires an incremental investment for facility setup and operations along with several months of lead time.

However, the value brought by such physical assets — in the form of various processing capabilities, potential of value additions for export, job creation, and building a carbon neutral sustainable industry — is immense.

To address the higher capital needs and decrease the risks on the investors, a Bond-type arrangement, like the Green Bonds issued by the Federal Government, should be considered. The Green Bonds came into effect through the Canadian Net-Zero Emissions



Accountability Act, which received Royal Assent in June 2021, to develop emission-reduction plans and contribute to reaching net-zero emissions by 2050. The Government of Canada will engage key stakeholders and partners, such as provincial and territorial governments, and Indigenous Peoples, among others, in setting these national targets.

This arrangement, however, is quite complex. The Government of Canada Green Bond Framework was developed in accordance with the International Capital Market Association (ICMA) Green Bond Principles of 2021, and needed an independent external reviewer, Sustainalytics, to confirm the framework's alignment with the core components and key recommendations of the Green Bond Principles of 2021. Finance Canada and Environment and Climate Change Canada lead an Interdepartmental Green Bonds Committee (IGBC) that updates the list of potential Eligible Green Expenditures. For the proceeds, Finance Canada issues and manages the Green Bonds. This in turn requires reporting and verification for compliance.

Recommendation:

- a) An option for a provincial Bond arrangement should be considered and studied in-depth for the Agri-Food Processing sector.

2) Help companies overcome technological challenges:

The Alberta Budget of October 24, 2019, ended the Alberta SRED tax credit which complemented the Federal SRED. Its removal impacted the innovation wellspring that creates jobs and economic activity, by reducing investment in R&D across industrial sectors, threatening both jobs and competitiveness.

The revision of the SRED incentive has dropped Alberta from middle of the pack in Canada to the very bottom in terms of availability of public funding for pre-revenue technology commercialization, on par with PEI (population of 157,000). For Canadian-controlled Private Corporations (CCPCs) below certain taxable capital limits, the net SR&ED rate in Alberta dropped from 41.5% (combined Federal + Provincial) to 35% back on expenditures.

For publicly traded companies, non-CCPCs, and CCPCs exceeding \$50M in taxable capital, the impact was even harder, and these companies saw their net SR&ED rate in Alberta drop from 23.5% (combined Federal + Provincial) to 15% on expenditures. Unfortunately, with the elimination of the Alberta SR&ED program, the credits awarded became non-refundable (i.e., credits applied against taxes owing).

Although corporate budgets are made on expectations of SRED credit success, the timing is such that the SRED credit typically helps to fund the next year's innovation budget. A company always has "skin in the game" for these R&D projects that frequently span several years, requiring long-term decisions.

Also, the extra cash back from SRED can make or break situations for many companies in the startup phase and are working towards capacity building. It can soften some



fundamental business issues that affect the viability of the businesses like lower return, thus less room for any contingency plan or pivot, or decreasing uncertainties in the product development cycle to speed up access to market.

The current Innovation and Employment Grant (IEG) program has tried to fill the void left by provincial SR&ED credits in Alberta. However, it will stop applying meaningfully once the company reaches the 10-million-dollar equity mark and the reduction in benefits will be incremental. Also, being a grant program linked to employment instead of a tax credit makes it difficult to access for startups with very less human capital.

So, if we want to promote more innovation, and more importantly help companies make a pilot/demonstration facility which can be used to generate more off-take interest and agreements, thus helping them with more investor interest and successful scale up, then we need to consider some meaningful changes.

Current gaps in the IEG:

- 1) No provisions of allowing tax credit on equipment for process improvements at a scale up stage that are meant to build a demonstration facility with limited commercial usage.
 - More understanding is needed about what level of technology development will still allow them to claim some or all their costs under the SR&ED/Innovation and Employment Grant (IEG) program.
 - The aim of the program is to reduce the risk to companies *when they are developing new technologies or processes*. However, the actual challenge in the case of plant proteins manufacturing is to optimize the processing that results in higher and constant quality products. This production efficacy is important to scale up and secure offtake agreements can be used to raise enough money from investors to pursue a viable business plan.
- 2) No provision to consider the plant proteins fractionation plants as a start-up and remove the \$10 million equity barrier to qualify for the innovation and employment grant or set this to a revenue mark instead.
 - The benefit of the provincial Innovation and Employment Grant (IEG) begins to erode if a company's "prior year taxable capital in Canada" is deemed to exceed \$10M (within the associated group of companies). It becomes null for provincial benefit when the associated group's capital is more than \$50M. It erodes linearly between \$10M and \$50M — i.e., the tax credit becomes half when a company reaches capital of \$30M.
 - For many plant protein producers, once they raise enough investment / take on enough debt that they exceed \$50M, they can no longer claim any benefit from the province through the IEG/SR&ED program. The Federal benefits are also limited (drop from 35% cash-back to 15% non-refundable). A potential way to address this gap would be to have the provincial program be applicable to companies without any taxable capital limitation. Alternatively, the cap can be tied to a revenue mark — historically the SR&ED program had a cap on benefits for corps that had >\$800K of "taxable INCOME" (as reported federally).



Recommendation:

- a) Scientific and Research Experimental Tax Credits (SRED): re-introduction of provincial tax credits and ensuring higher tax rebates for startups should be considered.
- b) Expand support for undergraduate and graduate level training at our Polytechnic schools and Universities for advanced technical skills in food processing, advanced bioprocessing, and food applications research.

CONCLUSION

Alberta is optimized to capitalize on the plant proteins sector's potential and meet global demand. In doing so, it will also help meet the aggressive growth targets committed to in Agri-Food's 2020 Investment and Growth Strategy by generating stable jobs, diversifying the industry and economy, and further expanding research and innovation. Government commitment without assertive action will see Alberta lag other jurisdictions and miss out on being an important global resource for food ingredients and other value-added protein offerings. Implementing the recommendations outlined above, will strengthen Alberta's potential to become the ingredients hub for plant-based foods and other proteins, be part of a secure domestic food supply chain, and increase trade opportunities nationally and globally.

Alberta Agriculture has committed to supporting the province's economic growth and job creation by ensuring rural Alberta businesses and employers have access to needed tools and resources. To set them up for success, the Government of Alberta developed the Economic Development in Rural Alberta Plan to support sustainable growth and diversification in the province's rural economy. The plan specifically includes key strategies and measurable actions to ensure rural Albertans have opportunities where they live by enhancing rural economic development through regional and targeted capacity building.

Now is the time to build on the Agri-Food sector's existing strengths and capitalize on emerging opportunities for growth. Solid government support that includes incentives and pre-empt investment, is integral to taking advantage of the underestimated opportunity that is Alberta's plant proteins industry.

