



# Protein Highway™

Network for plant-based protein innovation

June 2021

**Welcome to the Protein Highway Quarterly Newsletter!**

The [Protein Highway](#)™ is an initiative to enhance cross-border collaboration among entrepreneurs, researchers, and end users across the Canadian Prairies and U.S. Midwest-Great Plains region. The mission is to support and facilitate bilateral, precompetitive initiatives that unite industry, academia, and government in advancing the North American plant protein sector.

The *Protein Highway Newsletter* will be published quarterly. If you or someone you know would like to be added to our mailing list, or if you have ideas for future newsletter content, please contact [proteinhwy@gmail.com](mailto:proteinhwy@gmail.com).

[Learn more about the Protein Highway.](#)



[Become a Member of the Protein Highway!](#)

We are thrilled to announce that the Protein Highway is now accepting members! Choose from three affordable levels—individual, corporate, and student. Members can participate in exclusive

events, join an Action Team, and stay apprised of the latest intelligence on alternative proteins in the United States and Canada. Learn more and [apply now!](#)

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## Spotlights Across the Region

### Regional Crush Capacity Enhanced



*The Ag Innovation Campus in Crookston, Minnesota, will host several bays where companies can test research on the path to commercialization. Illustrations by Derek Byrozo*

#### **The Ag Innovation Campus: Growing for tomorrow**

In the span of just a few years, the Ag Innovation Campus in Crookston, Minnesota, transformed from a long-term dream to a shovel-ready project that's primed to improve ag economies throughout Upper Midwest – along with building demand for its Canadian neighbors. The possibilities for the Ag Innovation Campus are truly limitless for both the state's farmers and their Canadian trading partners.

"There are huge opportunities for Canadian farmers and businesses at the Ag Innovation Campus, both on the crush and education sides," said Tom Slunecka, CEO of Ag Management Solutions, which oversees the AIC's operations. "There's really no place like the AIC in the world. We are full steam ahead."

Located in the heart of northwest Minnesota's versatile ag country – roughly 100 miles south of

the Canadian border – the cutting-edge Ag Innovation Campus in Crookston combines the best of agriculture by fostering new opportunities for farmers and agribusinesses. Simply put: The AIC has the potential to change the game for North America’s diverse agriculture economy. The not-for-profit Campus will be available to private industries to achieve several initiatives: **demonstration, training and proving that technologies are commercially viable. The AIC will provide a platform to bring new crops and processing technologies from bench top through the starting states of commercialization.** It will build products to benefit all parties, from farm gate to consumers, and serve as a state-of-the-art facility for tomorrow’s ag professionals.

On day one, the AIC is projected to generate \$27.8 million in revenue annually. A fully operating AIC will create dozens of good-paying jobs and crush more than **60,000 tons per year** (equating to about 240 tons each production day) of soybean meal, enough to service more than 30% of the regional market. That equates to 2.5 million bushels a year, or 61,000 acres of soybeans. The AIC will also be ahead of the curve as the **first crush plant in the world dedicated to purchasing and selling soybeans based off amino acid value.**

The Ag Innovation Campus strives to serve as an incubator for agricultural advancements, with a goal toward cultivating new and novel products, creating jobs and increasing the value of ag commodities throughout the region. The mechanical, non-exhume facility will support three crushing lines. Each line can be operated all on either organic, non-GMO or GM soybeans as well as separately for each type of soybean. This flexibility will fill the regional gap in scale. Each line can also be cleaned to avoid cross contamination with other soybean lines. The facility’s floor plan is designed to welcome in new, advanced processing technologies as they become available or need to be featured by technology companies. In addition, in the near future, the **AIC will also be working on other oil seeds, including cover crops**, which were cited as a key climate priority in President Biden’s address to Congress last month.

Canada imports about \$337 million worth of the soybean meal from the U.S. each year, and is the third-largest importer of soybean meal from Minnesota. The North Star State exports \$4.8 billion in goods to its friends to the north each year, 14% of which is related to agriculture. In total, Minnesota exports nearly \$400 million worth of soybean meal annually. In 2019, officials from the Minnesota Soybean Growers Association, which successfully advocated the state legislature for partial funding for the AIC, met with agricultural officials at the Canadian Embassy in Washington, D.C.

Despite unforeseen circumstances related to COVID-19, the Ag Innovation Campus has launched a website and opened an office in Crookston as it readies to **begin formal construction this summer**, with an eye toward crushing 2021 beans in 2022. To learn more about sponsorship and partnership opportunities, visit [www.aginnovationcampus.org](http://www.aginnovationcampus.org) or reach out to Tom Slunecka at [tslunecka@agmgmtsolutions.com](mailto:tslunecka@agmgmtsolutions.com) or (507) 720-4052.

“We are looking for assistance from public and private resources to fill the gap created by increased construction costs due to the ongoing pandemic,” Slunecka said. “Our build plan is prudent, but we hope to reach our ultimate goal as quickly as possible.”

# Protein Highway- Strategic Direction

<b>Maintain &amp; Expand PHI Brand and Infrastructure</b>  <b>(FUNDING &amp; GOVERNANCE)</b>	<b>Facilitate cross-sector, cross-border collaborative relationships that otherwise may not happen in the plant protein space</b>  <b>(RELATIONSHIPS &amp; STRATEGY)</b>	<b>Encourage product development</b>  <b>(RESEARCH &amp; INNOVATION)</b>
<ol style="list-style-type: none"> <li>1. Brand and market the US-Upper Midwest and Canadian Prairies as the plant protein global hub                             <ul style="list-style-type: none"> <li>• Develop Communications Plan</li> <li>• Identify existing events for Protein Highway engagement and partnership</li> <li>• Explore options for an annual Protein Highway business and investment event</li> </ul> </li> <li>2. Develop organizational infrastructure to support the mission                             <ul style="list-style-type: none"> <li>• Develop Fundraising/Volunteer Engagement Plan</li> <li>• Establish &amp; update Strategic Plan                                     <ul style="list-style-type: none"> <li>• Identify metrics of value to the Protein Highway for assessing achievement of objectives and outcomes on an annual basis.</li> </ul> </li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Drive pre-competitive research partnering among scientists by connecting universities with each other and outside resources</li> <li>2. Match large corporate needs with available research groups and/or SMEs capable of fulfilling those requirements or addressing their business challenges.</li> <li>3. Unite existing efforts in plant proteins to avoid duplication and leverage success;</li> <li>4. Connect end users with manufacturers/suppliers of plant protein commodities and ingredients;</li> </ol>	<ol style="list-style-type: none"> <li>1. Encourage development of new products and services</li> <li>2. Attract capital investment through trade events, and encourage industry supply chain development</li> <li>3. Drive innovation in plant protein solutions/technologies</li> <li>4. Stimulate economic growth within the Protein Highway region</li> </ol>

## Protein Highway Strategic Planning

With the knowledgeable and enthusiastic assistance of [Denise Hauge](#), The Protein Highway Board has identified key areas of focus to guide our activities over the near term and medium term. Each action will have a filter relating to 'internal' to the Protein Highway region as well as 'external'. Next step is to formulate the tactical plan with input from our community- watch your email for a survey soon.

We welcome your feedback and participation in this process; please email [christina.connelly@international.gc.ca](mailto:christina.connelly@international.gc.ca) if you would like to provide input. As we refine our focus, we will continue to keep you – the Protein Highway community – aware of resources, opportunities and contacts across the region’s protein value chain.

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### **State of Minnesota To Invest in Alternative Protein**

credit: [Good Food Institute](#)

Minnesota lawmakers have introduced bills that, if enacted into law, will invest in research to advance Minnesota's plant-based food industry. This bill offers \$2 million of funding to support research in areas that are critical to grow the plant-based industry, such as developing new crop varieties, using byproducts from existing crops in plant-based products, and more.

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### **Meet A Protein Scientist- Dr. Gary Reineccius, University of Minnesota**

The Protein Highway region has a wealth of knowledgeable scientists who help advance protein concepts into practice. Dr. Gary Reineccius, University of Minnesota shares his perspectives on the opportunities in this area-and why flavor is king.



Dr. Gary Reineccius  
University of Minnesota

**What is your role at the University of Minnesota?**

I am an emeritus professor in the Food Science and Nutrition Department at the University of Minnesota. I retired from my faculty position early Jan 2020 so I could spend more time on research. My research is applied problem solving focused on flavor issues in the food industry. Currently most of my research is on off flavors inherent to protein sources and how to mitigate flavor: protein reactions which result in reduced sensory quality and early end to shelf-life.

**Tell us about the path that brought you to your current position?**

My professional life has been spent in the position I took on graduating from Penn State University (Ph.D. research on chocolate flavor). I have taken 3 sabbatical leaves to work in the flavor industry to gain insights into industry functioning and needs.

**What is the biggest challenge facing the alternative proteins industry today?** I could suggest the battle to become recognized as a functional/alternative protein source, or issues in encouraging farmers to plant a novel crop or some other non-technical challenge but I will stay with the chemistry/technology area. The alternative protein source is going to have to fill a functional need in its use – does it serve as an emulsifier, is it soluble at the pH of use, does it gel or build viscosity, does it offer equivalent nutritional quality? However, if the novel protein does meet these functional needs, does it have an acceptable flavor and is that flavor stable over time? When consumers are polled about what is most important to them in determining acceptance of a food, FLAVOR is always rated number 1. The industry must be able to provide new protein sources that are neutral in flavor.

**Do you have a favorite plant-based food and/or restaurant?**

I do not seek out vegan restaurants but restaurants that prepare a well balanced and well prepared meal. Over time my preferences have changed from meat centric to plant centric meals:

meat is now at the side of the plate. I actually make my menu choice based on the non-meat component preparation.

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## 2021 Protein-Focused Events

A promotional banner for a webinar. On the left, a photograph shows two people in white lab coats and hairnets in a food processing facility, looking at a tablet. The background is a dark blue geometric pattern. Text on the right reads: "Future of Labour in Protein Webinar", "Tuesday, June 15, 2021", and "10 a.m. CST". The Manitoba logo is in the bottom right corner.

**Future of Labour in Protein Webinar**  
Tuesday, June 15, 2021  
10 a.m. CST

Manitoba 

[Future of Labour in Protein Webinar](#)- June 15, 2021 (virtual)

A promotional banner for a symposium. The background is a collage of various protein sources: salmon, chicken, beef, chickpeas, lentils, and almonds. Text on the left reads: "MANITOBA SUSTAINABLE PROTEIN RESEARCH SYMPOSIUM", "JUNE 22-24, 2021", and "#MBPROTEINADVANTAGE". Logos for "MANITOBA PROTEIN RESEARCH STRATEGY" and "Manitoba Industry-Academia Partnership" are in the top left.

**MANITOBA SUSTAINABLE PROTEIN RESEARCH SYMPOSIUM**  
JUNE 22-24, 2021  
#MBPROTEINADVANTAGE

MANITOBA PROTEIN RESEARCH STRATEGY  
Manitoba Industry-Academia Partnership

[Manitoba Sustainable Protein Research Symposium](#)- June 22 to 24, 2021 (virtual)



PPIC [fall event planning](#) underway-

- Industry Focused - Research Planning Meeting - Early Fall 2021
- Protein Basics Short Course Early Fall 2021

[Pulse and Special Crops Convention](#) – September 7-9 (Whistler), Canadian Special Crops Association & Pulse Canada

[Plant-Based Foods & Proteins- Americas](#) 2021 Virtual Summit September 27-28, Bridge to Foods



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