



# PROTEIN PROJECT WITH NEW FOOD SCIENTIST BUILDS ON SUCCESSFUL RELATIONSHIP BETWEEN APG AND FPDC

Alberta Pulse Growers (APG) is funding research by the new food scientist for crops at Alberta's Food Processing Development Centre (FPDC) to develop versatile ingredients from high fibre or high starch spent meals for food and biomaterial industries.

Dr. Jingqi Yang has valuable experience researching plant proteins and developing value-added plant-based products, while APG has worked with FPDC on many processing research projects over the years.

"The goal of this research is to develop versatile ingredients from high fibre or high starch spent meals for both the food and biomaterial industries," Yang said. "According to Protein Industry Canada, plant-based foods represent a once-in-a-generation economic opportunity for this country. Adding value to protein spent meal aligns well with Canada's transition to a zero-carbon economy and strongly addresses national and global food security and nutritional challenges. I anticipate this project will help illustrate that using pulse by-products for conventional food and biomaterial ingredients is feasible by developing, scaling, optimizing, and commercializing pulse-based ingredients."

Yang noted that the project involves pilot scale research and development that will result in a presentation and product showcase. The findings will be shared with stakeholders including growers, plant protein producers, agri-value processors, and other researchers.

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"The knowledge gained from this project will boost the competitiveness of Alberta's plant protein industry by reducing waste, diversifying revenue streams, and increasing job opportunities," she explained. "My experience on processing conditions was gained from my last research project with APG when I was with the University of Alberta."

Yang earned her PhD from the University of Alberta in 2016. She then worked for six years as a post-doctoral researcher on both academic and industrial projects. Her research focused on exploring the process-structure-functionality relationship within plant proteins and developing value-added plant-based products. She joined FPDC in 2022 as the Food Scientist for Crops.

"This role has been really fulfilling and allowed me to focus on what I'm passionate about," Yang stated.



Dr. Jingqi Yang in the FPDC lab.

"While I love working with pulses because they are sustainable, my first love is integrating them into my diet because they have a relatively high protein content."

Yang remarked that her favourite pulse snack is deep fried faba beans coated with salt and five spice, a flavourful and crunchy snack from when she was a kid. The scientist said she is pleased to be able to contribute to the research that could help more people enjoy pulses.

"My hope is for a thriving pulse industry that supports local farmers and continues to grow substantially and sustainably in Alberta and beyond," she said. "I would like to see more awareness of the nutritional value, sustainability, and affordability of pulses."

Yang pointed out that there is a lot of valuable research being conducted in North America on pulses, such

as yield increase, pest and diseases resilience, adaptation to different climates, nutritional value, efficient processing, better taste, culinary innovation, and health benefits. Research in these areas is essential to turn pulses into better food ingredients that can be applied in more products. Pulse ingredients can be used in beverages, baked goods, breadings, fillings, and frozen foods. She explained that with increased use, consumers and food processors will become familiar with pulse ingredients, making pulses more mainstream.

FPDC has expertise and capability to collaborate on industry-led research projects and scale product/process development for industry, Yang noted.

“It is a great place to bring ideas to market,” she said. “The potential to use pulses in innovative food products aligned perfectly with my




passion for exploring cutting-edge advancements in the food industry.”

In her new role, Yang plans to help food companies develop products and processes for sale in local and global markets. This includes applying her expertise to help companies in the pulse industry transform commodities into value-added food ingredients that can be used in a wide range of products. She will also bring new and advanced knowledge to food industries

and increase Alberta’s long-term competitiveness by conducting industry-led research projects.

“I would like to thank the Alberta Pulse Growers Commission for generously funding and supporting this industry-led research project,” Yang commented. “I am grateful for the partnership between the commission and FPDC, which is enabling us to explore new frontiers and make a difference in Canada’s pulse industry.”

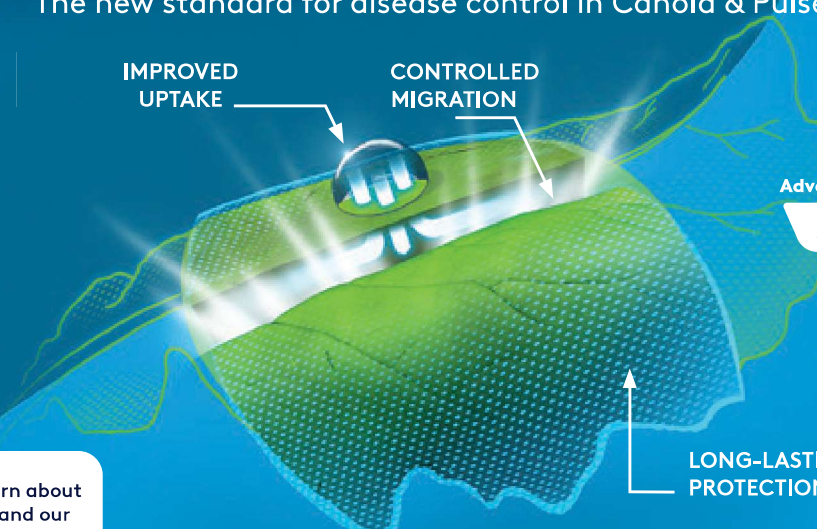


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