

Collaboration drives innovation

How can Canada's agri-food sector provide consumers with healthier meals and at the same time generate new market opportunities? The answer lies in findings new ways to use and promote traditional food ingredients, and bring the right people together to make that possible.

Barley is a case in point. Often used in soups, it has rarely been used as a more versatile food ingredient in North America. That may be changing. Recently, Winnipeg's Canadian International Grains Institute (Cigi) completed a project to develop products from hullless barley. The Institute worked with a range of partners to explore barley's potential, including the Alberta-based Food Processing Development Centre and more than 20 companies in Canada, the U.S., and U.K. The partners included millers and food ingredient suppliers, as well as manufacturers of baked products, breakfast cereals, doughnuts, pizza crusts, and meat products.

For this project, researchers successfully incorporated whole-grain barley flour into numerous bakery items, nutrition bars, snacks, and meat products. This experimentation generated technical information on a variety of food applications that could encourage food processors to consider barley flours in their ingredient mix. Along the way, they could increase the fibre content of many popular

"Attracting champions across the food system is vital."



Barley cookies

products, especially soluble fibre.

"Achieving a broader acceptance for using barley flour in everyday food products has widespread positive implications – for plant breeders looking for feedback from industry on desired traits, for producers seeking to grow crops in demand for their value-added opportunities, and for food processors interested in new, nutritious product options," said Dr. Linda Malcolmson, Manager of Special Crops, Oilseeds and Pulses at Cigi. (Further details about Cigi's Canadian barley project can be found at canadianfoodbarley.ca.)

In support of such advances, the industry must secure a health claim in Canada specifically for barley, similar to one that exists in the U.S. Barley industry members believe this measure helps promote that crop's full potential as a food ingredient with consumers and processors alike.

"Taking a technically viable idea and turning it into a commercially relevant success requires a great deal of collaboration between producers, researchers, investors, business, and government," said Earl Geddes, Cigi's Executive Director. "Having a shared objective – expanding the use of barley as a nutritious ingredient – and attracting champions across the food system is vital

Barley-based breakfast cereal



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to creating new opportunities.”

Cigi is also looking at incorporating pulse flours into food products, such as pastas made with yellow peas and chickpeas, bagels containing pea fibre, muffins using various pulse flours, and gluten-free extruded snacks made from

100 percent pea, bean, and lentil flours.

A four-year pulse-flour milling project is currently underway to identify foods that processors could commercialize using pulse flours and create prototypes to demonstrate food product applications.

The project, which will continue to 2014, is a partnership between Cigi and Pulse Canada, and is funded by the

Government of Canada, Saskatchewan Pulse Growers, Alberta Pulse Growers, and the Canadian Special Crops Association.

“We’re seeing an industry that is increasingly interested in understanding the functional traits of pulse flours as a basis to create innovative and more nutritious foods,” said Dr. Malcolmson.

Adding value in Saskatchewan

Saskatoon’s InfraReady Products illustrates how critical innovation and collaboration are to competitiveness. InfraReady was launched in 1994 as an attempt to add value to cereal grains before they left the province. Focusing on consumer demand for healthier food products, the company rapidly expanded. Today, it markets over 200 products. The company uses cereals, legumes (lentils, peas, beans), and oilseed-based ingredients in such products as baked goods, soups, baby foods, and beverages. Applying quick-cooking technology to lentils, beans, and peas helps to retain nutrition-quality and improve starch and protein digestibility.

InfraReady’s partners include POS Bio-Sciences and the Saskatchewan Food Industry Development Centre, which are both in Saskatoon. These partners provide technical assistance in commercializing the company’s innovative ideas.

For nutritional research, InfraReady partners with Winnipeg’s Richardson Centre for Functional Foods and Nutraceuticals, and for product development work the company partners with Cigi. Mark Pickard, InfraReady’s founder, said that: “A key part of our success in delivering more nutritious foods to the marketplace and creating new opportunities for growers and ourselves has been due to collaborating with these partners.”



InfraReady baked goods made with oilseed-based ingredients.

Leveraging the potential of ‘food systems’

The Canadian Agri-Food Policy Institute (CAPI) has been generating a national dialogue on its February 2011 report, *Canada’s Agri-Food Destination: A New Strategic Approach*. The *Destination* report provides ideas on how Canada can strive for a more profitable and competitive agri-food sector, a healthier population, and more sustainable ecosystems. A core concept is that success depends on leveraging the potential of “food systems” – a shift in approach that is based on a new collaborative spirit and supportive policies and regulations.

A food system is an operating environment for agri-food partners to work collaboratively with a full range of support partners while operating profitably and meeting consumer demands and society’s expectations. Food systems include agri-food supply or value chains and connect with many other supportive players, such as governments, researchers, financial services, and information-management providers.

CAPI believes that being successful in this complex food world requires increasing collaboration among players in supply/value chains, and among other players, and creating common objectives to drive performance.



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The Canadian Agri-Food Policy Institute (CAPI) is a catalyst. The Institute is focused on stimulating a national dialogue on agriculture and agri-food issues, by addressing the policies that will enable Canada to thrive in the global agri-food marketplace. It is a non-

partisan, not-for-profit organization that offers an independent voice on the mid- to long-term challenges facing the agriculture and agri-food industry. Through the publishing of an occasional newsletter, CAPI will highlight innovation and successes in the agri-food sector.