Q: Tell us about the Canadian International Grains Institute. How does cereal chemistry fit within its mission?

A: The Canadian International Grains Institute (Cigi) is an independent, not-for-profit market development institute headquartered in Winnipeg, MB, Canada. Cigi’s mission is to increase the utilization of Canadian grain and field crops through superior knowledge, technical expertise, industry leadership and collaboration, innovative processing solutions, and targeted training for customers around the world. Cigi employs a staff of 42. Cereal chemistry is core to our work in evaluating the processing and end-use applications of Canadian grain and field crops, with a particular emphasis on wheat and pulses.

Q: How does Cigi’s work bring innovation to the field of cereal chemistry?

A: Cigi’s work is focused on understanding the needs and requirements of customers who buy Canadian grain and using that knowledge to deliver market development and technical support activities on behalf of an industry value chain that includes growers, exporters, researchers, and end users. These efforts include outreach missions by Cigi staff to key markets, bringing international participants to Cigi for technical programs, and conducting applied research on wheat and pulses to identify practical, commercially relevant solutions related to milling and end-product applications.

Innovation stems from the ability of Cigi’s staff to apply their technical knowledge and in-depth understanding of customer needs to our research activities. For example, AACCI members may recall research done at Cigi that concluded fine flour milled from durum wheat produces alkaline noodles with superior yellow color and better texture than those made with common wheat flour. Previously, there was no scientific literature available on evaluating the use of durum wheat in Asian noodles. Although our work with pulses is more recent, it has developed significantly over the past 12 years. Some of our research in this area is focused on optimizing pulse milling through investigation of the use of pulse ingredients in products such as breakfast cereals, instant noodles, bread, and pasta to improve nutrition and health benefits.

Q: What are Cigi’s core capabilities? What types of scientists does the organization employ to do this work?

A: Cigi’s staff includes 23 specialists working in the areas of analytical services, Asian products, baking, milling, pasta, extrusion, and pulse processing. The majority have degrees in food science or cereal chemistry or extensive training and education in their areas of specialty. Many also have experience working in commercial operations such as mills and bakeries or research facilities. Staff members apply their expertise based on their knowledge of customer preferences to evaluate how Canadian wheat can meet needs unique to specific markets, such as texture and color requirements for noodles in different Asian countries or the significant range of processing conditions and formulations that exist in bakeries all over the world. Our facilities include a wide range of technology and equipment that enable staff to conduct lab- to commercial-scale testing.

Q: When was Cigi founded and what are key milestones in the organization’s growth?

A: Cigi was established in 1972 by Agriculture and Agri-Food Canada, the Canadian Wheat Board, the Canadian Grain Commission, and other industry members. Their vision was to build a facility that could teach customers and Canadi- ans about the Canadian grain industry, promote the export of Canadian grains, and provide a forum for information exchange between Canada and its trading partners. During the past 45 years, Cigi has worked with more than 45,000 participants from 115 countries and evolved to ensure we continue to meet industry needs. In July 2017, Cigi announced a new funding model and board structure that will bring together the provincial wheat commissions in western Canada and grain companies and handlers as its core source of funding. The new board will oversee Cigi’s future direction to ensure we remain a strong asset to the Canadian grain industry.

Q: In what ways has Cigi collaborated with AACCI? How does AACCI enable Cigi’s work and how does it support AACCI?

A: We rely on AACCI methods in our analytical services lab to add further credibility to the results we provide because many of our international participants are familiar with these methods. Cigi’s lab was twice awarded the AACCI Analytical Accuracy Award for the Amylograph, and we consistently use AACCI check samples to monitor a number of our test results.

Many Cigi staff members give poster and oral presentations at AACCI Annual Meetings, are members of AACCI technical committees, and are active at the local section level. Cigi is very supportive of this involvement because it demonstrates our commitment to excellence in quality and product analysis, and it is an excellent training ground for staff to further develop their expertise through an internationally recognized body.
Q: How is Cigi engaged in partnerships with government, industry, and academia that enable innovation?

A: Cigi has an extensive history of collaborating with government, industry, and universities. One current partnership involves a major pulse research initiative that was launched in 2016. Cigi is now conducting its most comprehensive investigation into the quality characteristics and functionality of pulses (yellow peas, red and green lentils, chickpeas, and navy beans) as ingredients in baked products in collaboration with Warburtons, the United Kingdom’s largest bakery brand. Enhancing commonly consumed wheat-based food products by adding pulse ingredients, which are high in protein and fiber, or using these ingredients to create new products can open the door to greater demand for pulses and more opportunities for food processors. In this project, Cigi staff are working with industry, university, and research centers to answer various questions about pulse flour functionality and flavor. This is just one example of how Cigi works with project partners, ensuring everyone involved has the opportunity to apply their respective areas of expertise for the good of the industry.

If you are interested in submitting a profile of your organization, please let us know! We will be conducting interviews with individual and institutional members to be featured in future issues of *Cereal Foods World*.

Contact Lauren McGinty at lmcginty@scisoc.org for more information.