



2021 Annual Report



Vision

We are the number one promoters of Canadian cereals – a united voice that cultivates relationships across the value chain to nourish the growth and development of markets.

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Together, the cereals value chain supports the work of over 52,000 Canadian farms and has a return of \$9.9 billion of export revenue to the Canadian economy.

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Mission

Cereals Canada is a national, not-for-profit organization that facilitates collaboration between partners across all sectors of the cereals value chain, with a focus on wheat, barley and oats. Our membership encompasses leading farm organizations, grain handling, export and processing companies, as well as crop development and seed companies.

Message from the Chair

In my two years as chair, Cereals Canada has accomplished some significant goals. We're establishing our reputation in the industry with our customers, government, growers, and consumers when it comes to technical expertise, market access and advocacy and growing the Canadian brand.

In 2020, a new organization was formed from the merger of two heritage brands—Cereals Canada and Canadian International Grains Institute (CIGI)—and in 2021, the focus was on strategic development, alignment and building a strong foundation.

United under one brand, with the vision of being the number one promoters of Canadian cereals, we grew the identity of Cereals Canada to include all cereals grains. We did this despite another year of COVID-19 and the challenges it brought to the industry.

Forced to rethink how we deliver programs, the organization deftly pivoted to include more online seminars and was able to reach more customers and members. We developed new collaborations with other value chain organizations and increased our advocacy role, and we supported the new direction of the Canada Grain Act Reform, Next Policy Framework, Seeds Regulatory Modernization and Eastern Declaration.

Finally, the whole industry came together to support each other in the last year. We experienced drought, excess moisture, floods, geopolitical crisis, evolving marketplace concerns, and government regulation, and we continue to maneuver through these events to help Canadian farmers and the cereals value chain.

I want to thank the board of directors, the members and staff for their commitment and effort to propel the organization forward so we can continue to build and grow.

Todd Hames

Chair, Cereals Canada

Board of Directors



Todd Hames

Chair of the Board

Producer Representative
Alberta Wheat Commission



Jennifer Marchand

Vice-Chair

Industry Representative
Cargill



Robert Misko

Treasurer

Producer Representative
Manitoba Crop Alliance



Jean-Marc Ruest

Secretary

Industry Representative
Richardson International Limited



Henry Van Ankum

Producer Representative
Grain Farmers of Ontario



Jeffrey Bertholet

Industry Representative
BASF



Gregg Fotheringham

Producer Representative
Manitoba Crop Alliance



Darren Amerongen

Industry Representative
Parrish & Heimbecker



Adam Dyck

Industry Representative
Warburtons



Brett Halstead

Producer Representative
Saskatchewan Wheat Development Commission



Tessa Ritter

Industry Representative
Viterra



Jake Leguee

Producer Representative
Saskatchewan Wheat Development Commission



Greg Sears

Producer Representative
Alberta Wheat Commission



Trish Jordan

Industry Representative
Bayer Canada



Glenn Tait

Producer Representative
Saskatchewan Wheat Development Commission



Matt Bingham

Industry Representative
G3

Members



Financials

Cereals Canada leverages our value chain membership investments enabling the organization to continue to provide consistent programming to key markets, supporting the transfer of information to the value chain, market access initiatives, market development and research.



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The financial support from the Government of Canada allows Cereals Canada to leverage our value chain investments to strengthen and maintain the brand, provide technical support to our global customers, and ensure market access success.

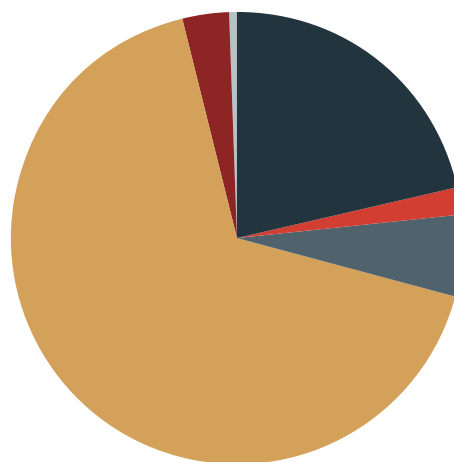
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Sources of Revenue

April 1, 2021 to March 31, 2022

Agriculture and Agri-Food Canada	● \$1,679,212	21.5%
Applied Research Projects	● \$144,683	1.9%
Consulting and Technical Services*	● \$454,674	5.9%
Industry Partners	● \$5,231,379	67%
Contributed Services In-Kind	● \$252,779	3.2%
Miscellaneous	● \$45,931	0.5%
Total	\$7,808,658	

**Fee for Service*



The main funding sources for 2021-22 were our industry partners and the Government of Canada through Agriculture and Agri-Food Canada's Canadian Agricultural Partnership program. Our industry partners are comprised of Canadian farmers who fund Cereals Canada through their respective provincial wheat commission check-offs and the Industry represented by Grain Exporters, Life Science Companies and Processors. The two pillars, Producer and Industry, are equal funders and share equal governance responsibilities for the organization. In the 2021-22 fiscal period for Cereals Canada the total revenue was \$7.8 million. The three top revenue sources were \$5.3 million in funding from producer and industry partners, \$1.8 million from AAFC for market development and applied research activities, and \$0.5 million in funding from consulting and technical services. Please refer to the revenue pie chart for future information.

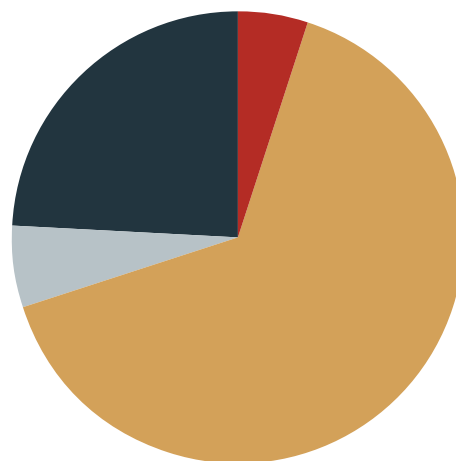
Audited financial statements can be made available upon request.

Expenditures

April 1, 2021 to March 31, 2022

Consulting & Technical Services	\$366,321	5%
Market Development	\$4,331,415	65%
Applied Research	\$407,032	6%
Operating and Administrative Expenses	\$1,589,717	24%
Total	\$6,694,485	

In the 2021-22 fiscal period for Cereals Canada the total expenditures were \$6.7 million. The three top expenditures were \$4.3 million in market development activities, \$1.6 million for operating and administrative expenses, and \$0.4 million for applied research activities.

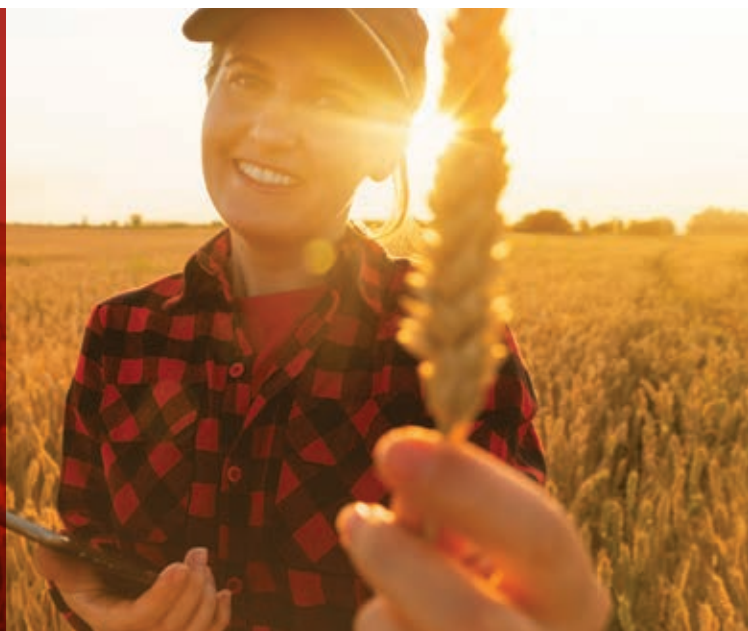


Canada has an enviable reputation as a reliable supplier of safe, high-quality cereal grains. Promoting the benefits of Canadian wheat, barley and oats and protecting and supporting export markets is important to the Canadian value chain.

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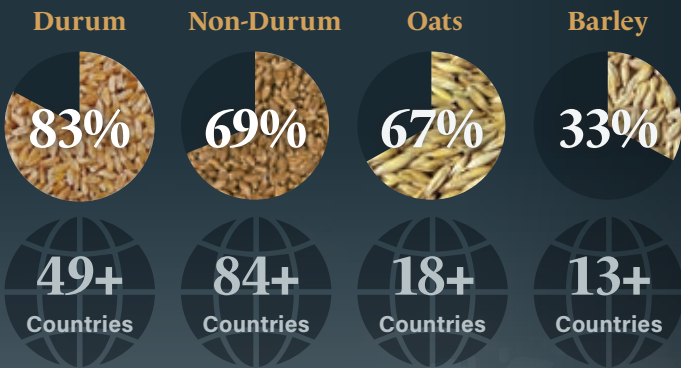
Canadian wheat is sought after for its quality and its ability to improve overall quality in many mills. The versatility and quality of Canadian wheat allows it to be used to produce many different high-quality end-products around the world.

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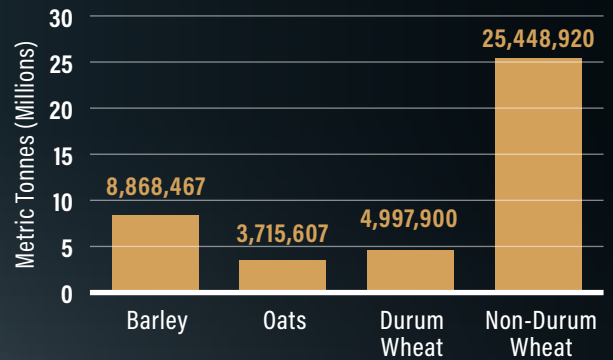


Demand for Canadian Cereals

Over the Last Five Years (2017-2021)
Canada's Exports (Grain and Products) Account for:



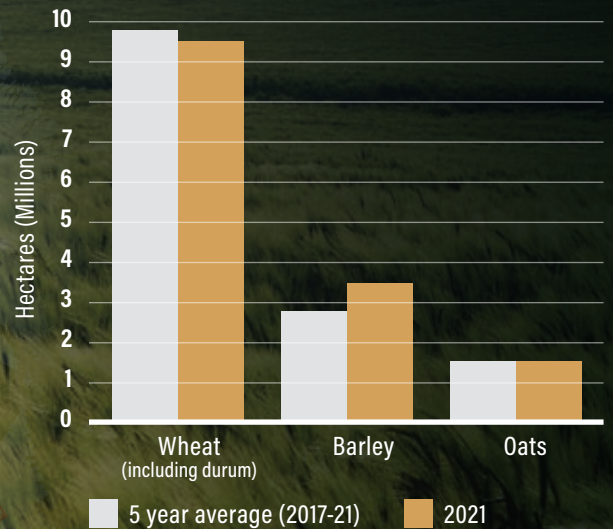
Canadian Cereal Crop Production
(5 year average)



Source: Statistics Canada



Canadian Farmers Planted



Largest Markets for Canadian Grain Exports (2021)*

Non-Durum Wheat



CHINA

Total Canadian Exports: 2.3 million tonnes, valued at \$831 million

Market Profile: Canada's largest buyer of non-durum wheat in 2021, China's non-durum wheat imports (2021) from all suppliers was 9.7 million tonnes.



INDONESIA

Total Canadian Exports: 1.65 million tonnes, valued at \$621 million

Market Profile: One of the world's largest markets for non-durum wheat, Indonesian non-durum wheat imports (2021) from all suppliers was 11.4 million tonnes.



JAPAN

Total Canadian Exports: 1.45 million tonnes, valued at \$575 million

Market Profile: A long-standing, quality conscious wheat customer, Japan's non-durum wheat imports (2021) from all suppliers was 4.9 million tonnes.



PERU

Total Canadian Exports: 1.4 million tonnes, valued at \$506 million

Market Profile: One of the world's largest buyers of non-durum wheat. Total non-durum wheat imports (2021) from all suppliers: 1.9 million tonnes.



COLOMBIA

Total Canadian Exports: 1.3 million tonnes, valued at \$508 million

Market Profile: One of the world's largest buyers of non-durum wheat. Total non-durum wheat imports (2021) from all suppliers: 2.0 million tonnes

Durum Wheat



ALGERIA

Total Canadian Exports: 1 million tonnes, valued at \$407 million

Market Profile: One of the world's largest buyers of durum wheat, total durum wheat imports (2021) from all suppliers are estimated at 1.5 million tonnes.



ITALY

Total Canadian Exports: 839 thousand tonnes, valued at \$341 million

Market Profile: A large durum wheat buyer, and pasta exporter, Italy's total durum wheat imports (2021) from all suppliers were 2.3 million tonnes.



MOROCCO

Total Canadian Exports: 823 thousand tonnes, valued at \$340 million

Market Profile: One of the world's largest buyers of durum wheat, Morocco's total durum wheat imports (2021) from all suppliers was 1 million tonnes.

Oats



UNITED STATES OF AMERICA

Total Canadian Exports: 1.4 million tonnes, valued at \$456 million

Market Profile: Canada is the leading supplier to the US oat market with oat imports (2021) from all suppliers of just over 1.4 million tonnes.



MEXICO

Total Canadian Exports: 92,000 tonnes, valued at \$27 million

Market Profile: Canada is a market leader in Mexico, a market with oat imports from all suppliers of 130,000 tonnes in 2021.



CHILE

Total Canadian Exports: 57,000 tonnes, valued at \$20 million

Market Profile: Canada has been the main supplier for Chile's growing oat demand. Total oat imports into Chile (2021) from all suppliers was 88,000 tonnes.

Barley



CHINA

Total Canadian Exports: 3.3 million tonnes, valued at \$1.1 billion

Market Profile: China has a large demand for feed grains including barley imports (2021) from all suppliers of 12.5 million tonnes.



UNITED STATES OF AMERICA

Total Canadian Exports: 153,000 tonnes, valued at \$62 million

Market Profile: Canada is a regular barley to the US and is the largest source for the US's total barley imports of 189,000 tonnes.



*Canadian export statistics are sourced from Statistics Canada and expressed on a calendar year basis. Total import statistics from Global Trade Tracker. Dollar values in CAD.

Cereals Canada is the voice of the cereals value chain. Over the past year, Cereals Canada continued to monitor market access issues, provide market support and programming, and promote the use of Canadian cereals in the global marketplace.

Cereals Canada focuses on four key areas:

1. Market Access and Advocacy

Focusing on market access, trade policy, and domestic regulations, Cereals Canada supports Canada’s market competitiveness by conveying its priorities to the federal government.

2. Market Support and Development

Cereals Canada provides unbiased, technical support to help customers understand the quality of cereals and how to integrate Canadian cereals into in-country milling and food processing (end-product) systems. We also support the value chain by communicating the quality, consistency, and reliability of Canadian cereals to a global audience.



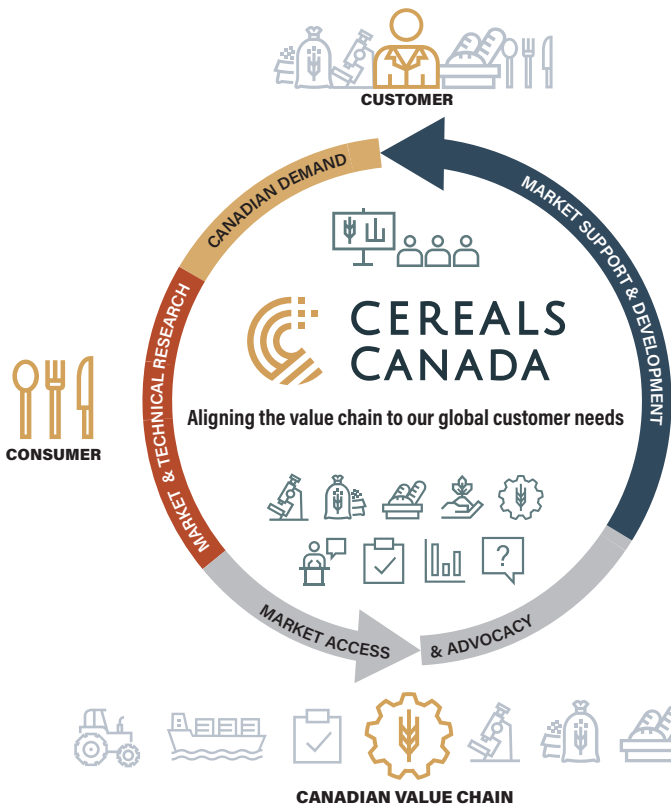
3. Growing Canadian Demand

Canada’s reputation for growing and supplying sustainably produced, consistent, versatile, high-quality wheat, barley, and oats is known around the world. Communicating key initiatives, programs, and technology informs the value chain, government, customers, and consumers about quality cereals grown across Canada.

As the voice of the industry, we work towards aligning the value chain to our global customer needs. This is accomplished by sharing insight and market guidance through Cereals Canada programming.

4. Market and Technical Research

Cereals Canada monitors the quality of cereals around the world, identifies food trends that impact customers and the use of Canadian cereals, and gathers insights from market trend analysis to help to inform and influence decisions.





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Market Access and Advocacy

Ensuring Market Access Success

Protecting export markets is a top concern for the Canadian cereals value chain. Relying on a science-based regulatory system that enables innovation, along with harmonization of regulations among global trading partners to ensure predictable trade, is key to the success of the cereals sector.

Canada depends on its reputation as a reliable supplier of safe and high-quality grain. All food is regulated in Canada and the science-based regulatory programs help contribute to Canada's strong international reputation. Maintaining transparency upholds public trust and helps to ensure market access success.

Cereals Canada has led in-depth engagement with members, government and in-market stakeholders to advance the policy environment for Canadian exports. This includes advocacy for trade agreement negotiations with the United Kingdom, Association of Southeast Asian Nations (ASEAN), Indonesia and India.

We have also led advocacy for the enforcement of trade agreements such as Comprehensive and Progressive Agreement for Trans Pacific Partnership (CPTPP) and European Union Comprehensive Economic and Trade Agreement (CETA).

The need for enforcement of these agreements is reflected by ongoing technical trade issues such as zero tolerance restrictions for certain weed seeds in Vietnam, or mandatory country-of-origin-labelling in Italy which emerged in tandem with the entry into force of these agreements.

Beyond efforts to promote continued trade liberalization and the enforcement of existing agreements, Cereals Canada has led targeted advocacy and support to members to advance and navigate technical issues in wide ranging global markets.



Driving Change for Growing Markets

Keeping markets open and monitoring trade issues that affect Canadian cereals exports involves the whole value chain. To encourage trading nations to strengthen transparency and predictability in trade, a collaborative approach is taken with our partners at Canada Grains Council (CGC), Canadian Agri-Food Trade Alliance (CAFTA), the Government of Canada and global industry partners.

Cereals Canada experts developed and provided input into multiple submissions in collaboration with CAFTA and CGC for the Canadian Government to consider which included

- Country of Origin Label (COOL),
- Front of Package labeling (FOP) and
- International Standards for Phytosanitary Measures (ISPMs).

North American Trade

Cereals Canada advocated for improvements to mandatory declarations imposed following Canada-United States-Mexico Agreement (CUSMA) which required mandatory declaration of all grain deliveries to license facilities. Cereals Canada advocacy resulted in the development of an industry-government working group led by the CGC and Cereals Canada eastern members. Following this engagement, declarations have been streamlined so that only grains subject to variety registration based on quality considerations will require a declaration. As a result, certain grains will no longer need to be declared under regulation.

Collaboration with Value Chain Organizations

The Next Policy Framework (NPF) is a five-year investment by federal, provincial, and territorial governments to strengthen and grow Canada's agriculture and agri-food sectors. Cereals Canada, along with other value chain organizations, took a leadership role in the NPF to influence direction and policy impacting the value chain.

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Cereals Canada, Canola Council of Canada, and Pulse Canada collectively represent three of the largest crops in Canadian agriculture. Members across these three organizations represent over \$45 billion in economic activity annually, support over 250,000 jobs across the country and account for over 77 per cent of all principal field crop production in Canada.

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Working with organizations such as Agriculture and Agri-Food Canada (AAFC), Pest Management Regulatory Agency (PMRA), and Canadian Food Inspection Agency (CFIA), we provide a strong, consistent voice for the Canadian grains value chain, advocating for effective and collaborative ways to address issues facing our industry.



Growing Exports

Cereals Canada played a leading role in driving a focus on opportunities for capacity improvements for market access in the Indo-Pacific. As part of this strategy Cereals Canada, the Canola Council of Canada, and Pulse Canada have released a jointly commissioned report calling for the creation of a diversification office in the Indo-Pacific to proactively address and resolve market access issues and position Canada as a trusted knowledge partner to key markets in the area.

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The Indo-Pacific Diversification Office represents a strategic step to secure Canadian agriculture’s export growth, diversification, and competitiveness in the Indo-Pacific region.

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Staffed by a dedicated and resourced team of agricultural trade and regulatory experts and technical personnel, The Indo-Pacific Diversification Office would maintain regular contact with agriculture policy makers and regulators in the Indo-Pacific, keeping Canada at the leading edge of emerging trends in the region. This would allow issues to be addressed in a timely and efficient manner and give Canada an advantage over its international competitors, while positively impacting global food security.

The Global Regulatory Landscape Remains Complex

Working with government, exporters, and growers to ensure that crops are market ready and meet Maximum Residue Limits (MRLs) is critical in keeping markets open. The Cereals Canada MRL Assessment Committee met to proactively evaluate the MRL-related trade risk of commercialization of chemistry/crop use patterns with new or amended registrations.

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Cereals Canada continuously monitors potential risks in major export markets and shares the guidelines for crop production products through monthly updates with our stakeholders.

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New in 2021, Cereals Canada included monthly corn MRL update reports, in partnership with Grain Farmers of Ontario (GFO). In addition to monitoring Canadian and CODEX MRLs, GFO has established the country list of MRLs of interest to include China, France, Ireland, Italy, Kenya, Netherlands, Portugal, Spain, United Kingdom, Ukraine, and the United States.

The monthly reports also provide Cereals Canada with valuable information on MRL changes, proposed changes, and revocations, which also helps secure market access. MRL changes in these reports, such as the reduction of an MRL in a market of interest identified in the policy, can trigger an active ingredient to be reviewed by the MRL Assessment Committee and provide opportunity for input into consultations.

Changes to maximum limits (MLs) are monitored in cereals. Cereals Canada provided comments to AAFC's Market Access Secretariat on the proposed EU measures notified by G/SPS/N/EU/547 amending Regulation (EC) No 1881/2006, with respect to ochratoxin A levels. The proposed change in the EU was viewed as more trade restrictive than necessary. Implementation would negatively impact Canadian exports of grain to the EU.

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For farmers to benefit from plant breeding innovation, it is essential that we maintain market access for Canadian grain.

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Plant Breeding Innovation

The Canadian agriculture industry relies on science to drive sustainability, supply new varieties to help the value chain be profitable, and provide consistent, high-quality grains for our domestic and international customers.

Plant breeding innovation allows researchers to prioritize on sustainable agriculture and is critical in the continued success of the grain sector in Canada. Innovations, like the adoption of gene editing, help to accelerate targeted solutions for crop concerns, such as disease resistance.

While there is currently no gene edited wheat being commercially grown in Canada, there is continued and emerging research on traits such as disease resistance and improved input use efficiency. For farmers, these advances would have a positive impact on their crop management practices and ultimately contribute to farm economic stability.



Gene editing was the focus of a recent webinar presented by Cereals Canada, along with industry partners Canada Grains Council and CropLife Canada. The information shared in the webinar provided an understanding of what gene editing is, some of its possibilities, and the importance of maintaining public trust and transparency for market access success.

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Gene editing works within the plant's own genetic code to make improvements that could occur in nature over time, or through traditional breeding, but faster and with more precision.

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In addition to proactive work that strengthens trading conditions for the benefits of Canadian farmers and the value chain, Cereals Canada actively responds to market access and trade barriers as they occur.

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The webinar was in anticipation of the Health Canada’s long-awaited publication of guidance on plant breeding innovation. Since the last update in 2006, technological advancements have created new tools of genetic modification by which new plant varieties can be developed. Developers expressed the need for the Novel Food Regulations to be clearer, more predictable, and more transparent regarding products of plant breeding, including those developed using these new tools of modification such as gene editing.

The update sets out clear, science-based requirements for researchers developing grain and oilseed varieties with a wide range of enhancements that will benefit our sector. Health Canada’s approach aligns well with global regulatory trends and acknowledges that gene editing is no more risky than conventional plant breeding.

The publication resulted from four years of advocating by Canada Grains Council, CropLife Canada and Seeds Canada, for a science and risk-based regulatory environment that facilitates innovation. Cereals Canada provided input into the advocacy efforts to look into the future possibilities of gene editing in cereals and what that could mean for market access.

Keeping Growers Informed about MRLs Through Keep it Clean

Keep it Clean is a joint initiative of Cereals Canada, the Canola Council of Canada, and Pulse Canada which informs and empowers Canadian growers to grow market-ready crops and helps maintain domestic and export markets. Throughout the year, growers are provided with timely updates on potential market risks or restrictions, including MRLs, and information about on-farm practices that will ensure their canola, cereals, and pulse crops meet the standards of our export customers.



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Canada is a leading global exporter of cereal commodities and proudly holds the position as the world’s #1 exporter of durum wheat and oats. By mobilizing the value chain across priority areas, Cereals Canada is building on Canada’s position as a reliable, nutritious, and sustainable supplier of high-quality cereal grains.

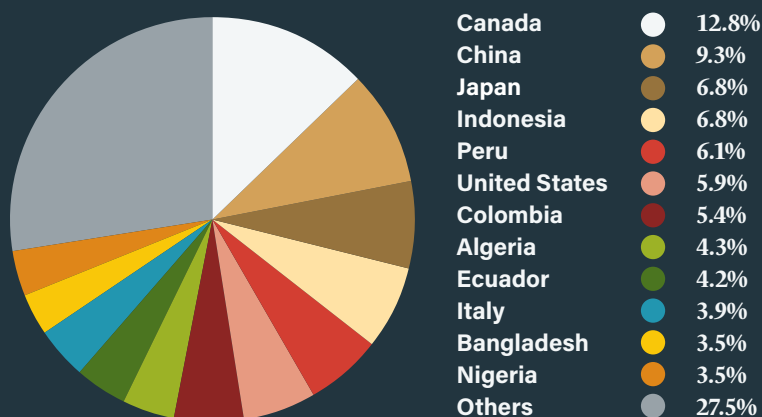
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Market Support and Development

Growing and Maintaining Markets

Although COVID-19 limited in-person training programs, new crop in-country missions, events and meetings, Cereals Canada reached more people in its targeted webinars. Over the last year, Cereals Canada held 17 webinars reaching 55 markets targeted to 1603 participants.

Core Wheat and Durum Markets 2021



New Crop Missions

The flagship program 2021 New Crop Missions saw:



34

Participating Countries



971

Registered Attendees



24

Individual Customer/ Company Meetings



7

Different Languages Provided for Interpretation

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Cereals Canada and the value chain partnered with the Canadian Grain Commission to deliver New Crop information to customers under the Canadian Cereals brand.

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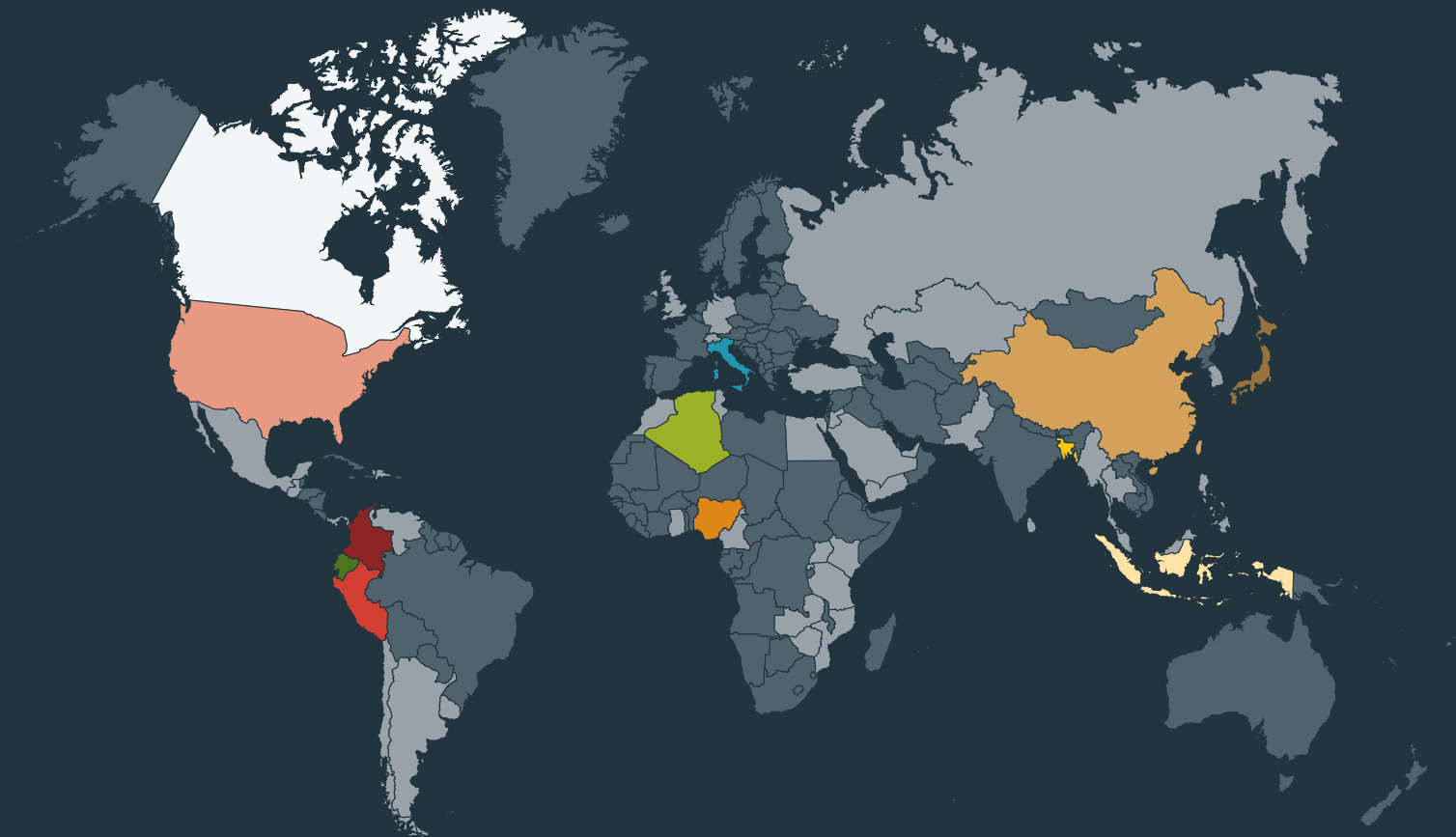
The Canadian cereals industry showed its strength by producing a quality high protein wheat crop despite decreased production. Online webinars were held to present the technical data from the crop to demonstrate its quality.

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2021/2022 Programs - Participants by Country

55 countries reached, 17 programs delivered

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|-----------------------|---------------|------------------|--------------------|
| 1. Algeria | 15. Greece | 29. Mozambique | 43. Taiwan |
| 2. Argentina | 16. Guatemala | 30. Nigeria | 44. Thailand |
| 3. Bangladesh | 17. Haiti | 31. Pakistan | 45. Tunisia |
| 4. Canada | 18. Hong Kong | 32. Panama | 46. Turkey |
| 5. Cameroon | 19. Indonesia | 33. Peru | 47. UAE |
| 6. Chile | 20. Italy | 34. Philippines | 48. Uganda |
| 7. China | 21. Japan | 35. Russia | 49. United Kingdom |
| 8. Colombia | 22. Jordan | 36. Rwanda | 50. USA |
| 9. Dominican Republic | 23. Kazakstán | 37. Saudi Arabia | 51. Uruguay |
| 10. Ecuador | 24. Kenya | 38. Singapore | 52. Venezuela |
| 11. Egypt | 25. Malaysia | 39. Sri Lanka | 53. Yemen |
| 12. El Salvador | 26. Mexico | 40. South Korea | 54. Zambia |
| 13. Germany | 27. Morocco | 41. Switzerland | 55. Zimbabwe |
| 14. Ghana | 28. Myanmar | 42. Tanzania | |



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Bangladesh has averaged over one million tonnes of Canadian wheat imports per year over the past five years and is Canada's seventh-largest export market for common wheat.

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Targeted Outreach

Cereals Canada provides in-country, annual technical support programming to countries, virtual webinars and direct requests for support. Targeting key exporting countries, webinars and outreach took place throughout the year to maintain relationships and to communicate key results.

This year, in partnership with the Canadian High Commission in Bangladesh, the Canadian Wheat Milling Handbook (2nd edition) was created to help millers understand how Canadian wheat and flour are used to make high-quality food products. This edition was released in both English and Bangla to provide additional information to complement in-person training and webinars, and to support an important, long-standing market for Canadian wheat.



“Canada is one of the top exporters of high-quality wheat to Bangladesh. We are proud to be contributing to Bangladesh's food security efforts as Canadian wheat is the best quality in the world.”

Dr. Lilly Nicholls

High Commissioner of Canada in Bangladesh

Research Supporting a Sustainable Future

Helping to drive innovation in wheat production, the National Wheat Research Database is a valuable resource for growers, scientists, and governments. The database, which is led by Cereals Canada on behalf of the value chain, includes details about ongoing research in Canada and allows farmers to access information about wheat varieties with higher yields, improved disease and insect resistance, and improved ability to tolerate environmental conditions, all while meeting required quality standards.

Together, Cereals Canada and Agriculture and Agri-Food Canada developed the National Wheat Research Priorities. The Canadian wheat research strategy themes for 2020-2022 are:

- improving wheat yield
- improve wheat yield reliability
- enhance cropping system sustainability
- continuous improvement in food safety
- consistently deliver on customers' quality needs

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The National Wheat Priorities are aligned with our value chain members and the strategic direction of Cereals Canada.

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Approximately \$90 million in funding has been allotted to wheat research since the launch of the database in 2018. In this last year (2021) of the current strategy, there were 75 new research projects underway, all with the potential to improve performance and grower revenue. An update for the next five-year term 2023-2028 is being developed. In the next framework, a new theme, Nutrition, will be included.

It All Starts with the Seed

The focus of the Prairie Grain Development Committee (PGDC) is to develop improved varieties of cereals for Western Canada. Cereals Canada provides insight to the PGDC on what global customers of Canadian cereals require in terms of quality. The insight supplied supports researchers and aligns with the National Research priorities.

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Connecting the value chain to global customers' needs is an important part of the value Cereals Canada brings to the cereals grains sector.

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Growing Canadian Demand

Supporting Wheat Nutrition Knowledge

What About Wheat? is a communication campaign launched in 2022 by the Canadian Wheat Nutrition Initiative (CWNI) to bring up-to-date science- and evidence-based information to nutrition professionals and consumers.

By turning research-driven health studies on Canadian wheat into digestible information bites, the campaign aims to inform dietitians, health professionals, and Canadians about the health benefits of wheat. Using social media and peer influencers, nutrition professionals and consumers are directed to the What About Wheat? website, which provides credible nutrition research, a wealth of information on wheat, and an FAQ page.

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An information-sharing partnership with ILCereales, the Latin American Cereals Institute, through the What About Wheat? initiative will help maintain the important Latin American market.

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Increasing Consumer Demand for Winter Wheat

The Habitat-Friendly Winter Wheat Ecolabel program, launched in 2021 by Cereals Canada, Ducks Unlimited Canada, and winter wheat grower groups is a solution that benefits Canadian wildlife habitats, the environment, and the economy. The ecolabel highlights the ecological benefits of winter wheat to consumers and creates new marketing opportunities that increase demand for winter wheat.

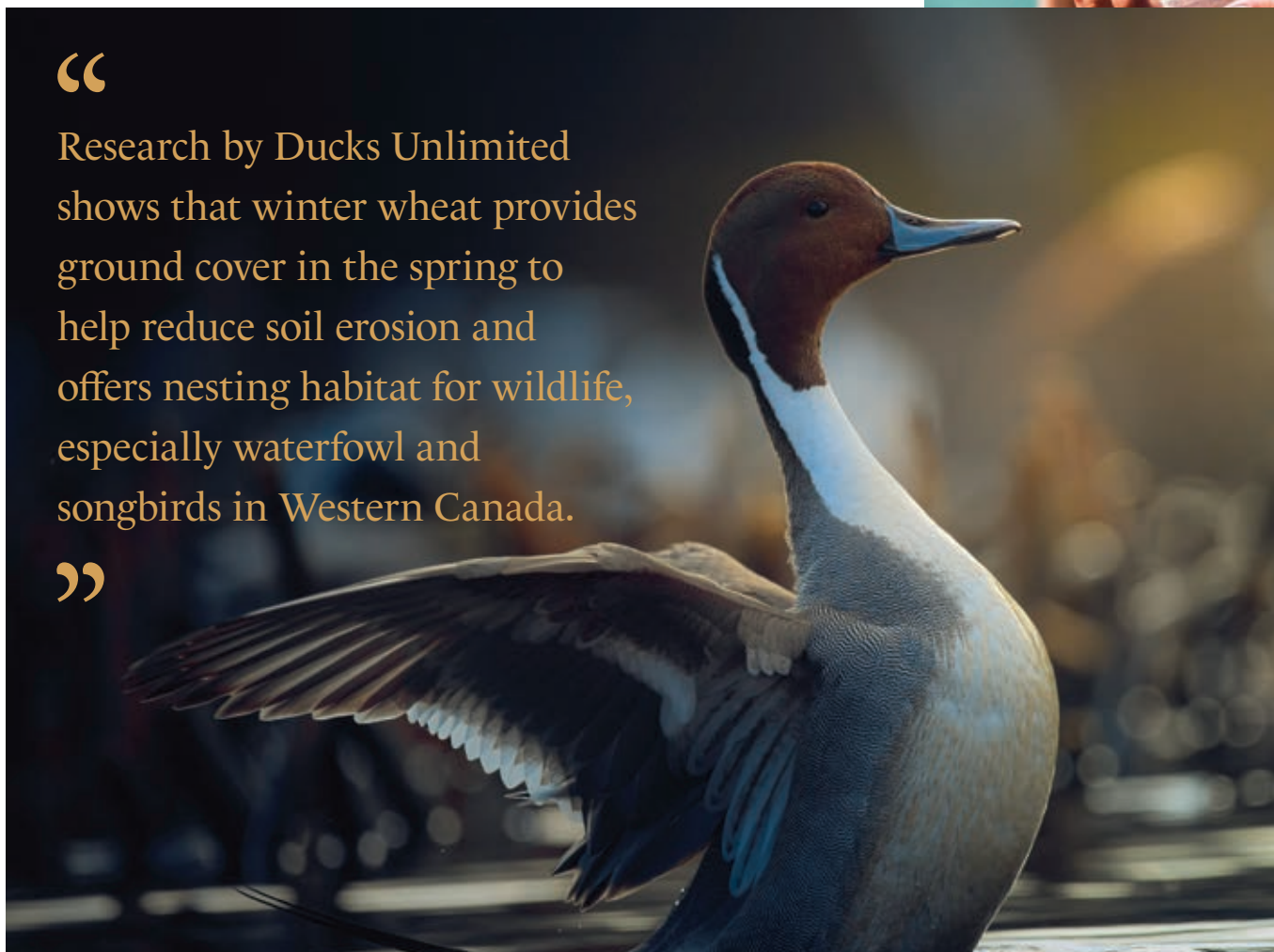
The Ecolabel program represents a shared value strategy, bringing together the full value chain on the advancement of market development interests with mutual benefits for producers, processors, consumers, and the environment.



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Research by Ducks Unlimited shows that winter wheat provides ground cover in the spring to help reduce soil erosion and offers nesting habitat for wildlife, especially waterfowl and songbirds in Western Canada.

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Market and Technical Research

Making a Healthier Pan Bread

In response to global consumer interest and government regulations for lower-salt products, including baked goods, Cereals Canada conducted extensive testing on reduced salt baking formulations using varieties of Canadian Western Red Spring (CWRS). Several countries have already developed reduced salt baking formulations but, until now, information has not been available on the response of individual CWRS varieties to reduced salt levels in baking.



While too much sodium can cause health concerns, salt plays an intrinsic role in baking by improving gluten strength, dough handling properties and loaf volume.

Through its research, Cereals Canada concluded that CWRS varieties exhibited excellent or good baking functionality, regardless of salt level and baking process. As countries move forward with salt reduction strategies, Canadian producers, exporters and other members of the Canadian wheat value chain can be assured that CWRS will continue to provide the high-quality expected and customers can continue to maximize the benefits of CWRS in their baking processes.

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Primarily used for the production of pan bread, CWRS is widely grown in Western Canada and exported to over 84 countries. CWRS makes up the majority of Canadian wheat production and with its high-quality and flexibility in use, is in demand across the globe.

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Supporting Customers and Canadian Growers

Plant growth regulators (PGRs) are a popular crop protection product used to reduce plant height and improve standability in wheat. Although PGRs have been tested to ensure they do not compromise safety, agronomics, or disease resistance, minimal testing had been completed to determine their effects on the quality of wheat and flour.

To evaluate the impact of PGRs on the quality of wheat, flour, and end-products, Cereals Canada, along with value chain member Manitoba Crop Alliance, supported research on a two-year project which assessed Canadian Western Red Spring (CWRS) and Canada Northern Hard Red (CNHR) treated with Manipulator, a plant growth regulator.

After examining the impact on quality in the analytical, milling and baking labs, Cereals Canada technical staff concluded the quality differences of wheat varieties treated with and without Manipulator over two years were minimal, suggesting that application of a PGR had little or no effect on wheat, flour, or end-product quality.

Monitoring the Competition

Keeping Canadian Wheat Competitive

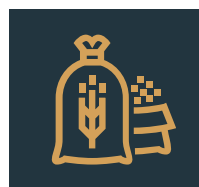
Each year, as part of our commitment back to the industry, Cereals Canada collects and analyzes wheat samples from top exporting countries around the globe. The samples are analyzed for quality, then compared against the quality of a similar class of Western Canadian wheat before results are shared with the value chain.

The process of monitoring the competition helps keep Canadian wheat competitive by providing us with market intelligence and a better understanding of quality differences between wheats from different origins. This knowledge helps us support millers and end-users, and has triggered more detailed investigations, including the blending study.

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Excellence in customer service is what drives Cereals Canada to better understand the competition. The information and data collected provides technical staff the knowledge on what to recommend for optimized blending strategies and helps us stay ahead of the curve.

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In some mills, CWRS and CPSR are blended to produce flour for bread production while CWRS/CPSR are blended with CWAD to produce flour or semolina for pasta production.

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To keep their costs low, mills around the world blend wheats and/or flours to meet customer quality specifications. Since approximately 80 per cent of the cost of flour is due to the cost of wheat, the biggest cost savings can be achieved by using the most economical wheats to produce the desired flour quality.

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Understanding the Customer, Understanding the Miller

Representing about 13 per cent of the global wheat supply, Canadian wheat is known for its quality, consistency, and reliability. Often, global customers manage their costs by purchasing high-quality Canadian wheat to improve the quality of other wheats. They do this by blending wheats prior to milling, on a clean or raw wheat basis, or by blending flours after milling.

To gain an understanding on how to recommend optimized blending strategies, Cereals Canada conducted a study which determined the effect of blending on quality, when different wheats are blended. Three classes of Canadian wheat, Canada Western Red Spring (CWRS), Canada Western Amber Durum (CWAD) and Canada Prairie Spring Red (CPSR), were used for this study, which assessed both semolina/flour and end-product quality.

Results from the research enables Cereals Canada to provide value to customers of Canadian wheat by demonstrating benefits of high-quality Canadian wheat in blends, while maintaining milling performance and desired end-product results.



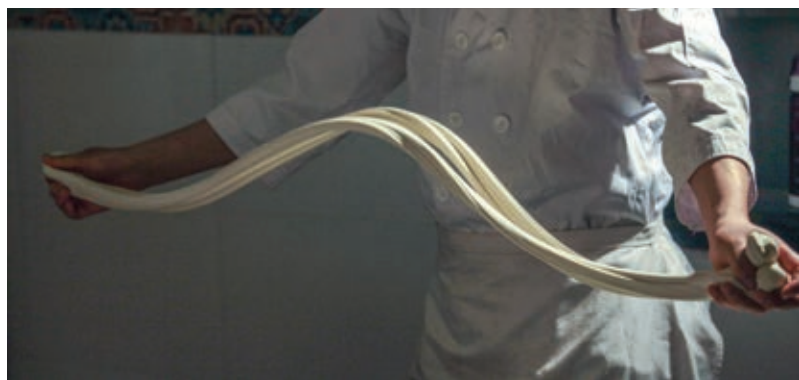
Improving End-Product Quality

In commercial bakeries, food additives are commonly used to perform various functions related to food safety and preservation, improvement of functional characteristics, alter appearance and/or enhance flavour.

Cereals Canada is investigating the effects of five of six common baking additives and treatments on analytical and baking properties of flour to gain a better understanding of how these additives impact flour and pan bread quality.

Commonly used baking additives were selected for this project and included ascorbic acid, inactive dry yeast, fungal alpha-amylase, glucose oxidase, and xylanase. For each additive, the levels of inclusion were within a range recommended by the manufacture including one additional level which exceeded the maximum recommended level.

Supporting customers is the key driver behind the research at Cereals Canada. When we have a better understanding of the impact of each additive on flour and baking quality, we can support customers that use additives in their flour.



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The most common baking additives are dough improvers or dough conditioners. Individual baking additives in the dough conditioner complement each other to ensure optimal dough handling properties and produce bread of superior quality.

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Cereals and Pulses: Maximizing Nutrition

The industry expert when it comes to milling and assessing the quality of Canadian cereal, Cereals Canada also has expertise to support the use of other Canadian crops, including pulses.

The food industry has expressed an interest in adding pulse ingredients to food formulations for health, protein, and fibre. However, each pulse ingredient is unique which makes it difficult to include in new food formulations. Research conducted by Cereals Canada is looking at how to increase pulse ingredients in food formulations for the food sector, by blending two key Canadian crops—pulses and wheat.

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Blending pulse and cereal flours can improve the nutritional quality of the food product, by creating a complete protein when blended together.

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Domestic and global customers, like Warburtons, have explored opportunities to include pulses in their baked goods.

Cereals Canada is one of five collaborators in an innovative 5-year project funded by AAFC. Together we are working on developing strategies on how to incorporate milled and processed pulses into more end-products to meet the needs of the food sector.

This research supports the industry by providing information on how to produce consistent pulse ingredients and improves our understanding of how the quality and functionality of different pulse ingredients can impact its suitability for various end-product applications.



1000-303 Main Street
Winnipeg, Manitoba R3C 3G7
Canada

Phone: 204-942-2166
Toll Free: 1-833-956-2444

cerealscanada.ca