

GrainsWest

Connecting Farmers, Food and Ideas

Fall • 2017

WHAT'S IN A CLAIM?

THE BROADER BATTLE FOR
PUBLIC TRUST



GRAIN DRYERS

LOOP TRACK
ELEVATORS

LIBERAL
REPORT
CARD

GOOD STORAGE GOES A LONG WAY

Protect Canadian grain markets with these best practices.



Our customers rely on Canadian growers for clean, top-quality grain, and an important part of managing that grain includes preparing your bins for storage. Let's all do our part to keep the industry strong.

Visit keepingitclean.ca for more tips on getting your cereals ready for export.

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Clean!

KEEP IT CLEAN!

Proper grain and oilseed storage key to reducing mycotoxins

In Canada, farmers know that producing quality products for both domestic and export markets starts with planting the best seed and following best management practices through to delivery of the grain. It is because farmers follow these best practices that Canadian agricultural products have a reputation for being reliable, consistent and clean.

The Keep It Clean - Cereals program is an example of Cereals Canada's commitment to communicate with farmers about best management practices. An important part of best management is proper grain storage.

Countries have strict regulations for natural mycotoxins (e.g., Ochratoxin A or OTA) that are produced by fungi that grow on grain. Customers also monitor to ensure that Canadian grain meets residue standards, including restrictions on seed treatments, fertilizers and cross contamination with animal products .

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- Store grain in cool, dry and well-ventilated bins to avoid spoilage and insect issues, and check their condition regularly.

For more information please go to: keepingitclean.ca or call 204.942.2166.



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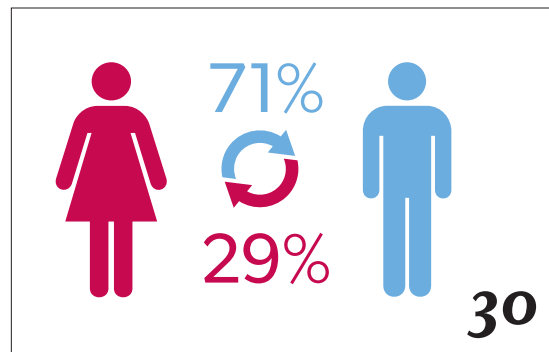
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WHO WE ARE



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Building trust requires credibility

CONSUMERS ARE HUNGRY FOR GOOD FOOD AND GOOD INFORMATION

CONSUMER PREFERENCE DOESN'T always appear to be rational, but the simple desire to eat healthy food grown in a responsible way is just that. To this end, all of us crave good information.

In this, the fall issue of *GrainsWest*, we examine the implications of GMO food labelling for the agricultural sector (page 34). While negative claims about the healthfulness and ecological friendliness of these crops hasn't held up to scientific scrutiny, and they've been widely grown and consumed for decades, demand for non-GMO certified food products apparently continues to grow.

Anyone who spends time surfing social media channels is well aware of the agricultural community's frustration with such trends that don't square with reality. However, while some people believe what they want to believe, most of us take action based on information delivered by trustworthy sources.

The Canadian Centre for Food Integrity (CCFI) is working to equip the agricultural sector with the tools and understanding to counter misinformation. The way to earn trust, the group advises, is through transparency; to present clear, credible and accurate information that's relevant to consumers and discloses both the positive and the negative aspects of food issues. The CCFI's research on the subject is encouraging in that it appears to indicate public opinion is flexible, and there is a hunger for honest information on food topics.

This research also indicates there are areas in need of work. For example., relative to other demographics, millennials have the lowest trust in farmers (24 per

cent) and 42 per cent of total respondents said they are personally concerned about eating food produced from genetically engineered crops.

On the upside, the 2017 survey indicates an increase over 2016 in the belief among respondents that the nation's food system is headed in the right direction. That number is highest (51 per cent) among foodies, self-styled cuisine fiends who are arguably the best-informed consumers with respect to food issues.

Also offering a numerical pick-me-up, we look at the implications of the 2016 Canadian Census of Agriculture (page 30). A shot of good news for the ag industry, it presents the welcome development that more young farmers are taking up the profession, and more women are among them as well.

While younger people are realizing the career and economic opportunities farming presents, international markets for Canadian ag products continue to open and evolve. NAFTA renegotiation is of great concern to Alberta farmers (page 38), but with the risk inherent in the process comes the chance to improve aspects of the agreement. While Canadian negotiators face substantial challenges in securing such tweaks, the grains sector stands to benefit greatly in engineering a Canada-China free trade agreement. We examine the predicted benefits of such a deal in the run up to its imminent negotiating process (page 10).

Further expanding on our coverage of federal ag initiatives, we asked industry representatives to weigh in on the strengths and weaknesses of the Liberal government's performance at the halfway

while some people believe what they want to believe, most of us take action based on information delivered by trustworthy sources.

point of its first term (page 26). Taxation issues notably aside, it has drawn considerable praise, including for initiatives such as the Transportation Modernization Act.

Our story lineup presents some enjoyable positives, but we employ the objective communication strategy advocated by the CCFI. For instance, we examine the federal government's imidacloprid review (page 16) and is hotly contentious implications.

Sometimes the news may be hard to digest and consumer preferences unsatisfying, but as an ag community, we need to remain positive and know that when we work together, we can accomplish much. ●



AG'S NEXT POLICY FRAMEWORK

POLICY PILLARS OF CANADIAN AGRICULTURAL PARTNERSHIP INCLUDE FOCUS ON SUSTAINABILITY AND BUSINESS RISK MANAGEMENT

DURING THE JULY 19-21 ANNUAL meeting of federal, provincial and territorial ministers of agriculture in St. John's, NL, the ministers reached consensus on the makeup of the successor to *Growing Forward 2*, which is now drawing to a close.

The Canadian Agricultural Partnership (CAP) is a five-year policy framework for Canada's agriculture and agri-food sector. *Growing Forward 2* will expire March 31, 2018, and CAP, which had the working title "next policy framework," will be implemented on April 1, 2018. *Growing Forward 2* focused on innovation, competitiveness and market development, giving farmers the tools required to innovate and seize emerging market opportunities.

"Federal, provincial and territorial governments are working hard to develop the next policy framework and have committed to continuity in programming," said Patrick Girard, senior media relations officer with Agriculture and Agri-Food Canada (AAFC).

"Innovation and public trust are key elements this time around," said Tulay Yildirim, director of policy research partnerships at the Canadian Agri-Food Policy Institute, before the ministers' July agreement was announced. "I would say that the inclusion of sustainable environmental policy as a key element is probably one of the most distinguishing aspects of the next policy framework," said Yildirim.

CAP represents a five-year, \$3-billion investment designed to strengthen the agriculture, agri-food and agri-based products sector. Farmers will continue to have access to business risk management programs, including crop insurance, AgriStability and AgriInvest, which make up over 80 per cent of the policy funding framework. Notable for provincial crop



The nation's agricultural ministers assembled in St. John's, NL, in July where they finalized the shape of the Canadian Agricultural Framework, the successor program to *Growing Forward 2*.

commissions is the funding levels for cost-shared research programs such as the national wheat and barley clusters.

Following its July meeting, AAFC stated that CAP will focus on six areas. These include utilization of scientific research and innovation, development of new markets and improved competitiveness, as well as supporting value-added agriculture and agri-food processing. While its risk management component will target resiliency in the agricultural sector, it will also seek to reduce greenhouse gas emissions and promote sustainable growth, higher yields and climate change adaptation. CAP will also tackle public trust in farming by addressing industry regulations as well as assurance and traceability systems.

The creation of CAP included extensive consultations with industry and the Canadian public. The federal, provincial and territorial governments have also committed to conducting a review to explore opportunities to improve business risk

management programming. The review will look at the AgriStability, AgriInvest and AgriInsurance programs, which are cost-shared with the provinces, and their impact on the risk management of farmers across the agricultural sector.

Yildirim has participated in consultation meetings with stakeholders in the past and has seen how policies can evolve. She expects CAP to evolve in the same way.

"Stakeholders usually seem to be satisfied with many elements of *Growing Forward 2*, and they are also expressing quite a bit of interest in furthering sustainability goals—because that is also becoming a requirement of the markets now, and consumers are seeking more information on food, the quality of food and production practices," she said.

The agreement reached by the ministers on CAP sets the stage for the federal, provincial and territorial governments to begin crafting bilateral policy agreements and settle on them by April 1, 2018.



POSITIVE CHANGE

NEW FUNDING FORMULA PRESENTS ADDITIONAL OPPORTUNITIES



Photo: Canadian International Grains Institute

Cigi's new board of directors. Back row: Gary Stanford, Trent Rude, Jean-Marc Ruest, Harvey Brooks, Kevin Bender. Front row: Brent Watchorn, JoAnne Buth (Cigi CEO), Drew Baker, Bill Gehl, Jim Smolik. Missing: Ward Weisensel.

THE CANADIAN INTERNATIONAL Grains Institute (Cigi) is experiencing a time of change, but the CEO of the organization sees nothing but opportunity and growth ahead.

Changes to the not-for-profit grain advocate's funding formula and board structure came into effect at the beginning of August. Previously funded by farmer check-offs through the Western Canadian Deduction, the new Cigi funding formula sees funds supplied by the Alberta, Saskatchewan and Manitoba wheat commissions and seven grain companies for a total of \$7.7 million over the next two years.

Cigi CEO JoAnne Buth believes it's a time of planning for the organization. "It really is an opportunity to look at what the future holds and what do we need to do."

She explained that the first step is to create a strategic plan, which Cigi board and staff are set to do in the coming

months. The board's membership now includes grain companies. As they're on the front line of wheat sales, Buth pointed out that they are closely in touch with customers and are in tune with the wants and concerns of those using Canadian wheat around the globe. "They're aware of their customers and what their customers' needs are," Buth said.

New to the Cigi board table with the wheat commissions are: Viterro; Richardson International Limited; Cargill Canada; Parrish and Heimbecker, Limited; Paterson Grain; G3 Canada Limited; and the Inland Terminal Association of Canada.

The organization's mission is to increase the use of Canadian grain and field crops around the world. More than 45,000 people from 115 countries have participated in Cigi programs and seminars on technical topics, innovative processing solutions

and skills training. Participants represent many facets of the grain industry and include farmers, grain buyers, millers, scientists and breeders.

"We have run programs at Cigi that have been very successful," said Buth. "We have focused programs and priority areas, and we can now work with the companies to see what their needs are," she said. "Working more closely with [grain] companies, we can see where those opportunities are ... It might provide a bit more focus on where we can provide more impact."

Alberta Wheat Commission general manager Tom Steve agrees with Buth and believes Cigi's future will be built on its reputation and accomplishments. "I think there's been a long-standing recognition of the value Cigi provides in terms of Canada's reputation as a quality supplier of wheat to the world," he said.

Cigi is also viewed as an important resource for clients working with the value chain to both develop the products their customers demand and provide technical support for end users. Cigi market support activities for 2017/18 include plans for technical training programs in countries such as Singapore, Peru, Mexico, Japan, Indonesia, Algeria and Morocco. As well, new crop missions are also planned for multiple European, Asian and Latin American countries.

Steve acknowledges farmers can sometimes think of the grain elevator as the customer and may forget to take a broader look at where their wheat goes next. This is the stage at which Cigi thrives, promoting the sale of Canada's grain abroad.

"The wheat market is the international customer. Cigi is a really important resource that's changing, and we're confident it's going to add to our value proposition to our customers," Steve said.

He views the new Cigi board structure as a tremendous advantage in the building of a collaborative marketplace. "Cigi is a critical element to that market support and market expansion. They work with our clients and provide extremely valuable service," he said.

At the same time, he sees the new Cigi funding and governance models providing more accountability to his members and the balance of Canadian wheat farmers. "Governance is now directly accountable to the largest funder (the farmers). It's an enhancement in terms of a more accountable, market-responsive funding model," Steve said.

Under the previous funding model, Alberta wheat farmers paid two check-offs on their cash tickets—one to the commission at 70 cents a tonne and a further 48 cents a tonne to the Western Canadian Deduction.

The \$1.09 single, consolidated check-off is a nine-cent-per-tonne reduction from what farmers paid prior to July 31, 2017. The wheat commissions assumed the funding obligations of the Western Canadian Deduction, including core funding for the development of new wheat varieties. Grain companies have commit-



Japanese customers check out samples of Canadian wheat at the Cigi pilot mill.

ted to making up the budget shortfall for the next two years.

Buth said the switch to the new funding model and governance structure was the culmination of months of consultations involving the value chain, and called the change an important milestone in Cigi's 45-year history.

In addition to its core funders, Cigi also receives funding from the federal government through Agriculture and Agri-Food Canada's (AAFC) AgriMarketing and AgriInnovation programs. Pulse activities are funded through AAFC's Canadian Agricultural Adaptation Program, Pulse Canada, Alberta Innovates Bio Solutions, Saskatchewan Pulse Growers, Manitoba Pulse & Soybean Growers, the Agri-Food Research and Development Initiative (Manitoba Agriculture) and Warburtons.

Prior to the latest change in funding sources, Cigi was funded by the Canadian Wheat Board (CWB). After Aug. 1, 2012, when the CWB lost its monopoly, the federal government gave Alberta Barley the ability to act as the middleman in managing the Western Canadian Deduction for three recipient groups—the Canadian Malting Barley Technical Centre, Cigi and the Western Grains Research Foundation. This five-year Alberta Barley management

period from Aug. 1, 2012, to July 31, 2017, was intended as a temporary administrative solution while Alberta, Saskatchewan and Manitoba developed their own provincial grain commissions, which would collect levies of their own on wheat and barley sales.

Once these provincial groups were up and running, it was stated that as of Aug. 1, 2017, the newly formed provincial grain commissions would have to determine how to fund the three recipient groups.

Cigi's new board chair, Kevin Bender, said the board of directors is eager to begin its work. "As new board members and funders, we are excited about our role in supporting and shaping Cigi's future. It's an organization with a long and distinguished history of working on behalf of farmers and industry to promote and demonstrate the quality and functionality of Canadian grain in international markets."

Bender also acknowledged the outgoing board members and outgoing chair Murdoch MacKay for their efforts on behalf of Cigi. "Through their foresight and determination, they succeeded in guiding Cigi through a period of significant industry change and have provided the new board with a solid foundation to build upon."

Photo: Canadian International Grains Institute



MASSIVE MARKETING POTENTIAL REQUIRES ACTION

FREE TRADE AGREEMENT WITH CHINA COULD SECURE CANADA'S
POSITION AS TOP GLOBAL PROVIDER IN AGRI-FOOD



Photo: Michael Interisano

National agri-food organizations are researching potential export gains in securing a free trade agreement with China. For example, such a deal may open big opportunities for Canadian feed barley and increase canola exports by \$1.2 billion annually.

STAKEHOLDERS IN THE CANADIAN ag industry are optimistic that a potential free trade agreement (FTA) with China could vastly increase value, predictability and competitive edge in export. With other countries—including Australia, New Zealand and Chile—already securing FTAs with China, the potential for Canada to do so looks promising.

Members of the industry predict negotiations will begin by the end of this year, but in order to exceed other existing agreements and fully address all potential issues, including non-tariff barriers and

conflict resolution processes, completing an agreement could take up to four years.

“The timeline will depend on the level of ambition, and I think that level should be high on Canada’s part,” said Phil de Kemp, executive director of the Barley Council of Canada (BCC). “China is the largest market in the world right now, and will continue to be into the future with their growing middle class.”

As Canada’s second-largest export market, our trade relationships with the Chinese are already well established. However, agri-food exporters have experi-

enced challenges in light of China’s defensive protection of its domestic producers. Certain industries, such as canola and wheat, have been subject to high tariffs, fluctuations in demand and low tariff-rate quotas (where only specified amounts of a product are allowed at a lower rate of duty and anything beyond the allowance is subject to a much higher rate).

With canola seed currently subjected to a nine per cent tariff, the canola sector sees massive potential in an FTA with China. Rick White, CEO of the Canadian Canola Growers Association, said an

agreement could increase exports by up to \$1.2 billion per year—equivalent to an extra 1.8 million tons, or approximately 10 per cent of Canada's current annual production—through elimination of tariffs.

“Our tariffs are higher than our competitors’, bringing us a disadvantage,” he said. “If this agreement can eliminate these tariffs, that would have a huge impact on value in what we sell into their country.”

White added that there is a need for more predictable access, with exports fluctuating from year to year. “As a supplier, it’s very challenging,” he said. “We’re looking for stabilization and elimination of non-tariff issues in this agreement.”

Cam Dahl, president of Cereals Canada, said the wheat sector has experienced significant fluctuations in exports to China over the past few years, which presents a significant challenge to Canadian farmers. “China is the world’s largest producer of wheat,” he said. “Their government has indicated repeatedly that it intends to be self-sufficient in its wheat production.”

However, he added that Canada supplies a different quality than China’s largely medium-protein and medium-quality wheat. “Because of this, I believe there will always be a reasonably strong market for our wheat going into China.”

Canada currently has a tariff-rate quota (TRQ) on the significant amount of grain it exports to China. However, it is only being filled at nine per cent and is controlled by China’s National Cereals, Oils and Foodstuffs Import and Export Corporation, the state trading enterprise. Dahl said that any steps to encourage China to increase its TRQ fill rate could increase Canada’s exports of that product.

“If TRQs could be allocated to more companies looking to buy Canadian grain, the demand would significantly increase,” he said. “There are some adjustments to an agreement that could go a long way for all cereal grains.”

China applies a 10 per cent tariff on imported Canadian malt. Because China prefers to complete the malting process at its own state-of-the-art facilities, it imports a relatively small amount of Canadian malt—approximately 10,000 to



Photo: Canadian Pork Council

Martin Rice, acting executive director of the Canadian Agri-Food Trade Alliance, suggests Canada mustn't lag behind on trade talks with China as it did with Korea.

15,000 tons per year. However, China is a large consumer of malting and feed barley, with tariffs currently set at three per cent for seed.

“The Chinese are taking an awful lot of malting barley from Canada,” de Kemp said. “They’ve gone from importing between 300,000 to 350,000 tons three years ago, to between 700,000 to 900,000 tons this past year.”

The current tariff on Canadian feed barley averages approximately \$7 per ton. As a top barley competitor in the world market, Australia has secured an FTA with China and therefore incurs no barley tariff. This puts Canadian barley farmers at a disadvantage.

“Eliminating that tariff will make us more competitive,” de Kemp said.

An FTA with China is expected to open up big opportunities for Canadian feed barley, especially considering its protein levels are three per cent higher than Australian barley. The BCC is working with select Chinese clients to introduce them

to Canadian feed barley and its benefits.

“Even though our price may be higher, there’s an advantage and a savings for them in reducing some of their protein-percentage requirements through something like soybean meal in a poultry or a hog ration,” de Kemp said.

In late July, a team of Chinese delegates visited Western Canada to tour numerous poultry, hog and feed mill operations as well as a couple of barley-producing farms in Alberta, and viewed barley research projects being conducted at the University of Saskatchewan.

In addition to the tariff issues, Canadian exporters are experiencing non-tariff barriers with the Chinese, such as inconsistencies in regulations, standards and testing. Addressing non-tariff barriers will require thorough and focused work on the part of Canadian negotiators.

“We need scientifically based rules and systems in place and a robust process for dispute resolution,” Dahl said. “We do not want to blur any of the lines between



Photo: Barley Council of Canada

Barley Council of Canada and Wahmix's feed barley ingredient tour at Antler Valley Farm near Penhold, AB, on July 31, 2017.

the food safety and quality questions. We need to increase predictability and reduce any risks.”

De Kemp agreed: “A lot of commodity groups would like to see a harmonization in terms of China recognizing Canada’s regulatory system—that it’s a good system, that it’s all about food safety and quality in grain, feed and processed meats.”

In case such recognition cannot be fully reached, a consultative process in which issues can be rectified quickly and co-operatively at the highest levels is essential to negotiating an agreement.

Canada has a high level of expertise in negotiating trade agreements, particularly since working on the Trans-Pacific Partnership and implementing the Canada-European Union Comprehensive Economic and Trade Agreement, as well as several other agreements.

“Canada is very sophisticated and experienced in negotiating, especially now,” de Kemp said. “The Chinese certainly have some FTAs in place with other countries, but they’re not as experienced and have not worked in the kind of detail that I think a lot of the major trading partners would like to see here.”

National agri-food organizations are working to identify the opportunities and requirements in an agreement for potential negotiators. They also work collectively through the Canadian Agri-Food Trade Alliance (CAFTA).

“We’ve been together a long time and much of what we do is done collectively,” de Kemp said. “CAFTA brings the opportunity for all the different organizations to collaborate, and it allows the government to get the pulse on all the industries in a very quick process.”

With other countries securing FTAs with China, time may be of the essence if Canadian agri-food exports are to remain competitive. Martin Rice, acting executive director of CAFTA, said it is important that Canada stay competitive and not lag behind other countries in negotiating trade agreements—as was the case with our Korean FTA, where Chile, the United States and the European Union were much further ahead. “We were struggling to get into the situation where we could start to catch up,” he said. “We finally are, but it took four to five years just to narrow the gap.”

D’Arcy Hilgartner, chair of Alberta Pulse Growers, also talked about the im-

portance of staying competitive. “China is one of our top three importers of yellow peas and they’re a key customer for us,” he said. “But with other pulse exporters signing bilateral agreements with them, being left behind is a concern.”

Alberta Barley chair Jason Lenz said farmers are hoping that reaching an agreement could increase opportunity for them in a big way. “Any new market is always advantageous to us farmers,” he said. “We’re always hoping it adds to our bottom line. China, as a large and growing market, is a key market for all our crops, and for agri-food in general.” He added that growers are confident the ag industry and the federal government will get the best out of an agreement for Canadian farmers.

“Farmers need our farmer groups to be knocking on the doors of these countries to either extend the market or find new markets for our products,” he said. “Protecting us from non-tariff barriers is the big concern. We know we have the right people in place in our farm organizations to get that job done, and it helps everyone in the value chain, right from the farmer to the processor.”

COUNTING ON ACCOUNTABILITY

NEW SUSTAINABILITY SELF-ASSESSMENT TOOL AIMED AT BOOSTING THE BOTTOM LINE, PREPARING FARMERS FOR THE FUTURE

AS SUSTAINABILITY CLIMBS TO

the top of the federal government's agricultural policy agenda, farmers may wonder how they ensure their farms are well positioned for the future. "Often, the first thing that comes to mind when we hear the word 'sustainability' is climate change and the environment," said Jolene Noble, extension co-ordinator for the Alberta Farm Sustainability Extension (AFSE) working group. "But sustainability is not only an important part of agriculture because of environmental leadership, but also because of succession planning, business readiness and future market access."

Still, with many sustainability standards and practices in Canadian agriculture, it can be difficult for farmers to meet the myriad requirements. Enter the AFSE sustainability information hub and self-assessment platform being developed collaboratively by Alberta Barley, Alberta Canola, Alberta Pulse Growers and the Alberta Wheat Commission. This online tool will combine the sustainable practices suggested by three sustainability standards—International Sustainability and Carbon Certification (ISCC), the Sustainable Agriculture Initiative Platform (SAI) Farm Sustainability Assessment (FSA) and Unilever's Sustainable Agriculture Code (ULSAC)—into a user-friendly platform that allows farmers to benchmark their level of sustainability, create and implement an action plan and track their progress.

"This voluntary readiness tool will give farmers a very good idea of what would be asked in an audit," said Noble. "While the marketplace is not currently demanding certification, there is a high likelihood it will become a requirement. Producer readiness is important and can take a considerable amount of time, so it is important that we start now."



Photo: Michael Interisano

Modelled after Dairy Farms +, the AFSE tool was created to respond to changes in sustainability policy.

The online tool will increase readiness by providing a library of best management practices (BMPs) and guidelines for their implementation, action plans, progress reports and information about each practice's impact on the farm's bottom line. The AFSE working group is also integrating this tool with other services such as Environmental Farm Plans to ensure a streamlined process that avoids duplication.

The AFSE tool is modelled after Dairy Farms +, an initiative launched by the Dairy Farmers of Canada in 2016. Following a life cycle analysis and a carbon footprint calculation for a typical unit of milk done in 2012, the group, in partnership with Agriculture and Agri-Food Canada, began developing a tool that would allow dairy farmers to assess their readiness to sustainably address socio-economic and environmental issues.

This tool helps farmers make changes that build consumer trust and address future market access issues. "There are currently 110 BMPs included in the tool,

addressing issues such as farm labour, impact on the community, animal husbandry and environmental footprints," said Shelley Crabtree, Dairy Research Cluster communications specialist. "The tool also shows producers how costly a practice would be to implement, as well as the impact it will have on energy use and other inputs."

The topic of sustainability is cropping up across the agricultural sector. "The change in government policy that we have seen recently reflects the importance of on-farm sustainability and the changing marketplace," said Noble. "The AFSE tool is responding to these same trends."

And it's not just the government talking about on-farm sustainability. "There is a trend in agriculture toward providing a high level of assurance and trust in the products that are being sold to consumers, especially in Canada," said Crabtree. "These online tools help farmers ensure a high level of accountability in these areas."

The AFSE tool will be available online in the first quarter of 2018.



SURPLUS SUGGESTIONS

UTILIZING CANADIAN GRAIN COMMISSION EXCESS USER-FEE DOLLARS A WORK IN PROGRESS



Photo: Canadian Grain Commission

The federal grain-handling regulator, the Canadian Grain Commission, will examine the results of an industry-wide consultation process in utilizing its \$100 million surplus.

IN COLLECTING EXCESS USER FEES from farmers, the Canadian Grain Commission (CGC) accumulated a sizable surplus since 2013/14. The almost \$100 million is now the subject of an industry-wide consultation on its potential uses. The CGC is expected to announce plans to review the proposals and suggestions it has received. As the federal grain-handling regulator doesn't have the authority to make this spending decision, ideas will be submitted to the Treasury Board of Canada Secretariat, the federal departments of justice, finance and agriculture, and Agri-Food Canada. The CGC also foresees soliciting further input before a decision is made.

The deliberation process was launched Mar. 1, 2017, with a discussion document outlining a number of proposals, including the creation of a producer compensation fund to enhance the existing CGC Payment Protection Program; reducing CGC user fees; and upgrading the CGC

Grain Research Laboratory and/or establishing new labs with real-time analytics at licensed terminal elevators to enhance CGC services. Industry and farmer stakeholders were invited to comment. This included all CGC licensees, producer and industry organizations, as well as government organizations with a stake in the outcomes.

The majority supported using the surplus to reduce CGC user fees as opposed to creating a new producer compensation fund. It was felt the latter might unfairly benefit less stable licensees and/or lead to more risk for producers if licensees engaged in higher-risk activities, knowing there were additional funds to compensate producers if risks were not rewarded.

Familiar with its contributions to the industry, stakeholders were also broadly supportive of the abovementioned laboratory upgrades. There was, however, mixed support for investing in elevator-based labs and analytics. Stakeholders also stated

there should be a demonstrated and measurable benefit shown for such plans prior to any investments being made.

Stakeholders also had ideas about how to spend the surplus. Not surprisingly, one of these was to return the surplus to farmers. However, this would be a challenge to administer, so the next best solution—according to farmers—would be to reduce user fees.

CGC modernization ideas include:

- updating the grain handling and standards system
- developing improved market information
- implementing 24/7 vessel loading
- improving monitoring and grade validation during vessel loading
- improving producer grain grading services
- developing better mycotoxin testing
- investing in promotional activities to increase the awareness of the Harvest Sample Program
- improving the subject-to-grade and dockage service

Prior to the comments process closing on May 1, 2017, further ideas were put forward. These included launching a pilot program to audit grain company dockage machines and producer delivery sample assessments; supporting plant breeding with a view to discontinuing the charging of royalties; and purchasing new railcars.

Notably, the CGC must restrict the use of surplus dollars to activities it is authorized to provide under the Canada Grain Act.

Recently, the CGC has reduced user fees for official grain inspection and grain weighing services by up to 24 per cent. The changes went into effect Aug. 1, 2017, and will spare farmers approximately \$10 million in fees over the next crop year.

WHEN THE GRAIN GETS GOING

LOOP TRACK ELEVATORS PART OF INCREASED WESTERN CANADIAN HANDLING CAPACITY

OVER THE LAST TWO YEARS, LOOP track grain elevators have been built across Canada. These facilities can load and move grain more efficiently, but they're just part of the picture. Much of the efficiency gain over two decades has occurred at conventional, straight-track facilities, where improvement may yet occur.

At loop track facilities, locomotives circle the elevator, receiving grain without braking. Trains of up to 135 cars are loaded continuously, and a locomotive's power needn't be turned off. Pickup and delivery is fast and seamless. Volume moved increases, while time taken decreases.

In addition to building a loop track facility at Port Metro Vancouver on the North Shore, G3 Canada Limited is building such facilities across the Prairies. "We plan to build another eight high-efficiency, loop track facilities over the next three years," said Karl Gerrand, G3 CEO. "Three years from now, G3 will have about 25 facilities across Canada."

G3 plans to handle between 300,000 and 400,000 tonnes per year at each country facility. Gerrand estimates an efficiency increase of up to 40 per cent.

GrainsConnect is constructing four 130-car rail loops to more efficiently move Canadian grain to buyers in China, Japan, Southeast Asia and the Middle East. President Warren Stow said two facilities in Reford and Maymont, SK, are nearing completion and two in Vegreville and Huxley, AB, are also in the works.

Paterson Grain also operates one loop track facility, with another under construction.

Stow and Gerrand said these facilities are essential for Canadian grain to remain competitive. "Canada continues to be one of the leading grain suppliers in the world," said Gerrand. "We produce more



Within three years' time, Grain handler G3 Canada Limited will operate 25 loop-track facilities across Canada, including this one, located in Colonsay, SK.

grain every year, and our infrastructure needs to keep up with the growth."

"In the time that we've been monitoring the grain handling and transportation system, it's improved phenomenally," said Mark Hemmes, president of Quorum Corporation, which functions as Canada's grain monitor. This is indicated by the shortened time it takes grain to go through the system. Between 1999 and 2002, the average was 60 to 80 days, but over the past three years the number has been consistently in the low 40s. In this time, average train size increased from 20 to 30 cars per train to around 85.

Hemmes doesn't doubt loop-track facilities will create huge efficiency gains, but this is now only theoretical. A closed loop system such as between individual coalmines and Vancouver and Prince Rupert terminals—all with loop-track facilities—can work well, said Hemmes. "That's not the

way the grain industry works." He noted more than 380 origins deliver to about 17 terminals. "It's not going to work the same way two trips in a row."

G3 has the only loop-track port facility. Not yet complete, it will face rail congestion caused by neighbouring elevators, chemical plants and more.

Of the 200 high-throughput elevators out there, most feature straight-through loading configurations and represent huge sunk assets. As well, construction costs are high, and large, flat parcels of land required for loop tracks are scarce. "Loop tracks are a great concept, but you're not going to mothball a bunch of elevators to do this," said Hemmes.

While loop tracks become more prevalent, straight-loading facilities will create further efficiency gains. Accommodating 112-car trains, most can be extended to 134 and 136 cars, concluded Hemmes.

Photo: G3 Canada Limited



PESTICIDE REVIEW CAUSES CONCERN FOR FARMERS

POTENTIAL LOSS OF INSECTICIDE GROUP MAY CAUSE INCREASE IN FOLIAR SPRAYING



Photo: Stamp Seeds

A Health Canada review of seed treatments containing the active ingredient imidacloprid could halt the use of these effective pest control products.

SOUTHERN ALBERTA FARMER

Greg Stamp is concerned he may be losing a very effective component of his crop protection toolbox.

There's a strong chance a Health Canada review of seed treatments containing the active ingredient imidacloprid could halt the use of these effective products. As well, the review could snowball to include the whole neonicotinoid chemical group.

Stamp, who with family members operates Stamp Seeds in Enchant, north of Lethbridge, fears the loss of imidacloprid could increase his crop protection costs, and ultimately increase environmental risk.

The Health Canada review cites studies showing products within this group pose a risk to beneficial insects and water quality. There's a strong leaning to phase them out over the next three to five years.

In a submission to Health Canada's Pest Management Regulatory Agency (PMRA), Alberta Barley questioned the process and approach taken, saying the agency failed to engage with the ag industry prior to announcing the review and has lacked transparency and predictability.

Alberta Barley also questioned the agency's interpretation of the scientific data, contending the small number of water monitoring sites in Ontario and Quebec with excessive pesticide levels don't warrant nation-wide regulatory action. Additionally, Alberta Barley said the threshold risk for aquatic vertebrates cited is not based on data from existing real-world studies, but rather on highly conservative laboratory data.

Health Canada will post its proposed decision by December 2017, allow for a period of further review and then make its final decision in the spring of 2018.

MORE COST, HIGHER RISK

Stamp said the loss of one and potentially all neonicotinoid products will significantly impact crop protection costs.

"If we are unable to use that seed treatment, we would have to apply one or two and perhaps three in-crop treatments with an insecticide," he said. "It increases costs: the foliar applications aren't as effective, so perhaps more than one is needed." He said even though he and other producers are careful about how they apply insecticide sprays, multiple applications may increase the environmental impact.

"My greater concern is if they decide to withdraw imidacloprid from the market, what's to stop them from removing all the neonicotinoids?" said Stamp. "That would be a difficult situation. These seed treatments are the best tools to control these pests early while they're in the ground. Not having them available would mean an increase in foliar insecticide treatments."

On his own farm, Stamp, as well as many of his customers who produce pulse crops such as peas and faba beans, rely on the imidacloprid seed treatment product Stress Shield to control pea leaf weevil. CruiserMaxx is also effective, but without Stress Shield or CruiserMaxx, they'd have

to spray crops up to three times.

“We not only need the products we have, we could use more effective ones,” said Stamp. “The neonicotinoids are very effective on some pests, but on others, such as wireworm, they don’t really control, they just slow them down.”

Imidacloprid has been cited as Health Canada’s main concern, although studies show other neonicotinoids—clothianidin and thiamethoxam—have been detected in aquatic environments, so they are under review as well. The department appears to be equally concerned with pesticide impacts on pollinators and aquatic insects.

PUTTING A NAME TO A MOLECULE

Within the neonicotinoid group there are seven active ingredients, three of which are most commonly used in field-crop insecticides. The active ingredient imidacloprid is used in brand-name products such as Gaucho, Raxil Pro Shield, Sombrero, Stress Shield and Admire. Clothianidin is used in products such as Prosper, Poncho, Titan and Clutch. Thirdly, thiamethoxam is used in Helix, Cruiser and Actara.

TWO LEVELS OF CONCERN

Manitoba Agriculture entomologist John Gavloski said the prospect of having insecticides withdrawn from the market involves two levels of concern. “Products containing imidacloprid are one thing,” said Gavloski. “But if we’re talking about all neonicotinoids being withdrawn, that’s really a whole different ball game.”

“Western Canadian grain and oilseed growers generally don’t use a lot of the imidacloprid products,” said Gavloski. “So losing that one active ingredient wouldn’t be a major setback. They would have other neonicotinoid options. But if all of the neonicotinoid products are withdrawn, there would be much fewer options.”

One newer chemical group that could be used as an alternative seed treatment in controlling some crop pests is the diamide group, which uses different active ingredients than the neonicotinoids. Trade name products most effective for field crops include Lumiderm and Fortenza.

Gavloski said the beauty of the



Photo: Stamp Seeds

Eliminating seed treatments that contain imidacloprid may significantly increase crop protection expense and ultimately boost environmental risk.

neonicotinoid products is that they are very water soluble and act very quickly. “That might also have been their downfall,” he said. “Because they are so water soluble, they can move easily into groundwater.” The diamide products are effective in controlling flea beetles, cutworms and other pests, but they do not have the same rapidity. “They are slower acting but last longer,” he said. Some seed treatments include both chemical groups—a neonicotinoid for early fast action and a diamide for prolonged activity.

THE OPTIONS

Gavloski said he believes the studies he has seen are based on good science and show that neonicotinoid chemistries are showing up in groundwater. “That is a concern that needs to be addressed,” he said. “It is not sustainable the way it is, but what is the solution? Can we have more targeted rather than widespread use in some crops, or do they need to be phased out?”

Gavloski said that in some parts of the country—primarily corn- and soybean-growing areas—the neonicotinoids aren’t used solely for pest control. They are also marketed as growth promotants, which has led to their widespread use. “It might help if they changed the marketing

focus and the products were only used as needed to control pests,” he said.

Stamp is also not sure there’s an easy solution. “I know many farmers, like ourselves, only use these products as seed treatments where needed,” he said. “With this crop on that field, I know I have a pest problem so I use the insecticide-treated seed. But then I don’t use insecticide-treated seed on the next field where it is not needed. If we are already doing that, it makes it difficult to reduce use.”

He suggested that if insecticide dust particles are harmful to beneficial insects, perhaps a coating or other treatment could be applied to reduce this release.

Stamp said commodity associations he is involved with are working diligently with Health Canada and the Pest Management Regulatory Agency to create a solution that will keep these chemistries in the toolbox. As well, Alberta Pulse Growers is working on studies relating to the review.

“Any decision that is made has to be based on good science and not be a political gesture,” said Stamp. “Let’s work with the science. As farmers, we are committed to protecting the environment, but if we lose these products and have no option other than to use multiple applications of pesticides, that may not be a solution either.”



FUNGUS FIGHTER

FUSARIUM HEAD BLIGHT TOOL WELL RECEIVED BY FARMERS AND AG COMPANIES



AWC grower relations and extension co-ordinator Brian Kennedy said response to the FHB risk tool developed by AWC and Alberta Climate Information Service has been very positive.

THE FUSARIUM HEAD BLIGHT RISK

Tool was launched at the start of the 2017 growing season. Developed by the Alberta Wheat Commission in collaboration with the Alberta Climate Information Service, the online resource features a local risk indicator, a provincial risk map and a tab detailing best management practices.

The map indicates the favourability of weather conditions for the development of Fusarium head blight (FHB) at wheat's most susceptible flowering stage, with a range of low, moderate and high. With climate data and management options provided by the online tool, as well as farmers' own field assessments, local infection history and crop-yield estimates, farmers can make more informed decisions about whether or not to spray, which fungicides to use and when.

In Saskatchewan and Manitoba, provinces where FHB has been prevalent longer, risk maps have been in use for some time.

AWC grower relations and extension co-ordinator Brian Kennedy said response to the risk tool from farmers, seed growers and crop-protection companies has been very positive. "Everybody really likes the format," he said. "We're excited to add features for 2018, but we want to keep it simple and usable, as it is now." Such features will likely include a risk map for barley once the model for predicting blight in this grain is better developed.

Though he expected usage of the tool will prove relatively low due to the dryness of the 2017 growing season, Kennedy predicted usage will increase in coming years with wetter conditions. A post-harvest examination of risk tool analytics compiled over the season is being carried out.

"You might have a new tool, but are people aware of it?" said Daniel Itenfsu, a drought modeller with the AgMet Unit of Alberta Agriculture and Forestry. "It will help us to get that feedback."

Kelly Turkington, a research scientist and plant pathologist at Agriculture and Agri-Food Canada's Lacombe Research and Development Centre, has been extensively involved in FHB research on the Prairies. He suggested that carrying out ground truthing with the system will be important over the next two to four years, and hopes that funding for this may be delivered federally through the Canadian Agricultural Partnership, the successor to *Growing Forward 2*. This could involve examining the Canadian Grain Commission's FHB-damaged kernel results as well as targeted surveying of areas of predicted low, moderate and high risk.

Any tweaks to the tool may be based on what's going on in Saskatchewan and Manitoba, Turkington predicted. "I think there is a desire that perhaps the three provinces will co-ordinate activities."

Does the risk of disease warrant either the effort or expense of a fungicide application? This is the big question the tool helps to answer, said Dr. Michael Harding, research scientist, plant pathology, pest surveillance section, Alberta Agriculture and Forestry. "It provides information that's very close to up-to-the-minute about what has happened and what that might do with respect to risk of FHB developing in an area.

"A number of farm units employ agronomists to help with this decision-making," he noted. "It would be used by those folks to make recommendations to farmers.

"I think it will be quite valuable and the uptake will increase over successive years as we move past this beta test year and do additional work to validate that the model works well in Alberta, as it does in other jurisdictions. As the word gets out and more and more people get familiar with it, I think it'll be really useful."

Though in much of the province dry conditions have minimized the occurrence of this moisture-loving fungus, Harding said the risk map will still have proven useful in areas where drought conditions did not occur. "Even though 2017 has been a really dry year, it's nice to have that tool available so we can start to add that info into our decision-making."

STANDARDIZING SUSTAINABILITY

THE NATIONAL ENVIRONMENTAL FARM PLAN CONTINUES TO TAKE SHAPE

DEMAND BY AGRI-FOOD

businesses for sustainably produced crops continues to increase. Addressing this, provincial chapters of the Environmental Farm Plan (EFP) program have been in operation for more than two decades.

A voluntary, whole-farm, self-assessment tool, it became the most utilized environmental ag program in the country. Helping farmers and ranchers identify and build on the existing strengths of their operations, it also helps mitigate risk in implementing sustainability-focused practices. A substantive 35 per cent of the country's ranchers and farmers, representing about 50 per cent of Canada's agricultural land, have completed an environmental plan. The Alberta Environmental Farm Plan was launched in 2003 and has been operated by the Agricultural Research and Extension Council of Alberta since 2013.

Building on the strength of the provincial plans, the National Environmental Farm Plan (NEFP) is a work in progress intended to harmonize EFPs across Canada.

Westlock-area farmer John Guelly is an Alberta EFP Stakeholder Advisory Panel member and Alberta Canola Producers Commission director. He said there's a buzz about sustainability requirements. "It hasn't hit my farm or my area, but we have a good idea that it's coming." He believes Alberta farmers won't be required to have them in place for a few years, but the eventuality may arrive with short notice.

Though the idea of forming a national body has been percolating for years, its formation was kick-started at the initial NEFP summit in Ottawa last fall. Guelly suggested there was desire to get ahead of the curve tempered with acknowledge-



NEFP event chair Erin Gowriluk.

ment that establishing the structure will take time.

The only impediment he foresees is the diversity of Canada's agricultural landscape and the unique makeup of its EFP organizations. "Part of establishing the national program is to make it more uniform across the country," he said. "So there could be some pushback from some provinces to make sure some things are included and others dropped." The challenge is in retaining all the necessary customer requirements.

In Guelly's experience, environmental planning proved a positive experience. "It's very practical and useful to have on the farm." The potential benefits in establishing the national program are simple, he said. With each Canadian farm having a national environmental plan in place, agri-food customers know their marketing requirements are addressed.

The NEFP annual summit will take place in Ottawa, Nov. 1 to 2. Alberta Wheat Commission government relations

and policy manager Erin Gowriluk will chair the event, while Agriculture Minister Lawrence MacAulay will speak at its opening reception.

"It is my objective to ensure that all of our industry partners feel engaged in the development of a truly national initiative that reflects the needs of Canada's agri-food value chain from farm to fork and coast to coast to coast," said Gowriluk.

"Canada's Environmental Farm Plan is unique in the world. It is developed by producers, for producers, to encourage continuous improvement. Now, we build on that solid foundation by ensuring it prepares participants to meet market requirements with respect to farm level sustainability."

The organization's four standing committees—struck to develop NEFP practices—will deliver reports on data collection management, verification/assurance and standards.

Andrew Graham, executive director of the Ontario Soil and Crop Improvement Association, is chair of the NEFP Standards Committee. He said the committee's central goal is to determine how to achieve bronze-level recognition within the Sustainable Agriculture Initiative Platform's Farm Sustainability Assessment (FSA) 2.0 program for all provincial and territorial EFPs. The intent is to tout the EFP as equivalent to the globally accepted SAI Platform.

"Compliance with FSA 2.0 Bronze will recognize the time and effort already invested by the farmer/rancher in the development of their EFP action plan and effectively streamline the FSA assessment process," he said. He added that multinational companies can be expected to influence the standard-building process. McCain Foods, for example, sources product based on compliance with an accepted industry standard for potato production.

"It may take a while for it to be implemented, but the federal government is in support of the program, and that's a good sign," said Guelly of the NEFP. "I think they'll be the ones that will create the incentives for farmers to get on board. With proper incentives, we'll get even more buy-in from farmers."



LEVELLING ROLLER COASTER INCOMES

DEFERRED CASH TICKETS SMOOTH INCOME UPS AND DOWNS

AWC CHAIRMAN KEVIN AUCH SAID

2016 was just the sort of year in which deferring income from one crop year to another made sense.

Auch, who farms at Carmangay, north of Lethbridge, doesn't expect he'll need to defer income from the 2017 crop he began harvesting in early August. After a dry growing season, wheat yields were about 50 per cent below average. He carried over deferred income from an above-average yield in 2016 to level his income over the two crop years.

This levelling-out mechanism is an important risk- and tax-management tool farmers hope to preserve. However, the federal finance department announced in early 2017 it was considering scrapping the deferred cash ticket program.

"I am sure it is something the vast majority of farmers use on a regular basis," said Auch. "For our farm, we probably use it every couple of years. It is a very important management tool. On any given year, you don't know what your production will be like, so it helps take those peaks and valleys out of your income—more specifically, the income tax you pay."

"We are not sure why the government is looking at eliminating the program," said AWC general manager Tom Steve. "In our investigations, it doesn't appear to be a political decision. Perhaps at the bureaucratic level someone thought, since there is no longer a Canadian Wheat Board, farmers didn't need the program. But it is still something very much used by producers."

EASIER TO MANAGE MONEY

Auch said with all the uncertainties involved in agricultural production, the deferred cash ticket takes some of the money management pressure off.

"In a good crop year, a person might have \$100,000 in income, and the next year, if the weather turns against you,

your income could be zero," he said. "With the deferred cash tickets, you can transfer income from the good year to the following year. So rather than pay a big tax bill one year, and then claim it back the next in the poor crop year, you level your income out and pay taxes on \$50,000 in each of the two years. It's not about trying to avoid income tax, it's about just spreading it out over two years. It just makes things easier to manage."

Stuart Person, director of primary producer agriculture for MNP, said the vast majority of grain producers the accounting, tax and business consulting firm works with use the system. "The immediate impact that would result from going through a transition would be staggering and have serious financial consequences for some farm families," he said.

Auch agrees it's unclear what benefit the program's cancellation would have. "If the government thinks it might save money or increase tax revenue, I believe

cancelling the program would have the opposite effect."

He said if the program isn't available, farmers likely won't deliver and sell as much of their crops in high-yield years, opting to leave a portion in storage. If a grain company has a market for a specific product, but can't acquire it because farmers don't want to sell, they could miss out on a sale, and the government would subsequently miss out on collecting income tax revenue. "There would be some real negative impacts to the finance department in cancelling the program," said Auch.

The AWC and other agriculture and commodity associations have discussed the ramifications of its cancellation with the federal finance department, which has yet to make a final decision.

"I'm hoping over the coming months we have another opportunity to explain to officials this program is important to farmers and cancelling it would have a negative impact," concluded Auch.



WHEN IT RAINS, IT POURS

2017 CROP POTENTIAL JEOPARDIZED BY PREVIOUS YEAR'S UNHARVESTED ACRES

DISASTROUSLY WET CONDITIONS

and early snowfall in 2016 left many Alberta farmers contemplating carrying out harvest and spring planting simultaneously.

Thirty minutes west of Barrhead, Shane DeBock said that in mid-August roughly eight to 18 centimetres of rain kept farmers out of their fields for three weeks.

“From there on, it was a battle,” he said. “It was muddy, and in areas of high-clay soil it’s challenging to peel stuff off the ground. And everything was down, lodged flat.”

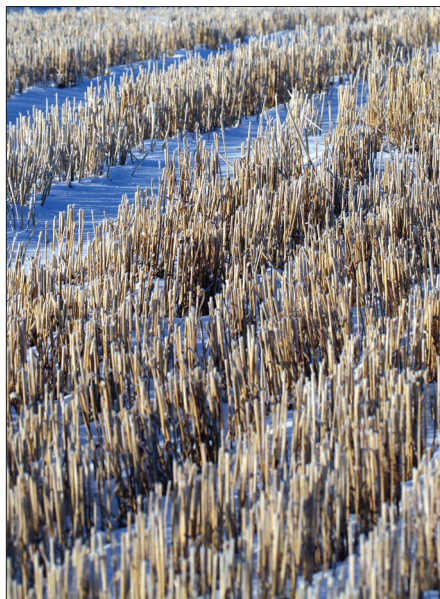
In late September, as DeBock managed to harvest 50 out of 370 acres of canola at 15.5 per cent moisture, he and other growers were again kept out of the fields by moisture.

“We dried it, and then it started to snow. After that, nobody in this area got back into the field,” he said.

In the early days of August, 2017 did not appear promising. Approximately a quarter of DeBock’s acres had not been seeded as he couldn’t get into his fields due to rain. However, by mid-August, the rain had let up and he was able to get some field work done.

Daniel Graham, manager, financial analysis, at Agriculture Financial Services Corporation (AFSC), said the magnitude of the unharvested 2016 crop and excessive spring moisture caused delays in spring threshing. “These conditions have caused an increase in unseeded acres for the 2017 crop year. Over 612,000 acres have been reported unseeded to AFSC,” he said. “This is well above the five-year average of 76,000 unseeded acres.”

Graham added that in anticipation of increased pre-harvest and wildlife inspection requests, AFSC streamlined its inspection processes early this year, extended the recommended seeding dates for several crops and increased the



Many producers were kept out of their fields in 2016 due to excessive moisture concerns.

unseeded acreage benefit for the 2017 crop year. For example, in some cases, complete pre-harvest and wildlife assessments were based on declarations from farmers, removing the need to wait for field inspections, and zero-yields were assessed in situations where inspectors determined the crop unharvestable or unmarketable.

Graham said that AFSC strives to make its programs responsive and accountable to stakeholders. “The production insurance program responded to the unharvested acres in the manner in which it was designed to,” he said. “Over \$33.6 million in advances were issued to producers significantly impacted by their insured acres that remained unharvested over winter. An additional \$57 million in payments has been paid as of early August on finalized claims that previously reported unharvested acres in 2016.”

However, farmers and other ag profes-

sionals have expressed frustration with lengthy assessment timelines, claim repayment times and the harvesting of unusable crops to satisfy the claims process. Alberta crop commissions advised AFSC regularly and worked with the organization to identify and eliminate bottlenecks. While these consultations helped streamline the process, there are yet a number of areas that could be improved in the future.

“Crops as old as 400 days were being combined with no possible end use,” said Robert Saik, founder of Agri-Trend Global Business Development. “But in order to make a claim, farmers were still forced to combine and harvest these crops, putting the 2017 crop in jeopardy in addition to the previous year’s.”

Though his fields were assessed in early June, DeBock was not paid out until August 15. “I didn’t receive my advance cheque until after I’d made my in-crop loan payment,” he said. “I financed myself, pulled money out of RRSPs, whatever I had to do to make my payments.”

In addition to the financial toll, strong emotions come with these highly stressful situations for farm families.

“It’s difficult to understand the stress of trying to pull last year’s crop, dealing with extended payment negotiations with creditors, not having any cash available, staring at upwards of \$1,000,000 in crop lying under the snow and the stress of unnecessary wear and tear on your equipment,” Saik said.

Still, Saik commended the ag community for pulling together, including farmers, banks, Farm Credit Canada and equipment manufacturers. “The agriculture community is resilient,” he said. “People have been understanding. They know the situation is out of the farmers’ control and they’re willing to work with them.” ●



Person: Dr. Harpinder Randhawa

Place: Lethbridge, AB

Thing: Looking for higher yields in all the right places

Better breeding

A look inside the complex world of cultivar creation with
Dr. Harpinder Randhawa

BY ELLEN COTTEE • PHOTOGRAPHY BY GEORGE CLAYTON

A WHEAT BREEDER WITH AGRICULTURE AND AGRI-FOOD CANADA, DR. HARPINDER RANDHAWA, A RESEARCH scientist specializing in spring wheat and triticale breeding, has spent more than 20 years immersed in this complex branch of agricultural science. In his work at the Lethbridge Research and Development Centre, happy farmers are his aim as he develops varieties with higher yield, improved disease resistance and better qualities for baking, animal feed and industrial uses.

GrainsWest: How did you get started in wheat breeding?

Dr. Harpinder Randhawa: I grew up on a farm in India and did my bachelor of science in agriculture and master's in plant breeding [at Punjab Agricultural University], and worked as a rice breeder for a couple of years before I moved to Canada in 1997. In 1998, I started school in Saskatoon, where I did my PhD. I did my post-doctorate in Nebraska before I moved to Washington, where I spent almost five years doing research. I got this job in 2007.

GW: What are your concerns in terms of diseases in wheat?

HR: We all know how devastating Fusarium head blight (FHB) is, and last year was a very bad year. Rain in late July and early August coincided with hot and humid conditions at flowering time, creating a perfect environment for fungus. Fusarium not only causes yield losses because you have a shrivelled grain and it will sometimes blow away with the combine, but the fungus also produces DON (deoxynivalenol), a vomitoxin, and DON is bad for human and animal health—you can't even use that grain for feedlot. Europe and export markets have a very strict maximum tolerance for DON content in the grain, so we have to control this disease.

GW: Is disease resistance all about the breeding?

HR: You don't want to put all your eggs in one basket and just rely on resistance, because it will break down. Our job as breeders is to bring the best genetics and we try to breed resistance for all diseases, including Fusarium. Then the agronomists and oth-

ers bring in their other controls like fungicide application or crop rotation. There has to be a total package for best management.

GW: What are the keys to success in breeding new wheat varieties?

HR: It takes 10 years to develop a new variety. We have three categories of breeding objectives and it's very complicated to bring all these things together.

One is agronomic objectives, or what is best for the farmer. These include high yield, plant height and good straw so the crop doesn't lodge. [These factors] depend on the region you're growing in. In irrigation areas, they may want a shorter variety, while in drier locations, they want it a little bit taller. Then maturity: we have a range—southern Alberta can go about 110 days, but in the north, they stick to about 90 days for their growing season. The second category is disease resistance. Some areas are more prone to one or another of the diseases. Leaf rust, stem rust and Fusarium are big in Manitoba, while in Alberta, stripe rust and Fusarium are getting attention. Different regions need a different resistance package.

The third objective is end-use quality. You can produce the best grain, but if it doesn't produce nice bread or noodles or cake, there's no use and it just ends up in feed or ethanol. Quality is determined by protein levels, gluten strength, the colour and baking properties. We export wheat to more than 70 countries and everybody uses it differently.



GW: What are your current wheat projects?

HR: My focus is Alberta—most of our wheat varieties are good for all of Western Canada, with some emphasis on irrigation for the south—except for the northern climate (they need to breed varieties with longer maturity; there are researchers in the north working on those).

I just registered AAC Awesome—it is the highest-yielding variety in Western Canada. It's a spring wheat, mostly targeted for ethanol. It has a non-milling wheat special-purpose classification. Good plant type and straw strength, resistant to all rust and a mid-resistance to FHB and midge tolerance.

GW: Tell us about your public-private-producer partnership Partnership with the Alberta Wheat Commission (AWC) and Canterra Seeds that started in 2014.

HR: It's a five-year agreement and it's a unique partnership, the first time we've had it in Western Canada. Usually, we're funded by producer money, like the AWC check-off or Agriculture and Agri-Food

Canada money. This funding gives us the money to conduct research, but sometimes we don't need money. This group is different because Canterra, as a seed company, does research and has committed to in-kind support. I need support in Manitoba—I can't take my people all the way out there to do the work—so they have plots, collect data and do quality analysis. It's really helpful.

GW: Have any new varieties come out of this partnership?

HR: We have two varieties ready for release in the next year, AAC Crossfield and its sister variety AAC Entice. Crossfield is a semi-dwarf variety that yields as much as top varieties like AAC Foray, even though Foray is on the taller side. Some farmers don't want to manage as much straw, for instance if they have wet conditions or irrigate, so a semi-dwarf variety is a good choice. It also has good resistance to leaf, stem and yellow rusts. Add in the intermediate FHB resistance and you have what farmers growing CPS wheat in Alberta are looking for. Crossfield should be available to farmers in 2018. Entice is very

similar, although not as high-yielding.

The third variety is similar but has a good midge tolerance, which is important for central Alberta. It should be in seed production in 2020.

GW: What could be done to speed up plant breeding?

HR: Plant breeding is like a pyramid. We select plants that have characteristics we want and we start crossing. For example, you can have five traits from parent plant one, five from parent two and five or so from parent three. Then you have 15 traits you want. That's the first generation—growing hundreds of thousands of plants and selecting among them. We make selections at every step. After 10 years, as we go up the pyramid, only one or two selections will make it to new varieties.

We discard and select, discard and select, for four or five plant generations based on simple genetics. After that, we focus on complicated traits like yield and resistance to FHB. Once we fix the line and develop it, we do agronomic testing. It's a long way and a lot of work, with plot testing and disease screening and quality trait analysis all the way along.

To speed up the process, we use our winter nursery in New Zealand. We plant here in May and harvest in September, then we take it to New Zealand and plant there by mid-October because it's spring down there. Then I go in the end of January and harvest all selected rows. They come back in March and we start again. We can do two generations in one year to speed up the process.

GW: Biotechnology and molecular biology are fast-growing industries. Will you employ advancements in these areas as a wheat breeder?

HR: There are tools and techniques coming up, like gene editing. We will have those, but they won't replace traditional breeding. We will use them to help selection and make changes in genetic expression and enhance a certain gene, but we'll still have to go through breeding and agronomic testing. The technology will be assisting, not replacing. ■



New Date
&
Location



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89th Annual General Meeting
Feb. 24 - Feb. 26, 2018

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The Honourable Marc Garneau, Minister of Transport presents Transportation 2030, his strategic plan for the future of transportation in Canada at the Chamber of Commerce of Metropolitan Montréal on November 3, 2016.

GRAIN EXPECTATIONS

A midterm look at the federal Liberals' performance in agriculture

BY TAMARA LEIGH • PHOTOGRAPHY COURTESY OF GOVERNMENT OF CANADA

CANADA'S LIBERAL GOVERNMENT IS HALFWAY through its first term, and despite early concerns that the caucus may be light on agricultural expertise, its members are receiving positive reviews from leaders in the grain sector for making significant investments in infrastructure and doubling down on supply management.

"We've been pleasantly surprised when you look at the composition of the Liberal government, and the minimal members they have from the West, how they have treated agriculture," said Grain Growers of Canada president Jeff Nielsen. "Minister MacAulay has really taken steps to be proactive with the grains sector."

"The federal Budget 2017 gives record recognition to the sector, with investments in agricultural innovation, and an ambitious target of \$75 billion in annual agri-food exports by 2025," said federal Minister of Agriculture Lawrence MacAulay. "Successful trade depends on a strong transportation system, and that's why, in Budget 2017, we are investing over \$10 billion in trade and transportation corridors to help get agri-food products to market."

Bill C-49, the Transportation Modernization Act, proposes sweeping changes aimed at solving issues in grain transportation. It has impressed industry leaders who generally feel the proposed changes reflect concerns they presented during industry consultation.

"As long as the proposed rail legislation passes and the intent of the new act is followed, this will be a positive development," responded Alberta Barley chair Jason Lenz. "But major negatives are the potential elimination of deferred cash tickets and the proposed changes to the tax system. (For more on this, see page 20.) The tax change will have a significant impact on producers, especially on

intergenerational land transfers. This is a critical item on farmers' minds, and the consultation period is quite short.

"On the grain transportation file, I think the agricultural community is wholly supportive of what they've seen thus far," said Kevin Hursh, executive director of the Inland Terminal Association of Canada and Saskatchewan grain farmer. "The agricultural community—shippers and producers—were amazingly united, and worked behind closed doors to come together and put forward a reasoned position to government, and the government seems to have adopted almost all of these ideas."

By defining adequate and suitable service, the new act provides clarity and certainty for shippers, who previously had to argue the definition every time they filed a level of service complaint. The act also provides a mechanism by which shippers can charge penalties to railways for service failures, in the same way that railways have long been able to charge penalties to shippers for contract failures. These are significant shifts in the power dynamic previously dominated by the railways.

Lenz describes reciprocal penalties as the act's most important aspect. "Commercial accountability throughout the system is important for it to perform in a more market responsive way. This should be a major roadblock that is removed if the grain handling system performs as a normal, competitive environment."

The new act went to committee in September and may move into enforcement by spring of 2018.

While the industry is looking forward to the new regulations coming into effect, there is concern that it will be vulnerable between the expiry of one act and the implementation of the next, especially given that once the act is passed,

regulations will need to be finalized and negotiations between the railroads and shippers must start.

To support the implementation of the Transportation Modernization Act, the minister announced the continuation of the Grain Monitoring Program (GMP) and a new mandate for the Crop Logistics Working Group (CLWG).

A forum of industry representatives from across the supply chain, it works to improve the efficiency of grain movement from farm to customer, in Canada and around the globe. This is the fourth time since the group was established in 2011 that it has received a mandate to address specific issues in the sector.

"Ongoing dialogue and engagement with the industry is important," said Tom Rosser, assistant deputy minister of strategic policy for Agriculture and Agri-Food Canada, who co-chairs the working group. "As we move toward implementation of the new legislation—identifying any issues, uncertainties or problems—having that feedback mechanism is really important."

"One of the goals of C-49 is to make the system more transparent. We anticipate there will be two sources of data available, and by bringing some of the players around the CLWG together to pool existing data sources with new ones, it might help bring new perspectives to the broader functioning of the system," added Rosser.

The first meeting of the new CLWG mandate was held in Winnipeg on June 20, 2017. At this meeting, the membership established subcommittees to look at the implementation of Bill C-49, data and performance measurement, industry growth and infrastructure needs, and system resiliency and contingency planning.

Hursh represents the ITAC on the CLWG and said that having a group like this in place strengthens the ability of the industry to provide input and respond to issues. "The government is more likely to pay attention to a structured group like this than to a loose industry

coalition," he said. "It's important to have government representatives as part of the process to hear discussions first-hand. Having a more formal organization gives us greater investigative powers and adds greater weight to our recommendations."

Having the data to properly evaluate performance under the new regulations will be critical to evaluation and to the work of the CLWG. "It is important that system performance continues to be monitored and measured by independent third parties," said Lenz. "We hope this data will be used to identify potential concerns earlier and prevent problems from becoming extreme. Penalties on railroads and grain companies don't make up for losses to Canadian farmers, and to the whole industry, that result from our customers' loss of confidence in our ability to deliver."

"The industry told us loud and clear that information is crucial to ensuring top performance.

We need a clear and timely picture of how well the system is performing at any given time. That is why we recently announced the Grain Monitoring Program (GMP) will be renewed until 2020," said Minister MacAulay. "This will ensure independent and timely monitoring and reporting on the performance of the western grain handling and transportation system continues. The grain sector views the GMP as an important tool for planning and accountability in the supply chain."

The program was established in 2001 to provide stakeholders with assessments of western Canadian grain handling and transportation in an independent, neutral and timely manner. Quorum Corporation has

delivered the GMP since its inception, and will continue for the next three years. President Mark Hemmes said the next year will see the information become more accessible to producers and other stakeholders interested in the reports the GMP produces.

"In 2014, we fixed in on a weekly reporting package and shifted to monthly reporting as well. We've added movements to the U.S. and Eastern Canada. What we're really doing right now is trying to fine-tune a lot of that," said Hemmes. "There are also going to be some changes in improving the accessibility of the data through the internet, but that's going to take some time."

In addition to the GMP, Bill C-49 will expand the reporting requirements for major railway companies related to rates, service and performance.

"If you look at the Surface Rights Transportation Board in the U.S., every week, Class 1 railroads have to provide

detailed reports of their performance—how many cars were in the system, how many cars are hitting their targets and meeting the needs of whoever requested the cars. Then there's action items to follow up on if they aren't hitting their targets," explained Nielsen. "Bill C-49 is mimicking the Surface Rights Transportation Board in the U.S, and CN and CP are already providing that information to them."

While there is optimism about Bill C-49, many in the industry admit that the real test will begin when the legislation is passed and the details roll out. Some would like to have seen more in the new act, but there's a sense that there is movement toward better solutions.

"A lot of groups said we have to get

"We've heard loud and clear from our farmer members that this is an important piece of legislation. It could be disruptive to the steady flow of product and could strain the entire system."

—Ward Toma



At the Viterra grain elevator in Acheson, federal Minister of Agriculture Lawrence MacAulay meets with Jeff Cockwill, Viterra director of corporate affairs (right).

grain transportation modernization in place first before we do a costing review. I would suspect once this bill gets passed and things settle down, this might be the next step," said Hursh. "By and large, the agriculture community is satisfied that the maximum revenue entitlement is being maintained."

While progress on grain handling and shipping is significant for the grain sector in Western Canada, it is only one of many issues in play for producers.

"Transportation is the area where we've seen the most movement, and the government has adopted a lot of the things the grain sector talked about," said Ward Toma, general manager of the Alberta Canola Producers Commission, emphasizing that it's the job of industry organizations to work with government on solutions, not in opposition. "Like all things that we try to achieve with government policy, it's a mixed bag."

One issue that has industry members scratching their heads has been the government's review of deferred grain sales, a tool that allows farmers to defer income and manage their tax burden.

"This came out of the blue. We're still trying to advance growers' needs there, and trying to understand what government was trying to achieve in changing these rules," said Toma. "We've heard loud and clear from our farmer members that this is an important piece of legislation. It could be disruptive to the steady flow of product and could strain the entire system."

The surplus fees collected by the Canadian Grain

Commission (CGC) has raised concerns from industry, and while the announcement that the fees were reduced starting Aug. 1, 2017, has been welcome, the issue may have opened the door to more scrutiny of that system.

"The CGC fees are hidden in the basis right now. We're relying on trust with our grain companies that we see a reduced basis level," said Nielsen. "We're seeing changing dynamics, too. We're seeing a lot of third parties asked to verify grain shipments, but with current law we still need a Certificate Final from CGC, too. We're getting dinged twice, and that gets reflected back to the producers in the basis. I think there's a lot of work on the Grain Commission file."

Also ongoing, as Canada and the United States revisit the North American Free Trade Agreement (NAFTA), the Liberal government has committed to support of the supply management system, but few in the grain sector have expressed significant concern.

"The cropping sector counts the U.S. and Mexico as significant export markets that are critical to our long-term success," said Lenz. "The agreement as it stands is generally quite positive, and we hope that our sector is not negatively impacted by tradeoffs to benefit other sections of agriculture or other sections of the economy."

Between trade negotiations, implementation and transportation issues, agricultural organizations are busy making sure that the needs of the sector are understood in multiple ministries beyond agriculture. So far, they have found a willing and receptive audience. ■

ENCOURAGING NUMBERS



Ag is trending up in key areas

BY LEE HART • PHOTOGRAPHY BY MICHAEL INTERISANO



CANADIAN AGRICULTURE IS NOT ONLY ALIVE and well—it's thriving, according to the 2016 Canadian Census of Agriculture.

Some media outlets may focus on statistics showing that Canadian farmers are getting older and that there are fewer farms in the country, but there is really a very positive message to be found in the statistics collected in the 2016 census released earlier this year by Statistics Canada.

"The statistics also show that more young farmers—35 years of age and younger—are now involved in the industry," said Levi Wood, one of those under-35 producers, who farms with family members in Pense, SK. He is also president of the Western Canadian Wheat Growers Association.

"We're seeing more of my generation of farmers either enter or return to the industry, which is a very positive sign. The increase over the 2011 agriculture census isn't huge, but it is a solid indication that younger farmers do have confidence in the future of agriculture.

"I think a few years ago the economics of the agriculture industry was pretty discouraging and younger people were considering other career choices. As farms have gotten larger, as technology has improved, as commodity prices have generally improved, younger farmers are seeing more opportunity. They are seeing a path to profitability, and that's bringing them back."

Wood said he sees several positive signs in the 2016 census. More younger farmers are involved in the agriculture industry; there was also a slight increase in the number of women operating their own farms; and more acres are being seeded to annual crops, which shows confidence in the grain and oilseed sector.

"I believe this is all a very good news story for agriculture," said Wood.

INSIDE THE NUMBERS

The census indicates that while the actual number of farms in Canada is down about six per cent from 2011 (sitting at 193,492 operations), farms are actually getting larger and farmers are farming more acres—cropland increased nearly seven per cent to 93.4 million acres. Most of the increase in cropped acres resulted from farmers switching from hay, forage and pasture production to annual crop production, putting summer fallow land back into crop production and returning western Canadian acres that were out of production in 2011 due to flooding. The average farm size across the country has doubled over the years. Compared with an average of 463 acres in 1971, the average sat at 820 acres in 2016.

Statistics Canada analyst Erik Dorff points out the total acres in production and total number of farm operators reflect farm operations of all sizes that sell or intend to sell agricultural products—ranging, for example, from a five-acre market garden to a 15,000-acre grain farm. Future analysis of census figures, linked to farm incomes, will provide a more detailed



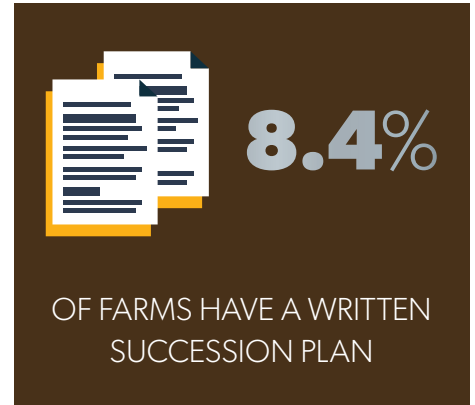
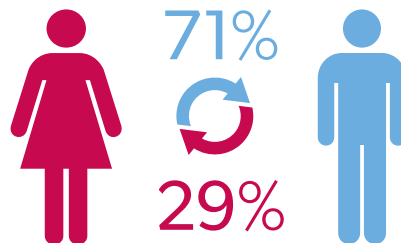
CROPLAND INCREASED NEARLY SEVEN PER CENT TO **93.4 MILLION ACRES**

Increase in acres is due to farmers switching hay, forage and pasture production over to annual crop production



271,935

FARM OPERATORS IN 2016



breakdown of smaller versus larger farming operations. That report should be published in early 2018.

Yes, farmers are getting older—following the national trend of an aging population. The average age increased from 54 years in 2011 to 55 years in 2016. However, as Wood pointed out, the census also showed about a three per cent increase in the number of farmers under the age of 35. This is the first increase in younger farmers since the 1991 census.

There was a total of 271,935 farm operators in 2016. While the majority (71 per cent) were male, nearly 29 per cent were female. This is a slight increase over the 2011 census figures, but continues a gradual but long-term trend first seen in 1991. It is also interesting to note that, while there is an increase in the number

of male farmers under the age of 35, the number of female farm operators in this age category is increasing at a faster rate. Since 2011, the number of young male operators increased by about 24 per cent, while the number of young female operators increased by 113 per cent.

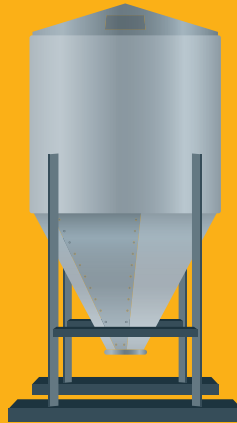
“As farms get larger, the role of the farm operator is changing,” said Wood. “It may mean there is less time in the tractor seat and more time on the managerial side of things, and that may be more appealing to young people regardless of whether they are male or female.”

Farm values have increased considerably since the 2011 census. The average value of land and buildings was \$2,696 per acre in 2016—a 38 per cent increase from five years before. While farm asset values have increased, this

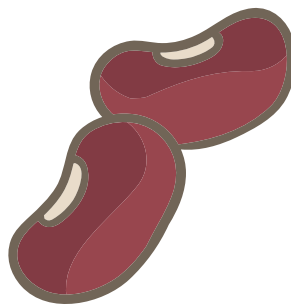
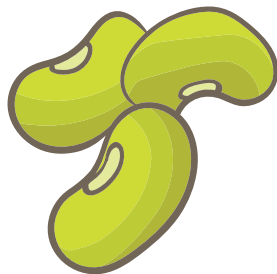
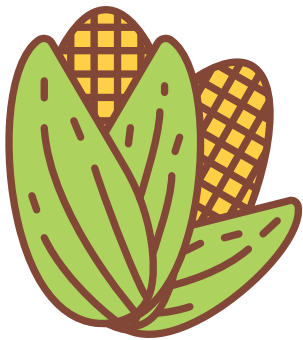
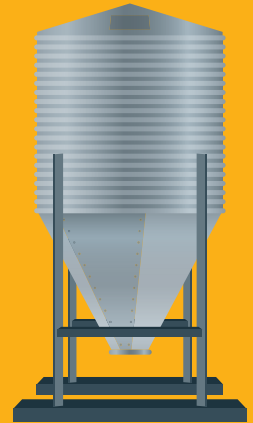
does make it more challenging for new farmers to get involved or existing farms to expand. However, at the same time, producers have been able to expand their farming operations by renting or leasing land from retiring operators.

Wood said that while there are many good signals in the 2016 census, he is concerned by low figures regarding farm succession planning. While farmers are aging and getting closer to retirement, he is concerned that the census showed only 8.4 per cent of farms have a written succession plan. This ranged from 5.7 per cent of sole proprietor farms with succession plans to 16.3 per cent of family and non-family corporations with plans.

“Overall, I was surprised that less than 10 per cent of farms have a written succession plan,” he said. “And this



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CORN, PULSE AND
SOYBEAN CROPS
ARE PUSHING INTO
NEW REGIONS OF
WESTERN CANADA

is going to be a huge concern over the next 10 to 15 years, again, as farmers continue to age. Young people are looking at coming back, but at least a verbal or preferably a written plan is needed to guide the transfer of ownership."

CENSUS REVEALS POSITIVE TRENDS

On the financial side, J.P. Gervais, vice-president and chief agricultural economist at Farm Credit Canada, also sees very positive trends in the 2016 Census of Agriculture.

"The statistics are showing more younger farmers farming larger farms, and this is a sign of a very progressive industry," said Gervais. "We're seeing more cropped acres and expanding livestock operations, which demonstrates confidence in the industry. Canadian farmers are very progressive, they are becoming much more sophisticated in their management skills, and they are adopting and applying new technology."

And bigger isn't necessarily the way to go. Gervais noted that there is also more diversity in agriculture, with more producers developing opportunities in smaller or niche markets such as organic and natural production systems.

Statistics Canada's Dorff agrees that the 2016 census describes a positive picture for Canadian agriculture. A welcome and positive trend sees an increasing number of younger, progressive farmers involved in the industry. And more producers are using new technology to improve production efficiency.

"Since the first census was taken back in 1871, we continue to see farm operators being more innovative and progressive in their production and management skills," said Dorff. "The innovation trend continues across all sectors of the industry. One of the cool things to note is the increasing diversification on farms. More producers are growing pulse crops, for example, and we continue to see corn and soybeans pushing into new regions of Western Canada. It is a sign of how things progress and change."

Dorff said that, in the future, the census will be employed to keep track of evolution within the agriculture sector by posing new questions to quantify developing trends as they emerge. "The industry in general and farmers in particular are very adaptable," he said. "So we may be asking about how they are diversifying their operations." ●

WHAT'S IN A CLAIM?



The ag industry renews the broader battle for public trust

BY IAN DOIG • ILLUSTRATION COURTESY OF SHUTTERSTOCK



NE HUNDRED AND NINE NOBEL LAUREATES can't be wrong.

Matt Sawyer, a grain and oilseed farmer who raises Black Angus cattle near Acme, AB, and Western Canadian Wheat Growers Association director, said scientific consensus overwhelmingly pronounces foods made from genetically modified organisms (GMOs) safe and nutritious.

"Non-GMO organizations are well-funded and have a lot of power, and they do a lot of lobbying," said Sawyer. Such frustration runs deep in the ag sector, and the vast flack cloud of anti-GMO material found online exhausts morale. When absurdly non-scientific advice about detoxifying your body by sleeping with onions in your socks goes viral on social media channels, what hope is there for a nuanced discussion of biotechnology's potential to boost agricultural sustainability?

Nonetheless, Sawyer cited a 2016 open letter endorsed by the above-mentioned prize-winning scientists backing the safety of foods produced using biotechnology as yet another irrefutable scientific endorsement. But the fight has increasingly been framed in marketing terms—an apples-and-onions battle between science and consumer demand.

As more and more agri-food corporations act on increasing consumer demand for certified and labelled non-GMO products, and anti-GMO advocates claim an emerging, game-changing victory, the Canadian farm sector is quietly rallying for a counterattack.

WHAT'S IN A LABEL?

In March of this year, a skirmish erupted on social media between farmers and agri-food giant Cargill over the company's engagement with the openly anti-GMO Non-GMO Project based in Portland, OR. Cargill had taken it on as the certifying body for its non-GMO food products. Many in the ag industry, Sawyer included, see such GMO content labelling as misleading. "Singling it out is suggesting to the public it's not as healthy as a conventionally grown crop, and that's false," he said. "Losing the ability to use that genetically modified system would be very detrimental to our industry." This is an understatement, considering the total average economic activity generated by canola alone in Canada in 2012/13 and 2014/15 was \$26.7 billion.

Commenting in the media, Cargill management in the United States affirmed the company's commitment to GMO crops, but claimed the demands of its food-company customers for certified non-GMO products could not be ignored. As well, Cargill defended the use of Non-GMO Project as the only viable certification option given the lack of U.S. federal or private standards.

"I can understand why this feels threatening," said Non-GMO Project executive director Megan Westgate in a *St. Louis Post-Dispatch* interview. "There's a big paradigm shift happening. The largest food companies in the world are looking for non-GMO ingredients and that's really changing the supply chain."

Sawyer sees the agri-food industry at another tipping point based on the way commodities and foods alike are being marketed. "It's probably a renewed call to action," he said.

LABELLED IN THE U.S.A.

In Canada, labelling of GMO content in packaged foods is voluntary, and the federal regulations governing it were reaffirmed in 2016. Along with making claim verification mandatory, these straightforward guidelines do answer in part to concerns that the act of labelling itself casts negative implications upon the product. Single-ingredient foods such as fruit and vegetables for which no genetically modified versions have been produced cannot claim to be non-GMO without the inclusion of a disclaimer.

Perhaps counterintuitively, farmers in the United States pushed the federal government to institute mandatory GMO labelling laws in 2016. The legislation, which has not yet been put in place, was created to head off an emerging state-by-state legal patchwork.

Vermont dairy farmer Joanna Lidback launched her fight against the state's proposed labelling laws with blog posts and a letter to the editor of a local newspaper, eventually testifying before the U.S. Congress on the benefits of biotechnology. "It's well documented that labelling would increase the cost of food, either through segregation or by encouraging other, less efficient and/or effective means of production from both an economic and environmental perspective. I felt I had to speak up for the sake of my community—both local and ag."

She believes the federal legislation's array of disclosure options, though a compromise, is good for U.S. farmers. "It offers the opportunity for labels to include more information to explain why farmers would want to use GMOs in the first place, either through websites or a QR code." Consumers, she said, can access good answers to questions about genetic modification technology.

Steve Savage is a plant pathologist, sustainability consultant and



commentator on food and farming who also works with CropLife Foundation. He believes the anti-GMO stance was never science-based, but rather a political, philosophical argument. He described non-GMO marketing as the next big thing in fear-based products. Well-fed consumers have become accustomed to purchasing food for what's not in it, he said, citing non-fat, sugar-free and gluten-free items. "That's fundamentally absurd."

The institution of the U.S. labelling laws headed off a lengthy resolution process in the courts, he said. "But it didn't do anything to resolve the issue, because it truly comes down to who has the leverage in the marketplace."

Savage believes farmers should be concerned with GMO content labelling. "People with good intentions are really hurting the future of our food supply," he claimed. The organic-upsell market makes it easy for corporations to excuse their concessions to anti-GMO sentiment by invoking customer preference, he added. "But the message you're sending with the organic or the GMO label is there's something wrong with what's left.

"Especially when the people that organize that non-GMO certification have stated that's what they want to do. Every marketer and other player along the chain is facilitating that goal. The fact Cargill, Danone, Costco and everybody else would go along with the non-GMO thing says these guys are going to win and farmers are going to lose."

FANTASTIC STORIES

Savage is skeptical that labelling legislation and accompanying government and university public-education programs will increase acceptance of GMO foods in the United States, and believes pro-GMO initiatives are being outspent by anti-GMO forces.

But Lidback senses a rising backlash against the profusion of poor information available primarily online. "I see it more as a true grassroots movement of people seeking answers and ultimately finding good information," she said.

Farmers, she said, should have got out in front of the issue earlier. "We took for granted that people didn't care what we do and how we do it. Indeed, they

are very concerned about the safety of the food they serve and that care was taken during production with respect to the environment and farm workers. Food is a very personal issue for them, for us, for everyone.

"When it comes to sharing why we do what we do, farmers can't ever relax," said Lidback. "And we need to do a better job of making sure we're listening to concerns and meeting them just as much as we explain methodology and our own stories.

"Speak up and put good information out there, and if that's not for you, then support individuals or groups that do."

Savage believes the GMO narrative must change, and the anti-GMO movement tagged as anti-farmer. There are compelling truths to be told about farm life—that corporate farms are not the norm. "These people that grow your food are just regular people that you can relate to," he said. "These are family operations that face some really severe challenges."

Savage also suggested winning over open-minded individuals by telling the fantastic stories of new products that benefit farmers, consumers and the environment. He cited three with Canadian connections.

The first, by AquaBounty, which operates a hatchery in Prince Edward Island, is the AquAdvantage Salmon. Developed to be fast-maturing and raised entirely in indoor tanks, it may potentially take pressure off wild fish populations.

Approved for sale in the U.S. and Canada and marketed for their reduced browning and bruising characteristics, the J.R. Simplot Company's Innate potatoes also have the potential to reduce food waste and farm input costs. A Boise, ID, company, Simplot operates Canadian test plots, and its first-generation potatoes are available in 4,000 U.S. grocery stores.

Arctic Apples from Okanagan Specialty Fruits are likewise marketed as non-browning. "It's a small company doing something that makes sense for consumers," said Savage. "Once consumers see those apples fresh, sliced or dried, they'll say 'OK, this is not an abstraction, it's really cool.'"

Savage admitted these are complex stories and difficult to tell for the purpose of winning the public over, adding it may unfortunately take a crop crisis to sway public opinion. For example, Italian olives are being wiped out by xylella fastidiosa bacteria. "Biotech is probably one of their only solutions."

MOBILIZING PUBLIC TRUST

Earning public trust in the agricultural sector is indeed a complex task, of which the GMO issue is just one facet. Launched in May 2016 and modelled after its U.S. counterpart, the Canadian Centre for Food Integrity (CCFI) is attempting to consolidate agriculture's subdivided landscape of jurisdictions, sectors and associations to build trust in food and farming.

CCFI listens to consumers and shares this research and resulting messaging with industry groups. Among these, Agriculture in the Classroom works with schools, Food & Farm Care works with consumers, and Agriculture More Than Ever encourages farmers to speak up. While these "amplifier groups"

spread tailored messaging, each company and association also carries out its own communications work.

"Fifty per cent of our population is unsure if the food system is even on the right track," said CCFI president Crystal Mackay. "There's this huge package of questions about everything that's on their plate: the wheat in the pasta, the salt in the bacon, how was the pig treated and did it eat GMO feed?"

Overwhelmed by conflicting information, consumers may not have the ability nor the interest to sort through it for credible sources, said Mackay.

"Our focus is to help the food system earn trust. We do that through everyone from my dad, the beef farmer in the Ottawa Valley, to the CEOs of the biggest food companies. One company, one commodity, one sector, one business cannot tackle this effectively on their own.

"If you want to drive change, you've got to get out of the back of the truck," she said. "The reality is, on many topics, the farm sector has been driven around by other people's agendas and then we respond and react."

CCFI has found antibiotics to be the top public food-system concern, with GMOs a close second. In 2016, it held a food-system forum on antibiotics for food-industry executives. A post-event evaluation revealed that participants overwhelmingly pronounced the issue "really complicated."

"And that's good," Mackay emphasized. "We want the other end of the supply chain to realize a press release is not going to solve this topic. This is a complicated area, as GMOs are." In late September of this year, CCFI held a similar summit on the GMO topic. The supply chain, she noted, was designed for competition, not collaboration, so facilitating a conversation between all its players is in everyone's best interest. As is pooling investment dollars, ideas and expertise.

"It's the difference between short-term competitive gain and long-term investment in public trust," she said. "It's a whole new way of doing business."

The key to the GMO issue, she explained, is realizing that giving people more scientific information may not win them over. "We live in a country where food choice is abundant. There are people that choose different options. Price it accordingly and don't be defensive about it."

A pro-GMO paradigm shift is not near, but the farmer's hands are back on the steering wheel. While it may be difficult to translate the agricultural efficiency of GMO crops, Canadians say access to affordable food is of top importance. "We can grow more food on less land with less inputs, but it's hard to transfer that to a consumer benefit," she said, suggesting the issue be positioned accordingly. "How does the GMO message frame up into providing healthy, affordable food? If we can achieve that, we'll move the bar a long way."

The stakes are high, said Mackay. "This is where public trust fits in: Will we be allowed to innovate? You can spend \$100 million on some new, amazing technology, but if your neighbour says no..." ■



Fiddling with NAFTA

WHEN OPPORTUNITY KNOCKS, WILL CANADA ANSWER THE DOOR?

AS SAYINGS GO, “IF IT AIN’T BROKE, don’t fix it” may not be profound, but for Canadian farmers faced with the reopening of the North American Free Trade Agreement (NAFTA), it offers more than a “grain” of truth. What impact might this have on grain trade among the three parties to the agreement (Mexico being the third), and Canadian grain farmers in particular?

It is indeed a relationship that has served Canada well for more than two decades. “The United States is one of our biggest customers and we’re one of their best,” said Cam Dahl, president of Cereals Canada. “This is a very positive trading relationship, so the bottom line approach should be to do no harm.”

RELIEVED OF OUR DUTIES

“As Canadian farmers, we’ve enjoyed duty-free grain movement since NAFTA was signed in 1994 and that’s something we don’t want to lose,” said D’Arcy Hilgartner, chair of Alberta Pulse Growers.

And there’s a lot to lose. From Aug. 1, 2014, to July 31, 2015, Canada exported 3.206 million metric tonnes of grains. Agri-food exports to our southern neighbour totalled \$29.6 billion in 2016 and our imports of the same were \$26.5 billion.

While the low Canadian dollar has slowed Canadian grain imports from the United States, that’s nothing new.

“When the dollar is low, we sell more to the U.S., and when it’s high, we buy more,” said Hilgartner. “I’m looking for a tariff-free trading arrangement where the market sets pricing rather than some artificial adjustment tax or other arbitrary measure.”

TURF AND TARIFF

“Agriculture has been a very positive part of NAFTA,” said Molly O’Connor,

government relations adviser for the National Association of Wheat Growers in Washington, D.C. “They may want to look at [tariffs for] manufacturing or other areas, but we would hate to see the return of tariffs that negatively impact trade for wheat growers.”

The push to retain the status quo is complicated by the possible impact of supply management in dairy, poultry and egg production on the crop sector.

Alberta Wheat Commission chair Kevin Auch is concerned the grain industry may suffer if the government commits to protecting supply management at all cost. “Grain farming is 90 per cent of the farming sector. We have to be concerned that our interests would be traded away to protect one small part of one sector.”

Martin Rice, acting executive director of the Canadian Agri-Food Trade Alliance, thinks the effect will be minimal. “I assume the U.S. would want more access to Canada for dairy and poultry, regardless of what we ship to them,” said Rice. “Those sectors have their own interests in exporting to Canada that aren’t based on pork or crops or other products.”

GETTING DEFENSIVE

In Rice’s view, the Canadian government doesn’t want to be seen as trading one sector against another. He feels we’ll be dealing with supply management from a defensive stance and largely in isolation from the export side.

“On export-oriented products like grain, oilseeds, beef and pork, we are looking at fairly friendly trading partners in the U.S. who want to preserve the benefits of NAFTA.” U.S. farm groups such as the American Farm Bureau Federation and the National Pork Producers Council have been vocal in support of trade integration between the three NAFTA nations.

One area that could be affected by renegotiation is wheat grading under the Canada Grain Act, but many experts feel that’s a good thing.

“The act states that wheat grown in the U.S. is only eligible for a feed grade, even if the variety is registered in Canada and has the same quality as grain grown north of the border,” said Dahl. “Regardless of what happens with NAFTA, that needs to change.”

Auch agrees. “It’s an irritant for them,” he said. “If they grow the same thing, follow the same rules Canadian farmers do, they should be allowed to sell here.”

FRIENDS WITH BENEFITS

Despite the longstanding alliance, American rhetoric around NAFTA has some Canadian farmers nervous. On the other hand, many industry members see reopening NAFTA as an opportunity.

“This is a chance to bring NAFTA up to speed with other trade agreements around issues like testing of new biotech crops and establishing maximum residue limits,” said Rice. “There are many areas where we can improve collaboration and harmonize regulations.”

Dahl echoes this sentiment. “We can use the re-opening to ensure we have similar ways of regulating pesticides, a common approach to new plant breeding techniques that facilitates investment and development, and electronic exchange of information that supports cross-border trade,” he said.

“These are all regulatory impediments that renegotiation can address in a positive way. I am optimistic we’ll use this time to modernize what we have while increasing trade activity.”

Also seeing win-win opportunities is Gord Kurbis, director of market access and trade policy for Pulse Canada. “A big



Photo: Government of Canada

Prime Minister Justin Trudeau visits the Lewis family farm in the Gray, Saskatchewan area. Under NAFTA, Canadian grain farmers have enjoyed duty-free grain movement for almost 25 years, and do not want this to change.

focus of any revised deal should be a harmonized approach to health claims and nutrition labels,” said Kurbis.

From an American wheat farmer perspective, O'Connor sees positives for all three countries in the agreement. “We were all part of the TPP (Trans-Pacific Partnership), and while the U.S. stepped away from that, there were sanitary and phytosanitary provisions that could be incorporated in a revised NAFTA for the benefit of all.”

HOPE AND HOMEWORK

While concerns remain, there is much hope the right approach will bear fruit. “Canada must do its homework and come to the table with clear negotiating objectives and desired results,” said Rice. “We must be confident that we can forge a modernized NAFTA, which will preserve the North American market for another 20 years.”

While there was initial concern about reopening NAFTA from producers on both sides of the border, that may be changing. “As time has gone by, that concern has been replaced with some optimism, especially in light of the strong support for the deal from the U.S. agriculture sector, which universally endorsed it,” said Dahl. “We can improve NAFTA, but we must not do anything to impede trade or move backward.”

In light of global activity on trade in recent months, some feel that cautious optimism is warranted. “If there is one thing that has characterized trade-related developments over the last year or so, it’s the difficulty that even trade veterans have in predicting outcomes,” said Kurbis. Whatever that outcome may be, Canada is hoping that when the smoke clears, the only thing broken will be the seal on the champagne to celebrate a job well done. ●

A BRIEF HISTORY OF SUPPLY MANAGEMENT

In a world where deregulation is often the norm, Canada’s system of supply management has been a point of contention in international trade negotiations.

It’s a system that is especially suited for the dairy industry. When advances in technology and farm management led to a steep rise in farm production in the late 19th century, the Agricultural Stabilization Act was passed in 1958 to provide a minimum income and a measure of financial security for farmers. While the Canadian government couldn’t afford to subsidize agriculture in the long run, it did the next best thing by giving farmers the tools to better negotiate with businesses and gain a fair share of consumer dollars.

This was the impetus for supply management, and though the reviews are mixed, it has been increasingly criticized as contrary to the principles of fair trade and open markets.

That criticism has somewhat impeded Canadian negotiators on the world stage, most recently with the TPP. Because countries like New Zealand and the United States wanted guarantees of major dairy concessions from Canada that would affect our supply management system, Canada was largely an outsider to the negotiations until late 2012.

Since then, the United States has made it clear that the removal of trade barriers against the American dairy industry is critical to that country’s participation in trade deals. Now that the United States has withdrawn from the TPP and asked to renegotiate NAFTA, what this means for the future of supply management in Canada is an unknown. Will it be preserved at the expense of other trade opportunities? Will it be abolished or modified, and, if so, what will be the impact on industries that rely on it like dairy, poultry and egg production?

Stay tuned.



Hot technology

CANADIAN FARMERS MAY BE MISSING OUT ON GRAIN-DRYING BENEFITS

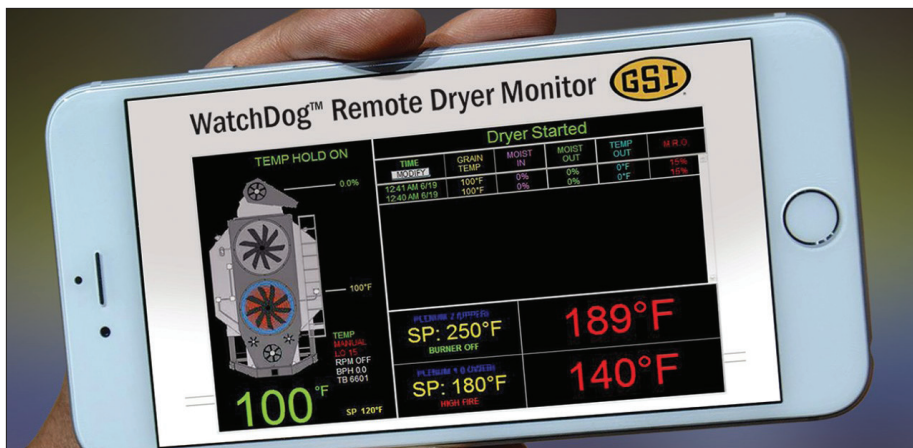
ACCORDING TO AGRICULTURAL experts, grain-drying technologies are being drastically overlooked in the Canadian farming industry, and many farmers could be losing out on profit by not taking advantage of the evolving tools at their disposal.

Fuji Jian is an assistant professor at the University of Manitoba Biosystems Engineering Department, which conducts collaborative research as part of an interdisciplinary group headquartered at the Canadian Wheat Board Centre for Grain Storage. Jian pointed out that for canola and wheat drying, countries such as China and India employ horizontal drying, whereas here we use vertical drying. “The vertical drying usually has high airflow resistance and needs much more time,” he said. Typically, Canadian grain farmers are drying in late fall and early winter, so vertical dryers are thought to be efficient at using rising heat, but the tradeoff is greater cost to operate fans and, according to Jian, non-uniform drying caused by dockage. “If we use the horizontal air-drying, usually the drying time is short and you can use less fan power,” said Jian.

Horizontal drying technology, however, has not been tested in Canadian conditions. Nor is there any government funding earmarked for exploring grain-drying technologies.

“It’s difficult to get funding [to study these] technologies, which would be seen as a small project,” said Jian. Horizontal aeration or ventilation can save a lot of drying time, as well as save money by making the use of high-temperature dryers unnecessary.

Jian also said that small and middle-sized farmers in other nations have focused on cleaning seed prior to drying, in part to remove weed seeds and chaff to improve



Grain drying technology such as that pictured here continues to advance, allowing producers to save time and increase profitability.

Photos: AGCO



Photo: Fujijian

The University of Manitoba's Canadian Wheat Board Centre for Grain Storage is the sight of ongoing collaborative research involving the institution's Department of Biosystems Engineering.

and evenly distribute airflow. He did note that the trend is gradually shrinking as farms get larger and the practice becomes more costly and time consuming.

Though most Canadian farms don't have the equipment to clean grain prior to drying, and trucking it away for cleaning is cost-prohibitive, Jian suggested the process is not completely impractical. Though cleaning will not influence airflow in high-temperature drying where grain depth is just a few centimetres, it will significantly influence the airflow resistance during in-bin drying or aeration where grain depth is more than a few metres. "I believe, if we get support, we can introduce new technologies that are already successful in other countries. We'll do studies here to apply the technologies to our environment." For example, Jian suggested quick, low-cost drying could benefit farmers harvesting late-season canola. "That's the technology we should focus on," he said.

Particularly beneficial in the barley malting process, grain drying can save time and increase profitability. Wade McAllister of Antler Valley Farm has been using a GSI dryer for roughly 10 years and said it has paid for itself and then some.

"To make good malt quality here in central Alberta, you have to try and get it off the field as quickly as possible when it's ready to go. With our wet seasons during harvest, every time you get a rain on a crop, that will start to lower the grade pretty quick."

McAllister said that using the grain dryer is like having a third combine. "After a rainstorm, as soon as that crop is able to go through the combine, you can start going at a higher moisture and just run it through the dryer," he said. "If you have a dryer going, at least your combines can be harvesting.

"We start taking it around 17 or 18 per cent moisture, and we'll bring it home and run it through the grain dryer. We've got

to bring it down to 13.5, so that's quite a bit of time in the dryer. And when you're running a grain dryer on malt, you can't use high temperatures, so right around that 49° to 52°C temperature. You don't want to get the grain any hotter than on an average harvest day, which is 30° to 31°C max."

McAllister estimated that only 25 per cent of grain farmers in his area are using similar technologies.

"Malt today is \$5.00 to \$5.50 a bushel, and feed is \$3.00 to \$3.50. Two dollars a bushel on 150,000 bushels—that's quite a bit of money, so it doesn't take long to pay for itself if you can save that grade."

McAllister can't imagine running his farm without drying equipment. "We've used it every year. Last year, the way the harvest went, we ran about 200,000 bushels through it. But we finished last year and a lot of guys weren't able to say that. I definitely think it's because we own a dryer." ■



Cultivating leadership

ADVANCINGAG PROGRAM PAIRS EXPERIENCED MENTORS WITH AMBITIOUS MENTEES

In February 2017, the Alberta Wheat Commission and Alberta Barley launched a crop sector mentorship program. AdvancingAg: Future Leaders Program pairs mentees aged 18 to 35 with crop sector professionals. The aim is to foster a strong network of future agricultural leaders. Stacie Yaremko and Allison Ammeter are one of the eight pairs.



Photo: Stacie Yaremko

MENTEE: Stacie Yaremko

Agriculture background

I grew up on a 3,000-acre grain farm near Peace River, AB. Throughout university, I worked for Bayer CropScience as a summer sales student, and then as a summer employee doing research after I graduated in 2016. After that, I was looking for a full-time job and ended up with Crop Production Services as a crop production adviser.

GrainsWest: What was it about Advancing Ag that grabbed your attention?

Stacie Yaremko: I graduated in 2016 and I was looking for something to further my education. I really enjoyed school, but I thought if there was something I could do past the classroom, that would be awesome.

GW: What value do you see in this program for yourself and Alberta's crop industry?

SY: I think any time you can strengthen new people coming in and get them a good foot to start off on, when you're coming out of school or starting a new career, it's a big help. For me, being paired with Allison is great because there are a lot of parallels between us. There's a lot I can learn from her. The program also gives me

the opportunity to go to conferences and other events that would be cost-prohibitive.

GW: What do you admire about your mentor, Allison?

SY: She's had a really interesting career overall. It's really nice to get to know another woman who works on the farm, but she's also had high-profile involvement with Alberta Pulse Growers and that's really cool.

GW: What do you hope to learn from Allison?

SY: She has a lot of good advice in a general life sense, like balancing family with your farm and succession planning. Those are things you might not really think about, but are good to know. She also has

a lot of good insight on conferences she thought would be good for me to attend, or ones I thought I might want to go to and she can tell me if it's really the best value for my money.

GW: What do you hope to accomplish through this program?

SY: One of the things I'm really excited about, and Allison emphasized, is the importance of starting a succession plan. She told me it's a process that can take 10 years from start to finish.

I was super excited to get into the program ... it's going to be a really good experience.

Advancing Ag

Future Leaders Program

- The 2017/18 year includes eight mentee/mentor pairings working in the cropping sector, including primary production, research and agricultural policy
- Each mentee is paired with a mentor in his or her field for the full program
- Mentees complete a roadmap with their mentor, complete with objectives and a budget for the duration of the program
- AdvancingAg provides mentees the opportunity and financial means to attend agriculture conferences across Alberta
- Mentees also attend a three-day leadership workshop specifically tailored to the cropping sector



Photo: Allison Ammeter

MENTOR: Allison Ammeter

Agriculture background

I was born on a grain farm in southwestern Saskatchewan, and I married a grain farmer in Sylvan Lake, AB. From dryland farming to wetland farming, I've always had a heart for growing things. It's been my life for most of my life, and I love it. In the ag community, I am a director with Alberta Pulse Growers and Pulse Canada, and I've gotten involved with a few other projects in the past, including being the Canadian chair of the International Year of Pulse. If I can do something that forwards the industry, I'm willing to step up.

GW: What interested you in the Advancing Ag program?

Allison Ammeter: How could anyone not want to be a part of helping future leaders get everything they need to be a success? When I met Stacie, what impressed me the most was that she's done a crop science degree, she's working for a crop life company, but her end goal is to take on the family farm. And that's the future of agriculture. I'm just excited to even be a small part of helping her along.

GW: What value do you see in the program for Stacie and for Alberta's crop industry?

AA: The value is partly in giving her an opportunity to get to some conferences and people she might not otherwise get to, both through funding and networking.

In my opinion, the networking is going to be the most valuable thing she gains, because everywhere she goes she will be introduced as one of the people involved in the mentorship program. I think what she'll find is that instead of one or two people mentoring her, she's going to gain 20 mentors.

GW: What value do you see in this program for the Alberta crop industry?

AA: It's always a great thing to help the next generation along. That's the benefit I see, that we will be ensuring that we have bright, dedicated people moving forward.

GW: What do you hope Stacie will learn from you?

AA: What I hope she gets from me is connections. Through my work with the com-

missions I've met a lot of terrific people, and I am hoping over the next year I get to introduce a lot of them to Stacie. Nobody knows everything, so the best thing is to ask questions everywhere.

GW: What have you learned or gained from working with Stacie?

AA: Just talking to her about setting goals has reminded me of the vastness of it. We talked about everything from peer support to machinery repair to succession planning. It has reminded me just how incredibly complex and diverse farming can be.

I wish we all had mentors and mentees. It's not easy to figure out what you want to ask a mentor or contribute to a mentee, but they're so critical at any stage of life. Formalizing the program and giving us some guidelines is a great thing. ●



Food waste unappetizing

WORKING TO MINIMIZE LOSSES FROM FIELD TO TABLE



THIS ISSUE OF GRAINSWEST

arrives at harvest time. In my experience growing up on a mixed farm in north-central Alberta, it was practically a sin to spill grain. But if you were on Twitter this last year, it was amazing to see farmers from around the world own up to such messy mistakes—have a look by searching for the hashtags #harvest16 and #oops!

This column is dedicated to post-harvest losses. In an era when global food security is a headline-grabbing topic, the idea of loss or waste anywhere in the food chain is a hot topic. The numbers are shocking: the World Food Programme of the United Nations estimates that one-third of all food produced for human consumption is lost or wasted. That represents over 1.3 billion tons of food. Food losses refer to either a decrease in the amount of food or a reduction in nutritional value (quality) of food. Food waste specifically refers to food that is available to be consumed but is somehow lost from the system.

In developing countries, up to 40 per cent of the cereal and pulse crop losses occur in the early stages following harvest. Vegetables and fruits present even greater issues of spoilage and damage due to the

nature of those products. Smallholder farmers limited to hand harvesting, open-air drying, hand or animal threshing and traditional storage methods leave their grains, fruits and vegetables susceptible to contamination and/or loss by rodents, birds, micro-organisms and insects.

All of these practices occur in environments that present major challenges. High temperatures significantly reduce the storage time and the quality of many farm products. Humidity can create issues for the quality of harvested crops. Urbanization in developing nations means that food moves into large cities over poor roads. Transportation in bags or other open containers also leads to losses.

These challenges are not just economic issues. In Kenya, there have been three major mycotoxin events where aflatoxin (a toxic fungus that grows on maize grain under humid conditions) in maize products has led to fatalities. In May 2004, 125 Kenyans died from aflatoxin poisoning.

Post-harvest losses are not limited to the developing world, though estimates of on-farm, post-harvest losses are less than five per cent. We should be rightfully proud of our remarkable harvest success. However, the U.S. Department of Agriculture's (USDA) most recent estimate indicates that 31 per cent of all food in the United States is lost. The USDA Economic Research Service estimates that represents a monetary loss of US\$161 billion each year. So what is happening? It will not come as a surprise that the issue is food waste.

In Canada, it was reported by Value Chain Management International that our food losses were valued at \$31 billion in 2014. The same study ranked all sources of waste and identified that 51 per cent of the waste occurs in our homes. Consumers want only fruits and vegetables that look good and have no blemishes, leading

them to discard large amounts of produce. Food stores dump “out-of-date” items based on regulated calendar protocols rather than assessment of food risk. Canadians spending only nine per cent of their disposable income on food find it more convenient to over-buy than risk running short. Grocery stores sell products in volumes that lead to portions of these products remaining unused. And the George Morris Centre reported that eight per cent of Canada's food waste occurs in restaurants as leftovers from over-large portions as well as food handling issues.

Wasting land, labour, water and energy through food loss is a very bad thing. Many of our institutions are working on a range of technologies to extend the shelf life and maintain the nutritional value of food products. Several grassroots programs are occurring across Africa, Latin America and South Asia to improve post-harvest management of crops. France has enacted legislation to ensure that grocery stores must work with food charities to eliminate waste. And collaboration within the food system is happening in many places across Canada.

Please be careful during this harvest season. Western Canadian farmers are doing a great deal to minimize post-harvest losses; it is one more demonstration of the superb stewardship of our resources. Reducing post-harvest losses has a double payoff: it makes money for producers and is good for society. Shatter-resistant cultivars, harvest timing, improvements to on-farm grain handling and storage—all of these investments are part of the solution. We as citizens are doing a lot of things right, but we need to continue to challenge ourselves to do even better. ■

Stan Blade, PhD, is dean of the Faculty of Agricultural, Life and Environmental Sciences at the University of Alberta.



Wheat world

WHEN IT COMES TO MARKETING, NOT ALL WHEAT IS EQUAL



WHEAT PRICES HAVE EXPERIENCED quite a ride between spring and fall. There was a sharp rally in late June and early July as markets focused on the dry conditions in the northern plains of the U.S. and the southern prairies. Some concerns over the European crop, dryness in Australia and potential imperfections in other regions added further support, together with some strength in corn and soybean markets.

However, prices gave up all of their gains and then some over the next six weeks. While the North American spring wheat crop was pointing toward a tightness of supplies, the uncertainty of the production outcome eased as harvest got underway, and the U.S. Department of Agriculture posted larger estimates than the trade was looking for. In the meantime, conditions improved in other regions, including bin-busting expectations for Russia. The end result is a global crop that may only fall slightly behind last year's record volume, while the projected ending stocks look to post an all-time high at the end of the crop year. In other words,

the alarm that was raised in mid-summer succumbed to the reality that the world will be awash in wheat once again. The result is Chicago and Kansas City futures prices trading back down to 10-year lows.

With the ebb and flow of the market and the stream of information regarding crop conditions, we are reminded again that when it comes to marketing wheat, not all wheat is the same. The huge global stockpile of wheat means that a sharp and sustained increase in the wider wheat complex seems unlikely in the foreseeable future. However, supplies of high-quality, high-protein wheat are short, and demand for this type of wheat is quite inelastic. This means that there is the potential for prices to be supported within a heavier price environment for wheat as a whole. This is why the Minneapolis Hard Red Spring Wheat futures prices continue to hold a sizable premium compared to the other markets, even if they, too, have pulled well back from their early summer peak.

Farmers need to keep these dynamics in mind when making selling decisions on this year's harvest. Representative and accurate samples are absolutely critical. Shop those samples around widely, including to buyers whom you might not have traditionally sold to in the past. The shortage of high-quality wheat means that good selling opportunities will arise during the year if the protein and grade are there. However, these premiums may only be available from specific buyers, and will likely hinge on the sample meeting specific requirements. Markets often work through supply shortages through basis premiums and cash market spe-

cial, rather than a widespread structural strength in values. The opportunities may also be somewhat fleeting, so having the samples in ahead of time will be important.

The effects on prices for the 2018/19 marketing year need to be kept in mind as well. In particular, one has to be careful not to make seeding decisions based on marketing last year's crop. In other words, the fundamentals for the upcoming crop year will look different than what is driving prices today. While there is a shortage of high-quality spring wheat today, that may not be the case next year if seeded area increases on the northern plains and Canadian Prairies at the same time that yields improve and quality remains high. Demand for high-quality wheat is quite inelastic, but it's also a very small segment of wider global wheat consumption. As a result, we are one good harvest away from satisfying that demand and forcing premiums lower. That's not to suggest that farmers should shy away from planting spring wheat. Rather, it's important to make sure that decisions are based on a realistic outlook, rather than driving while looking in the rear-view mirror.

The wheat market is incredibly dynamic. It can also be frustrating for farmers trying to make marketing decisions. While you can't control what the wider market does, you can help yourself by ensuring that you have accurate samples in the hands of a wide range of buyers and by keeping a close eye on local premium selling opportunities. ●

Jon Driedger is a senior market analyst with FarmLink Marketing Solutions.



Glenbow Archives NA-2604-30

Feeding the field crew

FROM THE TIME FARMERS FIRST broke Prairie soil, harvest-time field meals became a tradition.

Feeding the threshing crew was a big, important job. Women, assisted by girls, often cooked for these outfits. Presiding over the cook shacks, they rose early to bake dishes in wood stoves and served hearty meals at tables or serving windows.

Preserved in the photo archive of Calgary's Glenbow Museum, this photo of farmer Tom Whittle and his harvest crew at lunch was taken near Foremost in 1917. The image also accompanied a 1986 story entitled "Folklife of The Threshing Outfit" in *South Dakota History*, the journal of the South Dakota State Historical Society. Written by Thomas D. Isern, he noted that threshing was prevalent from

the late 1890s through the Second World War and beyond. During that time, custom threshing crews travelled the West, complemented by many farmers-helping-farmers crews.

Feeding crews was a daylong job according to Anna May Handley, who worked as a hired girl in Saskatchewan in 1928 and whose recollections Isern quotes. "Breakfast consisted of bacon, eggs, hash brown potatoes, and a gallon of coffee. For dinner at 11:00 a.m. we cooked a 15 pound roast, two types of vegetables and what seemed to me to be a half bushel of potatoes. (I had to peel them.) All the men liked pie for dessert, so we baked three pies every day. At 3 p.m. we took lunch out to the field. This was another gallon of coffee, sandwiches, and cookies. For supper we

had cold meats, potatoes, salads, and cake for dessert.

"The highlight of our day was when we took lunch out to the threshing crew. We waited until the men had finished eating so we could bring the plates home. I enjoyed the ride home on those beautiful autumn days, when there wasn't a breath of wind and a haze hung over the landscape. It felt good to be alive."

When boarding threshing crews, work for the farm wife multiplied. "She did not relish social contact with these individuals," wrote Isern, hinting at their roughness. Not surprisingly, farm wives were supporters of new farming technology such as gas-powered combines that appeared in the late 1920s, ending the threshing era. ●



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