The FENCE POST
Spring/Summer 2026 Issue No. 12

MANITOBA CROP ALLIANCE

FUTURE FOOD

Enhancing agricultural research with computer science

Contents

The FENCE POST

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Cover Photo
Courtesy of Jiating Li

Publisher
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Printing
Houghton Boston

Distribution
Houghton Boston

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2026 BOARD OF DIRECTORS

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Adapting through change

Agriculture is one of the oldest industries in the world. Between 1882, when my ancestors planted their first crop in western Manitoba, and the present day on my family farm, change and weather variability have been the only sure things you can count on. As chair of Manitoba Crop Alliance (MCA), I spend a lot of time thinking about where our industry has been and where it is headed.

Sometimes change comes from emerging technology. Other times it comes from tariffs placed on some of our largest export markets. As farmers, we are continuously adapting to both the things that follow patterns and the things that emerge suddenly without warning.

In a world that seems to be shifting away from globalization and barrier-free trade, we need to be prepared for the impact this will have on our export-driven economy. The pieces on the export board keep moving but trade continues, and the flow of grain exports will head towards new markets in response.

In this increasingly competitive global environment, we as farmers will continue to face volatility. Like any successful industry, agriculture will need to adopt new technologies to improve yield, margins and the profitability of our crops. Tremendous advancements have been made in grain farming over the past 25 years, and history tells us that the next 25 years will bring even more changes.

Change may come through adoption of precision farming equipment, continued improvements in plant genetics, reduced use of crop protection products because of AI technology or an increase in efficiency of fertilizer products essential for modern agriculture.

Research funded by MCA and other commodity groups, as well as private industry and government, is already tackling these challenges and we are seeing early signs of meaningful progress. These efforts are focused on helping farmers become more efficient, more sustainable and better positioned for the future.

I know that farmers, and especially young farmers, will play a key role in how these changes take shape. As an industry, we've always adapted, and that willingness to evolve is what will carry us through the next decade and beyond.

Jonothan Hodson
Chair
Manitoba Crop Alliance

Turning metrics into meaning for Manitoba farmers

As a large farm organization serving 7,700 farmer members across Manitoba, we rely on metrics to guide our work, measure our progress and evaluate our impact. Metrics help us understand whether we are realizing our vision: ensuring every Manitoba farmer is more productive and sustainable due to the investments we make on their behalf. Metrics help us assess the effectiveness of our priorities, inform decision-making and keep us aligned with our core principles and strategy.

Clear, relevant and measurable metrics are essential. They allow us to track everything from financial performance to operational execution, and from research and agronomy initiatives to how well we support our staff, board and farmer community. In our organization, every step goal in our strategic plan has defined, board approved metrics for success, such as initiatives completed, agreements secured or timelines met. In a science based world, we certainly love data.

But over time, I have learned a deeper truth: metrics matter, but the journey behind them is where our real learning lives. Success is not defined solely by whether a target is met – the path from goal setting to final reporting is just as important. The insights gained, challenges faced, partnerships built, lessons learned and innovations uncovered throughout the process are what propel us forward.

Through professional development, our team learned a crucial lesson: that a well told story can move people in ways data alone cannot. It strengthens connection, fosters understanding and helps our farmer members see not just what we achieved, but why it matters. Some of the most meaningful parts of our work are intangible or difficult to quantify, yet they are essential to our impact.

At Manitoba Crop Alliance, we are committed to sharing both our data and the stories that give that data meaning. We want you to see the full picture: the progress, the hurdles, the breakthroughs and, ultimately, the value created for you.

I invite you to follow along with us — not just through the numbers, but through the journey behind them. Our work is for you, and your story is at the heart of ours.

Pam de Rocquigny
CEO
Manitoba Crop Alliance

Meet our 2026 board of directors

In January, our four crop committees met to elect their representatives for the Manitoba Crop Alliance (MCA) board of directors. The following directors will serve on the MCA board in 2026:

SUNFLOWER

Korey Peters

Randolph, MB

Korey Peters was raised on a farm in Randolph, MB. In 2011, he returned to the farm full time and is now a third-generation partner in the family grain and hog operation, Herbsigwil Farms Ltd. They grow a variety of crops, including wheat, canola, soybeans, sunflowers and corn.

Sally Parsonage

Baldur, MB

Sally Parsonage grew up on the family farm east of Baldur, MB. She completed an agronomy degree at the University of Manitoba before returning to the farm. In 2014, she and her three siblings took over Parsonage Farms from their parents. Together they grow a rotation of sunflowers, barley, soybeans, canola, oats and wheat.

WHEAT AND BARLEY

Robert Misko

Roblin, MB

When he was seven years old, Robert Misko moved with his parents to begin a farming operation east of Roblin, MB, which has since grown to encompass 7,200 acres, with an additional 3,500 acres of custom seeding. They grow primarily wheat, canola and peas. Over the years, as Robert's parents slowly retired from farming, the farm has developed into a true family farm, with Robert and Leifa's children — Brittany, Courtney and Robert Jr. — becoming more involved in farm operations.

Jeffrey Stobbe-Wiebe

Springstein, MB

Jeffrey Stobbe-Wiebe is a farmer and maltster from Springstein, MB, growing malt barley, wheat, oats, canola and soybeans. He has an agriculture diploma from the University of Manitoba and a brewmaster and brewery operations management diploma from Niagara College. After graduating, he spent time working in the brewing industry before returning to full-time farming in 2019. In 2024, his farm launched Scythe Malting Co., with the aim of supplying local malt to local breweries.

Carly Chatham

Killarney, MB

Carly Chatham farms with her husband Cody at his family farm, Chatham Seeds, in Killarney, MB. The Chathams are seed growers and continue to produce top-of-the-market wheat varieties. She was born and raised in Carman, MB, and has been involved in the agriculture industry since she was a student. Chatham obtained her agriculture diploma and B.Sc. in agriculture at the University of Manitoba, and also holds a designation in the Prairies as a Certified Crop Advisor.

Scott Mowbray

Cartwright, MB

Fourth-generation farmer Scott Mowbray farms with his parents, wife and three young children. Their farm made the switch from minimum to zero-tillage 15 years ago and are now experimenting with other regenerative farming practices to ensure the land is healthier and more productive for the next generation.

FLAX

Nick Matheson

Stonewall, MB

Sixth-generation farmer Nick Matheson farms just south of Stonewall, MB. Along with his wife and father, he runs a beef cattle, grain and forage seed operation. Of the 1,100 acres that they own and rent, about 160 acres are planted to flax annually.

Leigh Smith

Oak Lake, MB

Sixth-generation farmer Leigh Smith and his wife own and operate a mixed grain and cow-calf operation. Their farm is a diverse grain, oilseed and forage seed operation. They are also seed growers, with an emphasis on flax, barley, soybeans and forage grass seed.

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CORN

Jonothan Hodson

Lenore, MB

Jonothan Hodson farms at Lenore, MB, alongside his brothers Jason and Jamie, as well as their families and dedicated staff, on their fifth-generation farm. He has been farming full time for 35 years and grows many different crops, such as soybeans, wheat, barley, canola, forages and corn.

Carl Bangert

Beausejour, MB

Carl Bangert grew up on his family farm near the town of Beausejour, MB. He farms with his brother Mark and with continued support from his parents and extended family. His farm was one of the first to grow corn in the Beausejour area, which helped supply feed for their farrow-to-finish hog operation. The farm now focuses on grain production.

Doug Martin

East Selkirk, MB

Doug Martin is a fourth-generation farmer who has been in the business for the past 40 years. He farms in partnership with his wife Laurie, as well as his cousin Gerry and Gerry's wife Kelly. Martin's son Kevin works off the farm and is also involved in the operation. Together, they grow winter wheat, spring wheat, corn, soybeans, oats and canola.

Congratulations to our 2025–26 post-secondary bursary recipients!

Manitoba Crop Alliance (MCA) is proud to support agriculture's next generation. MCA's bursary program is designed to assist with the financial needs of students pursuing education in a field that will benefit the agriculture sector.

Six post-secondary students from Manitoba have been awarded with MCA 2025-26 bursaries valued at $2,000 each. The 2025-26 bursary recipients are:

Daniela Heinrichs
Clearwater, MB

Kayden Stewart
Rosser, MB

Marco Fanzago
Elm Creek, MB

Evan Whetter
Alexander, MB

Nolan Marginet
Treherne, MB

Cohen Crammond
Austin, MB

Thank you to the selection committee for evaluating the bursary applications and congratulations to the 2025–26 bursary recipients!

Manitoba Crop Alliance

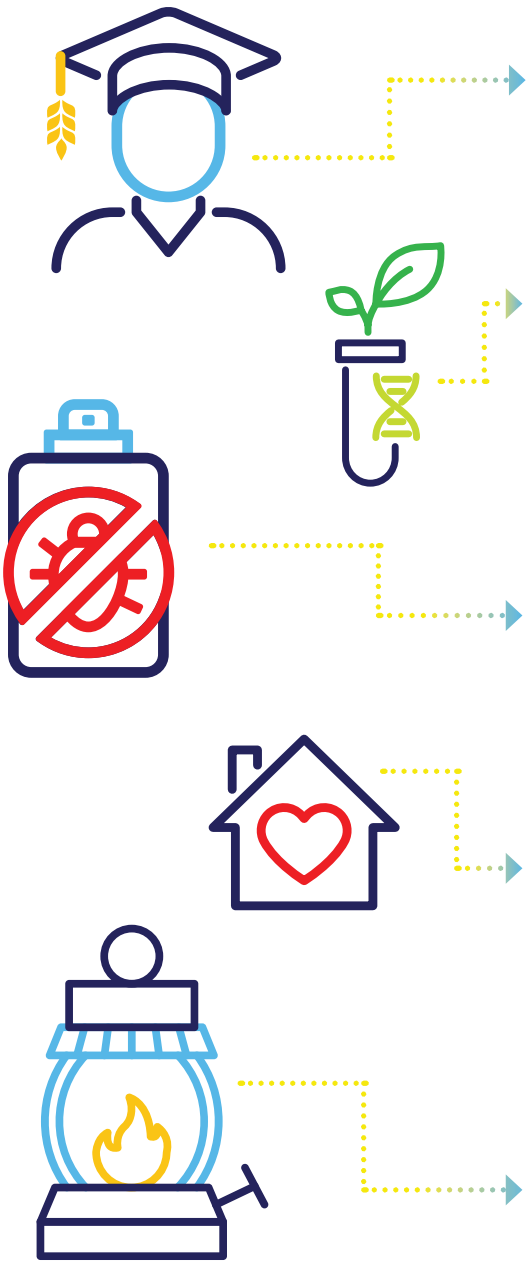
EVENTS

Visit ***mbcropalliance.ca*** to view our summer 2026 event listings. While you're there, sign up for our ***Heads Up*** e-newsletter to be the first to know about upcoming MCA events.

Five questions

with Surjit Bawa

Field Research Specialist



1. Why did you choose to work in Manitoba's agriculture industry?

I chose to work in Manitoba's agriculture industry because agriculture has always been my passion. Growing up in a farming family and working on the farm led me to ***pursue a degree in agricultural science*** *and build about 12 years of experience in applied agriculture science before coming to Canada. Manitoba's strong, diverse and innovative agriculture sector made it the ideal place to continue my career and support farmers.*

2. What do you love most about Manitoba ag?

What I love most about Manitoba agriculture is the strong sense of collaboration and commitment to sustainability. Farmers are highly engaged, care deeply about their land and actively work with researchers and industry partners to address challenges such as soil health, herbicide-resistant weeds and pest management. I am also impressed by how readily ***Manitoba farmers adopt new genetics and technologies****, leading to improved productivity, quality and resilience that strengthen both individual farms and Canada's position in global markets.*

3. What do you think are the greatest challenges and opportunities the industry faces?

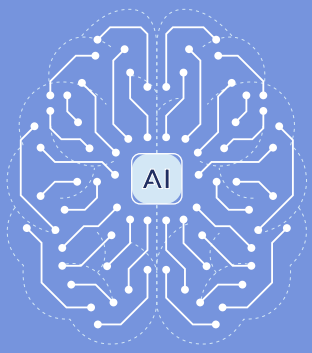
Manitoba agriculture faces several key challenges. Some that come to my mind are market uncertainty, declining soil health, ***chemical resistance in pests*** *and the need to consistently meet end use quality standards. These challenges open the door for scientists, researchers and industry partners to develop innovative solutions. Advancements in genetics with pest-resistant genes, crop protection solutions, soil management and value added end-use quality traits can help strengthen long term sustainability and profitability across the industry.*

4. What is your favourite place in the world and why?

My favourite place in the world is ***my home*** *in Manitoba. It allows me to spend meaningful time with my family while staying closely connected to my passion for agriculture. The wide-open fields and strong agricultural community make it feel like home. I also enjoy Manitoba's natural beauty, lakes, peaceful landscapes and distinct four seasons.*

5. What's a fun fact about yourself that people might not know or that might surprise them?

A fun fact about me starts in my childhood. I grew up on a family farm four kilometres from my village, which meant an eight kilometre walk to school every day and doing ***homework by gas lamp*** *until Grade 10. Those early years taught me resilience, independence and how to make the most of what you have. Fast forward to today, I enjoy spending time with family and friends; cheering for the Jets, the Bombers and India's cricket team; taking morning walks year round and occasionally getting out for some ice fishing.*



Smarter research, stronger crops

How AI, digital modelling and image-based tools are reshaping agricultural science

By Alison Inglis
Public Relations Specialist, Freelance

We hear a lot about drones, apps and automation. But behind the scenes, before innovations even reach the farm, researchers are using artificial intelligence (AI) and digital modelling to better understand Manitoba's soils, rethink yield potential and develop more resilient crop varieties.

If stronger crops start anywhere, it's in the soil. New soil technologies are helping researchers gain a deeper understanding of that foundation.

All soil has a unique light reflection pattern, or "spectral signature." Researchers at the University of Manitoba (UM) are using spectroscopy to scan soil samples and capture that signature. These digital signatures can then be linked to physical and chemical soil properties such as organic carbon, texture, moisture and nutrient levels.

"It's like a blood sample," says Nasem Badreldin, assistant professor of soil science at UM. "Imagine every blood sample has a different colour, and with every colour there is a certain property. That's what we are trying to build, a library containing the specific colour of the soil associated with its physical and chemical properties."

The result is the Manitoba Soil Spectral Library (MSSL), a centralized database that allows soils to be analyzed, compared and mapped at scale. For farmers, that means soil tests and digital mapping tools can be calibrated using Manitoba-based data, improving accuracy and confidence in the results.

With advances in sensor technology, researchers can now observe wavelengths beyond what the human eye can detect. Those wavelengths hold more information about soil properties, unlocking detail that once required time-consuming lab tests. Instead of running intensive chemical analysis on every sample, spectroscopy captures a soil's spectral signature in a single scan, all in a fraction of a second.

To begin building the MSSL, researchers collected surface and subsurface soil samples across different soil zones and land types in Manitoba. In the lab, samples were dried to remove moisture and sieved to a consistent particle size.

One portion of each sample is analyzed the traditional way in a lab, measuring texture, pH, salinity, organic carbon and nutrient levels. The other is scanned using a lab-grade spectroradiometer that measures how soil reflects light under controlled conditions. Each scan produces hundreds of data points. Across thousands of samples, that becomes an enormous dataset.

> ***For all of us, this is the foundation. AI without good ground truthing is a useless technology.***
>
> **Nasem Badreldin**
> Assistant professor of soil science at University of Manitoba

This is where AI becomes essential. With so many wavelengths tied to so many soil properties, Badreldin and his team train deep learning neural networks (a type of machine learning within AI) to identify patterns in the spectral data and link them to measured soil properties. Once trained, the AI can use a soil's spectral signature to predict soil properties directly with accuracy that can, in some cases, exceed 90 per cent.

"For all of us, this is the foundation," Badreldin says. "AI without good ground truthing is a useless technology."

That foundation matters, as farmers are facing a changing climate and growing pressure around measuring soil carbon. Without Manitoba-based reference data, digital tools and private scanning technologies risk producing unreliable results. The MSSL is designed to be that foundation.

Soil data builds the foundation, but modelling tools are helping researchers rethink what yield potential really means. Even with advancements in wheat genetics and improved management practices, research shows there remains a consistent gap between potential and actual yields on the Prairies.

The Manitoba Spring Wheat Yield Enhancement Network (YEN) was created to better understand that gap. Launched in 2025, it aims to not only compare yields, but to measure how much of a field's full potential was captured in a season.

"You can't just look at two yield numbers and say one farmer did a better job than another," says Mark Lysack, ag weather data technologist with Manitoba Agriculture. "Different land has different capabilities, and weather conditions vary a lot across the province."

The YEN model draws from multiple data sources, including the Manitoba Agriculture Weather Program, soil characteristics from participating farmers' fields and reference data from Manitoba Agricultural Services Corporation.

Using daily weather data, the model analyzes how weather conditions influenced crop water use throughout the season, then translates that into an estimate of potential yield for that specific location. It focuses on weather as the limiting factor, estimating what yield could have been under ideal management given that season's rainfall, soil moisture conditions and heat accumulation.

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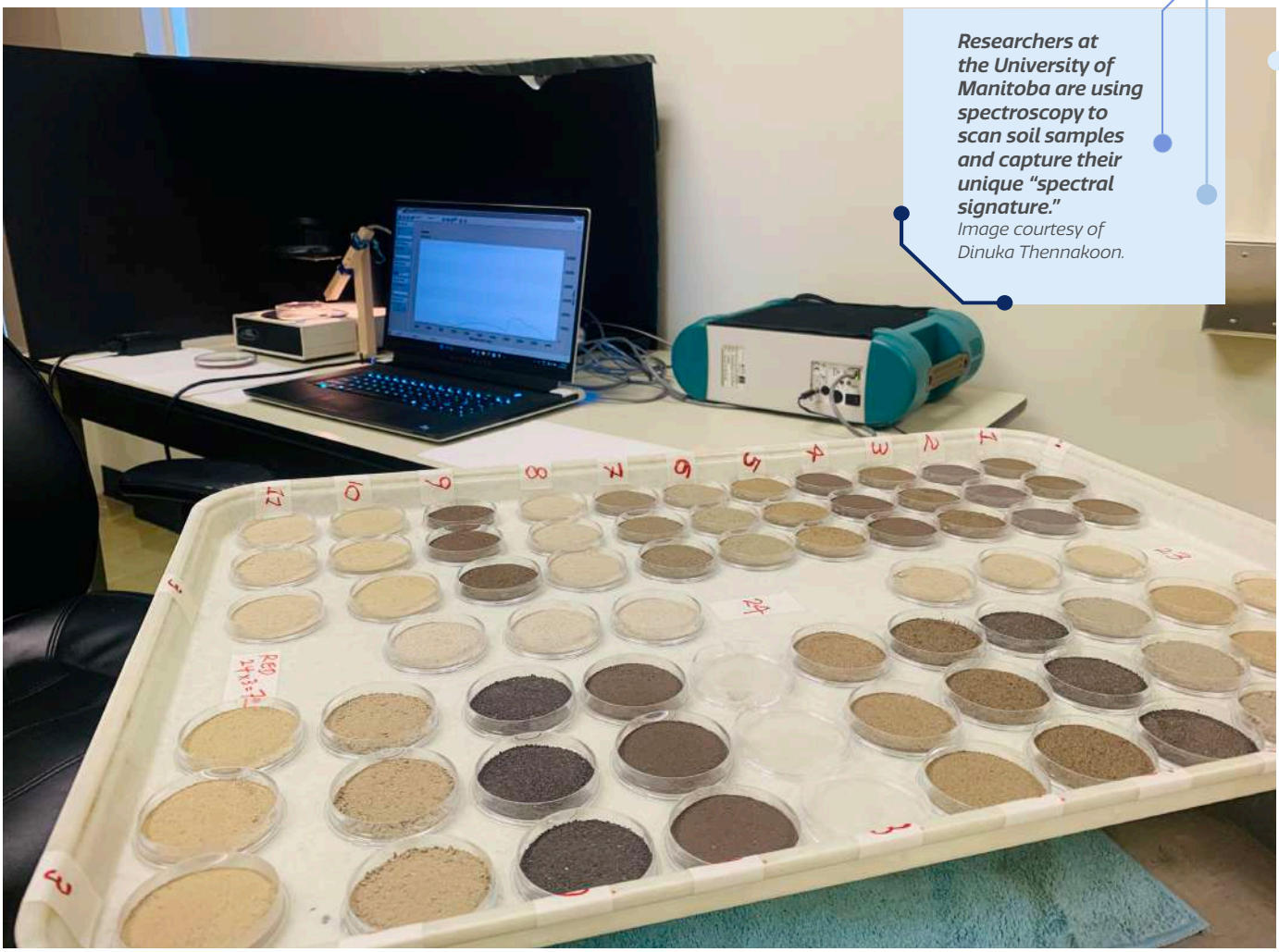
***Graduate students collect field data as part of ongoing research**. Image courtesy of Jiating Li.*



Researchers at the University of Manitoba are using spectroscopy to scan soil samples and capture their unique "spectral signature."
Image courtesy of Dinuka Thennakoon.

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The result is a clearer picture of yield capture, or the percentage of potential yield that was achieved.

In some cases, a 60-bushel crop may have captured nearly all its potential in a challenging season, while a 100-bushel crop in a different location may have left greater potential yield on the table.

"It's a way to move away from just maximizing the number," Lysack says. "It's all relative."

Because the model is built using Manitoba-based weather and soil data, it reflects local conditions rather than relying on assumptions from other regions. As more seasons of data are added, the model can continue to be refined, improving its accuracy over time.

For farmers, the value isn't just in seeing the number. The YEN program benchmarks soil properties, nutrient levels, plant tissue data and yield components alongside yield potential. Together, that information helps identify what may have limited yield and where management changes could improve future performance. Long term, the information gathered will allow researchers to analyze trends within participants' cropping practices to better understand what practices are leading to greater yields.

The goal is not to predict the future, but to better understand the past, so decisions moving forward are grounded in data.

Understanding yield potential is one piece of the puzzle, but acting on it in-season is another. At UM, assistant professor Jiating Li is working on a new generation of decision-support tools to help farmers adjust nitrogen timing and rates as corn develops.

Today, many nitrogen decisions are based on experience, regional recommendations or generalized calculators. They provide useful guidance, but they are not always site-specific or dynamic. Weather shifts, hybrids change and fields often vary from one end to the other.

"We want to provide a digital decision-making tool that is site- and time-specific," Li says. "Farmers could visualize spatial variation across their whole field and adjust nitrogen decisions at different growth stages."

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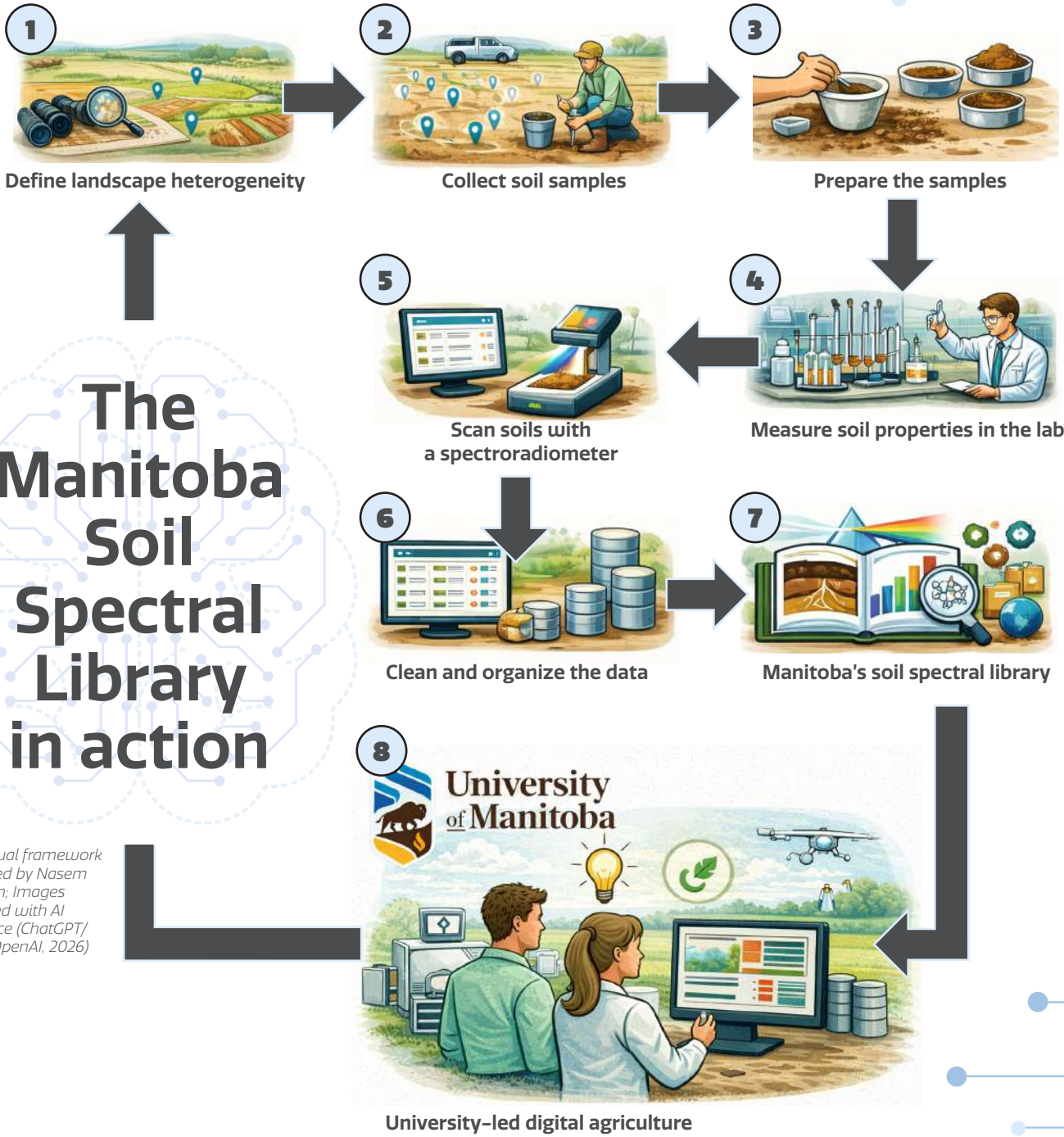
The Manitoba Soil Spectral Library in action



Conceptual framework developed by Nasem Badreldin; Images generated with AI assistance (ChatGPT/ DALL·E, OpenAI, 2026)

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Her research combines three pillars: remote sensing, crop growth models and AI.

Remote sensing, often through drones, captures real-time images of how a crop is performing across a field. Crop growth models simulate how a crop responds to weather, soil and management based on decades of agronomic research and understanding. AI then learns patterns from both sources of information.

"Most AI models are still a black box. You feed data in and get a prediction, but the model doesn't tell you why," Li says. "By combining crop growth models with AI, we hope we can improve interpretability and trust."

Li refers to this approach as knowledge-guided AI. The crop growth model embeds decades of agronomic knowledge into the system, guiding the AI rather than being replaced by it. Rather than simply predicting how much nitrogen a crop might need, the system aims to explain which factors, such as weather, soil moisture or crop stage, are driving the recommendation.

"If I can tell you why the model made a prediction, it improves reliability and trust," Li says.

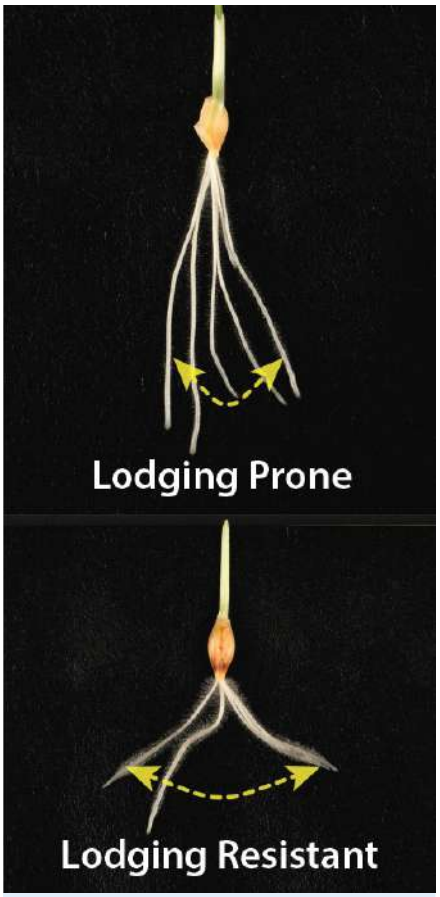
Her long-term vision is practical: a farmer could fly a drone over a field, upload the imagery into a software platform and receive a prescription map that recommends nitrogen adjustments, along with a confidence level indicating how strong the recommendation is under current conditions.

The approach is still in development in collaboration with Loveleen Dhillon, agronomist in residence at UM, and will require on-farm testing over multiple seasons. But the broader shift is clear: AI is no longer being used only to generate faster answers. It is being guided by crop science knowledge to produce recommendations that are more transparent, adaptable and field-specific.

Digital tools are also reshaping plant breeding long before a new variety ever reaches the farm. For barley breeders, lodging remains a persistent challenge. Even with the introduction of semi-dwarf traits, shorter plants do not automatically mean stronger stands.

A Manitoba Agriculture Weather Program weather station. *Image courtesy of Ian Petkau.*

"Barley is just a different beast," says Aaron Beattie, associate professor and Ministry of Agriculture Strategic Research Program Chair in Barley and Oat Breeding and Genetics at the University of Saskatchewan. "While there were noticeable improvements when the semi-dwarf traits were introduced, not all varieties necessarily stand up just because they're short."



Images of early stage barley seedlings showing differences in seminal root angle and the association to lodging resistance. *Image courtesy of the National Research Council of Canada.*

In Western Canada, breeders often face another challenge: they do not consistently see lodging pressure in the field. Drier Prairie conditions mean lodging does not show up every year. If you do not see it, you cannot measure it. And if you cannot measure it, you cannot reliably select for it. That is where new image-based analysis tools are changing the process.

Researchers at the National Research Council of Canada (NRC) are studying the underlying traits that contribute to standability, particularly those below ground. Using indoor hydroponic systems, they can grow barley seedlings and capture detailed images of root systems early in development, which facilitates analysis through computer vision, a field of AI that enables computers to extract meaningful data from images.

> ***The wider the root angle coming out of the germinating seed, the more horizontal the root system becomes.***
>
> **Allan Feurtado**
> Team lead for integrated omics and climate resilience, National Research Council of Canada

With a focus on root system architecture, which is the shape and spatial arrangement of the root system, one trait in particular, root angle, has been identified as especially important at predicting lodging resistance.

"The wider the root angle coming out of the germinating seed, the more horizontal the root system becomes," says Allan Feurtado, team lead for integrated omics and climate resilience at the NRC's Aquatic and Crop Resource Development Research Centre. "A root system spreading in the horizontal direction grabs more topsoil and establishes stronger anchorage."

Traditionally, studying roots meant digging them up in the field, a labour-intensive process that limited how many samples could realistically be evaluated. Image-based analysis allows researchers to measure root traits at a scale and precision that was not previously practical in a breeding program. The indoor root measurements are being validated with field experiments at the University of Saskatchewan and Agriculture and Agri-Food Canada's Brandon Research and Development Centre, with barley breeding research scientist Ana Badea collaborating. This ensures the traits observed in the lab translate to real-world lodging performance.

"These image-based features are measured by machine," says Jordan Ubbens, research officer, computational biology, at the NRC. "They're very accurate down to the pixel. You get a degree of objectivity you wouldn't necessarily get with more manual approaches."

This shift is giving breeders more information to work with. "We're giving breeders a new lens on their germplasm," Ubbens says.

By generating quantitative data on root traits, researchers can connect those traits to specific genomic regions, noted by Feurtado. That opens the door to identifying genetic markers associated with lodging resistance – the ultimate goal for breeders.

With better markers, selection becomes more informed. The breeding cycle itself does not necessarily get shorter, but the outcomes improve.

"We can't really speed up the program much more than we already have," Beattie says. "It's really about getting more information, and therefore better varieties, over the same period of time."

For farmers, that means future barley varieties should be incrementally stronger and better adapted because breeders are equipped with more detailed information and tools at their disposal earlier in the pipeline.

Behind each of these tools is a shift in mindset: the goal is not just faster answers, but better questions.

2026 Annual Report
(2025 Activities)

MANITOBA CROP ALLIANCE

All Manitoba Crop Alliance (MCA) activities are farmer led and directed to ensure we invest our farmer members' dollars wisely and are making strides towards achieving our vision, mission and strategic objectives.

Research and Production

Highlights:

- Increased research capacity in Manitoba through strategic investments.
- Supported the development of new crop varieties for farmers that make them more productive and sustainable.
- Identified research gaps and increased efficiency among all MCA research investments to maximize ROI for farmer members.
- Accelerated on-farm innovation by supporting the adoption of new practices through farmer-led trials and collaborative learning.

156 Active research projects *(as of July 31, 2025)*

90	27	11	9	8	7	4
Barley & Wheat	Whole Farm	Corn	Increasing Capacity	Sunflower	Flax	Winter Wheat

MCA total investment in research and production in **2024–25** fiscal year:
$5,368,662

Research and production budget for **2025–26** fiscal year:
$6,625,799

Advocacy

Highlights:

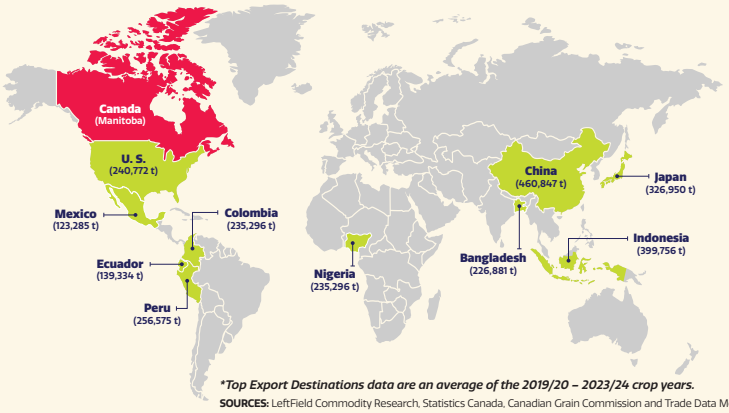
- Strengthened MCA's relationships with government officials to increase awareness of farmer issues and foster dialogue around the importance of agriculture.
- Amplified Manitoba farmers' voices on the national stage through strategic collaboration with Grain Growers of Canada.
- Crafted a targeted advocacy strategy grounded in collaboration and relationship-building.
- Cultivated passionate and informed agricultural leaders and consumers.

Market Development and Access

Highlights:

- Ignited industry collaboration to lead sustainable growth in the flax sector.
- Strengthened the global competitiveness of Manitoba wheat through innovation, quality assurance and market access.

Key Markets for Manitoba Wheat*



**Top Export Destinations data are an average of the 2019/20 – 2023/24 crop years.*

SOURCES: LeftField Commodity Research, Statistics Canada, Canadian Grain Commission and Trade Data Monitor

Communications and Extension

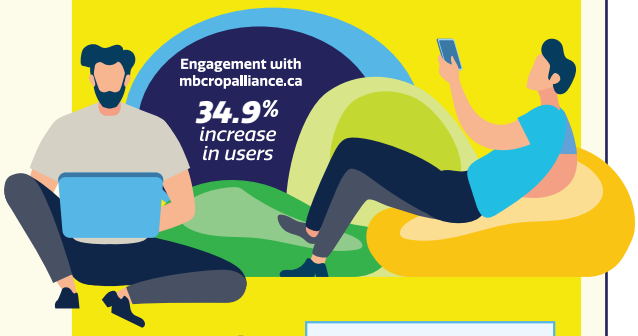
Highlights:

- Increased awareness of MCA and strengthened the organization's reputation as a trusted source of information and strong voice for farmers in Manitoba's agriculture industry.
- Equipped Manitoba farmers with knowledge, tools and networks to thrive in a changing agricultural landscape.
- Celebrated MCA's fifth anniversary.

5 YEARS AND COUNTING
MANITOBA CROP ALLIANCE

Growth in social media audiences

↑5% (+97)	↑100% (+651)	↑20% (+165)	↑109% (+857)



MCA in the media

(i.e., articles mentioning or featuring MCA or MCA spokespeople)

110+ MEDIA HITS

TOP OUTLETS:

- **Glacier Farm Media** (e.g., Manitoba Co-operator, Western Producer, Grainews, etc.)
- **Golden West** (e.g., Pembina Valley Online, Steinbach Online, etc.)
- **Farms.com**
- **Real Agriculture**
- **Winnipeg Free Press**

Advance Payments Program

Highlights:

- Provided short-term financial support to Manitoba farmers through MCA's Cash Advance Program, allowing them to capitalize on favourable market conditions and enhance overall profitability.

CASH ADVANCE

Prime minus 0.5%
Interest-bearing rate for 2025 program year

31%
Increase in clients since 2021

Governance and Operations

Highlights:

- Delivered excellent return on investment to our farmer members for their check-off dollars, reflected by high member retention.
- Implemented technological advancements to better meet the needs our farmer members, while safeguarding their information from external threats.
- Invested in our people to support their personal and professional development, while cultivating a culture of growth, collaboration and excellence.

2025 Professional Development and Investment in our People

Investing in Directors and Delegates	Investing in Skills and Knowledge	Building Strong Connections	Thought Leadership	Strategy -Focused
46 touchpoints	33 touchpoints	30 touchpoints	30 touchpoints	11 touchpoints

View our complete 2026 Annual Report (2025 activities) at **annualreport.mbcropalliance.ca**

Grain Marketing Insights

The shift to 2026–27

By LeftField Commodity Research

The 2025–26 marketing year has been one for the books. Yields for most western Canadian crops were at or close to record levels, as a milder summer and decent rains allowed crops to prosper. The positive yields didn't only happen in Canada, either, with global yields well above trendline for several key crops, especially cereal grains. The overall result of big production in Canada and elsewhere is a market environment that feels "heavy." The good news is that demand has also been improving in many cases, which helps chew through the stockpiles. Even so, supplies carried over from 2025–26 into 2026–27 are still large and will have an influence on next year's markets.

The outlook for seeded area in 2026 is still tentative but shifts from one crop to another aren't expected to be large, as there aren't any noticeable standouts in the crop mix. Even if acreage doesn't change much, the impact of a drop in 2026 yields closer to average would be considerable, as crops shrink to more "normal" levels. As always, growing conditions through the summer will have the ultimate say on 2026–27 price direction.

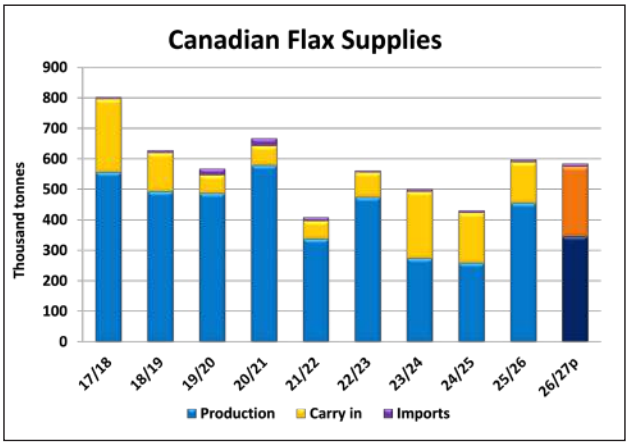
Flax supplies look comfortable but not heavy

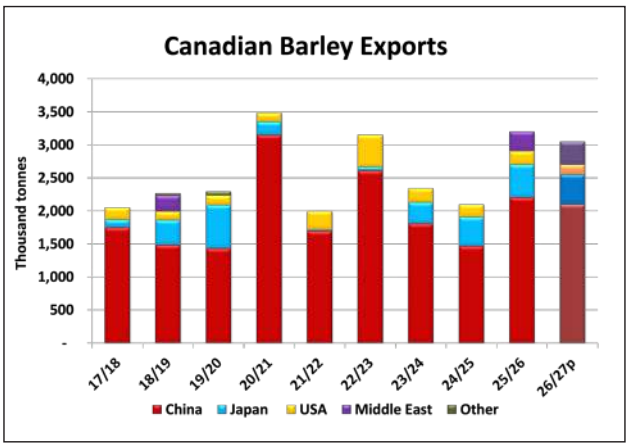
In 2025, Canadian flax acreage turned around and saw a solid increase from the 2024 low. The flax crop was bolstered further by a record yield of 455,000 tonnes, which helped push 2025–26 supplies up to 600,000 tonnes, the most since 2020–21. Canadian supplies are at multiyear highs but still aren't historically heavy. The difference, though, is that in the last few years, the global flax market has become dominated by much larger crops in Russia and Kazakhstan, limiting Canadian export potential.

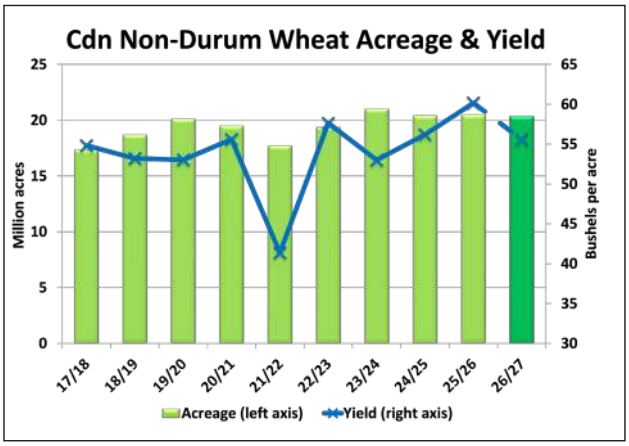
The stronger competition from Russian and Kazakh flax will result in larger Canadian stocks of flax carried over from 2025–26 into next year. Early indications are that Canadian flax acreage could nudge a bit higher again in 2026, but the yield outcome could have a much greater impact on next year's crop. An average yield would be a full eight bushels lower than last year's record and could more than offset an acreage increase. This smaller crop, together with larger old-crop carryover, may leave 2026–27 supplies very close to current levels. If so, that would suggest a mostly stable price outlook for next year.

Bigger barley exports draw down supplies

Canadian barley acreage in 2025 dropped to its lowest level in almost 10 years, but a record yield of almost 18 bushels above the five-year average raised production nearly 20 per cent compared with last year. This pushed 2025–26 supplies over 11 million tonnes, the most since 2020–21, and raised the possibility of very heavy 2025–26 ending stocks. Despite large barley crops in competing exporters, Canada has been shipping out barley at a very strong clip. More demand has been coming from China and Japan, as well as the surprise return of Saudi Arabia after an absence of several years. As a







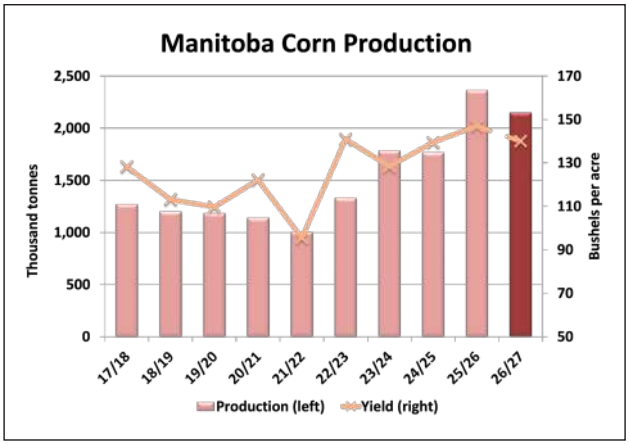
result, barley ending stocks for 2025-26 won't be nearly as heavy as the big pre supplies indicated previously.

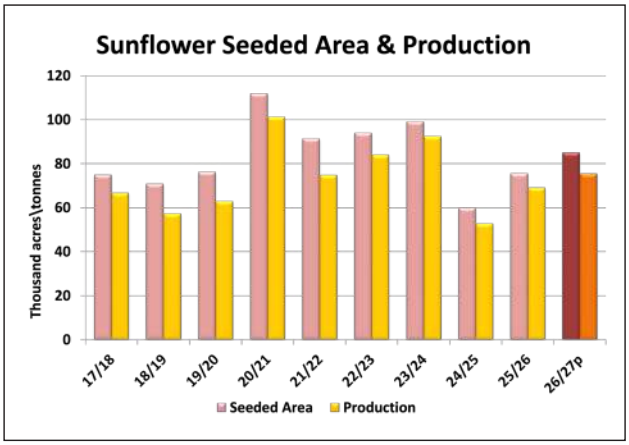
Canadian barley acres are widely expected to rebound in 2026, but a drop back to an average yield could easily mean a smaller barley crop next year. If so, supplies in 2026-27 would be lower than the current year and cause a slightly "tighter" outlook, raising the potential for lower ending stocks. Even with a slightly more cautious export outlook for the upcoming marketing year, there's a good chance 2026-27 ending stocks will end up lower than the last couple of years. Ultimately, that should mean firm barley prices.

Global wheat supplies will be large going into next season

Wheat prices have spent most of the year grinding sideways, as supplies are large both in Canada and globally after a season that saw good growing conditions across every key region. While big stocks limit upside potential, steady demand has prevented values from breaking lower. For Canada, shipments have been at a record pace so far in 2025-26, pointing to good buying interest for high-quality wheat, as long as prices remain competitive. There are areas to monitor, but very early indications don't point to any major yield threats in the primary Northern Hemisphere growing areas, which could mean another season of well-supplied markets, although the most important weather is still ahead.

Canadian spring wheat acres may stay roughly flat in 2026, despite lacklustre new-crop bids to farmers. Winter wheat plantings saw a small dip according to Statistics Canada, which would put total non-durum area at around 20.4 million acres, down from the previous three seasons but still on the higher side historically. However, if yields return from last year's record to a more trendline level, non-durum production could be nearly three million tonnes lower at a little over 30 million tonnes. Supplies still wouldn't be tight, but Prairie stocks will likely be reduced.





North American corn supplies may drop in 2026-27

Record production was the story for corn in 2025-26, with the U.S. seeing an all-time high for plantings and yield. South American production also projects to be a record this season. Demand has also never been this strong, which will prevent stocks from building to burdensome levels and is keeping prices in a range. It appears U.S. acres will be lower in 2026, which when combined with the potential for yields to not match last year's high means the crop will likely be smaller next season. How much of a drop will ultimately be driven by weather.

Canadian production was down in 2025 due to dry conditions in the east, where most of the country's corn is grown. However, Manitoba's corn crop was a record by a wide margin at 2.4 million tonnes due to new highs for both acres and yields. Big local production and large cereal crops in general across Western Canada have been a headwind for cash bids, although this has reduced the pace of U.S. imports into the province as well.

Manitoba corn acres could stay roughly flat in 2026. If yields return to a trendline level, production will be down but could still be historically large. Price direction will continue to be primarily driven by U.S. markets.

Sunflower market firm

In 2025, Canadian sunflower acreage recovered from the low point in 2024 but still was not historically large. At the same time, the 2025 yield set a new record of 2,147 lb/acre, but the limited acreage meant the crop was still on the low side. Official estimates of Canadian sunflower supplies seem to be overstated (by a lot) and actual supply levels are quite low. The sunflower market is North American in scope and the 2025 U.S. crop rebounded even more sharply than Canada's, although all the U.S. production gains occurred in oil sunflowers while the confection crop was one of the smallest on record.

Sunflower prices in the U.S. have strengthened since harvest, which could encourage more acreage and production in 2026. The Canadian sunflower market is less transparent, but bids should be following the same track as the U.S. As a result, there's a good chance sunflower acres in Canada could also see another modest increase.

Old reliable

In uncertain trade environments, a reputation for consistency and quality matters more than ever.

By Alison Inglis
Public Relations Specialist, Freelance

Trade uncertainty has become a defining feature of global grain markets. Over the past several years, conversations around trade policy, tariffs and market access have introduced a level of uncertainty that many farmers and exporters have not had to navigate in recent decades.

That uncertainty does not mean grain is no longer moving or markets are disappearing overnight. Instead, it is changing how buyers think about risk, prioritizing consistency and long-term relationships. Frequent fluctuations in trade policy have made it harder for buyers to know what conditions they will be trading under in the future, making them inclined to stick with the exporters they know and trust.

"In an environment of uncertainty, it puts more emphasis on reliability," says Leif Carlson, vice president of markets and trade with Cereals Canada. "And that's a place where Canada can shine, because our reputation is well-earned for reliability, consistency and quality."

That reputation is not new, but it carries more weight when buyers are cautious. "In an uncertain environment, the question becomes: which country is going to be there year after year?" Carlson says. "And I think Canada fits that role very well."

Canadian wheat flows into almost 80 countries, and many of those trade relationships are longstanding. There is often a focus on market diversification and growth, but maintaining existing relationships is just as important.

"Just because we're doing business somewhere doesn't mean we can take that for granted," Carlson says.

Canada's ability to maintain those relationships is tied to long-term investments across the value chain. Advanced farming practices, strong quality assurance systems and direct engagement with customers – including Cereals Canada's work to help buyers get the most out of Canadian wheat, durum, oats and barley – all contribute to Canadian grain high-value reputation.

Even in challenging production years, such as 2021, Canada has demonstrated resilience and an ability to continue supplying global markets.

Cereals Canada manager of end-products Lindsay Bourrée showcasing Canadian quality with customers from Bangladesh.
Image courtesy of Cereals Canada.

Together, those factors help reinforce confidence in Canadian grain at a time when buyers are carefully managing risk and uncertainty.

Malting barley and malt markets highlight another set of factors that influence demand for Canadian cereals. Trade flows are also shaped by competitiveness, supply chain logistics, the ability to serve specific market segments and the actions of major global competitors.

Mexico offers a strong example. It is the fourth-largest beer producer in the world and one of the largest importers of malting barley and processed malt. In 2025, Canada shipped malting barley to Mexico, something that has happened only a handful of times in recent decades. While the shipment was notable, it was not the result of trade disruption or shifting political relationships.

"The reason Mexico bought Canadian malting barley was because Canada was competitive," says Peter Watts, managing director of the Canadian Malting Barley Technical Centre. "It wasn't driven by disruption – it came down to price and quality."

Canadian malting barley was well positioned on price and quality relative to other origins, making it an attractive option. In price-sensitive markets, even small changes in relative competitiveness can open doors that have been closed for years.

Not all markets are the same. In many countries, brewers segment production between premium products and economy brands. Canada typically competes in the higher-quality segment, where consistency and performance are valued alongside price. In some markets, that premium segment is growing as consumer preferences shift.

Watts notes that efforts to diversify markets have been intentional, with ongoing outreach, invitations to technical programs here in Canada and relationship-building over the past several years helping position Canadian malting barley in markets such as Mexico and Colombia.

The prospect of tariffs over the past year created hesitation among buyers, particularly around making long-term purchasing commitments. Business volumes have remained relatively steady, but buyers have been more cautious about contracting far in advance, which can make planning more challenging for maltsters and exporters, especially at a time when beer demand has already been soft in some markets.

"In an environment of uncertainty, it puts more emphasis on reliability. And that's a place where Canada can shine . . . "

Leif Carlson
Vice president of markets and trade, Cereals Canada

At the same time, broader shifts in global trade flows have also influenced demand. Australia's return to the Chinese market has reshaped barley movement worldwide, while China has emerged as an increasingly important exporter of processed malt into international markets. These developments affect demand for Canadian malt barley and malt products, even when they are not directly tied to policy changes.

Logistics add another layer of complexity. Canada's exports of processed malt to Mexico move by rail through the U.S., meaning access to some markets depends not only on buyers, but also on transit routes and cross-border supply chains. In uncertain environments, those logistical considerations become part of how risk is assessed across the value chain.

Together, these factors highlight why shifts in malting barley and malt trade are often influenced by a combination of competitiveness considerations, supply dynamics and practical realities, rather than any single trigger.

For farmers, shifting trade flows and ongoing uncertainty can feel distant from day-to-day decisions on the farm. But over time, these forces influence where Canadian grain moves, how it is valued and how reliably markets remain open.

Across cereals and malting barley, one consistent theme emerges: buyers are managing risk in different ways, but they continue to value dependable supply, consistent quality and strong working relationships. In some cases, competitiveness opens doors to new or returning markets. In others, longstanding relationships help maintain access, even when conditions are unsettled.

Not every shift in trade patterns is driven by disruption or policy change. Pricing, logistics, global competition and evolving demand all play a role. These factors may change quietly and gradually, but they help shape demand for Canadian grain over the long term.

Trade uncertainty is likely to remain part of the global landscape, but it does not mean Canadian grain is losing its place in the world. Canada's strength lies in its consistency, resilience and commitment to quality across the value chain, providing a steady foundation even as markets adjust.

By understanding how and why trade flows shift, farmers can better interpret change without overreacting to it. In uncertain times, awareness matters more than anxiety.

Roots to results

Five business management pillars for increasing profits on your farm

By Ashley Robinson
Senior Project Manager, Burr Forest Group

This winter, Manitoba Crop Alliance (MCA) hosted a five-part Roots to Results Webinar Series focused on timely, practical insights you can put to work on your farm to maximize efficiencies and boost profits.

Farming isn't just about the fields and crops – modern farmers are also business leaders, marketers and agronomists. To help you keep track of it all and cut through the noise, presentations in the series covered a wide range of topics, including grain marketing, crop insurance, tax strategies and succession planning.

As you move into the field this spring, consider that your most valuable crop just might be the data and strategy behind it all.

Get caught up on our Roots to Results Webinar Series, with key takeaways or full recordings, by scanning the QR code.

1. Using data and seasonality to improve grain marketing decisions

Grain markets have rhythms and learning them helps you sell with more discipline and less emotion. Farmers don't need to predict the future to make better marketing decisions, explained Left Field Commodity Research's **Chuck Penner** during our first webinar, "Planning Without Prediction: Using Data to Improve the Odds."

When prices drop in July–September, assume the decline is normal, not a warning signal.

Using historic price patterns, seasonal trends and simple odds-based thinking can increase confidence, reduce stress and improve financial outcomes. Price prediction is unreliable because market drivers such as weather, geopolitics, trade policy and freight costs change constantly. But price patterns repeat often enough that farmers can use them to guide decisions.

"We did this thought experiment, and it's how prices respond after harvest. Every summer, there's this doom and gloom … where prices are declining and people get really weighed down," Penner said. "You look at the end of November, end of December, the increase in prices from the seasonal low is about the same."

Panic selling at harvest is often driven by noise, not reality, and buyers, analysts and media tend to amplify negative news during post-harvest lows. Penner recommends setting a no-sale window for the weeks immediately after harvest, unless exceptional opportunities arise.

2. Understanding fairness, taxes and planning in farm succession

Succession planning isn't glamorous: it's uncomfortable, emotional and often gets pushed off until "next year." But waiting too long can be costly, explained MNP tax specialist **Edith Frison** during the "Harvesting the Future: Farm Succession Planning & Tax-Smart Strategies" webinar.

Set a reminder to review your will every two to five years. Keep it simple, keep it clear, and talk about it with your kids so there are no surprises later.

Succession planning preserves relationships, protects the land and gives the next generation a fighting chance. Start early, ask questions and create a plan as strong as the farm you've worked so hard to build.

"One of the things we see is the biggest downfall to a sound succession plan is an outdated will or no will at all," Frison said. "If you don't have a will at all, your estate has to go to court. Your assets are split up by however the judge feels it's appropriate."

Splitting the farm equally between farming and non-farming children is often unrealistic, so think in terms of fairness rather than equality. Farming kids may receive land or shares, while non-farming kids might receive cash, life insurance proceeds or non-farming assets.

One of Frison's strongest recommendations is to not farm as a sole proprietor. Partnerships can reduce tax on death, provide access to more capital gains exemptions and make transitions cleaner.

3. Practical farm finance lessons for uncertain times

Volatile markets, rising input costs, unpredictable weather and tighter margins are forcing many farms to think differently about how they make decisions. During the "Staying Ahead of the Curve" webinar, Maverick Ag president and co-founder **Evan Shout** challenged the idea that these pressures are completely out of our hands.

"As the CEO of your company, you're in charge of doing what you can to minimize the risk from the uncontrollable, and the way we do that is data, it's numbers, it's operations," he said.

Working capital, debt service ratio and debt-to-equity are the numbers lenders watch, and they shape your day-to-day flexibility. Strong working capital gives you selling power, a healthy debt service ratio keeps the bank on your side and debt-to-equity tells you how much cushion you really have.

Calculate your true cost of production using conservative, 10-year average yields and today's prices. Include personal drawings and realistic equipment depreciation to find your real break-even.

"We need to have a set of standards of how to actually calculate cost of production," Shout said, adding this includes machinery depreciation, family living draws and even the opportunity cost of owning land.

Once you know your break-even, marketing plans become clearer. Instead of hoping for a rally, you can decide when selling at a small loss protects the whole farm, or when a crop is carrying the operation.

4. Rethinking crop insurance for your farm

Risk management is, in part, about making sure one poor crop year doesn't severely impact the overall trajectory of the farm. During the "Beyond Basic Coverage: Unlocking the Value of Crop Coverage Plus" webinar, Manitoba Agricultural Services Corporation's (MASC) **David Van Deynze** and **Scott Clayton**, asked farmers to think about crop insurance as protection for the whole farm, not just for individual crops.

MASC's Crop Coverage Plus shifts the focus from isolated losses to overall farm performance by offering higher coverage levels and, in some cases, premium savings for diversified operations.

Review your insurance decisions across your entire crop mix, not one line item at a time. If you're growing three or more crops, ask your MASC insurance specialist to model your farm under Crop Coverage Plus.

"We combine the value of your harvested production from all your crops into one number, and we compare that to your overall Crop Coverage Plus coverage – claims are then paid on any shortfall," Van Deynze said. "The bonus side of it is the trigger point might be as high as 90 per cent rather than the 80 per cent single-crop coverage."

While small, single-crop claims may be offset, farms tend to receive larger indemnities in years when most crops suffer, Van Deynze added. Farmers should decide whether their operation benefits more from frequent small payouts or stronger protection in difficult years.

5. Using cash advances to strengthen marketing decisions

Seed, fuel, fertilizer and land costs go out months before crop revenue comes in, making cash flow strategy just as important as production strategy. During the "Smart Financing for Manitoba Farmers" webinar, MCA COO **Darcelle Graham** shared how an Advance Payments Program (APP) cash advance can serve as a flexible tool to strengthen marketing power and reduce borrowing costs.

The APP provides access to capital based on up to 50 per cent of your anticipated or stored production value, reducing the need to sell grain just to cover spring bills.

Map out your 12- to 18-month cash flow needs. If input or rent payments are driving early sales, consider whether an advance could bridge the gap and let you market when prices improve.

"It's designed to help you manage operating costs, meet financial obligations and create flexibility around how and when you market your crop," Graham said. "It's a program specifically built for agriculture and designed around the realities of your operation."

Unlike traditional loans, there are no fixed, monthly payments. You repay as you sell your crop, within an 18-month window. The federal government covers interest on the first $100,000 (and up to $500,000 for canola in 2026).

There are multiple program administrators, but their rates vary for the interest-bearing portion of the loan, Graham explained. MCA's rate is lower than others at prime minus 0.5 per cent.

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Smart farm financing

APP offers flexible cash flow when it matters most

By Alison Inglis and Darcelle Graham
Public Relations Specialist, Freelance and COO, MCA

Running a farm requires a lot of financial flexibility, with many bills needing to be paid long before the crop is sold. An Advance Payments Program (APP) cash advance is a proven, government-backed option that helps Manitoba farmers access affordable cash flow when they need it most.

Delivered through Manitoba Crop Alliance (MCA) on behalf of Agriculture and Agri-Food Canada, the APP allows farmers to manage operating expenses, reduce borrowing costs and gain more control over marketing decisions, especially during times of market uncertainty.

What is the APP?

The APP is a federal program that provides interest-free and low-interest cash advances based on the value of the agricultural products farmers produce. It is designed to help farmers cover operating costs and improve cash flow, while providing flexibility around when they sell their products.

Access working capital

Eligible farmers can access up to $1 million per program year, depending on their operation and commodities. These funds can be used to support everyday farm needs, including:

- Seed, fertilizer, fuel and crop protection
- Wages and operating expenses
- Repairs, maintenance and unexpected costs

There are no restrictions on how the money is used on the farm. APP cash advances are designed to support real-world farming needs, not add paperwork or limitations.

Large interest-free portion means real savings

One of the biggest benefits of an APP cash advance with MCA is the interest-free portion: up to $250,000 interest-free for all eligible commodities, and up to $500,000 interest-free for canola only, for the 2026 program year. For interest bearing advances, MCA can offer a rate of prime less 0.50 per cent.

Financing is available for more than 35 crop types and honey, and less money spent on interest means more stays in the operation.

Repay when you sell

APP cash advances are repaid as farmers market their commodities, not through fixed monthly payments. This flexibility helps:

- Reduce pressure during low-price periods
- Improve marketing decisions
- Align repayment with real farm income

With cash flow in place, farmers can hold grain for stronger prices, avoid selling early just to cover bills and spread sales across the year to manage risk.

Why choose MCA?

While the APP is offered by several administrators across Canada, MCA provides key advantages for Manitoba farmers.

Local knowledge, local support

MCA understands Manitoba crops, seasons and farm operations. That local expertise means clear communication, practical answers and support that fits Manitoba farming realities.

Competitive, farmer-focused delivery

MCA offers a straightforward application process, $250 application fee, competitive rates and a focus on making the program work smoothly from application to repayment.

A farm-first approach

MCA works for farmers. By choosing MCA for your cash advance, you're working with an organization that puts producer needs first, supports long-term farm sustainability and reinvests in Manitoba agriculture.

Support when you need it

Whether applying for the first time or returning to the program, MCA staff are available to help guide you through the process and answer questions along the way.

"The APP has been a valuable cash-flow tool for our farm," says MCA sunflower delegate Gregg Fotheringham. "The interest-free portion and the flexibility to repay as we sell give us more control over marketing decisions and reduce pressure during the growing season. The personalized, local support from MCA makes the program easy to work with."

The APP is more than financing. It is a strategic cash-flow tool that helps farmers manage risk, reduce borrowing costs and make better marketing decisions.

WHAT FARMERS ARE SAYING

Recent MCA client survey results show strong satisfaction with the APP cash advance program:

Overall client satisfaction:
96 per cent

Customer service rating:
97 per cent

Clients who return to MCA:
92 per cent

CASH ADVANCE

keep it clean

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Review the 2026 Keep it Clean Product Advisory if you plan to use the following products this season:

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- Fluopyram
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Cream of the crop

New varieties are assessed based on a combination of agronomic performance, disease resistance and end-use quality.
Image courtesy of MCA..

Prairie Grain Development Committee puts new varieties to the test

By Alison Inglis
Public Relations Specialist, Freelance

You've likely heard it can take 10 to 12 years for a new crop variety to move from an initial cross in a lab to a farmer's field. Along the way, thousands of lines are narrowed down, tested, discarded and re-tested. In Canada, one of the final and most critical steps in that journey happens through the Prairie Grain Development Committee (PGDC).

While many farmers may not be familiar with PGDC by name, they rely on its work every year when selecting varieties. PGDC serves as a forum for sharing information related to the development of improved grain varieties. It supports four independent, crop-specific recommending committees responsible for testing, evaluating and recommending candidate varieties for registration in Western Canada. The Canadian Food Inspection Agency (CFIA) is the body that formally registers new varieties, but PGDC provides the structure that allows committees to review data and make recommendations to the CFIA.

These committees include:

- The Prairie Recommending Committee for Wheat, Rye and Triticale (PRCWRT)
- The Prairie Recommending Committee for Oat and Barley (PRCOB)
- The Prairie Recommending Committee for Pulse and Special Crops (PRCPSC)
- The Prairie Recommending Committee for Oilseeds (PRCO)

Each recommending committee is recognized by the CFIA and brings together representation from across the value chain, including farmers, researchers, breeders, agronomists, disease specialists, seed sector representatives, government officials, quality specialists, end users and more.

"Everyone who shows up at these meetings is there to deliver the best solutions possible for farmers in Western Canada," says PRCWRT chair Dana Maxwell. "People may come from different organizations, but they come to the table wearing a 'what's best for the industry' hat."

Maxwell notes that committee members represent a wide range of organizations, but they share a common interest in meeting farmers' needs. "If people weren't genuinely interested in serving farmers, they wouldn't be doing this work," she says. "Our core mandate is to review

Continued on page 26

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varieties and make recommendations to the CFIA on which ones we support as eligible for registration."

For most crops, this work happens in the final years of a long development process. By the time a variety reaches this stage, it has already gone through extensive screening and testing.

Varieties are assessed based on a combination of agronomic performance, disease resistance and end-use quality. "We don't look at a single trait in isolation," Maxwell says. "Varieties are evaluated as a whole package, because that's how they'll perform in the real world."

At this stage, the goal is not to identify a perfect variety, but rather to understand how a line performs. Trade-offs are expected, and decisions are based on whether a variety meets established standards and offers value for farmers under Prairie growing conditions.

For the PRCWRT, candidate wheat, rye and triticale lines are grown in replicated agronomic trials across multiple sites throughout Western Canada. Different tests are used depending on crop type and intended class.

ABOVE: Bread dough after proofing. LEFT: Bread loaf as part of wheat end-use quality testing inside a VolScan Profiler, which measures the volume, density and dimensional profiles of bread and bakery products. *Images courtesy of the Canadian Grain Commission.*

Disease resistance is assessed through dedicated disease nurseries. For wheat, this includes inoculated tests for the five priority one diseases: Fusarium head blight, leaf rust, stem rust, stripe rust and common bunt. Quality testing on grain harvested from the trials is carried out by the Canadian Grain Commission, Cereals Canada and other labs.

Results from agronomic, disease and quality testing are compiled and reviewed each year. Most wheat varieties are tested over three years, with breeders deciding annually whether a line should advance. If a variety is put forward after the final year of testing, the recommending committee reviews the full data package.

Recently, the PRCWRT introduced a set of five check varieties to allow simultaneous assessment against Canada Western Red Spring, Canada Prairie Spring Red and Canada Northern Hard Red class performance. This allows the best class "fit" to be recommended to the Canadian Grain Commission, without affecting registration eligibility. It also avoids the old process of moving a variety between registration tests after a year or two of assessments, which could add more years of testing or present an unbalanced data set that might be challenging to interpret. As a result, evaluators can better understand where a variety fits and whether it is well suited to a particular class.

"The committee uses assessment tools that help us make consistent decisions based on past decision-making," Maxwell says. "You can put a line up against the checks and see how it compares. That gives clarity on what's likely to be supported and where there may be room for discussion."

A key part of the committees' mandate is preventing harm to farmers, particularly when it comes to disease resistance.

"If disease resistance or performance isn't accurately characterized, that could lead to real economic and marketing consequences for farmers," Maxwell says.

Disease resistance plays a critical role in on-farm management decisions, as control options are often limited.

"In terms of disease management, we only have a few tools available," says Andrew Hector, agronomy extension specialist for cereal crops with Manitoba Crop Alliance. "Variety resistance is a vitally important one, and it's a central part of an overall integrated disease management approach."

Accurate disease resistance information is especially important. If ratings are wrong or incomplete, farmers could face yield loss or quality issues. It's not just an agronomic consideration, either, as grain grading issues can impact market access, affecting how and where grain can be sold.

"This is a stage where accuracy is important, because this is the information farmers are acting on when they make decisions," Maxwell says.

That information doesn't stay within the registration process, showing up directly in the tools farmers rely on when comparing and selecting varieties.

"All of the disease resistance ratings farmers see in Seed Manitoba and other provincial seed guides come from the PGDC registration process," Hector says. "That same information also shows up in seed company technical bulletins and variety fact sheets."

Aerial photos of Fusarium head blight and leaf rust nurseries at AAFC Morden in 2017. *Image courtesy of Agriculture and Agri-Food Canada.*

In other words, even if a farmer has never attended a PRCWRT meeting, they are using PGDC-generated data when comparing varieties. Farmers use this information not only to react to disease pressure in-season, but also to plan out variety selection, input use and management decisions before seeding.

MCA wheat and barley delegate Ryan Hueging says seeing the PGDC process firsthand changed how he looks at new varieties.

"I didn't realize how integrated the varietal approval process was," he says.

"Farmers and industry representatives all have input, and the level of scrutiny is high. After attending those meetings, you see how thoroughly varieties are evaluated, from agronomic traits to milling quality. It shows that, as a country, we have a high standard for quality and that approved varieties have survived a rigorous review."

That confidence is built on independent, collaborative, standardized data. Disease resistance data is collected across multiple sites and years and reviewed by experts before ratings are finalized.

"Having confidence that disease ratings are coming from a third party, using standardized protocols, really matters when farmers are deciding whether to adopt a new variety," Hector says.

This process helps reduce uncertainty when farmers adopt new varieties by providing a reliable baseline for evaluating new options. Knowing a variety has met minimum standards for disease resistance, quality and agronomic performance allows farmers to focus on fine-tuning management rather than reacting to surprises.

In a production environment where risk is unavoidable, having better information matters. "This process doesn't eliminate risk, but it reduces the unknowns," Hector says. "Farmers have better information going into variety and management decisions."

Growing season preview

What to watch in your fields

Holcus spot begins as nondescript spots with a water-soaked appearance on the lower leaves of corn plants. *Image courtesy of MCA.*

Predicting which pest and disease issues will be the biggest threats in a given year is an extremely difficult task. However, Manitoba Crop Alliance's agronomy and extension team has singled out three emerging issues to watch during the 2026 growing season, including tips for identification and management.

Wheat and Barley

Andrew Hector
Agronomy Extension Specialist – Cereal Crops

BACTERIAL LEAF STREAK (BLS)

What it is:

- BLS is a bacterial disease caused by *Xanthomonas translucens* and found across the Prairies. Several *Xanthomonas translucens* pathovars impact cereal crops, including wheat and barley.
- BLS is primarily a seed-borne pathogen. Infected seed is the largest source of inoculum, but BLS can also survive on plant residues, winter cereals and grassy weeds.
- The pathogen is dispersed in the field through rain splashing, wind-driven rain, plant-to-plant rubbing, overhead irrigation and insect movement. The bacterium enters plant tissue through plant pores such as stomata or through damaged tissue caused by hail, strong winds, thunderstorm events, mechanical damage or soil particle abrasion. The bacterium favours moist and humid conditions, and temperatures between 15–30 C.

- The bacterium can multiply quickly under conducive conditions, with multiple generations occurring in a growing season.

Why it's a concern:

- BLS is an emerging problem across the Prairies and can cause significant yield loss if the infection is severe. Yield loss is caused by destruction of photosynthetic tissue.
- Currently, BLS resistance in Canadian wheat and barley varieties is limited. Research is ongoing to determine the resistance levels within current and future Canadian varieties.
- Foliar and seed treatment fungicides are ineffective in managing the disease. No bactericides have shown control or economic viability for disease management.

What to look for:

- The first symptoms appear as small, water-soaked spots or streaks on leaves. Spots look similar to a grease spot and often first appear in the middle of the leaf, where moisture persists the longest. Spots will begin to coalesce, become necrotic and turn a brown or tan colour. They form irregularly shaped streaks and ultimately destroy plant tissue.
- Under high-moisture and humid conditions, white or yellow ooze (bacterial cell mass) will be exuded from lesions. Once dried, this ooze will give leaves a "glazed" appearance.
- An additional symptom is black chaff, which appears on wheat or barley heads. This occurs when the bacterium moves from the plant leaves to the head. Symptoms include dark stripes on glumes and awns, with glumes becoming completely black under severe infection. White and yellow exudates (ooze) might also be found on glumes.

LEFT: Bacterial leaf streak on barley flag leaf. RIGHT: Black chaff (caused by the same pathogen as BLS) symptoms on a wheat head. *Images courtesy of Dr. Michael Harding.*

How to manage it:

- Disease development typically occurs on the upper leaf canopy but can occur anytime during the plant's life cycle. Scouting should occur from tillering to crop senescence. Take specific note of potential disease development after thunderstorms, severe wind and hail, as these conditions favour disease spread and plant tissue damage.
- Clean and disease-free seed is essential. If BLS infection is suspected, don't use harvested grain for seed the next year. BLS seed and tissue tests are available at a few designated labs, including SGS and 20/20 Seed Labs.
- The bacterium requires a host and doesn't survive long-term in fields without one. Maintaining a two-year break from cereal crops within your rotations can help reduce incidence frequency and inoculum load.
- Irrigation management to reduce periods of wet and humid conditions when not required.

Corn

Morgan Cott
Agronomy Extension Specialist — Special Crops

HOLCUS SPOT

What it is:

- A bacterial leaf disease affecting mainly corn crops.
- Can overwinter in both monocot and dicot plant species.

Why it's a concern:

- It is not an economical concern, as it rarely covers enough leaf surface to hinder photosynthesis.
- Infections follow typical Manitoba spring conditions: high winds and heavy rains, followed by extended moisture and warm summer temperatures (24–30 C).
- The bacteria is interesting because it infects the leaf via wounding, but it doesn't need a wound for development and can enter leaf tissue through a natural opening.

Continued on page 30

Cont. from previous page

- The pathogen does not spread from an infected leaf to a healthy leaf, as in many other leaf diseases.
- In 2025, holcus spot was prevalent in Manitoba corn fields. Fortunately, the pathogen was affecting a very small area of each infected leaf and photosynthesis of the green leaf material was still very effective. Since this is most often the case, it is extremely rare that yield would be negatively affected and holcus spot is more aesthetically displeasing than anything else.
- Other leaf diseases or even a hard frost tend to affect much larger areas on the leaf surface, and photosynthesis is therefore allocated to a small area or possibly none at all. A leaf disease will generally affect yield by interfering with photosynthesis.

What to look for:

- Holcus spot begins as nondescript spots on lower leaves with a water-soaked appearance and develops into small (1/4" to 1/8" in diameter), circular to elliptical, white to tan lesions.
- A brown margin often develops around lesions and sometimes a light halo is visible, although these both seem to be hybrid-specific traits.
- In severe infections, lesions can cover a large area, but it is more common to have minor spotting that covers less than five per cent of a single leaf's surface.

How to manage it:

- The holcus spot pathogen lives and overwinters on crop residues.
- Best management practices to gain control of the pathogen are crop rotation and tillage.
- As a bacterial pathogen, fungicides will have no effect on the disease.

TOP: Holcus spot on corn leaf. ABOVE: Leaf damage caused by herbicide drift. *Images courtesy of MCA.*

MISDIAGNOSIS:

- Lesions can be confused with drift of a contact herbicide, such as diquat, or fertilizer burn.
  - ◊ **Fertilizer injury:** Ask the farmer or applicator if anything was applied recently or in the sprayer tank.
  - ◊ **Herbicide drift:** Look for a clear pattern in the area that would have gotten "hit." The lesions would likely be worst along the outer rows and lessen in severity the further into the field you look.
  - ◊ Early in the season, any type of injury would not grow with the plant and new leaves would be injury-free.

Whole Farm

Ashley Ammeter
Whole Farm Specialist

WATERHEMP

What it is:

- Waterhemp is a member of the pigweed family. More common members of this family, such as redroot pigweed, are familiar to Manitoba farmers, but waterhemp is relatively new in the province.

Why it's a concern:

- Waterhemp has separate male and female plants and must outcross to produce seed. The result is high genetic diversity and the ability to quickly develop herbicide resistance.
- Waterhemp is resistant to several herbicide groups. In Ontario, waterhemp with five-way resistance (Groups 2, 5, 9, 14 and 27) has been identified.
- When there is little competition from crops, plants can produce over one million seeds. These seeds are small and can easily be transported through contaminated seed, straw and hay by equipment, spreading of manure, migratory birds and flood water.
- Under favourable conditions, waterhemp can grow rapidly and up to a height of three metres. It can germinate throughout the summer and will continue to flower and produce seed until the first frost.

What to look for:

- It's especially important to monitor for waterhemp in crops that are grown in a wide row (e.g., corn, soybean, sunflower), but it can also be found in more competitive crops such as cereals.
- Waterhemp has a smooth, hairless stem, which can be a good distinguishing characteristic from other pigweeds, which tend to have hairy stems.

Waterhemp (above bottom) is a member of the pigweed family. More common members of this family, such as redroot pigweed (above top), are familiar to Manitoba farmers, but waterhemp is relatively new in the province. *Images courtesy of MCA.*

How to manage it:

- Waterhemp is currently classified as a Tier 1 or Tier 2 Noxious weed in Manitoba depending on the rural municipality. When it is found, action for removal is critical.
- If you identify or suspect you have waterhemp, do not put plants through the combine, as this will spread seed.
- Diverse crop rotation: including crops such as wheat and barley in your rotation to provide more competition than row crops. Crop rotation is also important to help facilitate rotation of herbicides.
- Use of tank mixes/ multiple effective modes of action, including soil residual herbicides: in addition to preventing the development of herbicide resistance by using multiple effective modes of action, the use of soil residual herbicides can be helpful for waterhemp due to its extended germination period.
- Narrow row spacing and increased plant population: practices that speed crop canopy closure, including increasing plant population or using narrower row spacing, can be important to increase crop competition.
- Strategic tillage: due to their small seed size, most waterhemp seedlings germinate from near the soil surface. As a result, populations can increase under no- or reduced-till systems.

Looking for more information about diseases, weeds and insects? Visit mbcropalliance.ca or check out the following monitoring networks:

Prairie Pest Monitoring Network (prairiepest.ca)

Prairie Crop Disease Monitoring Network (prairiecropdisease.com)

Prairie Weed Monitoring Network (prairieweeds.com)

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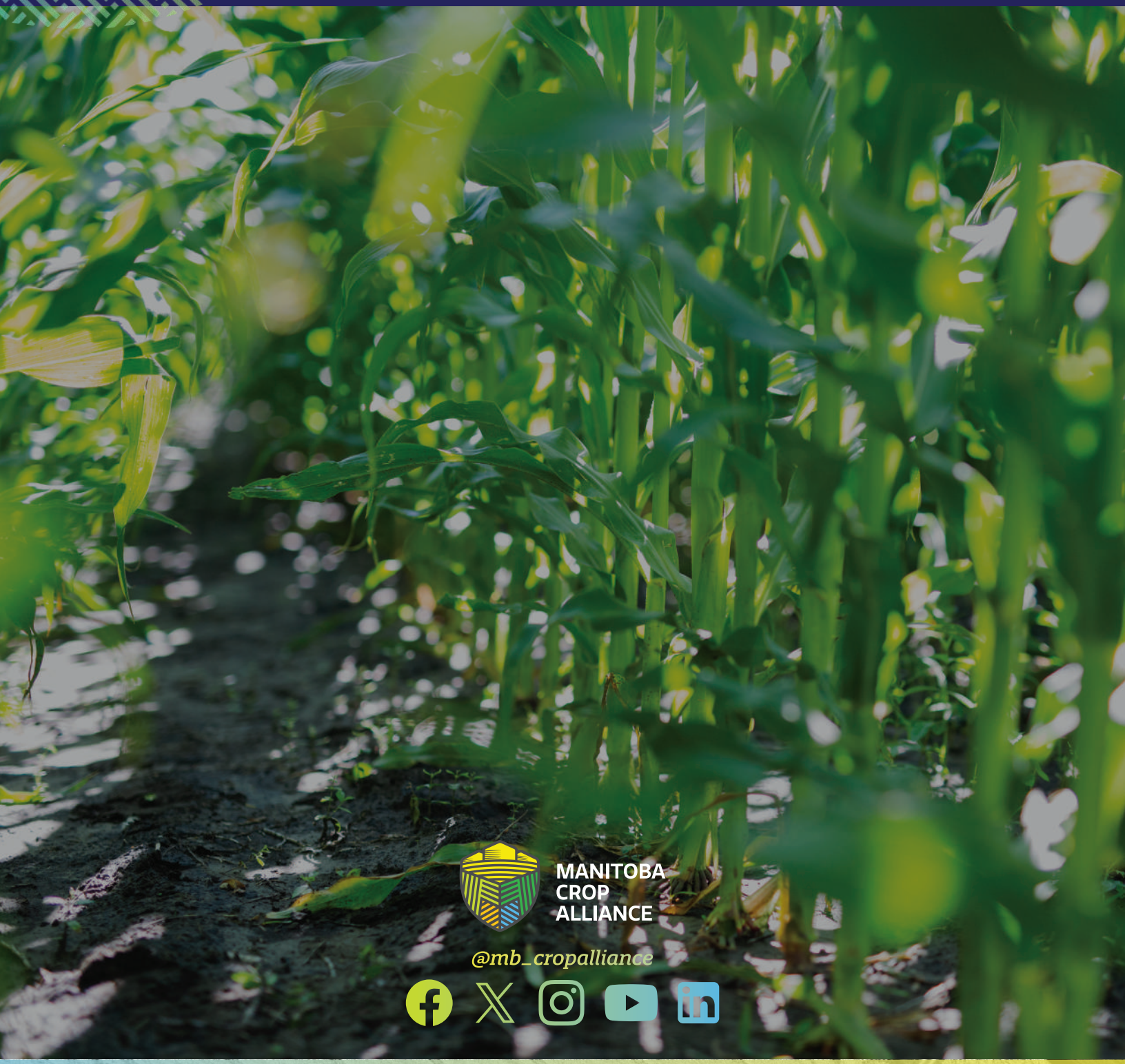

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