MANITOBA Pulse Soybean GROWERS

pulsebeat

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ONE HUNDRED *ISSUES OF* PULSEBEAT

P.28

The History – and Future – of Pulses and Soybeans in Manitoba

P.16

Publisher	*Manitoba Pulse & Soybean Growers*
Editor	*Ashley Robinson, Burr Forest Group*
Associate Editor	*Desirae Warkentin*
Design and Production	*Burr Forest Group*

Manitoba Pulse & Soybean Growers thanks the authors who have taken the time to contribute to this publication.

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RETURN UNDELIVERABLE CANADIAN ADDRESSES TO:

Manitoba Pulse & Soybean Growers
P. O. Box 1760, Carman, Manitoba R0G 0J0

204.745.6488 Fax 204.745.6213
Email info@manitobapulse.ca

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In This Issue

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STAFF

Executive Director
Daryl Domitruk
daryl@manitobapulse.ca

On-Farm Network Technical Specialist
Ian Kirby
ian@manitobapulse.ca

On-Farm Network Agronomist
Christopher Forsythe
chris@manitobapulse.ca

Finance and Member Relations Coordinator
Robyn Swark
robyn@manitobapulse.ca

Research Contracts Administrator
Wendy Voogt
wendy@manitobapulse.ca

Research Project Manager
Cassandra Tkachuk
cassandra@manitobapulse.ca

Communications Coordinator
Kate Menold
kate.menold@manitobapulse.ca

Production Specialist – East
Jennifer McCombe-Theroux
jennifer@manitobapulse.ca

Production Specialist – West
Laura Schmidt
laura@manitobapulse.ca

Manitoba Pulse & Soybean Growers 2024 Committees and Representatives

MPSG Committees – *The first named is chair.*
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- **Commodity Group** - D. Domitruk

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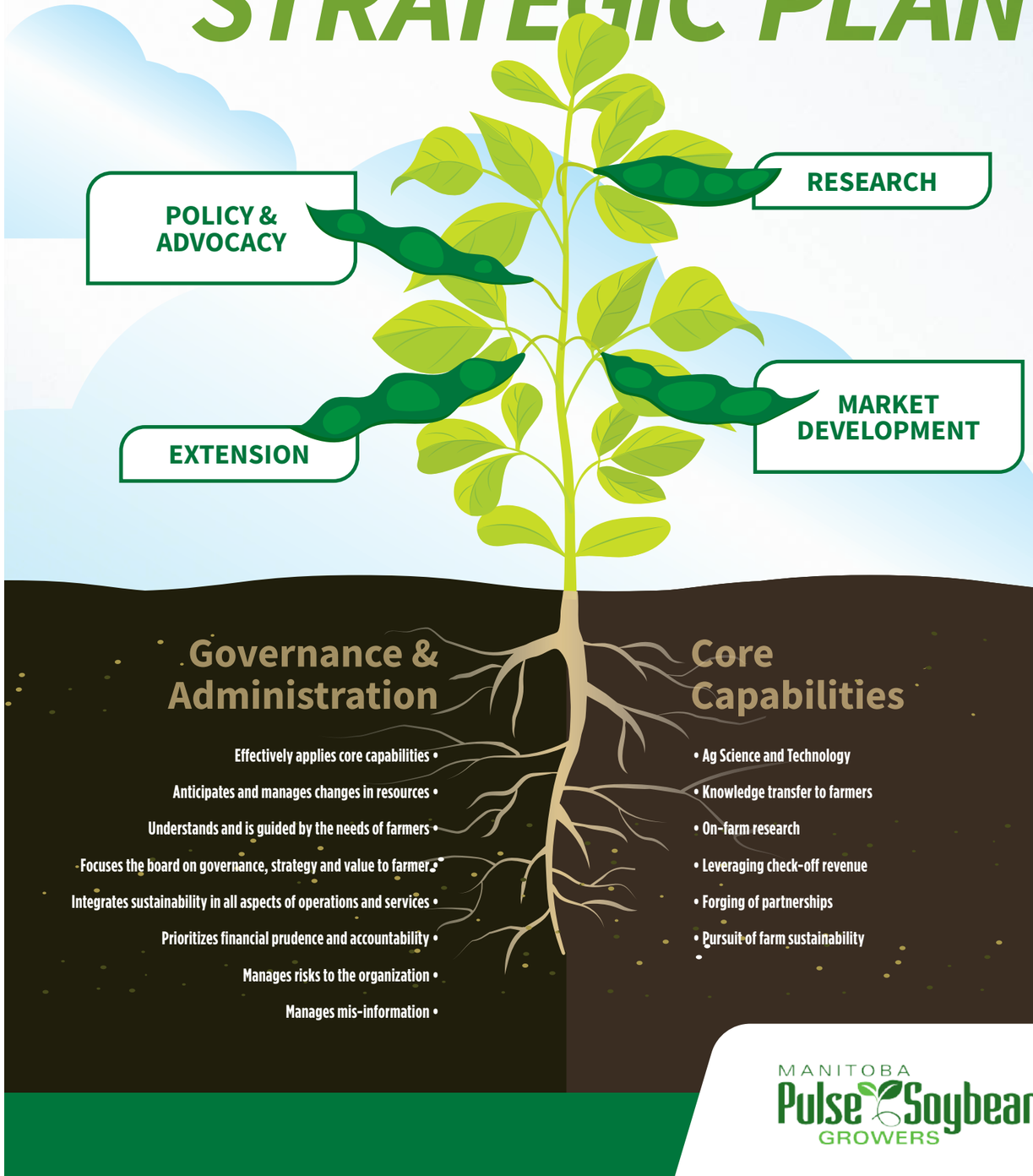
THE MPSG STRATEGIC PLAN



MANITOBA Pulse & Soybean GROWERS

Message from Board Chair

Melvin Rattai, Chair, MPSG

IT HAS BEEN a beautiful start to our fall in October 2024. At the time of writing, it's Thanksgiving weekend and we're done with harvest. It's been a long time since we have been 100 per cent complete by this time of the year. Now, all that's left to do is field work and spreading fertilizer.

The marketing of the new crops in the bin will be a very big change. With the new low prices, we must decide to hold our crops until spring or move them throughout the winter. The crop around Beausejour, Man. came off really dry, for the most part, so there's no problem storing it this year, but how long can we store it before we need to sell some is a bigger question!

It has been an interesting year for Manitoba Pulse & Soybean Growers (MPSG). MPSG's 40th anniversary celebration was held in Dauphin, Man. at a local farmer's residence. During this event, MPSG had the opportunity to spend some quality time with Manitoba Agriculture Minister Ron Kostyshyn.

One of the big achievements for MPSG this past year, was bringing the Soy Quality Program to the Canadian Grain Commission in Winnipeg, Man. (see Quality Information for Quality Outcomes on page 12). A special thanks goes to Soy Canada's board for the approval of a four-year commitment to jointly fund the program, combined with financial support from Agriculture and Agri-Food Canada, the Canadian Grain Commission, Producteurs de grains du Québec, Grain Farmers of Ontario and MPSG. This program means more agricluture innovation for the Winnipeg area as companies from across Canada now can send their food-grade variety samples to Winnipeg. This testing program provides functional analysis for products such as tofu, soy milk etc.

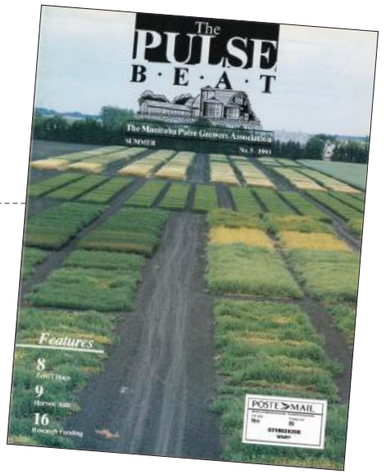
We are happy to see a large number of farmers continuing to use our On-Farm Network research programs. This shows us continual interest among our farmers. We're excited to have the on-going support from local farmers for testing purposes. Thanks everyone!

Enjoy the holidays and take care of yourselves! Stay focused on the things that matter the most to you in your life. ■

— Melvin

Message from Executive Director

Daryl Domitruk, Executive Director, MPSG



A 1993 issue of The Pulse Beat. Photo credit: Manitoba Pulse & Soybean Growers

FARMERS AND AGRONOMISTS generally agree diversity is a good thing – especially when it describes crop rotations, input suppliers, delivery options and the like. On the downside, diversity can make farm management more complicated.

Each of the featured articles in *Pulse Beat's* 100th edition aid in the inclusion of pulses and/or soybeans in the farm enterprise. In the background is the hope that successful diversification will propel farms to be more profitable and resilient. The magazine has continuously evolved to meet the needs of readers who face the complications of managing an array of unique crops.

Back in the day, the bread and butter of the Manitoba Pulse & Soybean Growers (MPSG) was dry beans. *Pulse Beat*, at the time, was correspondingly heavy on dry beans. But even then, the magazine (initially in newsletter format) established itself as a forum where facts about peas, lentils, faba beans and even chickpeas were also explained in ink. By the 2010's stories about soybean became the focus.

The single reason for *Pulse Beat* to carve out this turf was to fuel farmers' ongoing desire to diversify their income.

Today the demand is to again simplify crop production, especially on larger farms. MPSG and *Pulse Beat* will continue to move with the times, recognizing that pulses and soybeans hold a regular spot in some rotations while in others they're planted on an opportunistic or experimental basis. In a cereal and canola dominated business we know diversity in sowing and harvest dates provided by dry beans, peas and soybeans can lead to more efficient use of land, labour, time and equipment. Ironically, the bit of added complexity that comes with each crop leads to simplifying management of the overall farm.

Moving forward, *Pulse Beat* intends to emulate our members by embracing diversity. There's much to explore with the crops in MPSG's mandate. Our research program, is exploring all sorts of opportunities to introduce and expand faba bean, lupin and adzuki bean with more species on the horizon. And we intend to support opportunities at the regional level to diversify into a greater range of annual legume crops. Topping the list are food type soybean, dry beans in western Manitoba and faba beans. We don't have to grow hundreds of thousands of acres to claim success, provided the acres farmers do plant deliver on the goal of profit from diversity. And for as long as readers desire, we will use *Pulse Beat* as a medium to quench farmers' thirst for knowledge about diversification options. ■

— Daryl

MPSG Events

Extension of MPSG-funded Research Results and Surveillance Efforts a Priority

By: Laura Schmidt, Production Specialist – West, MPSG

One of Manitoba Pulse & Soybean Growers' (MPSG) core activities is funding research on behalf of Manitoba's pulse and soybean farmers. A critical component of this research's success is ensuring those results make it back to the farmers. Your farmer dollars at work, your results.

To achieve this, MPSG production specialists take a very active role in extension such as producing the bi-weekly agronomy-focused *Bean Report* newsletter, participating and presenting at field days and farm press interviews, among many other activities. This growing season, along with producing 12 issues of *The Bean Report* and 10 radio reports, MPSG production specialists participated in nine field days across the province.

Here's a recap of some of the events we participated in through the 2024 growing season.

MANITOBA AGRICULTURE'S CROP DIAGNOSTIC SCHOOL – CARMAN

Running from July 3 to 5, and 10 and 11, 2024 MPSG production specialists, Laura Schmidt and Jennifer McCombe-Theroux, joined David Kaminski and Dennis Lange at the University of Manitoba Ian N. Morrison Research Farm in Carman, Man. for Crop Diagnostic School. Considering the wet start to the growing season, root rots were front-of-mind and results from recent crop surveillance and research were shared, covering Phytophthora root rot in soybeans and Aphanomyces root rot in peas.

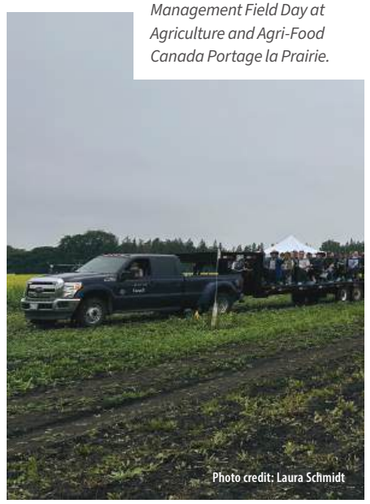
Over the five days, more than 400 agronomists and farmers participated in the school, with a special commodity group-sponsored farmer day happening on July 5, 2024. It was hosted by MPSG, Manitoba Crop Alliance (MCA) and Manitoba Canola Growers Association (MCGA).

Crop Diagnostic School in Carman, Man. reached more than 400 agronomists and farmers in 2024.

Several soybean and pulse trials were part of the Westman Agricultural Diversification Organization's annual field day in Melita, Man.

Laura Schmidt, production specialist – west with Manitoba Pulse & Soybean Growers, shares pea leaf weevil information at the Westman Agricultural Diversification Organization's annual field day in Melita, Man.

The Cross-Commodity Crop Management Field Day at Agriculture and Agri-Food Canada Portage la Prairie.



CROSS-COMMODITY CROP MANAGEMENT FIELD TOUR – PORTAGE LA PRAIRIE

On July 23, 2024 a morning farmer-focused field day was hosted by MPSG, MCA, MCGA and Agriculture and Agri-Food Canada (AAFC) Portage la Prairie. More than 50 farmers joined us for the morning.

MPSG production specialists, Schmidt and McCombe-Theroux, covered soybean seed depth and rolling challenges this spring, sharing results from MPSG-University of Manitoba's agronomist-in-residence program, MPSG's On-Farm Network and research from North Dakota and Minnesota.

WADO – MELITA

On July 25, 2024 temperatures reached 32 C for Westman Agricultural Diversification Organization's (WADO) annual field day in Melita, Man. Over 60 folks turned up for the day, despite the heat.

MPSG's production specialist – west, Schmidt, shared pea leaf weevil results and recapped Phytophthora root rot management in soybeans and Aphanomyces root rot in peas.

MPSG Events

More than 30 farmers joined Prairies East Sustainable Agriculture Initiative's field day at Arborg, Man. on July 31, 2024.

PESAI FIELD DAY – ARBORG

Prairies East Sustainable Agriculture Initiative's (PESAI) annual field day in Arborg, Man. brought in over 30 farmers on July 31, 2024. MPSG's production specialist – east, McCombe-Theroux, discussed making pea fungicide decisions.

CROP FIELD DAY – PORTAGE LA PRAIRIE

While McCombe-Theroux was busy at the PESAI field day on July 31, 2024 Schmidt, MPSG production specialist – west joined the group at the Crop Research Organization of Portage (CROP) field tour that morning near Portage la Prairie, Man. Schmidt shared a research update for soybeans and dry beans on diseases like Phytophthora root rot and soybean cyst nematode.

James Frey with the Parkland Crop Diversification Foundation (PCDF), and Laura Schmidt, production specialist – west with Manitoba Pulse & Soybean Growers, chat about pea leaf weevils and faba beans at PCDF's field day.

MPSG'S DRY BEAN TOUR – MORDEN

On Aug. 7, 2024 MPSG and AAFC hosted a Dry Bean Tour at AAFC's Morden Research and Development Centre. More than 30 farmers were able to join us for this dry bean-focused morning.

AAFC pathologists, Yong Min Kim and Ahmed Abdelmagid, offered insight into dry bean diseases. AAFC plant breeders, Jamie Larsen and Anfu Hou, discussed the future of dry bean breeding for Manitoba. Dennis Lange, Manitoba Agriculture Pulse and Soybean Specialist, walked attendees though the regional variety trials for dry beans.

Top Middle: Ahmed Abdelmagid, research scientist in oil seeds and pulse crops pathology with Agriculture and Agri-Food Canada Morden Research and Development Centre, discusses dry bean diseases at Manitoba Pulse & Soybean Growers' Dry Bean Tour.

PCDF FIELD DAY – ROBLIN

Parkland Crop Diversification Foundation (PCDF) hosted their annual field day on Aug. 8, 2024 in Roblin, Man. with more than 40 farmers and agronomists participating throughout the day. MPSG's production specialist – west, Schmidt, dived into MPSG's pea seed treatment trials. These trials are hosted at Roblin and Swan River, Man. to explore pea leaf weevil management in the northwest region where pea leaf weevils occur in the greatest numbers.

MCDC FIELD DAY – CARBERRY

Also, on Aug. 7 2024, Manitoba Crop Diversification Centre (MCDC) hosted their annual field day in Carberry, Man. More than 100 attendees joined for a morning covering grain crops and 150 joining for the potato-focused afternoon. MPSG's production specialist – west, Schmidt, showcased the lupin variety trial, walking attendees through broad-leaved sweet white lupins, narrow-leaved lupins and yellow lupins compared to field peas, and the promises and challenges of this novel crop.

Top Right: Manitoba Pulse & Soybean Growers' lupin variety trial at the Manitoba Crop Diversification Centre near Carberry, Man. testing nine lupin varieties compared to three pea varieties.

ASCIA SOYBEAN VARIETY WORKSHOP – BEAUSEJOUR

MPSG's production specialist – east, McCombe-Theroux, offered a review of the 2024 soybean growing season at Agassiz Soil and Crop Improvement Association's (ASCIA) soybean variety workshop on Sept. 20, 2024 near Beausejour, Man. More than 30 farmers joined for this soybean-focused morning exploring the regional variety trial site.

Above right: Jennifer McCombe-Theroux, Manitoba Pulse & Soybean Growers production specialist – east, discussing the 2024 growing season at the Agassiz Soil and Crop Improvement Association's soybean variety workshop in Beausejour, Man.

Pulse Check – Shaping the Future of Agriculture with Legumes and Soybeans

John Gaudes, Communications Manager, AITC-M

AS A NEW school year kicks off in Manitoba, pulse and soybean growers are helping fuel a rising interest in agriculture education. Thanks to their contributions, students across the province are becoming more curious about where their food comes from and how it's grown.

Led by Agriculture in the Classroom-Manitoba (AITC-M), more educators are incorporating agriculture into their lessons. Students, both urban and rural, are exploring farming through field trips, virtual farm tours, and resources that highlight the vital role of agriculture in their daily lives.

Pulse and soybean producers have been key partners in this movement. Manitoba Pulse & Soybean Growers (MPSG) haven't only provided funding for vital resources like the Manitoba Seed Kit and Foundations of Manitoba Agriculture but are also working alongside AITC-M to introduce new pulse-themed learning kits.

This collaboration will see the refresh of the popular Sprout Head activity kit for Grades 1 to 6 later this school year. With this resource, students will have the chance to grow their own pea microgreens while learning about plant nutrients, root care and the protein content of pulses. The best part? Once the microgreens are fully grown, students can harvest and enjoy what they've cultivated, making learning hands-on and delicious.

Katharine Cherewyk, executive director of AITC-M, emphasizes how these early learning opportunities set students on a path toward a deeper understanding of agriculture.

"Early and middle years resources like Sprout Head introduce students to agricultural processes. As they move through high school, they start exploring a wide range of career options, and that includes roles in the agriculture sector."

Cherewyk adds, "We want every Manitoba student to leave high school knowing the opportunities in the agriculture and food industries. And for today's producers, it's important to realize that resources like this help inspire and guide the future workforce – the next generation of farmers, engineers and technicians."

MPSG's support has also extended to AITC-M's virtual farm tour series, including Follow the Soybean Farmer. This spring, over 500 students in Grades 3 to 5 got a firsthand look at soybean farming when Lyle Peters of Henervic Farms walked them through planting, crop care and harvest. The experience didn't stop there – students did a hands-on activity making bioplastics from soybean oil, connecting agriculture to innovation.

Farm tours like Follow the Soybean Farmer do more than engage students; they help dispel myths about agriculture among the public. With over 2,300 views to date, this video has been viewed not only in Canada but also in the United States and India. The video series overall has amassed more than 60,000 views, reaching audiences in over 20 countries.

Cherewyk is proud of the widespread impact.

"These tours bring students closer to the farm and provide clear, accurate information about Manitoba food production. Our goal is to educate beyond the classroom, ensuring both students and the public understand the realities of modern agriculture."

These successes wouldn't be possible without strong partnerships. AITC-M welcomes producers, industry professionals and community members to join their mission by volunteering, advocating or donating to support agriculture education.

"Support from the agriculture community is vital," says Cherewyk. "Whether it's through donations, volunteering or speaking up for agriculture education, every contribution helps expand our reach."

> Producers and those in the pulse and soybean value chain can get involved by visiting **www.aitc.mb.ca**. ■

Grade 2 students at Glenboro School with their fully-grown Sprout Head pea shoots in March 2022.

RAIL TROUBLES MITIGATED BY #STOPTHESTRIKE

EYE ON OTTAWA – Strikes, Trade and Transportation on the Agenda This Fall

PULSE CANADA

Jeff English, Vice President, Marketing and Communications, Pulse Canada

Graphic from stopthestrike.ca/

OVER THE SUMMER of 2024, Canadian agriculture faced a serious threat. The looming possibility of a strike or lockout on both of the country's major railways jeopardized the pulse sector's access to vital export markets. In response, the "Stop The Strike" campaign was launched to urge the federal government to intervene and prevent a devastating work stoppage. Thanks to the collective efforts of 27 national and regional agricultural groups, including Pulse Canada, Canadian Pulse and Special Crops Trade Association, the campaign achieved its goal.

The campaign, launched on Aug. 9, employed a straightforward yet powerful strategy: make it politically impossible for the government to ignore the impending crisis. A bilingual website, at www.stopthestrike.ca, served as the campaign's hub, enabling farmers to send 2,485 letters directly to key federal decision-makers. Through the use of social media, a countdown clock tracking the time left until the potential rail disruption, and a virtual press conference attended by over 100 media and agriculture industry representatives, the message reached far and wide.

As the work stoppage approached, Canadian Labour Minister Seamus O'Regan initially expressed his intention not to intervene. However, less than 24 hours into the disruption, the sustained pressure from the coalition prompted the minister to invoke Section 107 of the Canadian Labour Code, forcing the parties into binding arbitration – exactly what the campaign had called for.

The victory prevented a prolonged total rail shutdown that would have cost the Canadian agriculture industry billions. Thanks to the efforts of our pulse growers and allied organizations, vital rail services resumed operation quickly, ensuring that our crops continued to move to market without delay.

This was a win for every farmer who relies on efficient rail transport to reach international markets. It's a clear demonstration of the power of collective advocacy, and a reminder that when we work together, we can protect the future of Canadian agriculture.

FLIPPING THE SWITCH FOR CANADIAN AG

This is the same spirit behind our efforts to create efficiencies on Canada's rail lines. Pulse Canada helped found a coalition of 21 national and provincial associations that rely on rail transportation to deliver our crops and fertilizer to market. The "Flip the Switch" group advocates for rail transportation that is competitive, cost-effective and efficient.

In 2023, our group advocated for a pilot trial to increase the extended interswitching radius from 30 kilometres to 160 kilometres for a period of 18 months. This measure was introduced and passed by the federal government, serving two key purposes: it enabled shippers to utilize the services of the competing Class I railway within the extended interswitching radius, and it empowered shippers to negotiate better rates and services with their current providers by leveraging the threat of extended interswitching. Our data shows that extended interswitching provides great benefits to shippers who were able to access a more competitive transportation network.

While this pilot was a good first step, it's insufficient for growers and shippers to fully realize the benefits of extended interswitching. Shippers typically sign 12-month contracts, limiting their ability to leverage this tool effectively. Additionally, concerns about jeopardizing future relationships with current shipping providers may deter shippers from using extended interswitching as a negotiating tool. That's why our coalition is redoubling efforts to extend the pilot by an additional 30 months with a pathway to permanency. This extension will allow shippers to fully benefit from extended interswitching and provide the government with ample data to evaluate its effectiveness as a pro-competition tool. We are confident that the data will show that extended interswitching benefits shippers and improves rail service.

OPEN TRADE AT RISK

Bill C-282, currently under review in the Senate, seeks to prevent the government from negotiating any increase in import quotas for supply-managed sectors, such as dairy, poultry and eggs. This bill effectively restricts the ability to grant additional market access for these products in future trade deals.

By limiting flexibility in trade negotiations, Bill C-282 will complicate Canada's ability to secure and expand international trade agreements. For instance, ongoing trade negotiations with the United Kingdom and future updates to agreements like the Canada-United States-Mexico Agreement (CUSMA) could be affected, as these countries may view Canada as unwilling to compromise on agricultural access.

Canada's agri-food exports were valued at $92.8 billion in 2022. With 90 per cent of Canadian farmers depending on trade, there's no doubt this bill will undermine their ability to compete globally.

That's why Pulse Canada, both as an organization and through our strategic partnership in the Canadian Agri-Food Trade Alliance (CAFTA) has been working to have the bill rejected by the Senate. We have shared our sector's position at the Senate trade committee, and through letters and direct representations to senators. The end goal is to ensure that Bill C-282 never becomes law and cannot undermine Canada's current and future trade negotiating positions.

Pulse Canada will continue to advance these and other files that have a real impact on the livelihoods of our members. To learn more about these or any initiatives we undertake on your behalf, please get in touch at jenglish@pulsecanada.com for more information. ■

Quality Information for Quality Outcomes

SOY CANADA

Brian Innes, Executive Director, Soy Canada

SINCE JOINING SOY Canada I've come to appreciate that all soybeans are not equal. While two beans can look very similar in the field, they can perform very differently for our customers.

For Manitoba, diversity in bean quality for both soy food manufacturing and for crushing has become much more important to growers over the past two decades.

Put simply, some beans are worth more to our customers than others. For growers, it means that some varieties help us get more value from customers while others create a bad reputation that can lead to discounts.

But how do you tell which variety brings value and which lowers value? And how do you measure quality?

These questions are at the heart of why the Manitoba soy variety trials are now integrated into the renewed Canadian Soy Quality Program and our northern soy quality efforts.

By integrating the variety trials into our quality work, we're driving value through data. We're using the samples from across the province to create credible data that's meaningful to customers so they make purchasing decisions based on performance rather than perception.

What's the connection between variety trials and value?

CANADA'S RENEWED SOY QUALITY PROGRAM

As food-grade soybeans have expanded in Manitoba it's become more important to showcase how varieties grown in the province will perform for manufacturers of soy foods like tofu and soy milk. Since 2022, the quality characteristics for all food-grade varieties in the Manitoba variety trials have been measured. But Agriculture and Agri-Food Canada's (AAFC) closure of their soy quality program in early 2024 created doubts about how this unique testing would continue – it was the only Canadian testing facility analyzing how soybean varieties perform for soy food manufacturing.

Thankfully, we found a solution. Canada's Soy Quality Program has been renewed and is now administered by the Canadian Grain Commission in Winnipeg, Man. Through industry leadership, the support of AAFC, the Grain Commission and grower organizations like Manitoba Pulse & Soybean Growers (MPSG), world-class quality testing continues to be performed on varieties entered in Manitoba variety trials.

Seed developers entering varieties in the trials benefit from having independent data on the quality characteristics important to soy food manufacturers. This helps seed developers commercialize varieties that our customers value sooner, so growers can have new varieties that perform better in their fields sooner as well.

> **"...one thing was clear, there's a lack of data to demonstrate to feed formulators how northern soy produced in Manitoba will perform in feed rations."**

DIGGING INTO NORTHERN SOY QUALITY

Growing soybeans further north than almost anywhere on the planet comes with unique challenges. One of these challenges has been the reputation that northern-grown soy has developed – a reputation for lower value soybeans as measured by lower crude protein.

With the last Northern Soybean Summit held in late 2023, we've come to understand the diversity of views on northern soy quality – while there are significant discounts at export position, the animals consuming northern soy on the prairies don't seem to notice much of a difference. But one thing was clear, there's a lack of data to demonstrate to feed formulators how northern soy produced in Manitoba will perform in feed rations.

The data and research capacity created with the help of the variety trials has been important to understand where we are and where we need to be.

Building on research supported by MPSG at the University of Manitoba that assessed protein levels for varieties entered in the trials, we're taking the next step to look at factors that affect animal performance. While crude protein tends to be lower in northern soy, digestibility, critical amino acid values and energy values are often higher and contribute significantly to how animals perform.

To combat the current perception of northern soy centered on discounts, we've identified that we need credible data explaining the feeding value seen by animals. The variety trials remain a key source of annual samples to draw upon for future analysis, helping us know how varieties differ and how regionality affects quality factors. ■

VIEW FROM THE FIELD

Laura Schmidt, Production Specialist – West, MPSG

WIND-DAMAGED DRY BEANS

Cool, wet conditions kicked off the start of the 2024 growing season. To combat this, many fields received some tillage to encourage soils to warm and dry enough for planting – this was especially necessary with fields destined for dry beans, which thrive in warmer soils and often need an incorporation pass for pre-plant herbicides.

Unfortunately, this cool, wet start was followed by some pretty high winds in June, gusting above 100 km/hr. In young, freshly emerged dry bean crops these winds picked up soil particles, sandblasting plants, and caused substantial damage. Sandblasting tore off leaves and cotyledons, bruised stems and in some cases, sheared them off completely.

In some fields, growing points remained intact and plants were able to recover, albeit with a maturity delay. In others, stems were broken below the cotyledon node, preventing regrowth due to the loss of growing points. Tough reseeding decisions were made tight to crop insurance seeding deadlines.

Sand-blasted headlands of pinto beans on potato stubble.

When early-season weather damage strikes, be it from hail, winds or frost, aim to assess your fields five to seven days later to look for signs of regrowth. Dry bean and soybean growing points are all above ground and susceptible to damage. If that main growing point is damaged, look for signs of regrowth at the axillary buds where leaves and cotyledons meet the main stem. Take plant counts to assess the remaining stand to make an informed management decision moving forward.

Soil blowing on June 16, 2024 near MacGregor, Man.

Above: Pinto beans five days after severe wind damage.

Above: Pinto beans 11 days after severe wind damage with regrowth.

Soybean SCOUT

Q: These two stem diseases are infecting the lower nodes of these soybean stems. Both plants are wilted with leaves attached and have fairly healthy root systems. What are these stem diseases?

Answers can be found on page 27

The Basics of Hedging

Adam Pukalo, Portfolio Manager – Securities and Commodities Futures Advisor, Pukalo Prairie Wealth Group of Ventum Financial Group

WHAT IS HEDGING with futures and options? You may have heard these words from a neighbour, on the radio, or in a seminar but haven't understood what they meant. Every farming operation should at least be acquainted with the basics. Consider how futures and options can give you marketing flexibility and reduce risk in your farming operation.

WHAT IS HEDGING?

Hedging is a way to offset risks associated with the volatility in grain and livestock prices or currency fluctuations. Specifically, it's a way to help give you flexibility in your marketing decisions.

The best way I find to explain hedging is using the analogy of truck insurance. Every year you pay a premium for your truck insurance. You might never need to use the insurance, but if you get into an accident, you are glad you have it. When hedging, think of your truck as your crop and the insurance as the futures and options strategy. If an accident happens, your truck insurance compensates you for the loss. Now if the price declines on your grains or livestock, your hedging strategy could compensate you for the price decline. However, futures and options aren't insurance products and shouldn't be confused with your other insurance programs.

In summary, farmers can use futures and options to create a floor price (strike price minus premium paid) to protect them from price declines for their grains and livestock.

HOW, YOU ASK?

The most common strategy is buying a put option. Buying a put option means paying a premium – similar to your truck insurance – to get protection on your crops or livestock at a certain price until a specified time.

For example, in June 2022 I reviewed purchasing canola protection out until November 2022 for my clients. I'm using a year where prices were significantly higher to illustrate how using hedging strategies could be beneficial. Everyone reading, I'm sure, would like for canola to be at these levels again.

Each canola contract trades in 20 tons. In June 2022 when I implemented this strategy, the November 2022 futures contract was around $23.64 per bushel, or approximately $1040 per ton. In this example, the producer wants protection for the current market price.

Strategy: Buy the $1040 per ton November 2022 put option – Premium cost approximately $73 per ton.

This creates a floor price from June 2022 until November 2022 at $21.98 per bushel, or $967 per ton ($1,040 strike minus $73 per ton premium cost).

Profit Scenario: If canola goes lower than $967 per ton….

This is important: producers sell their physical crop as normal. You get less for your physical canola, BUT your hedge account increases to offset any loss. You can sell your option at any time to take the profit. The premium you paid for your option ($73 per ton) could be worth $150 per ton depending on how long you held the option. This option protected you from the price declining because you wanted to hold the physical crop in the bin. Rather than holding it in the bin and hoping prices go up, you had protection in case they went lower.

And if canola goes higher than $1,040/ton? You remove the protection.

You can either hold onto your protection or sell it if you want to recoup some of your premium. Once the option reaches half of the premium cost, consider whether you still want the protection. Some producers have said to me before, "Why did I spend this premium on the option to only get half my money back?!" My response is that nobody knows where prices will be a year from now, but it's inevitable they will change along with supply and demand.

These types of strategies aren't new. For years, companies in various sectors like mining, oil and gas and aviation have been controlling their risks with futures and options. Imagine the board of an aviation company having to explain to its shareholders why their revenue decreased because oil went from $50 to $70 per barrel. Shareholders wouldn't be very happy, and they might wonder why the company didn't manage their risk better. Your farming operation can use these futures and options strategies to give you the same marketing flexibility and reduce your risk. ■

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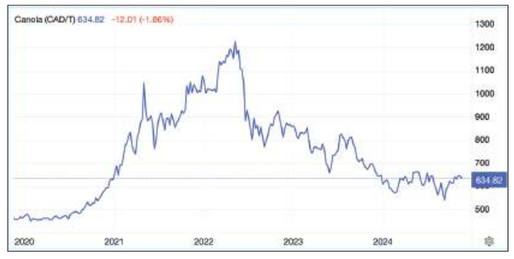

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Source: https://www.simtrade.fr/blog_simtrade/understanding-options-trading-strategies/

Strengthening Manitoba's Agriculture through Plant Breeding Innovation

GRAIN GROWERS OF CANADA

Kyle Larkin, Executive Director, Grain Growers of Canada

IN MANITOBA, THE diversity of crops and the ability for farmers to choose varieties that best suit their operations are vital to maintaining a thriving agricultural sector. At the heart of this is plant breeding and variety development, which enable farmers to benefit from resilient crops and often allow for cost-savings or increased revenue opportunities. Innovations like soybeans with improved oil profiles, early maturing varieties for shorter growing seasons, and increased yield are key examples of how plant breeding helps farmers adapt to challenges while boosting their productivity.

Despite the clear benefits, investment in plant breeding innovation has been on the decline for years. This decline threatens the ability to develop new crop varieties that can meet the evolving needs of farmers. For Manitoba's growers, continuous innovation is essential to maintaining competitiveness in global markets, sustaining crop diversity and maintaining productive farms. However, with fewer resources being directed toward this research, the potential for advancement is stifled.

To address this, there's a pressing need for better support for both public and private plant breeding programs. Previously, public funding played a significant role in agricultural innovation, but the responsibility has now shifted more heavily onto farmers, with many paying 50 to 70 per cent of what was once covered through public programs. Even for programs that do exist, funding criteria is becoming increasingly narrow, excluding crucial projects that could help growers. For example, while pulses naturally fix nitrogen and enhance soil health, more research is required to develop disease-resistant varieties that can thrive and provide these benefits more effectively.

Forming public-private partnerships is critical to fostering innovation, but challenges remain. These partnerships, which are essential for developing new crop varieties, are hindered by short five-year funding cycles, making long-term planning difficult. Government involvement in creating sustainable, long-term partnerships is necessary to ensure consistent progress.

Challenges in plant breeding innovation extend beyond funding. The Canadian Food Inspection Agency's (CFIA) recent guidance on gene editing, though a positive step for plant breeding innovation, took more than three years to finalize. This regulatory delay cost the industry valuable time and missed opportunities for progress. In 2018, the University of Saskatchewan cited that regulatory hurdles pushed almost one-third of plant breeders to consider moving their research outside Canada, a concerning trend that highlights the need for more streamlined and supportive processes.

If Manitoba's agricultural sector is to continue benefiting from plant breeding innovation, it's crucial that governments understand the benefits and prioritize it. By doing so, Manitoba farmers will have access to the diverse crop varieties they need to maintain their competitive edge. At the same time, we'll continue to work diligently with our industry counterparts to advocate for better funding and program design to ensure Manitoba growers have access to the next generation of varieties. ■

Photo credit: Laura Schmidt

A flower blooms on a pea plant.

The History – and Future – of Pulses and Soybeans in Manitoba

How, and why, the province's crop landscape has changed over time

Matt McIntosh, Writer and Farmer

THERE WAS A time in Manitoba's agricultural history when cereals reigned supreme. A time when the Canadian Prairie was synonymous with endless fields of wheat, barley and more.

Now, it's a more complicated and diverse picture.

Though millions of acres continue to be planted with cereal crops each year, recent decades have seen several usurpers succeed in diversifying Prairie crop production. Pulses and canola, in particular, have had a significant impact, and continue to change Manitoba's cropping landscape as new varieties, markets and production challenges wax and wane.

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Ramona Mohr's field trials of two- and three-year rotations with canola and wheat, plus an additional rotation with a stacked two-year soybean component, followed by wheat.

Photo credit: Laura Schmidt

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A soybean field trial. Photo credit: Agriculture and Agri-Food Canada

THE SOYBEAN WAVE

Data from Statistics Canada illustrates the story of what could be called Manitoba's traditional broad-acre crops. Barley, for example, comprised 1,568,000 acres in 1980, but just 439,373 acres in 2024. Flax covered 210,800 and 21,934 in the same years, respectively. For sunflowers, acreage numbers declined – albeit with significant variation between some years – from 158,800 acres to 36,136.

These declines coincided with growth in other crops, notably canola (294,800 acres in 1980, to over 3,000,000 in 2024). New crops also emerged – canary seed, chickpeas and lentils among others. David Simonot, intelligence and crops foresight and analysis specialist with Manitoba Agriculture, points to the rise of soybeans as one of the most significant trends in Manitoba agriculture. Despite ups and downs, soybeans have grown from some 50,000 acres in 2001, to around 2.3 million acres in 2017. It now ranks as Manitoba's third largest crop.

Part of the reason soybeans have done so well is the risk-mitigation they afford growers.

"One of the things that's really attractive to Manitoba farmers about soybeans is they're a strong diversification play as well…The way soybeans are different is they do well in wet years," says Simonot, adding that plant breeders have done a particularly good job of developing cultivars well-suited to the different regions within the province.

"Soybeans are also planted later, so the whole growing season is a little offset. It spreads out the work but also spreads out your weather risk. You can have a great year for soybeans and a poor year for wheat, and vice versa."

According to Dennis Lange, pulse and soybean specialist with Manitoba Agriculture, the gradual transition from conventional food-grade varieties to herbicide-tolerant varieties indicates weed control as another driving factor behind the popularity of soybeans.

"The biggest thing was weed control and that farmers were able to clean up some of their fields. It really helped drive the industry forward, along with more earlier maturing varieties," he says. This fact can be seen in the change in acreage from largely food-grade soybean varieties to herbicide-tolerant varieties over time – from just 38 per cent of soybean acres in 2005, to 98 per cent of planted acres in 2023.

Herbicide-tolerant weeds are a natural concern given the trend. However, Lang says the variety of cropping options Manitoba farmers can help mitigate risk.

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Ramona Mohr, research scientist at Agriculture and Agri-Food Canada's Brandon Research and Development Centre

David Simonot, intelligence and crops foresight and analysis specialist with Manitoba Agriculture

“The biggest thing was weed control and that farmers were able to clean up some of their fields. It really helped drive the industry forward, along with more earlier maturing varieties.”

Dennis Lange

A soybean field trial.

Photo credit: Agriculture and Agri-Food Canada

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Ramona Mohr's field trials of two- and three-year rotations with canola and wheat.

Photo credit: Gordon Finlay

“Now we’re starting to see growers who say ‘Hey, we have all these other crops we can grow, and we can grow things with other herbicide packages.’ There are just so many other options. You’re also making sure you narrow up your rows so you have better plant competition, and then you’re also scouting,” says Lange. Going forward, he expects Manitoba’s soybean acres to level off around 1.5 million per year.

PROTEIN PROMINENCE

Simonot says protein’s rise to prominence has been another factor driving interest in soybeans, and pulses in general. Indeed, such interest appears to be raising the value of crops already considered high-value due to its variety of uses – animal feed, soybean oil and human cuisines.

Lange cites the establishment of the Roquette pea protein processing plant in Portage la Prairie, Man. as an example of how market development has, and will continue, to shape Manitoba’s crop landscape. Increasing the number of acres planted with new pulses – faba beans, lupins and others either being actively investigated, if not already grown on a smaller scale – is possible as well. But whether for high-quality plant proteins or some other desirable characteristic, the development of new markets is critical to widespread success of other pulses.

“A lot of it has to do with markets. Markets have always been a challenge. Having an end use has been a challenge. [A more diverse array of] pulses will eventually have a fit, but they need to walk before they can run,” says Lange.

On the soybean front, demand for food-grade soybeans has spurred a small comeback in food-grade production, as well as corresponding interest in variety development. Conversely, higher workload and other practical factors may continue to limit the spread of some pulses, such as dry beans.

ROTATIONAL IMPACTS

Significant changes in crop acres don’t occur in a vacuum. Indeed, the impact of more pulses, or any crop, can alter conditions for subsequent crops – and by extension, what farmers do to address problems and seize opportunities. For Ramona Mohr, research scientist at Agriculture and Agri-Food Canada's Brandon Research and Development Centre, understanding how crops fit into and change rotational conditions is necessary to inform what challenges growers will face as they change what goes into the seeder. This is particularly important as soybeans and canola have come to prominence in what was once a landscape dominated by cereals and canola.

Mohr is currently researching how soybeans and peas – and corn, to a lesser extent – best fit into common crop rotations.

“We’re trying to take a holistic approach,” says Mohr, speaking specifically to soybeans. “So, not looking only at crop yield and quality, but also looking at disease, soil factors, economics of different rotations. We’re trying to get a broad understanding of the performance of these different rotations and how best to fit soybeans into rotation, and what are the optimum rotations with respect to soybeans.”

The rotations being studied include two- and three-year rotations with canola and wheat, plus an additional rotation with a stacked two-year soybean component, followed by wheat. Thus far both the two- and three-year cohorts have performed similarly, but some slight soybean yield reductions in the double-stacked rotation have been noted – something Mohr says they are eying with interest. Slight increases in soybean root rot have also been observed in tighter rotations.

Protein levels in both wheat and canola appear to get a boost when planted after soybeans in some years, but whether soybeans afford any nitrogen benefit in subsequent seasons, however, isn’t yet clear. All these and other questions, Mohr says, will help inform how the Manitoba crop landscape will continue to change, even in limited rotations.

Simonot also points to fertility, and specifically the nitrogen-fixation capability of pulses and soybeans, as a potential driver of greater change. If one of these crops can reduce the cost burden of nitrogen fertilizer in other crops, even by a small margin, Simonot says growing pulses becomes a “very attractive” prospect.

“Ultimately, farmers tend to focus on what’s profitable and works on their farm,” says Simonot. ■

THE SHIFTING DIVERSITY OF MANITOBA CROPS

Acreage and production of pulse and soybean crops has risen over the years in Manitoba as the province's crop production has become more diversified. Manitoba farmers used to mainly plant spring wheat but now grow a wealth of different crops.

Source: Manitoba Government

CROP

	1973	1983	1993	2003	2013	2023
Seeded area in acres						
Dry beans	N/A	N/A	40,000	220,000	80,000	142,300
Peas	35,000	100,000	200,000	135,000	60,000	161,3000
Soybeans	N/A	N/A	N/A	220,000	1,050,000	1,595,400
Spring wheat	2,900,000	4,365,000	3,850,000	3,0055,000	2,930,000	3,166,100
Production in metric tonnes						
Dry beans	N/A	N/A	9,700	165,500	74,800	121,895
Peas *(bushels)*	22,850,000	68,000,000	85,700,000	137,400,000	67,700,000	217,996,000
Soybeans	N/A	N/A	N/A	149,700	1,068,200	1,566,858
Spring wheat	2,030,000	3,243,000	3,538,000	3,567,900	4,376,200	4,972,747
Yield in bushels per acre						
Dry beans *(pounds per acre)*	N/A	N/A	650	1,660	20,600	19,000
Peas	24.0	25.0	21.0	37.4	41.4	49.9
Soybeans	N/A	N/A	N/A	25.0	37.6	36.2
Spring wheat	25.7	27.3	27.2	42.9	55.3	57.8

HOW MPSG'S VARIETY TESTING PROGRAM HELPS MANITOBA PRODUCERS DIAL IN THE BEST CROP VARIETIES FOR THEIR FARMS

Finding the Right Variety with MPSG's Variety Trials

Mark Halsall, Writer

THERE ARE LOTS of reasons why growing a diverse set of crops can pay off for producers. One is increased market opportunities, but there are numerous agronomic benefits as well, such as longer, more resilient crop rotations that can boost the productivity – and profitability – of a farm.

Manitoba Pulse & Soybean Growers (MPSG) and Manitoba Agriculture are doing their bit to help boost the diversity of crops grown in the province by co-ordinating regional variety evaluation trials of soybeans, dry beans and faba beans.

The trials, which have been running for more than 30 years, also create opportunities to test new pulse crops like lupins. Lupins were added to the variety testing program in 2022 and trial locations have since expanded.

MPSG also co-sponsors field pea regional variety evaluation trials that are commissioned, approved and overseen by the Manitoba Crop Variety Evaluation Trails (MCVET) team, which comprises representatives from Manitoba Agriculture, MPSG, Manitoba Seed Growers' Association (MSGA), Manitoba Crop Alliance, Seeds Canada, Agriculture and Agri-Food Canada (AAFC) and the University of Manitoba.

The annual Seed Manitoba report produced by MCVET includes soybeans, pulses and many other crops. It's intended to provide producers, agronomists and others in the ag industry with fair and accurate third-party varietal performance information that's relevant to Manitoba growing conditions.

Jennifer McCombe-Theroux, a production specialist with MPSG who helps to oversee the association's soybean, dry bean, faba bean and lupin trials, says farmers count on the variety evaluation results to show them how different varieties will fare in various regions around the province. This enables producers to choose high-yielding varieties suited to local growing conditions, she explains, while also making farming an unfamiliar variety or new crop like lupin a safer bet.

"It's about providing farmers with the right type of variety for their area," says McCombe-Theroux, noting the trial data can be really helpful for farmers wrestling with specific challenges like iron deficiency chlorosis (IDC) or Phytophthora root rot (PRR), since soybean variety selection can be part of the solution for managing these.

She notes lupins were introduced to the testing program after a Calgary, Alta. agribusiness called Lupin Platform started contracting lupin acres in Manitoba, sparking farmer interest in growing the crop.

Chami Amarasinghe, research and innovation specialist with Manitoba Agriculture

Jennifer McCombe-Theroux, production specialist with Manitoba Pulse & Soybean Growers

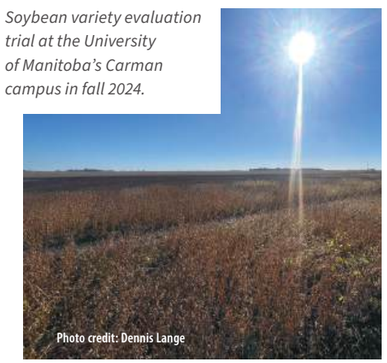

Photo credit: Dennis Lange

Soybean variety evaluation trial at the University of Manitoba's Carman campus in fall 2024.

Photo credit: Laura Schmidt

Lupin seedlings, part of the Manitoba regional variety evaluation trials in Carberry, Man. in June 2024.

Photo credit: Laura Schmidt

Manitoba regional variety evaluation trials in Hamiota, Man. in September 2024.

Photo credit: Jennifer McCombe-Theroux

Soybean variety evaluation trial in Portage la Prairie, Man. in September 2024.

"Farmers were asking questions on how to grow lupins, so with that, we started including lupins in the regional variety trials to get more Manitoba-specific information about them," adds McCombe-Theroux.

The move is in line with MPSG's commitment to expand crop alternatives for Manitoba producers. McCombe-Theroux notes while dry beans, field peas and faba beans are less common than the major crops grown in the province, they all help to promote crop diversity.

"In the future, something else like adzuki bean might potentially be included," says McCombe-Theroux. "It provides the opportunity for farmers to get regional Manitoba data before taking that risk on their own farms."

For the pulse and soybean variety testing, seed companies submit varieties for third-party evaluation by independent contractors hired by MPSG, who conduct small plot trials throughout the province.

According to McCombe-Theroux, Manitoba Agriculture plays a critical role in the regional variety evaluation trials.

She says tasks like trial co-ordination, plot planning and statistical analysis, as well as overseeing maturity ratings and IDC trials and ratings, are performed by Dennis Lange, the provincial pulse and soybean specialist, with the help of Chami Amarasinghe, a research and innovation specialist with Manitoba Agriculture.

"Dennis Lange has been the backbone of these trials, doing the heavy lifting and behind the scenes work," McCombe-Theroux says.

As she points out, there are many others who contribute to the success of the variety testing program as well. This includes AAFC, Manitoba's four crop diversification centres (WADO, PCDF, PESAI and MCDC) and private research companies.

All the trials in the regional variety evaluation program require three replicates and randomization of varieties to enable statistical analysis. Each trial spans the entire growing season, from seeding to harvest and everything in between.

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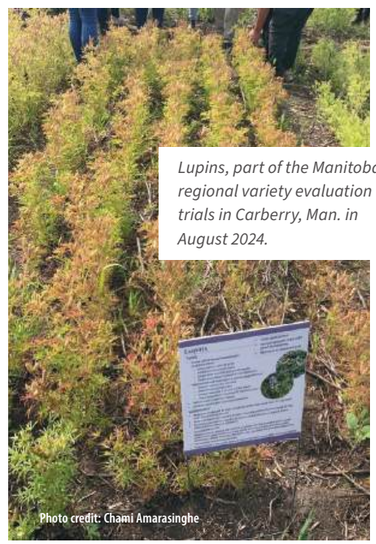

Photo credit: Chami Amarasinghe

Lupins, part of the Manitoba regional variety evaluation trials in Carberry, Man. in August 2024.

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Manitoba regional variety evaluation trials in Souris, Man. in September 2024.

Photo credit: Laura Schmidt

Manitoba regional variety evaluation trials in Dauphin, Man. in August 2024.

Photo credit: Laura Schmidt

Manitoba regional variety evaluation trials in Melita, Man. in July 2024.

Photo credit: Laura Schmidt

Rigorous standards are in place for the trials, and plots or trial locations that fail to meet them are rejected.

McCombe-Theroux notes that trials are checked regularly throughout the growing season by MPSG staff and Lange, who monitor plots for crop establishment, pests and environmental conditions to ensure high-quality information is collected. Stringent reviews are also conducted by the MCVET committee once the final data is submitted.

For each trial, varieties are compared to a check variety for each crop type or region to account for differences in conditions across sites and years. The number of years a variety has been tested at a particular site is also recorded.

Yield and days to maturity are standard measurements in every trial. Other important agronomic data is recorded as well, but this varies by crop and location.

Some of these additional measurements are:

- Soybeans: IDC ratings, which are determined in three-year IDC trials for each new variety conducted at an IDC-prone site located near Winnipeg.
- Dry beans: plant and pod heights and scores for white mould incidence and common bacterial blight incidence and severity.
- Lupins: plant height, total seed weight per 1,000 seeds and resistance to lodging.

In 2024, the soybean and pulse trials took place at close to 20 different locations. The total number of test sites was 47, which were split as follows among the five crops:

- 13 for herbicide-tolerant soybeans
- 10 for conventional soybeans
- 10 for field peas
- four for dry beans (wide row)
- four for dry beans (narrow row)
- three for faba beans
- three for lupins

Amarasinghe says one of the best things about the regional variety evaluation trials is they provide an additional layer of information for farmers.

"Usually, the agronomic and disease data from a variety's registration trial doesn't provide enough information about how it compares to other varieties and regional adaptations," she says. "Our trials clearly can be used to compare varieties."

McCombe-Theroux says the variety testing program also creates opportunities for additional research. For instance, all soybean varieties are now tested for protein and the results help inform a study looking at the critical amino acid values of varieties grown in Manitoba. Since 2022, the trial data is being used for a MPSG-sponsored pilot program assessing varietal field tolerance to PRR.

Another example is food grade testing for conventional soybeans, which was added to the trials in 2022. The data is part of Soy Canada's Food-Grade Variety Finder program, a database for buyers looking to access information on specific food-grade qualities of Canadian soybeans.

The results of the regional variety testing for soybeans, dry beans, field peas, faba beans and lupins are reported annually in MPSG's *Pulse and Soybean Guide*, which accompanies the issue of *Pulse Beat* mailed out to association members in December. The information is also published online at https://www.manitobapulse.ca/production/variety-evaluation-guide/.

> The *Seed Manitoba* seed guide published by Manitoba Agriculture and MSGA that includes the soybean and pulse variety trial results comes out in December as well. It's available at Manitoba Agriculture and ag industry offices. ■

For info online, scan here:
←

Soybean SCOUT

Question: These two stem diseases are infecting the lower nodes of these soybean stems. Both plants are wilted with leaves attached and have fairly healthy root systems. What are these stem diseases?

Answer:

Pod and Stem Blight
(Diaporthe longicolla)

Pod and stem blight is identified by distinct lines of raised, black dots on the stem called pycnidia. Seed infection (formerly known as Phomopsis seed decay) only occurs if pods are infected and will reduce seed quality. Seed decay symptoms result in shrivelled seeds covered with chalky mould that may or may not have pycnidia.

Symptoms are easiest to spot in late August through September when soybean plants are maturing.

Pod and stem blight causing Diaporthes are favoured by excess rainfall and humidity during pod-filling growth stages. Delayed harvest increases risk since plants are exposed longer to cool, wet conditions favouring this disease.

These fungi overwinter in soybean residues and may also infect seeds. Tillage can help break down crop residues, reducing the amount of this disease in a field.

Northern Stem Canker
(Diaporthe caulivora)

Northern stem canker lesions start small and begin at a node where leaves meet the stem. As the season progresses, lesions may expand to span several nodes on the stem. Canker lesions tend to have a dark, reddish-purple border. Breaking open the stems will reveal browning near the lesion. Leaves will wilt and remain attached to the plant.

Wet weather early in the season favours this disease and infection occurs when spores are splashed by rain onto plants.

Diaporthe fungi causing stem canker survive in the soil and in infected crop residue. Tillage to incorporate crop residue will help break down this disease in a field.

Northern stem canker is most common in fields with frequent soybean history. Extending the crop rotation between soybean crops will help limit the buildup of this disease.

Looking Back at 100 Issues of Pulse Beat

As the 100th issue of Pulse Beat is published, we look back at how the magazine came to be

Ashley Robinson, Editor

THE PULSE BEAT, yes *THE Pulse Beat*, launched not long after the Manitoba Pulse Growers Association (MPGA) was formed in 1984. Shortly after the association came into existence, the board realized they needed a way to keep their members up-to-date on what was happening – so a newsletter was born.

Directors would write articles. These articles included updates on meetings that directors had attended and other day-to-day happenings within the organization. It was laid out as a paper newsletter and mailed out to members.

"I was somewhat connected with the office because there was essentially me and the manager/executive director when I started, and that was it. We did all the brainstorming. The text was provided to me. Then I was responsible for editing, proofing, and overseeing production through to mailing," Shannon Beddome-Lorenz, former publisher of *Pulse Beat*, says about the early days of the publication.

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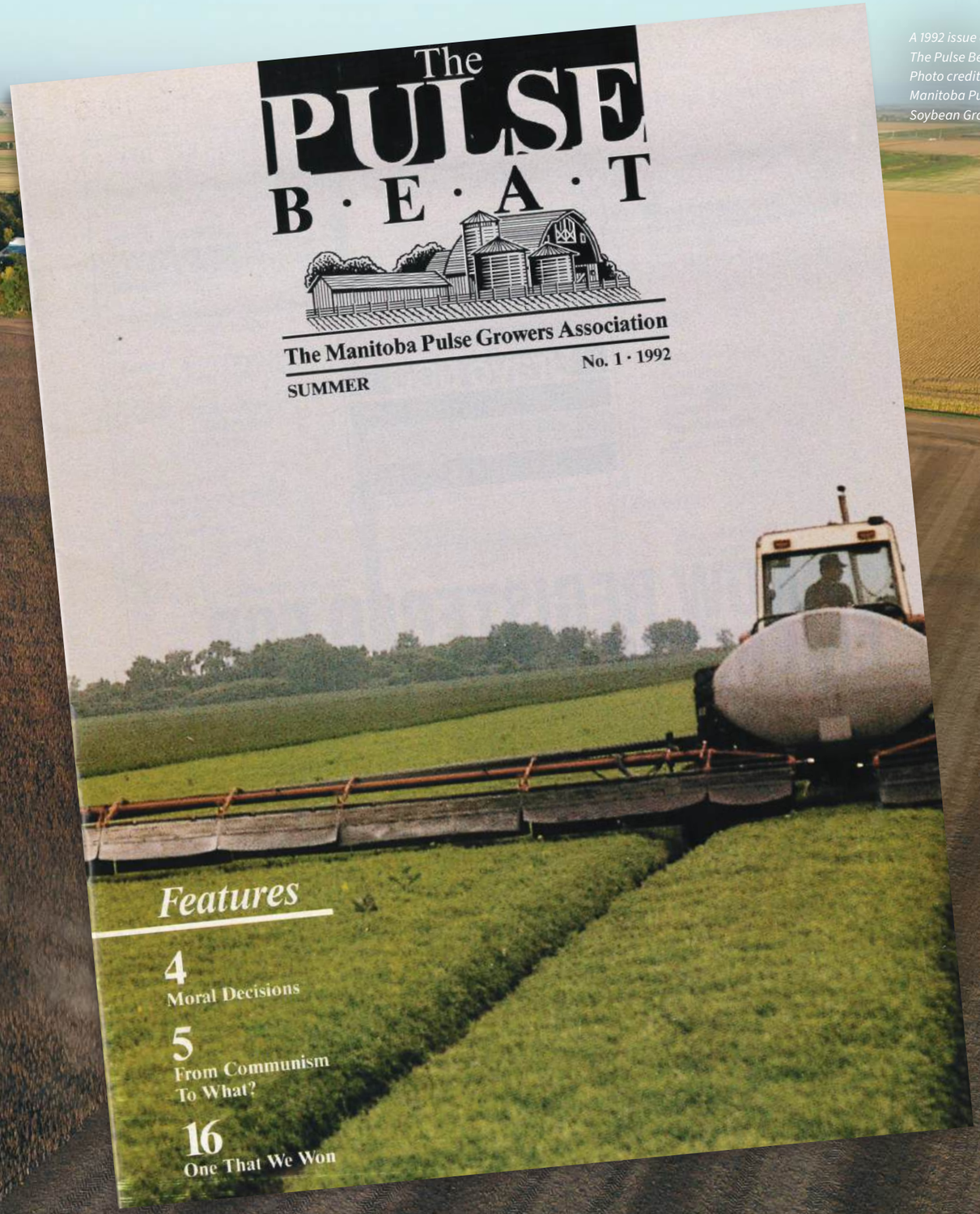

A 1992 issue of The Pulse Beat. Photo credit: Manitoba Pulse & Soybean Growers

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As the years passed, the newsletter morphed into a magazine focusing more on issues facing growers day-to-day on their farms, and in the mid-2000's, 'The' was dropped with *Pulse Beat* taking on its current moniker.

"There was a lot of attention spent on (*Pulse Beat*). Looking at it and thinking to make sure that it was up to date, and more modern and not just the old paper or the old magazine type thing," says former Manitoba Pulse & Soybean Growers (MPSG) executive director Francois Labelle. "They wanted to remain relevant and attentive to people, and that type of thing."

Labelle himself was a founding director of MPGA, which later became MPSG. As a farmer in the Carman, Man. area he has been around for the majority of the association's 40 years – first as an executive member on the board and then as executive director for six years up until his retirement in 2020. He has had a front row seat to how *Pulse Beat* changed over the years.

A 1993 issue of The Pulse Beat.
Photo credit: Manitoba Pulse & Soybean Growers

"I really like the evolution that it went through – that it became much more in-depth information that was current to the growers. You know production as well as some marketing and some issue-based things, like markets in different parts of the world, etc.," he says.

Modifications to *Pulse Beat* were made based on feedback from members and as changes happened within the association. As the magazine switched to focus on issues-based content, MPSG staff took a more proactive role in content creation, taking over writing stories from directors.

"Some of those discussions weren't simple, because a lot of it was put together in the latter years by staff. As we had increased staff, there was more effort from a lot of different people, and therefore a lot of different ideas or inputs," Labelle adds.

The MPSG staff was very supportive of the magazine and did a lot of work to get it done. According to Labelle, they saw it as important to share information about the work they and the organization were doing.

"It was such a collaboration of ideas. It was just a fun project to be part of. The staff was great. Everybody respected meeting our deadlines to produce the magazine, which made my job so much easier," Beddome-Lorenz explains.

As the publication releases its 100th edition, the staff continues to support the magazine, writing numerous articles for each issue. Since Labelle retired in 2020, he still supports and reads the magazine regularly.

"I'm not surprised – I think one of the reasons why it survived so long is the value of it. Value to get the message to the growers. As well there was value in the advertisers being involved in it. If they wouldn't have seen the value in it, they wouldn't have advertised, and they wouldn't have gotten to where it is today," he says.

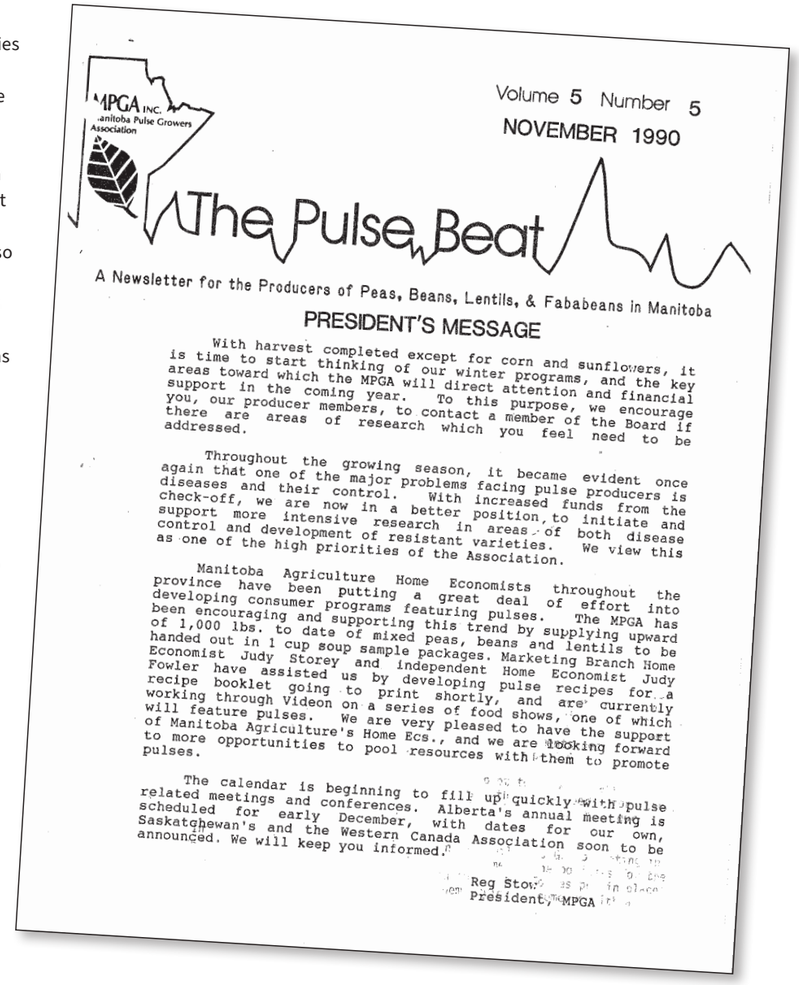
There have been some hiccups over the years. To keep a magazine running as long as *Pulse Beat* has been requires monetary support from advertisers. While industry support from advertisers has been good over the years, there were occasions when advertisers weren't impressed with stories or information printed.

"We're not making things up," Labelle explains. "We're putting out facts. And if somebody had a product that wasn't working for the growers and we let them know, that was a fact of life, and we dealt with it."

The number of issues per year has also fluctuated over the years. At one point, the summer issue was dropped as MPSG members said they never had time to read it. The number of issues per year has varied based on feedback from farmers, going from four to three to the current two issues per year.

At the end of the day, MPSG member support is what keeps *Pulse Beat* going. Through comments from members about reading it and sharing what they want to read, the magazine continues to be printed.

"The interesting thing about *Pulse Beat* is we always, when you ran across growers, they always talked about *The Pulse Beat*," Labelle says. "The grower says, 'Oh, I get the magazine, and I really like that. Keep it going. We read it cover to cover.' A lot of these farms have the family involved, and then (issues) would get passed down through the family, so that everybody would get a chance to look at it and read it." ■


MPGA INC.
anitoba Pulse Growers
Association

Volume 5 Number 5
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The Pulse Beat

A Newsletter for the Producers of Peas, Beans, Lentils, & Fababeans in Manitoba

PRESIDENT'S MESSAGE

With harvest completed except for corn and sunflowers, it is time to start thinking of our winter programs, and the key areas toward which the MPGA will direct attention and financial support in the coming year. To this purpose, we encourage you, our producer members, to contact a member of the Board if there are areas of research which you feel need to be addressed.

Throughout the growing season, it became evident once again that one of the major problems facing pulse producers is diseases and their control. With increased funds from the check-off, we are now in a better position to initiate and support more intensive research in areas of both disease control and development of resistant varieties. We view this as one of the high priorities of the Association.

Manitoba Agriculture Home Economists throughout the province have been putting a great deal of effort into developing consumer programs featuring pulses. The MPGA has been encouraging and supporting this trend by supplying upward of 1,000 lbs. to date of mixed peas, beans and lentils to be handed out in 1 cup soup sample packages. Marketing Branch Home Economist Judy Storey and independent Home Economist Judy Fowler have assisted us by developing pulse recipes for a recipe booklet going to print shortly, and are currently working through Videon on a series of food shows, one of which will feature pulses. We are very pleased to have the support of Manitoba Agriculture's Home Ecs., and we are looking forward to more opportunities to pool resources with them to promote pulses.

The calendar is beginning to fill up quickly with pulse related meetings and conferences. Alberta's annual meeting is scheduled for early December, with dates for our own, Saskatchewan's and the Western Canada Association soon to be announced. We will keep you informed.

Reg Sto
President, MPGA

A 1990 issue of The Pulse Beat when it was still a newsletter.
Photo credit: Manitoba Pulse & Soybean Growers

Reflecting on the 2024 Growing Season

Laura Schmidt, Production Specialist – West, MPSG

Photo credit: Laura Schmidt

Many pea fields lodged flat in August, hampering harvest.

COOL, WET CONDITIONS prevailed during May and June in Manitoba, resulting in delayed seeding and slow crop growth at the start of the season. By the end of May, most of the province had received more than 150 per cent of normal rainfall. Some areas, like Eden, received more than 300 per cent of normal rainfall. The northwest and Interlake regions experienced a truly challenging spring with many unseeded acres.

With all this rain, seeding windows were tight and cropping plans needed to change on a dime. This showcased the flexibility of soybeans. Seeding dates for soybeans are flexible throughout the month of May and respectable yields can still be achieved into June. In terms of rotation planning, in many fields we can often get away with soybeans-on-soybeans in a pinch, largely since our more challenging soybean diseases aren't known to occur at great levels in Manitoba. We don't want to do this every year, especially considering how much phosphorus soybeans remove, but when plans need to change, soybeans have that flexibility.

This early season crunch time and saturated soil conditions meant that rolling operations were tough to sneak in for many soybean and dry bean fields. By the time many folks pulled into their fields with the roller, they noticed those beans were starting to poke through and were at the hook stage and susceptible to breakage. This meant some non-stony fields went unrolled and, in those fields where stones require rolling, post-emergent rolling operations were carefully timed to hit V1 on a hot day when plants were flexible.

These cool, wet conditions were followed by high winds that caused severe sandblasting damage in some regions, leading to reseeding in some dry bean and soybean fields. Fields that weren't reseeded experienced some maturity delays but otherwise regrew and branched to fill gaps in the plant stand.

The combination of winds, cool temperatures and saturated soils created challenging conditions for timely herbicide applications. In some areas, applications made in windy conditions resulted in off-target movement of herbicides to neighbouring fields. Saturated soils prevented field access in portions of several fields, and cool temperatures meant weeds were growing slowly, limiting herbicide uptake and activity. Despite these weather conditions working against us, many were pleasantly surprised with how effective weed control worked out on their farms this year. The benefits of an effective pre-plant or pre-emergent herbicide program really shined.

Photo credit: Laura Schmidt

Pinto bean regrowth 11 days after major sandblasting damage.

For peas, prolonged saturated conditions in several fields resulted in rampant root rot infections by late June. This was especially apparent on fields with a history of peas. Aphanomyces root rot testing was encouraged to help plan for future rotations.

Pea leaf weevils, a relatively new insect pest in Manitoba, expanded their range again this year. Pea leaf weevils have now been confirmed as far east as Stonewall, Man. Thankfully, their populations appeared to decrease this year in the heaviest hit regions in the northwest.

In late June and early July as soybeans reached V2–V3, iron deficiency chlorosis (IDC) symptoms were spotted in many fields with crop yellowing visible from the road. Excess soil moisture, along with soil carbonates, soluble salts and nitrate levels contribute to IDC development. Most fields grew through IDC by V6, with symptoms persisting longer in susceptible varieties.

Following a storm that absolutely swamped the Red River Valley on Canada Day weekend, temperatures increased in mid-July and accumulated growing degree days caught up to normal for most of the province. Humid conditions persisted within the crop canopy, and diseases began to flourish in areas that received more moisture.

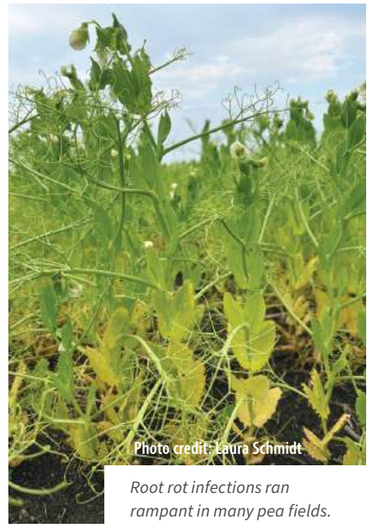


Photo credit: Laura Schmidt

Root rot infections ran rampant in many pea fields.

Photo credit: Laura Schmidt

Root rot infections ran rampant in many pea fields.

Mycosphaerella blight continued to be the most common foliar disease observed in field peas. White mould was found at low levels in most dry bean fields, even those that received timely fungicide applications. In soybeans, Phytophthora root rot symptoms were spotted in many headlands and low-lying areas of fields with soybean history.

continued on page 34

Photo credit: Laura Schmidt

High winds in early June caused sandblasting damage to many young crops.

continued from page 33

Photo credit: Laura Schmidt

White mould was found in many broadleaf crops this season, like these pinto beans.

Photo credit: Laura Schmidt

Excess soil moisture conditions at V2–V3 led to IDC popping up throughout many fields.

Photo credit: Laura Schmidt

White mould was found in many broadleaf crops this season, like these pinto beans.

In early to mid-August, foliar diseases were common in soybeans. At R3–R4 stages, septoria brown spot was the most common foliar disease (present in 97 per cent of fields), followed by bacterial blight (89 per cent of fields), downy mildew (25 per cent of fields) and frogeye leaf spot (20 per cent of fields).[1] At these early reproductive stages, stem diseases were low. Roots were collected at this time and submitted to Yong Min Kim and his team at Agriculture and Agri-Food Canada Brandon Research and Development Centre for laboratory analysis. Results are expected later this winter.

The same fields were surveyed again at R6–R7 stages and stem diseases picked up as plants continued to develop. The most common stem disease at this later timing was white mould, present in 34 per cent of soybean fields surveyed and infecting six per cent of plants within those fields, on average.[1] This was closely followed by northern stem canker, which was found in 32 per cent of fields, infecting five per cent of plants in those fields, on average.[1]

Insect pests remained low overall, with control occurring in a few sporadic fields across the province. The most common pulse insect concern this year was pea aphids, which exceeded thresholds and overwhelmed natural enemies like lady beetles, green lacewing larvae and hoverfly larvae, among others, in some areas. Also, pockets of above-threshold soybean aphids occurred in August. For the most part, natural enemies were able to keep these pests in check.

Root rot-stressed pea fields matured early, ripening in July. Pea harvest began in mid-August but was hampered by winds that caused severe lodging in several fields. Fields were harvested slowly, and yield and quality were overall positive with yield reports ranging from 30 to 85 bushels per acre.

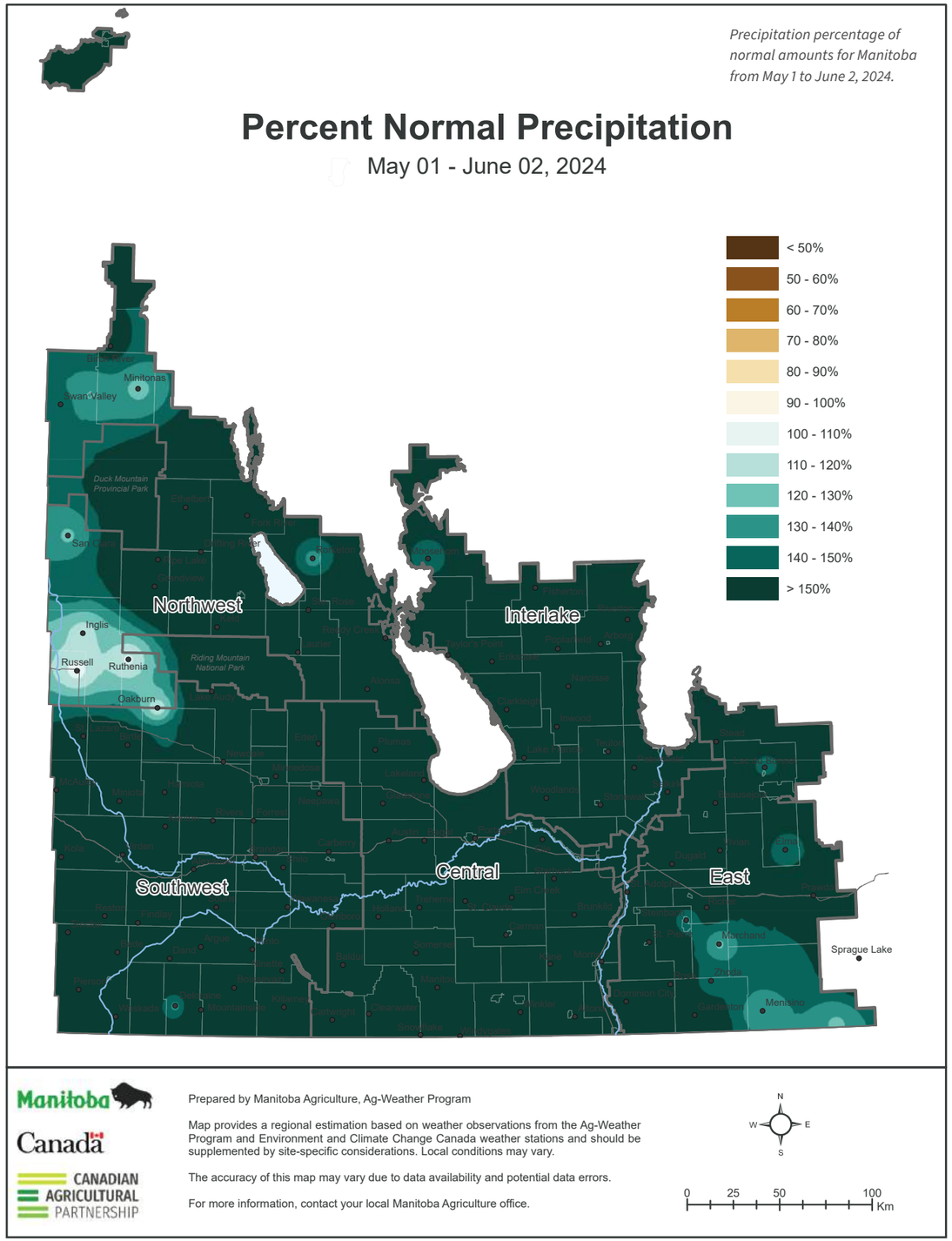
Dry bean harvest began in early September. Some fields that were undercut were caught in mid-September rains. Those windrows took a long time to dry out. Quality was affected with pintos darkening in the swath and sprouting in some fields. Standing crop quality remained positive, with harvest continuing in the third week of September. Yield reports have ranged from 1,700 to 3,000 pounds per acre.

Soybean harvest began in late September. Following mid-September rains, the weather turned hot, dry and windy and by the end of September, soybean crop moisture began to drop below 10 per cent. Yields have been quite positive, with reports ranging from 35 to 65 bushels per acre across Manitoba.

> With harvest reports continuing to roll in, there's a lot of positivity for these crops considering the many challenges they faced this season. To receive agronomy tips on managing some of these challenges, subscribe to *The Bean Report,* a bi-weekly agronomy newsletter distributed throughout the growing season, at manitobapulse.ca. ■

[1]The annual soybean disease survey is a collaborative effort between Manitoba Pulse & Soybean Growers, Manitoba Agriculture and Agriculture and Agri-Food Canada. In 2024, 65 soybean fields were surveyed for diseases. L. Schmidt, D. Lange, D. Kaminski, Y.M. Kim, A. Abdelmagid, J. McCombe-Theroux, T. Buss, E. Bargen, C. Morrison, N. Clouson, A. Farooq and V. Owusu. Soybean foliar and stem diseases in Manitoba in 2024. Canadian Plant Disease Survey, *Canadian Journal of Plant Pathology.*

Photo credit: Manitoba Agriculture



On-Farm Network: 2024 Season Update

Christopher Forsythe, On-Farm Network Agronomist, MPSG

IN 2024, MANITOBA Pulse & Soybean Growers' (MPSG) On-Farm Network (OFN) hosted 61 on-farm field-scale replicated trials with interested farmers (Figure 1). This makes the total number of all-time OFN trials 577 (2012–2014) (Figure 2).

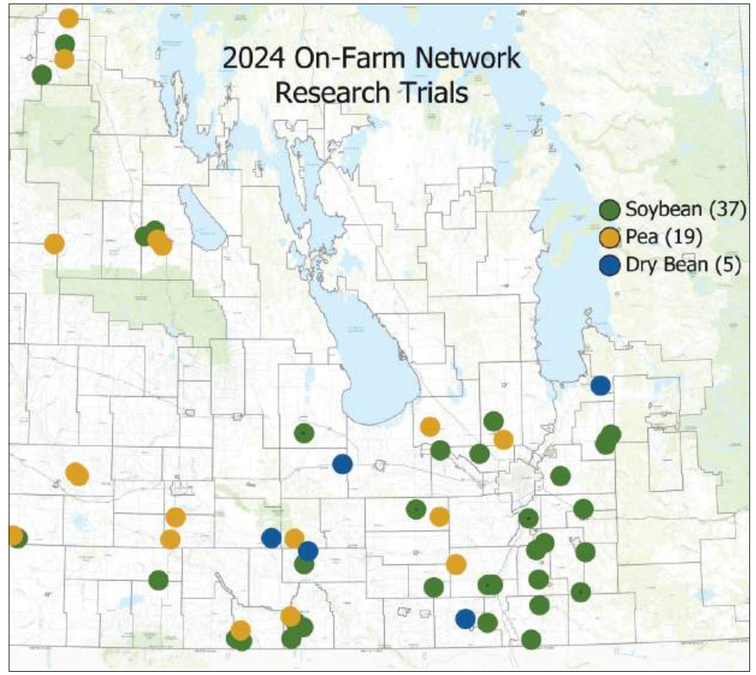
Our pre-seeding goal was to establish 67 trials, and we achieved 88 per cent of this goal. Due to challenging seeding conditions, some trials had to be cancelled. Three established trials were later cancelled due to crop failure and severe lodging at harvest.

Soybean Trial Type	Trials in 2024
Seeding Rates	12
Biological Products	8
Row Spacings	7
Fungicide Applications	4
Double vs Single Inoculant	3
Single vs No Inoculant	2
Iron Chelate Product	1
Total	37

2024 On-Farm Network team members taking plant counts at a pea seed treatment trial in the Rural Municipality of Louise.

Pea Trial Type	Trials in 2024
Fungicide Applications	8
Seeding Rates	7
Seeding Treatments	3
Double vs Single Inoculant	1
Total	19

Dry Bean Trial Type	Trials in 2024
Fungicide Applications	4
Nitrogen Rates	1
Total	5



Humid growing conditions meant fungicide trials were popular this year, with four soybean fungicide trials, eight pea fungicide trials and four dry bean fungicide trials across the province. At four of these trials, weather stations were also added to better capture environmental conditions influencing disease development.

We established the first iron chelate product trial since 2017 to reduce symptoms of soybean iron deficiency chlorosis (IDC). As part of this trial, we used a drone to gather multi-spectral imagery to monitor field variability of IDC throughout the season.

This year we added 11 new farmer cooperators, which speaks to the ongoing interest in on-farm research.

Full trial results are available in the OFN database at manitobapulse.ca/on-farm-network.

If you are interested in conducting a trial on your farm in 2025, please contact Chris Forsythe, OFN agronomist, at chris@manitobapulse.ca or (204) 751-0439. ■

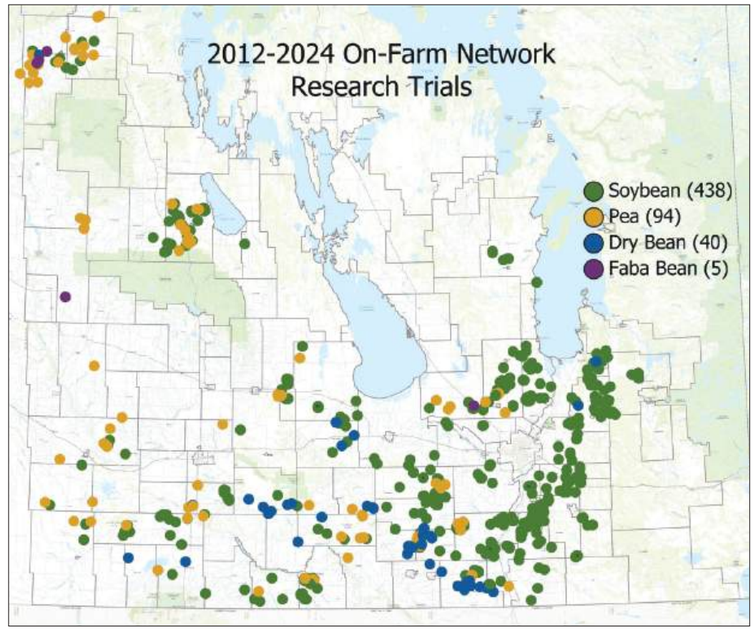


Figure 1, top: On-Farm Network Trials (2024).
Figure 2, bottom: On-Farm Network Trials (2012–2024).

The Plant Doctors of MPSG

Ahmed Abdelmagid and Yong Min Kim are AAFC plant pathologists who work to diagnose the diseases of MPSG crops

Ashley Robinson, Editor

WHILE AHMED ABDELMAGID and Yong Min Kim may have grown up thousands of kilometres apart and in different countries, they had similar entries into the world of plant pathology.

Kim grew up in South Korea and Abdelmagid was raised in Egypt. Both were influenced by their fathers to study plant pathology. Kim's father, a university professor himself, encouraged him to pursue pathology.

Abdelmagid's father told him that plant pathology would satisfy him because it's mix of agriculture and other sciences. "So, then I started to explore this idea and what plant pathology is," Abdelmagid says. "The interaction between plants and microbes and the impact they have on plants – I found it was very interesting."

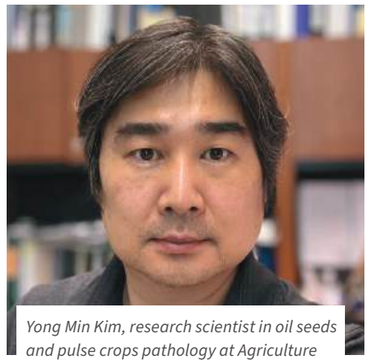
As the two pursued their studies, they furthered their studies in Canada, which eventually lead to their jobs with Agriculture and Agri-Food Canada (AAFC) – Abdelmagid as a research scientist in oilseeds and pulse crops pathology at AAFC Morden Research and Development Centre, and Kim as a research scientist in oilseeds and pulse crops pathology at AAFC Brandon Research and Development Centre. Through their positions they work closely with the staff at Manitoba Pulse & Soybean Growers (MPSG) to identify research projects that help MPSG farmers.

"I always try to be close to MPSG to know what are the real issues impacting farmers," Abdelmagid explains. "I always try to find the ideas that will have a direct impact on [dry beans, field peas and soybeans] for the farmers."

While it's important to work on long term research, it's also important to have research projects that are three to four years in length and can deliver results to farmers faster, Abdelmagid adds.

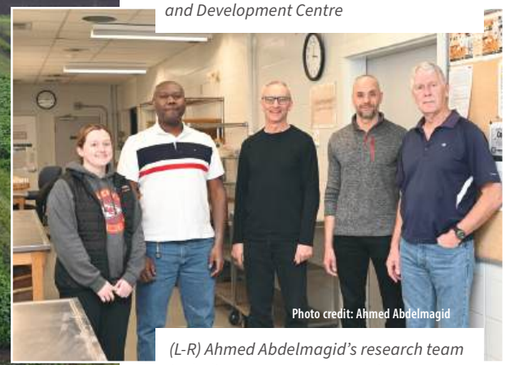
"As a plant pathologist one of our main goals is to understand the current status of the pathogen populations that we're dealing with. While also trying to keep an eye out for any new or emerging diseases," Kim says. "Our disease surveillance activities for various field crops in Manitoba help us identify root pathogens and any emerging threats early on. This is essential for sustainable crop production and maintaining good security."

Ahmed Abdelmagid, research scientist in oil seeds and pulse crops pathology at Agriculture and Agri-Food Canada Morden Research and Development Centre, speaks at the Dry Bean Tour on Aug. 7, 2024.



Yong Min Kim, research scientist in oil seeds and pulse crops pathology at Agriculture and Agri-Food Canada Brandon Research and Development Centre

Phytophthora field trial at Agriculture and Agri-Food Canada Brandon Research Development Centre with irrigation systems.



(L-R) Ahmed Abdelmagid's research team including Jenna Doherty, Alain Ngantcha, Waldo Penner, Abdelmagid and Dennis Stoesz.

Currently Abdelmagid and Kim are working on annual provincial disease surveys together. These surveys inspect for diseases found in soybeans, dry beans and field peas. The surveys are focused on identifying disease pathotypes. The two plant pathologists are working together on the soybean survey specifically. The soybean survey is looking at the incidences of stem diseases, previously they had focused on foliage and root diseases.

Kim is working on improved disease management strategies for pulse and oilseed crop production and the management of plant disease risk in diversified cropping systems. Abdelmagid is also working on diversifying crop rotations and is researching if growing fava beans in a field can reduce Aphanomyces incidence. ■

Aerial view of the Phytophthora field trial at Agriculture and Agri-Food Canada Brandon Research and Development Centre with irrigation systems.

Aerial view of the Phytophthora field trial at Agriculture and Agri-Food Canada Brandon Research and Development Centre, showing plants with symptoms of Phytophthora root and stem rot.

VIEW FROM THE FIELD

Laura Schmidt, Production Specialist – West, MPSG

WHITE-MOULD GALL MIDGE – NO MOULD, NO GOLD FOR THIS INSECT

We were no strangers to white mould this summer. Excess moisture early in the season carried through to a humid crop canopy in July. This humidity combined with dense soybean and dry bean canopies allowed white mould to flourish in several fields.

But that wasn't the only thing flourishing on those plants. If you inspected the fluffy mycelial growth a little closer, you may have seen small, orange larvae wiggling around. These larvae are the white-mould gall midge (*Karshomyia caulicola*). While some of their cousins in the gall midge family are crop pests, this species is feeding on the white mould fungi.

A similar looking soybean pest, the soybean gall midge, occurs in southern states. Thankfully, the soybean gall midge is not a pest known to occur in Manitoba.

Right: White-mould gall midge larvae feed on white mould fungi and are not crop pests.

INDEPENDENT ASSESSMENT OF IDC TOLERANCE IN SOYBEAN VARIETIES

Regional Variety Testing – 18 Years of IDC Trials

Jennifer McCombe-Théroux, Production Specialist – East, MPSG and Laura Schmidt, Production Specialist – West, MPSG

Soybeans consistently rating less than or equal to 2.3 are susceptible to iron deficiency chlorosis (IDC) (left) and soybeans rating more than or equal to 1.7 are tolerant to IDC (right).

Soybean varieties are grown in single rows and each variety is replicated three times.

GIVEN THE MOISTURE situation this June across much of agro-Manitoba, you most likely saw some yellowing soybeans. After the first trifoliate (V1), soybeans need to acidify the area around their rooting zone to take up iron. Excess calcium carbonates, soluble salts and high nitrate levels can all buffer this and limit iron uptake into the plant. When excess moisture conditions occur like we had this year during early vegetative stages (V1–V4), the root zone becomes diluted and further aggravates any existing iron deficiency chlorosis (IDC)-contributing factors. This results in tell-tale IDC symptoms, where new leaves yellow and veins remain green.

Soybean varieties vary in their ability to acidify their rooting zone and as a result, variety selection remains the greatest tool when it comes to managing IDC. Choosing IDC-tolerant soybean varieties is critical on fields where risk of IDC development is moderate to high (Table 1).

Manitoba Pulse & Soybean Growers (MPSG) supports IDC evaluation through the regional variety trials in collaboration with Manitoba Agriculture. The IDC trials started in 2006 and have been on-going for 18 years. Dennis Lange, pulse and soybean specialist with Manitoba Agriculture, oversees and rates the IDC trial, emphasizing the importance of the information it provides.

"The IDC trial gives producers an unbiased representation of how a variety responds to IDC. It is done under the worst-case scenario with respect to carbonates and salts. The purpose of the trials is to find the varieties that are tolerant and the varieties that are susceptible. That will help growers make decisions on growing certain varieties based on field conditions such as their carbonate and salt levels going forward," says Lange.

Each year, at an IDC-prone site near Winnipeg, Man. varieties are rated over a three-week period at V2–V3 growth stages. Three replicates of each variety are grown in single-row plots and rated weekly for a total of nine ratings of each line. Two check varieties are included for comparison, a tolerant line and a susceptible line. Visual IDC severity ratings are assigned from one to five in each plot – one equals healthy, green plants and five equals severe chlorosis and a stunted growing point.

Soybean varieties are grown in single lines and each variety is replicated three times.

Dennis Lange with Manitoba Agriculture, conducts iron deficiency chlorosis (IDC) ratings weekly during early vegetative stages.

The iron deficiency chlorosis (IDC)-susceptible check on July 17, 2024 showing leaf necrosis and stunted growth.

It takes a trained eye to conduct these ratings, with consistency being a key benefit of these trials. Lange started rating these trials in 2011 and has been doing them for the past 13 years. The same person doing each rating, year after year, provides consistent, independent results for farmers and industry.

Ratings fluctuate with the weather and soil moisture conditions. To account for this, each variety is rated over three years and averaged in MPSG's *Soybean Variety Guide* and *Seed Manitoba*.

When you flip open these publications, you'll find IDC ratings and groupings. Varieties consistently rating 1.7 or lower are considered tolerant to IDC and varieties rating 2.3 or greater are susceptible. Anything falling between (1.8–2.2) is semi-tolerant. In 2024, for herbicide-tolerant soybeans, 58 varieties were semi-tolerant, 13 were tolerant and four was susceptible to IDC. For conventional soybeans, 19 varieties were semi-tolerant and eight were susceptible to IDC.

Choosing a tolerant variety for IDC-prone fields can offer a large return on investment. Recently, these trials have been taken to yield by Kristen MacMillan, MPSG and University of Manitoba agronomist-in-residence, to explore the relationship between IDC score and soybean yield in Manitoba. Results have shown that when soybeans are grown in IDC-prone soils, each 0.1 unit increases IDC score results in an estimated yield loss of 1.5 to 2.8 bushels per acre on average. Within most fields IDC is quite variable. Often, less than a quarter of the field has the conditions for IDC to develop. This year, with excess soil moisture in June, IDC was much more widespread. Symptoms can show up as early as V1 but if plants recover by V5 or V6 stages, yield loss will be minimal. If symptoms persist beyond these stages, there will be more significant yield loss.

When looking to MPSG's *Soybean Variety Guide* and *Seed Manitoba* to select a soybean variety, take note of the various agronomic characteristics such as herbicide tolerance traits, days to maturity, IDC ratings, and PRR and SCN resistance to choose the features needed for your farm. ■

TABLE 1. Field Risk of IDC based on carbonate and soluble salt soil test levels.

SOLUBLE SALTS	CARBONATE LEVEL (%)		
(mmhos/cm)	0 to 2.5	2.6 to 5	>5.0
0 to 0.25	Low	Low	Moderate
0.26 to 0.50	Low	Moderate	High
0.50 to 1.0	Moderate	High	Very High
>1.0	High	Very High	Extreme

Adapted from Agvise Laboratories

Food-grade Soybean Production and Iron Deficiency Chlorosis

Christopher Forsythe, Agronomist – On-Farm Network, MPSG

TO CAPTURE GREATER profit, many Manitoban farmers grow food-grade soybean varieties destined for a global human food market. Food-grade soybeans are grown under identity preserved contracts most often with a prescribed non-genetically modified or conventional variety and are subject to higher traceability and quality standards. Farmers get a price premium on food-grade soybeans over commodity herbicide tolerant soybeans for the crush market. There's growing interest in diversifying into food-grade soybeans in Manitoba, but there are some important management considerations.

One consideration is iron deficiency chlorosis (IDC) where the plants develop interveinal chlorosis, which reduces yield. Soybeans grown in Manitoba can be prone to developing IDC due to our high calcium carbonate soils. This season's cool and wet weather made IDC symptoms even worse than normal. Often, soybeans will grow out of IDC but yield loss from IDC will occur if symptoms persist past the sixth trifoliate (V6) staging.

In addition to variety selection (see article on page 40), farmers can also reduce IDC by growing soybeans in wider row widths and increasing seeding rates, but these impacts are relatively minimal and can vary across different environments. Another IDC prevention tool available is an in-furrow chelated iron (Fe EDDHA) product that has shown to provide some protection.

This year, the On-Farm Network (OFN) was approached by a food-grade soybean farmer who has struggled with IDC and wanted to test an in-furrow chelated iron product. The OFN helped the farmer set up an on-farm replicated strip trial (see the photo below). The seed was a food-grade variety with an IDC rating of 2.1 (semi-tolerant). The field was in the high IDC risk category (soluble salts of 0.56 mmhos/cm and calcium carbonate of 5.6 per cent). A granular iron chelate product was applied to treated strips at a rate of four pounds per acre. The results showed that the iron chelate product didn't increase yield over the untreated strips. Iron chelate products have been shown to improve IDC symptoms through trials in North Dakota, however, this was our first OFN trial and additional research in Manitoba is required.

Ultimately, iron chelate products won't turn a susceptible variety into a tolerant variety, so the best strategy if your field has a history of IDC, is still going to be choosing the most tolerant variety available.

Soil testing to determine a field's overall IDC risk is good practice however, bear in mind IDC often only affects pockets of a field. Ensure you aren't overlooking these pockets during soil sampling. As shown in this year's OFN trial, there's no evidence the pockets can be successfully farmed separate from the rest of the field. As a result, the best advice may be to first avoid planting an IDC susceptible variety on a high-risk field, and where IDC is present but judged to be less of a threat, consider the above points to make an informed decision on pairing the variety with the field.

Food-grade soybeans present a fantastic diversifying opportunity, and we look forward to seeing more IDC tolerant varieties to compliment effective IDC management strategies.

> If you are interested in conducting an in-furrow iron chelate product trial in 2025 please get in touch with please contact Chris, On-Farm Network agronomist, at chris@manitobapulse.ca or (204) 751-0439. ■

2024 On-Farm Network soybean iron chelate product trial with treated and untreated strips on July 11, 2024.

Root Rot Solutions for Peas and Lentils

Cassandra Tkachuk, Research Project Manager, MPSG

EACH YEAR, MANITOBA Pulse & Soybean Growers (MPSG) leverages check-off dollars to invest in cutting-edge research projects that will bring value back to your farm.

One such project, which launched in 2024, is taking a multidisciplinary approach to control the pea and lentil root rot complex in Western Canada. It includes a combination of advances in genetics, breeding, genomics, agronomy and novel biotechnology applications. This impressive study is highly collaborative in both funding partners and researchers.

It's a five-year study with a total budget of about $4.2 million. This mammoth project is funded through the Saskatchewan government's Strategic Research Initiative with support from the Sustainable Canadian Agricultural Partnership ($2.5 million) and several industry partners ($1.7 million). Industry partners include Saskatchewan Pulse Growers, Alberta Pulse Growers, MPSG, Western Grains Research Foundation and Results Driven Agriculture Research.

MPSG's contribution is just over $35,000. Though a relatively low investment, this is reflective of much of the work taking place in Saskatchewan. MPSG's support for this project will give us access to all the results, which will benefit the Manitoba pea and lentil industries. This shows the true power of collaboration.

Then there's the sheer importance of what they are studying. Root rot is the number one concern of pea and lentil growers across Western Canada. Some farmers have even removed these crops from their rotations in certain areas due to its damaging impact on their bottom lines.

The work will be done by project lead, Sabine Banniza of University of Saskatchewan's Crop Development Centre, along with a huge team of 15 fellow researchers across Saskatchewan.

ACCELERATE DISCOVERY OF ROOT ROT SOLUTIONS FOR PEAS AND LENTILS

Project Objectives:

- Optimizing crop rotations to mitigate pea and lentil root rot diseases
- Integrating pest management using biocontrol, natural products and tolerant lines
- Implementing biocontrol of Aphanomyces root rot using bacteria isolated from soil
- Characterizing the diversity and abundance of Aphanomyces and Fusarium populations in Saskatchewan
- Conducting molecular and conventional breeding for improved root rot resistance and rapid variety release in peas and lentils
- Utilizing gene editing in lentils
- Expanding genomic resources for Western Canadian Aphanomyces
- Applying RNAi for control of Aphanomyces
- Investigating the effect of secondary metabolites and polyphenols within pea and lentil roots on root rot
- Studying host-pathogen interactions with *Fusarium avenaceum* toxin knock-out isolates
- Exploring endophytic control of root rot in lentils using the Medicago Root Infection Model


Photo credit: Laura Schmidt

Right: Pea root rot in a western Manitoba field in July 2024.

RNA interference (RNAi) for in-field management of root rot is one of the cutting-edge aspects of this study. This method involves directly targeting root rot pathogens, in this case *Aphanomyces euteiches*, at the genetic level to interfere with their ability to infect and spread in the plants.

Will this project place Canada as a global leader in pulse root rot research? It will be one to watch over the next five years. ■

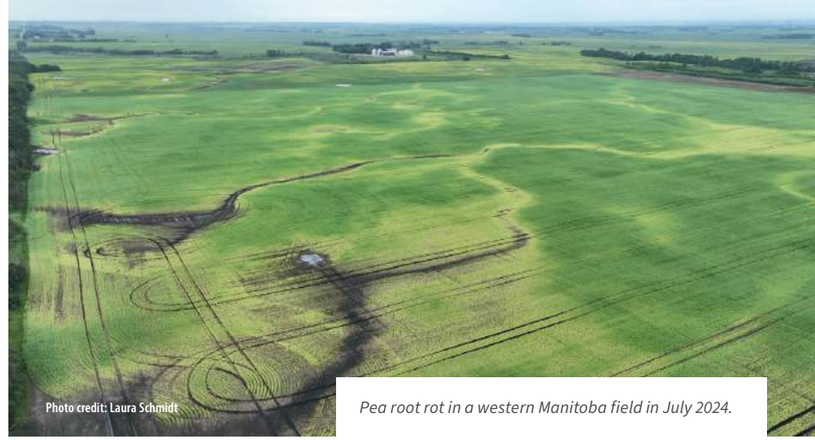


Photo credit: Laura Schmidt

Pea root rot in a western Manitoba field in July 2024.

VIEW FROM THE FIELD

Christopher Forsythe, Agronomist – On-Farm Network, MPSG

ON-FARM SCOUTING – MANAGEMENT CHALLENGES WITH SOYBEAN APHIDS

In August, while visiting an On-Farm Network (OFN) soybean trial in southeast Manitoba, Ashlyn Kropp, OFN field assistant, found the field had a high population of soybean aphids. After scouting, she estimated the aphids were above the economic threshold of 250 aphids per plant and within the susceptible R5 stage (beginning seed).

Thankfully, the farmer was aware and was already scouting his field. An insecticide application was deemed warranted as the population continued to increase and few natural enemies were present. The OFN team went back to the field four days post-application to assess product efficacy and found an alarming number of aphids still alive on the plants and still above threshold.

This brought up the question – what happened? We ruled out all other potential causes of insecticide failure and confirmed that the product used was a pyrethroid insecticide. One of the possible reasons for the high leftover population considered was pyrethroid-resistant aphids. Pyrethroid-resistant soybean aphids, which blow in from areas further south, were first confirmed in parts of Manitoba in 2017.

We decided to investigate further and contacted John Gavloski, Manitoba Agriculture entomologist, for assistance. He explained that a pyrethroid resistance field test kit could be brought in from another province, and after it arrived, he offered to carry out the resistance test.

Gavloski reported that the results showed "hints of possible resistance" and that the field test kit could be refined.

High populations of soybean aphid don't occur every year, but if insecticide control is necessary, the first pass is recommended to be a product from a **non-pyrethroid chemical** group, if practical and available (see Table 1 for options). Or even better, use one of the selective insecticides (e.g. Sefina, Group 9D) that do minimal harm to natural enemies of aphids and other insects.'' OR ''Or even better, use one of the selective insecticides, for example Sefina (Group 9D), that do minimal harm to natural enemies of aphids and other insects Remember to consult the *Guide to Field Crop Protection* and the product label for more information.

TABLE 1. Foliar Insecticides Registered For Control Of Soybean Aphids

TRADE NAME (ACTIVE INGREDIENT)	CHEMICAL GROUP
Sefina (afidopyropen)*	9D Pyropenes
Movento (spirotetramat)*	23 Tetronic and tetramic acid derivatives
Sivanto Prime (flupyradifurone)*	4D Butenolides
Matador/Silencer/ Labamba/Zivata (lambda-cyhalothrin)	3A Pyrethroids
Voliam Xpress (lambda-cyhalothrin + chlorantraniliprole)	3A, 28 Pyrethroids + diamides
Concept (deltamethrin + imidacloprid)	3A, 4A Pyrethroids + Neonicotinoids
Lagon/Cygon (dimethoate)	1B Organophosphates

*Not harmful to many beneficial insects


Photo credit: Ashlyn Kropp


Photo credit: Ashlyn Kropp

Right: Soybean aphids before insecticide application.
Left: Living soybean aphids four days after insecticide application.

Manitoba Pulse & Soybean Buyer List – September 2024

The Canada Grain Act requires elevators and grain dealers to have a Canadian Grain Commission (CGC) license and post security to cover their liabilities (what they owe) to farmers. Grain dealers and operators of primary, terminal, and process elevators in western Canada are licensed by the CGC. Seed cleaning plants, which do not purchase grain, and feed mills do not have to be licensed.

It is the responsibility of farmers to satisfy themselves that any company they deal with is financially sound. Questions regarding licencing and security should be directed to the CGC at 800-853-6705 or 204-983-2770.

MPSG's pulse crop buyers list contains the names of companies that have registered with MPSG and are actively purchasing pulse crops in Manitoba. The word registered does not imply endorsement. The complete list is available on our website manitobapulse.ca.

COMPANY	EDIBLE BEANS	FABA BEANS	LENTILS	PEAS	SOYBEANS	PHONE	LOCATION	CGC REGULATED
Adroit Overseas Enterprises Ltd.	√	√	√	√	√	604-930-4855	Surrey, BC	√
Agassiz Global Trading	√			√	√	204-745-6655	Homewood, MB	
Alliance Pulse Processors Inc. dba AGT Foods Canada	√	√	√	√	√	306-525-4490	Regina, SK	√
All Commodities (AC) Trading Ltd.			√	√		204-339-8001	Winnipeg, MB	√
Avena Foods Ltd. dba Best Cooking Pulses Inc.			√	√		306-586-7111	Rowatt, SK	√
Bayer - Crop Science Monsanto Company					√	314-694-5764	St. Louis, MO	
Belle Pulses Ltd.		√		√		306-423-5202	Bellevue, SK	√
Besco Grain Ltd.		√		√		204-745-3662	Carman, MB	√
Brett-Young Seeds Ltd.				√	√	204-478-2204	Winnipeg, MB	
Border Bean International Inc	√					204-714-1233	Altona, MB	√
Broadgrain Commodities Inc.	√	√	√	√	√	416-504-0070	Toronto, ON	√
C.B. Constantini Ltd.	√	√	√	√		604-669-1212	Vancouver, BC	√
Cargill Ltd.					√	204-947-0141	Winnipeg, MB	√
Columbia Grain Inc. (CGI) (Walhalla Bean Co.)	√					701-549-3721	Walhalla, ND	
Columbia Seed Co. Ltd	√	√		√		306-525-2295	Regina, SK	
Delmar Commodities Ltd.	√		√	√	√	204-331-3696	Winkler, MB	√
ETG Commodities	√	√	√	√	√	416-900-4148	Mississauga, ON	√
G3 Canada Limited				√	√	204-983-0239	Winnipeg, MB	√
Gavilon Grain LLC					√	816-584-2210	Omaha, NE	√
Grain St Laurent	√	√	√	√	√	514-871-2037	Montreal, QC	√
Hensall District Co-operative Inc.	√			√		204-750-0529	Winnipeg, MB	√
Horizon Agro Inc.					√	204-746-2026	Morris, MB	√
Kalshea Commodities Inc.			√		√	204-488-0251	Winnipeg, MB	√
Knight Seeds			√		√	204-764-2450	Hamiota, MB	
Lighhouse Commodities, LLC					√	701-516-8024	Bismarck, ND	√
Linear Grain Inc.	√	√		√	√	204-745-6747	Carman, MB	√
Lyft Commodity Trading Ltd.	√	√	√	√	√	604-355-4275	Vancouver, BC	√
McDougall Acres Ltd.	√	√	√	√	√	306-693-3649	Moose Jaw, SK	
Natural Proteins Inc.					√	204-355-5040	Blumenort, MB	
Nutri-Pea				√		204-239-5998	Portage la Prairie, MB	
NuVision Commodities Inc.	√			√	√	204-758-3401	St. Jean Baptiste, MB	
Parrish & Heimbecker Ltd.				√	√	204-987-4329	Winnipeg, MB	√
Paterson Grain	√			√	√	204-956-2090	Winnipeg, MB	√
Prairie Fava Ltd.		√				204-721-4715	Glenboro, MB	√
Prairie Premium Products Inc.				√		204-252-2940	Portage la Prairie, MB	√
Providence Grain Group			√	√	√	780-997-0211	Fort Saskatchewan, AB	√
PS International, LLC dba Seaboard Special Crops		√	√	√		306-565-3934	Regina, SK	√
Richardson International Ltd.			√	√		204-934-5652	Winnipeg, MB	√
• Richardson Pioneer Limited				√	√	204-934-5627	Winnipeg, MB	√
• Tri Lake Agri Limited				√	√	204-934-5652	Winnipeg, MB	√
Roquette Canada Ltd.				√		204-428-3722	Portage la Prairie, MB	√
Rudy Agro Ltd.	√		√	√		306-867-8667	Outlook, SK	√
Scoular Canada Ltd.	√	√	√	√		403-349-5077	Calgary, AB	√
Seed-Ex Inc.				√	√	204-737-2000	Letellier, MB	√
Semences Prograin Inc.					√	450-469-5744	Saint-Césaire, QC	√
Sevita International					√	613-989-3000	Inkerman, ON	√
Shafer Commodities Inc.	√	√	√	√	√	204-822-6275	Morden, MB	√
Simpson Seeds Inc.			√	√		306-693-2132	Moose Jaw, SK	√
Southland Pulse Inc.			√	√		306-634-8008	Estevan, SK	√
Sunnydale Foods Inc		√		√		306-986-6180	Saskatoon, SK	
Sunrise Foods International Inc.					√	306-657-4541	Saskatoon, SK	√
SureSource Commodities, LLC				√		866-697-5960	Petrolia, ON	√
The Andersons Inc.			√	√		419-891-6464	Maumee, OH	√
Vandaele Seeds Ltd.		√		√		204-665-2384	Medora, MB	√
Vanderveen Commodity Services Ltd.				√	√	204-745-6444	Carman, MB	√
Viterra Inc.	√		√	√	√	Contact your local Viterra Sales Rep		√
Viterra USA Grain, LLC					√	816-584-2210	Omaha, NE	√
Western Harvest Bean ULC	√					204-515-7331	Winnipeg, MB	√
Wilbur Ellis Company of Canada Ltd.	√	√	√	√		403-328-3311	Lethbridge County, AB	√
XPT Grain Inc.	√			√		306-525-0205	Regina, SK	√

Great Tastes of Manitoba – 35 Years of Sharing Manitoba Food and Farms

Kate Menold, Contract Communications Coordinator, MPSG and Donalee Jones, Producer, Great Tastes of Manitoba

GREAT TASTES OF MANITOBA recently launched a milestone 35th anniversary season. The television series and digital brand has been entertaining and educating Manitobans about locally grown agricultural commodities since the early 1990s. Manitoba Pulse & Soybean Growers (MPSG) has been involved in the show since nearly the beginning.

Great Tastes, currently airing on CTV, is the longest running, locally produced television series in Manitoba. The series was conceptualized by a group of marketing representatives from various producer groups and was originally coordinated by Food Manitoba and Manitoba Agriculture, Food and Rural Development. The goal was to encourage Manitobans to purchase and cook with Manitoba grown ingredients. What started on Videon Cable grew to become Manitoba's most-watched cooking series airing on prime-time broadcast television. In total, the series has provided more than 20 farmer-directed commodity organizations an opportunity to improve consumer awareness about their products.

The series has evolved over the years, featuring many different hosts including Hal Anderson, Joey Gregorash, Iris Walsh, Jim Ingebrigtsen and Ace Burpee, and is currently hosted by popular Winnipeg media personality, Dez Daniels.

In celebration of their 20th season *Great Tastes* published a cookbook that went on to become a best-seller. In celebration of their 30th anniversary season in 2018, producers decided it was time to take the show on the road. The goal was to give Manitobans an exclusive behind-the-scenes look at the farms and farm families behind growing the locally produced ingredients being cooked with on the show. Since then, every episode of *Great Tastes* includes a story direct from Manitoba's agricultural community.

The 35th anniversary season will connect consumers with our province's nutritious, affordable ingredients and the passionate people who produce them. For this monumental season, MPSG contracted food expert, Getty Stewart, professional home economist, to create recipes and showcase them on air. Stewart does such a great job creating and sharing simple, nutritious recipes, giving a few key tips along the way. *Great Tastes* producers have also partnered with Manitoba Ag Days to create a series of documentaries about the community of passionate people who work in Manitoba's agricultural and agri-food sector called *Produced on the Prairies.*

"In past seasons, we have primarily showcased folks who work in food production – livestock and grain farmers – from across the province. We've compiled over 70 stories about farms and agricultural communities and everyone we've met has been so welcoming and genuine in their passion for what they do" says *Great Tastes* Senior Producer Donalee Jones. "Sharing the stories, not only of the food produced on the prairies but of all the ways agriculture impacts the life of an average Manitoban, is a great opportunity." Viewers will get an exclusive behind-the-scenes look at a world of agriculture that goes beyond the farm gate.

Photo credit: Great Tastes of Manitoba

Behind the scenes photograph of Getty Stewart filming the 35th season of Great Tastes of Manitoba.

The series also has a fresh look for season 35 and the brand has expanded beyond the Saturday evening television broadcast. Full episodes of *Great Tastes* can also be viewed across Canada on The Rural Channel, and content is released all week long on the *Great Tastes* social media channels.

"YouTube viewing is much more accessible now than it was even five years ago," explains Jones. "It's not just for short-format videos anymore. Streaming long-form content on YouTube and other platforms is much more common now thanks to the popularity of smart TVs." This presents an opportunity to inspire more Manitobans to cook with local ingredients and provide a closer connection between them and the food on their plates.

Greattastesmb.ca is home to over 600 recipes and 70 stories about the people who work in agriculture that home cooks can access anytime. Full episodes of the show going all the way back to season 21 can be streamed on the website as well. Ninety-one per cent of *Great Tastes* viewers have tried a recipe from the show at home and 99 per cent say they were happy with the results.

The series is produced by Frank Digital with funding provided by the Government of Canada and Manitoba Agriculture through the Sustainable Canadian Agricultural Partnership and Manitoba's farmers and ranchers through their non-profit industry associations: Manitoba Pulse & Soybean Growers, Manitoba Beef Producers, Hello Canola, Manitoba Chicken, Manitoba Crop Alliance, Manitoba Pork and Manitoba Turkey Producers. ■

Photo credit: Great Tastes of Manitoba

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>
> DONALEE JONES

Behind the scenes photograph of Getty Stewart filming the 35th season of Great Tastes of Manitoba.

Season 35 of *Great Tastes*
airs on CTV Winnipeg, Saturday's at 6:30 p.m. CST. Full episodes of *Great Tastes* can be streamed on demand at greattastesmb.ca or on the @GreatTastesTV YouTube channel. To watch MPSG sponsored episodes, visit the *Great Tastes* website or tune in on May 29 and June 5, 2025. You can follow along with exclusive behind-the-scenes content, recipe tips, meal plans and more at @GreatTastesMB on Facebook and Instagram.

RECIPE **CORNER**

Blueberry Bean Lemon Loaf

Courtesy of MPSG, GETTYSTEWART.COM
AND GREAT TASTES OF MANITOBA

SERVINGS: 1 loaf | PREP TIME: 20 min | COOK TIME: 55 to 65 min
TOTAL TIME: 1 hour 25 min

Ingredients

View the recipe online:

1 cup white beans
¼ cup water
⅓ cup butter, softened
1 Tbsp lemon zest
1 cup granulated sugar
2 eggs
1 ½ tsp vanilla extract
2 Tbsp lemon juice
1 ¾ cups all-purpose flour
1 tsp baking powder
½ tsp baking soda
½ tsp salt
⅓ cup milk
1 cup frozen blueberries

Lemon Glaze
1 cup powdered sugar
2 Tbsp milk
1 Tbsp lemon juice

Method

1. Preheat oven to 350°F (180°C). Grease and flour 9×5 inch loaf pan or line with parchment paper.
2. Make white bean puree. Combine 1 cup white beans and ¼ cup water in blender or food processor and purée until smooth, scraping sides as needed.
3. In large bowl, beat butter until soft. Massage lemon zest into sugar and add to butter. Cream together until light and fluffy. Beat in bean puree, mix well. Beat in eggs, vanilla and lemon juice.
4. In separate bowl, mix flour, baking powder, baking soda and salt.
5. Use ½ Tbsp of flour mix to toss with frozen blueberries.
6. Add dry ingredients and milk to creamed butter and beans in three alternating parts, starting and ending with dry ingredients. Mix until just combined.
7. Gently fold in blueberries. Don't over mix.
8. Pour batter into prepared loaf pan.
9. Bake for 60 to 65 minutes until golden and toothpick inserted into centre comes out clean. Do not underbake.
10. Cool in pan on wire rack for 10 minutes before transferring to wire rack to cool completely before glazing.
11. To glaze, mix powdered sugar, milk and lemon juice until smooth. Drizzle over cooled loaf.

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RECIPE **CORNER**

Pork and Two Bean Stir Fry

Courtesy of MPSG, GETTYSTEWART.COM
AND GREAT TASTES OF MANITOBA

SERVINGS: 4 | PREP TIME: 10 min | COOK TIME: 15 min
TOTAL TIME: 25 min

Ingredients

View the recipe online:

1 tsp (5 mL) corn starch
1 tsp (5 mL) water
1 lb (450g) ground pork
1 ½ cups frozen green beans, cut to 1-inch pieces
1 Tbsp canola oil
3 cloves garlic, minced
2 Tbsp ginger, grated
1 can (19 oz/540 mL) red kidney beans,drained and rinsed
1 red bell pepper, cut to 1½-inch pieces
1 Tbsp sesame seeds (garnish)
1 Tbsp chopped green onions (garnish)
cooked rice, for serving

Sauce

¼ cup soy sauce
1 Tbsp cornstarch
1 Tbsp brown sugar
½ cup soup stock
1 Tbsp hoisin sauce
1 Tbsp rice vinegar
1 Tbsp sesame oil
½ tsp hot pepper flakes

Method

1. Heat a large skillet or wok over medium-high heat. Add ground pork. Break apart and cook until browned and cooked through, about five to seven minutes. Remove and set aside.
2. Add frozen green beans and cook for three to five minutes until starting to blister.
3. Add canola oil and minced garlic and ginger and stir fry for another one to two minutes until fragrant.
4. Stir in drained kidney beans, bell pepper and cooked pork. Stir to combine well and heat through.
5. In a small bowl, whisk together soy sauce and cornstarch until dissolved. Add brown sugar, beef stock, hoisin sauce, rice vinegar, sesame oil and hot pepper flakes.
6. Pour sauce over pork and beans, stirring well to coat everything evenly. Cook for an additional two to three minutes until the sauce thickens and coats the ingredients.
7. Taste and adjust seasoning as needed.
8. Serve the pork and bean stir fry hot over cooked rice.

Substitutions: Hoisin Sauce – replace the salty/sweet/tangy flavour of hoisin sauce by using more soy sauce and sugar or use a sweet and sour sauce. Rice Vinegar – use lemon or lime juice.

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