the BarleyBin

FALL 2026 · VOL 11



Building for the Future

Rethinking Public Breeding in Canada

INSIDE: EXPORT SALES REPORTING + ASSESSING HAIL DAMAGE + BARLEY WATER... *and more*

TABLE OF CONTENTS





SaskBarley Update

Message from the Chair
& Call for Resolutions for SaskBarley's 2027 AGM 3

Cover Story

Building for the Future: Rethinking Public Breeding in Canada 4

Advocacy

Levelling the Playing Field: Export Sales Reporting in Canada. 8

Market Development

What Global Customers Value in Canadian Barley 10

Research

Unlocking the Potential of Barley for Swine Nutrition 12

From Protein to Pests What Your Levy Dollars are Working On. 15

Agronomy

Hail of a Time 18

Feed

The Lowdown on DON 20

Alternative Uses

Flavour, Fibre and Fun: Barley Brings It All 24

Rhubarb Crumble with Strawberries & Ginger. 26

theBarleyBin

Editor-in-Chief
Serra McSymytz

Creative Director
Garret Phenix

Contributing Writers
Geoff Geddes
Mitchell Japp
Jill McDonald
Serra McSymytz
Delaney Seiferling

Publisher
SaskBarley

Printing & Distribution
JBeck Commercial Print

Cover Photo: Barley research plots at the Agriculture & Agri-Food Canada research station at Melfort, SK.

SaskBarley
DEVELOPMENT COMMISSION

Executive Director
Jillian McDonald
Tel. 306-370-7237
jmcdonald@saskbarley.com

General Inquiries
Tel. 306-653-7232
info@saskbarley.com

225-415 Wellman Cres
Saskatoon, SK S7T 0J1

SaskBarley

Board of Directors

Cody Glenn (Chair)
Tel. 306-293-7525
cglenn@saskbarley.com

Chad Ferguson (Vice-Chair)
Tel. 306-874-8168
cferguson@saskbarley.com

Maurice Berry
Tel. 306-452-7504
mberry@saskbarley.com

Zenneth Faye
Tel. 306-272-7080
zfaye@saskbarley.com

Bernie McClean
Tel. 306-342-7597
bmcclean@saskbarley.com

Gordon Moellenbeck
Tel. 306-287-7799
gmoellenbeck@saskbarley.com

Looking for information on disease, pest and weed management?

Check out our library of barley production resources at BarleyBin.ca or subscribe to our monthly e-newsletter!

theBarleyBin

As we look back on the 2026 growing season, "delayed" is the word most Saskatchewan barley producers would use to sum it up.



Unfortunately, September rain meant harvest stretched on longer than most of us would have liked, with many producers watching moisture readings as closely as yield monitors. It wasn't the finish we planned for, and it's a reminder of the disease and quality issues that come with a wet year – you'll learn more about our fusarium focused research, vomitoxin and hail damage recovery later in this issue.

Despite this year's wet finish, 2025/26 was a strong demand year - buyers wanted barley and Saskatchewan's record crop was there to meet them. That kind of demand is good news for our bottom lines, but it's also a reminder of why market intelligence matters. You'll find more on that in this issue's advocacy update, where SaskBarley and our SaskCrops partners continue pushing Ottawa for the same export sales data our competitors in the EU and America already have access to (page 8).

Beyond this year's weather and markets, there's a bigger conversation happening about the future of barley research itself. AAFC's move to close the Lacombe, Indian Head and Scott research farms rattled a lot of us, and rightfully so – these sites have shaped the varieties in our fields today. I'm glad to highlight some encouraging news: in July, federal and provincial agriculture ministers signed a Memorandum of Understanding committing to explore ways to keep both Saskatchewan farms operating. And the Canadian Barley Research Coalition (CBRC) has partnered with its wheat counterpart to deliver a new vision for the variety development pipeline in Canada. These are important first steps, ones SaskBarley has pushed hard to see, but it's a starting point, not a finish line. You'll find more on the impacts of Ag Canada's erosion of funding from the breeding system and what happens next, in this issue's cover story (page 4).

None of this work happens without you. The levy dollars you invest are what let SaskBarley show up at these tables, whether that's Ottawa, Regina, or the discussions shaping the future of our research farms. I hope to see many of you in Saskatoon this January at the Saskatchewan Crops Forum and our Annual General Meeting.

Cody Glenn, *Chair, SaskBarley*

Call for Resolutions
SaskBarley's Annual General Meeting

January 13, 2027
at 12:30 PM

SaskBarley is now accepting resolutions for our Annual General Meeting, held in conjunction with the Saskatchewan Crops Forum (January 12–13) at the Western Development Museum in Saskatoon. Hear the latest on SaskBarley's research, advocacy and market development priorities, and have your say in shaping the year ahead.

Resolutions provide a vital platform for registered barley producers to influence the future direction of our organization and the barley sector. If you have grown and sold barley in the province in the previous 2 crop years you are eligible to submit.

Submission Guidelines

- **Resolutions must be submitted in writing to info@saskbarley.com.**

  OR MAILED TO:

  The Saskatchewan Barley Development Commission 225 – 415 Wellman Cres. Saskatoon, SK S7T 0J1

The deadline for submission is January 8, 2027.

All proposed resolutions will be reviewed in advance of the AGM to ensure clarity and alignment with SaskBarley's mandate. Approved resolutions will be presented for discussion and voting during the AGM.

Building for the Future

Rethinking Public Breeding in Canada

Producer-led organizations are charting a new path for variety development as federal support erodes.

By Delaney Seiferling | *Freelance Writer*



> *"Most farmers can grow a good crop – they know how to fertilize, how to use technology. But the big gains come in variety development."*
>
> **Scott Jespersen**
> Spruce Grove, AB

Scott Jesperson (middle), Chair of Alberta Grains farms near Spruce Grove, Alberta. Pictured above with his father Merrill (left) and son Ryan (right).



SaskBarley's Director of Research & Extension, Mitchell Japp walks the plots at the AAFC station in Scott, SK. Check out page 8 for an update on the future of the Scott & Indian Head research farms.

There are many factors that can affect a farm's profitability, but barley farmer Scott Jespersen says the biggest one on his farm is something that's often overlooked: better varieties.

"Most farmers can grow a good crop – they know how to fertilize, how to use technology. But the big gains come in variety development," says Jespersen, who farms near Spruce Grove, AB.

"In my opinion, it's the number one thing that's going to contribute to profitability on our farm."

Recent research backs up Jespersen's assessment.

A 2021 study concluded that, from 1995 to 2020, every $1 invested in barley breeding generated about $26 in farmer benefits – an estimated $1.36 billion in gains from $51.5 million invested.

But despite these strong, proven returns, the future of public crop breeding programs in AAFC is unclear. Federal support for these programs has been quietly eroding for years, with farmer groups filling in the gaps. More concerning is that there are currently no plans in place to ensure these breeding programs can continue to operate long term.

Compounding the problem is that most barley farmers aren't aware of just how big of an issue this is, says Jespersen, who is also the Chair of Alberta Grains and the Canadian Barley Research Coalition (CBRC).

To date, farmers have regularly had access to new and improved barley varieties, without having to consider the complex and expensive breeding system behind them, he says.

"As a producer, we're so focused on our own operation, we don't see the macro part of what's happening behind the scenes in the industry, and farmers are just not engaged."

But Jespersen says if a new solution isn't found quickly, the breeding pipeline just might run out, leaving farmers without one of the most important – if not the most important – tools in the toolbox.

"It's like a garden hose. The water's running, but you turn the tap off … in 10 years from now, there aren't going to be any new varieties."

"It's like a garden hose. The water's running, but you turn the tap off … in 10 years from now, there aren't going to be any new varieties."

Scott Jespersen
Spruce Grove, AB

How did we get here?

Federally funded breeding programs in AAFC were first established in the late 19th century, and for more than 100 years after that the Canadian government provided the scientists, infrastructure and long-term funding to develop crops suited to Canadian growing conditions.

Beginning in the 1990s, farm groups also started contributing to public breeding programs through farmer levies. But while this support was initially intended to supplement and leverage public investment, it increasingly became more important as federal support declined.

In recent decades, diminishing support also translated into downsizing of staff and infrastructure, resulting in the closure of key research sites at Scott and Indian Head, in Saskatchewan, and Lacombe, in Alberta.

These losses are as equally concerning as the decline in funds, says Jill McDonald, Executive Director for SaskBarley.

"Breeders have to access regional variety testing and disease nurseries. We need to know that one variety can be adapted across Alberta and Saskatchewan, and hopefully parts of Manitoba. We cannot have varieties that are only specific to small regions within Western Canada because our export system can only handle having maybe two to three dominant [malt] barley varieties."



Barley research plots at the Agriculture & Agri-Food Canada Research Station at Scott, SK.

CONT. FROM PREVIOUS PAGE

In light of all these concerns, farmer groups have increasingly stepped up their support. In 2020, SaskBarley, Alberta Grains and Manitoba Crop Alliance created the Canadian Barley Research Coalition (CBRC) to coordinate farmer investments in core barley breeding activities.

In more recent years, provincial barley organizations committed over $7 million to core barley breeding programs at Agriculture and Agri-Food Canada (AAFC) and the University of Saskatchewan's Crop Development Centre to ensure programs can continue running until 2028.

And in early September, the CBRC announced it had joined with its wheat-industry counterpart group to formally work with AAFC and industry to create a new vision for Canada's wheat and barley breeding system.

The industry needs to find a long-term solution, says McDonald, including a new model for how the plant breeding system is delivered and funded. Even with action now, some of the infrastructure lost to date cannot be fully restored – a situation that many feel could have been avoided had industry been given more clear communications around the future of public breeding programs.

"There are now significant gaps in the barley breeding system due to the site closures. We don't even know yet where some of the work is actually going to happen in the future."

Why is federal support declining?

The funding model behind public barley breeding has become mathematically unsustainable, says Francois Eudes, Director of Research, Development and Technology of the Science and Technology Branch at AAFC.

This is because AAFC's core funding envelope has remained largely flat while inflation steadily erodes its purchasing power, he says. Even at just 2 per cent inflation per year, the value of a fixed budget falls by roughly 35 per cent over 15 years – about the maximum timeline that's required to develop a new barley variety, from initial crosses to release.

"The current model is going to break," he says.

He says these pressures are not only specific to barley, now extending across more than 30 crop species supported by AAFC and virtually every science program within the department.

Furthermore, he says that simply adding more farmer money into the existing federal structure will not solve its deeper structural problems, as the department doesn't have the same flexibility or agility that a private company, or even a university organization would.

"What we do is quite expensive the way we do it," he says. "We get to a point where relying so extensively on AAFC to do all the science and deliver this commercial product is not sustainable. That's why we need collectively to create something new."

Working towards a collective solution

All parties agree that the current system isn't sustainable.

McDonald says one thing that has also become clear is that any future model would need to give farmers direct control over the direction and stability of Canada's barley breeding programs.

She says partnership with AAFC will continue to be critical going forward, however, as any future model would also still rely on foundational public infrastructure, including germplasm, disease nurseries and regional testing – a point on which Eudes agrees. He



"We get to a point where relying so extensively on AAFC to do all the science and deliver this commercial product is not sustainable. That's why we need collectively to create something new."

Francois Eudes
Director of Research, Development and Technology of the Science and Technology Branch at AAFC

"I've never seen anything like it. Everyone is working with a shared goal. It's very much a collaborative effort amongst funding groups to address the erosion that we have seen within Ag Canada."

Jill McDonald
Executive Director, SaskBarley

says AAFC should continue to invest in foundational science, germplasm development and public-good research, while other groups take larger roles in advancing material toward commercial varieties.

Another thing that has become clear is that developing a new model will require continued leadership from farmers themselves, McDonald says – work that has already begun.

In fact, she says one of the silver linings to come out of this situation has been seeing SaskBarley and other Western Canadian provincial crop commissions proactively address these challenges.

"I've never seen anything like it. Everyone is working with a shared goal. It's very much a collaborative effort amongst funding groups to address the erosion that we have seen within Ag Canada."

Time is of the essence

For Jespersen, the concern isn't today's varieties. It's the varieties farmers will need ten years fromnow, designed to address not only current but emerging threats.

For example, this year his farm dealt with excessive moisture instead of drought.

"We need something instead of drought tolerance. We need something for really moist soils," he says.

But breeders can't respond to tomorrow's production challenges if today's breeding capacity disappears, he says – and farmers should be worried about this.

"There is more than just growing a crop that is affecting your bottom line. Variety development right now is top of mind for those of us that are working on this new vision."

Eudes says one thing that everyone can agree on is that time is of the essence.

"For every year we take to find that financially sustainable solution, the more competitiveness we're going to lose," he says. "We need collectively to build that made-in-Canada solution now. We cannot waste more time."

McDonald agrees, saying that this is a topic that all farmers should be aware of, and engaged on, right now.

"It just affects farmer profitability so much at the end of the day – and that creates a shared sense of urgency to develop a solution. We need a stable, sustainable system that continues to deliver varieties that work for farmers and meets the quality needs of our end-use customers."

CBRC and CWRC Join Forces to Transform Barley and Wheat Breeding

On September 3, the Canadian Barley Research Coalition (CBRC) and the Canadian Wheat Research Coalition (CWRC) announced a formal strategic partnership aimed at reshaping wheat and barley breeding in Canada.

The agreement makes official the CBRC's participation in the CWRC's ongoing work with Agriculture and Agri-Food Canada (AAFC), work that grew out of the CWRC's review of the Canadian wheat breeding innovation system and an April visioning workshop where industry and AAFC officials began building a shared vision for Western Canadian wheat and barley breeding.

SaskBarley is excited about this partnership. Wheat and barley breeding face many of the same structural pressures, and tackling them together strengthens the case for a breeding system that keeps delivering quality, field-ready varieties for producers and the customers who buy their grain.

"We all agreed that the ideal plant breeding system is innovation driven and delivers field-ready varieties that meet the needs of farmers and our end-use customers around the world," said Scott Jespersen, CBRC Chair. "Through this new agreement, the CBRC and CWRC hope to ensure the Canadian system meets that standard for many years to come."

As this issue's cover story (page 4) explores, barley producers have already invested heavily in the breeding programs and germplasm behind the varieties they plant. Now farmers are leading the conversation about the long term vision of the public breeding system.

To view the full release, visit SaskBarley.com

A Welcome Step Forward for Indian Head and Scott

On July 16, federal and provincial agriculture ministers met in Halifax and signed a Memorandum of Understanding (MOU) committing to explore ways to keep the Indian Head and Scott Research Farms operating.

The Honourable Heath MacDonald, federal Minister of Agriculture and Agri-Food, and the Honourable David Marit, Saskatchewan's Minister of Agriculture, signed the agreement, opening the door to a made-in-Saskatchewan solution for these two sites.

For barley producers, the stakes go well beyond a signing ceremony. Indian Head and Scott have anchored decades of variety development and agronomic research behind the varieties growers plant today, as this issue's cover story explores in more detail. When AAFC announced it would close the sites, that research capacity, and the investment producers have made in it, was suddenly at risk.

SaskBarley welcomes this MOU as a concrete, positive step.

"Indian Head and Scott are critical to Saskatchewan's research capacity – you do not replace that overnight, and you do not replace it by walking away ... We recognize the leadership shown by Minister Marit and the Saskatchewan Ministry of Agriculture in getting this MOU done. SaskBarley welcomes it as a concrete step to keep these sites productive, and we're committed to working with AAFC, the province and industry to build that capacity for the long term."

Cody Glenn, Chair of SaskBarley

An MOU is a starting point, not a finish line. SaskBarley will keep working alongside AAFC, the Government of Saskatchewan and our fellow commodity organizations to land an operating model that keeps both farms productive for the long haul.

To view the full release, visit SaskBarley.com.

Levelling the Playing Field

How SaskBarley and the SaskCrops coalition are pushing for Export Sales Reporting in Canada

Jill McDonald | *Executive Director, SaskBarley*

Every marketing decision eventually comes back to one core question. What does the market really want, and when does it want it?

For our farmer competitors in the United States and European Union, that answer is a lot easier to find than it is for Canadians. They have public, timely export sales reporting systems that show which countries are buying what grain, in what quantities, and when. Our farmers have no equivalent. We are competing in the same global markets with less information, and it's costing us.

That gap is what drove the SaskCrops commissions (a coalition of SaskBarley, SaskOats, SaskOilseeds, Saskatchewan Pulse Growers and Sask Wheat) to collaborate with the Agricultural Producers Association of Saskatchewan (APAS) to commission an independent study on what a Canadian Export Sales Reporting (ESR) program could deliver for producers. Together the five commissions represent roughly 24,000 Saskatchewan farmers. We all agreed the information gap is hurting the sector, but it was clear the case needed to be built with real numbers.

What the research found

We asked Mercantile Consulting to look at the supply chain impact of export sales data transparency in Canada's grain industry. The report, released publicly in October 2025, laid out the economic case in plain terms.

Currently, Statistics Canada only publishes it's Supply & Disposition of Grain report three times a year, and the Canadian Grain Commission's weekly Grain Statistics report shows movement data, but only after shipments have

already occurred. That is useful for looking backward, but does very little for a farmer trying to make a forward marketing decision. Export sales reporting, by contrast, shows demand as it emerges by requiring exporters to report on the sales that have been made, rather than grain movement long after the sales have been filled.

The study estimated that closing the information gap through an ESR program could generate up to $27.5 million in additional annual returns for Saskatchewan grain farmers, and up to $56.6 million nationally. Those figures are conservative as they only reflect gains from better basis timing. They don't capture the additional value producers would realize from improved cropping decisions and stronger supply chain coordination. Grain companies, processors and transportation providers would benefit as well, since better demand forecasting means less congestion at peak periods and more predictable movement through the system.

For barley specifically, where our market signals depend heavily on end-user demand from feed, malting and food processors around the world, timely export data would help producers respond faster to shifting buyer interest and price opportunities.

The advocacy campaign so far

Publishing the report was only step one. Since then, SaskCrops has been running a coordinated advocacy campaign aimed at federal decision makers, senior public servants and the parliamentary press gallery. Actions in spring 2026 included direct meetings with cabinet officials, deputy ministers, Finance Canada, Prairies Economic Development Canada and representatives from the United States Department of Agriculture, along with sponsored content in The Hill Times and a coordinated digital push aimed at parliamentary audiences. A short follow-up campaign at the Calgary Stampede in early July kept the message in front of political audiences while they were in the prairies.

The most encouraging shift has been in the tone of the conversations themselves. When we started, we were explaining what ESR is. Today, officials are asking how it would work in Canada and which department should lead implementation. That is real progress.

What comes next

The Federal Budget is expected November 5th and the lead-up is an important window to keep the file in front of decision makers and secure internal champions. Agriculture and Agri-Food Canada has emerged as the logical advocate for the program, and our focus is now on turning growing awareness into a defined implementation pathway.

Where farmers come in

Stay informed and be ready to add your voice as the conversation moves forward. Talk to your neighbours about why market transparency matters. Share our updates on social media. When your MP is home in the constituency, take five minutes to tell them why this issue matters on your farm.

Canadian farmers deserve access to the same information tools already available to our competitors. This is an important initiative that our SaskCrops collaboration will continue to advocate for.

Learn more and read the full Mercantile report at saskbarley.com/saskcrops.



What Global Customers Value in Canadian Barley

By Peter Watts
Managing Director, Canadian Malting Barley Technical Centre (CMBTC)

From August 11 to 13, the Canadian Malting Barley Technical Centre (CMBTC) brought together nearly 70 participants from Canada's barley and malting sector and the global malting and brewing industry for the annual New Crop Tour.

Based in Saskatoon, the tour travelled through east-central Saskatchewan, with stops at the farms of SaskBarley board members Chad Ferguson and Gord Moellenbeck, Rugg Seed Farm and the Bunge elevator in Muenster. The final day included a seminar session and tour of the Crop Development Centre.

The tour gives global customers a chance to see Canadian barley production first-hand and gives Canadian growers, researchers and exporters direct access to the world's leading maltsters and brewers. That exchange is especially valuable in a market where Canadian grain often carries a premium price.

Customers can see the scale of Western Canadian production and the distances grain travels, but they can also see the work that backs up Canada's reputation for quality.

This year, much of that interest centred on new varieties and the variety selection and registration process, with specific focus on how Canada balances agronomic performance with malt and brewing quality. Dr. Aaron Beattie's presentation on August 13 gave that process useful context, showing the amount of testing and evaluation required before a new line reaches commercial production.

The 2026 New Crop Tour reinforced that our strength as an industry comes from the people, research and relationships that keep growers connected to customer needs and keep new ideas grounded in what works on the farm.



Almost 70 participants from Canada's barley and malting sector and the global malting and brewing industry attending the CMBTC's New Crop Tour in the Saskatoon area in August, 2026.



From left: CMBTC Managing Director Peter Watts with Amit Ahir and Akshay Gupta of AB InBev India, and CMBTC Chair Jon White during the tour at Chad Ferguson's farm near Naicam, SK.

That naturally led to questions about what happens once those varieties and new ideas reach the farm. In discussions with AB InBev, the brewer emphasized that the system has to work for growers. Research, extension, better varieties and practical agronomic information all give growers more options to improve productivity and respond to changing expectations.

For Canada, that points to an important source of competitive strength: the close connection between growers, researchers and processors. That connection keeps the specific needs of the barley industry in view and helps align variety development, production and end-use requirements.

Maintaining that expertise matters, particularly as research funding comes under pressure. The quality and performance of Canadian varieties are among our strongest market advantages, and the research and industry support behind them help keep malting barley competitive in growers' rotations and reliable for maltsters and brewers.

The 2026 New Crop Tour reinforced that our strength as an industry comes from the people, research and relationships that keep growers connected to customer needs and keep new ideas grounded in what works on the farm. Protecting that foundation will be critical to keeping barley competitive at home and maintaining Canada's position with maltsters and brewers around the world. At CMBTC, we are committed to strengthening those connections and the expertise behind them.

CANTERRA SEEDS

Tapping into barley's best.

Find a local seed grower

NEW

AAC Prairie

CMBTC

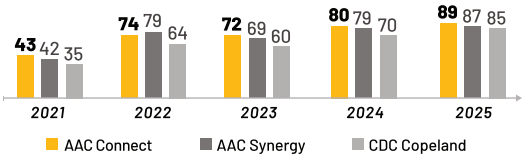
The barley behind great beer. With the highest enzyme activity since AC Metcalfe, AAC Prairie is well suited for adjunct brewing.

AAC Connect

CMBTC

A top-performing 2-row malting barley on the Malting Barley Recommended Varieties list from the Canadian Malting Barley Technical Centre (CMBTC).

*Yield in bu/ac across SK Insured Acres**



This is Canadian Certified Seed. Learn more at choosecertifiedseed.ca (91) These varieties are protected by Plant Breeder's Rights. Learn more at pbrfacts.ca
*Data from SCIC Sask Management Plus.
If you're reading this, you're just like us and notice the small things. As a Western Canadian company with 41 employees, we love this. Text BARLEY to 866.744.4321 so we can send you a token of our appreciation.



Unlocking the Potential of Barley for Swine Nutrition

SaskBarley is a Tier 1 member and core funder of the Canadian Malting Barley Technical Centre (CMBTC).

SaskBarley Chair Cody Glenn serves as CMBTC's vice-chair, and SaskBarley director Bernie McClean also sits on the CMBTC board. Pictured from left to right at CMBTC's New Crop Tour in August are Glenn and McClean, along with fellow SaskBarley directors Gord Moellenbeck, Zenneth Faye and Chad Ferguson. Maurice Berry, who is not pictured, completes SaskBarley's six-member board.

CMBTC is one of SaskBarley's strategic partners and a crucial part of our market development activities. Together, we work to promote Canadian malting barley domestically and internationally, ensuring Saskatchewan producers have access to high-quality, market-ready varieties that meet the needs of global maltsters and brewers. This partnership strengthens Canada's reputation as a world leader in malting barley quality and consistency.

Learn more about our Strategic Partnerships at SaskBarley.com.



Dr. Martin Nyachoti (University of Manitoba) and Dr. Ruurd Zijlstra (University of Alberta) are leading research to better understand how barley and its fibre fractions can be used to improve gut health, feed efficiency, and overall performance in young pigs. The work is part of the National Barley Cluster under the Sustainable Canadian Agricultural Partnership and is now roughly halfway through its five-year term.

By Serra McSymytz
Communications Manager, SaskBarley
Reviewed by Dr Ruurd Zijlstra, University of Alberta



A new opportunity for barley in North American swine production

Historically, barley in Western Canada was fed almost exclusively to finishing pigs. Because it has a lower energy content than wheat, nutritionists used it to dial back energy density as pigs approached slaughter weight, keeping them from getting too fat. Nursery pigs were a different story entirely.

"Thirty years ago, barley was definitely not fed to nursery pigs – nobody would do that," says Zijlstra, who has worked in Western Canadian barley research for almost three decades. "It was kind of a no-no, because nutritionists were really afraid about the beta-glucans, the high fibre content, that would prevent pigs from reaching their feed intake potential and therefore they would grow less."

That thinking is shifting. Several trials, including this project, have found the opposite: some nutritionists are now including barley in nursery diets based on research showing nursery pigs fed barley perform better than assumed.

The timing lines up with a bigger industry shift. Antibiotic growth promoters are no longer permitted in Canadian swine diets without a veterinary prescription – preventative antibiotics are no longer used. Instead, zinc oxide has become a major tool for controlling post-weaning diarrhea. But, following the lead of the European Union, Canada may also ban this practice, though timelines are uncertain.

"One of the tools to control gut health was removed. The second tool might be removed next year," Zijlstra says. "So, there are all kinds of reasons to look at what alternatives are there to control gut health using dietary means. That's where barley may have a role to play."

Fractionating barley to find what matters

To isolate which part of the barley kernel drives the gut-health benefit, the team works with Dr. Rex Newkirk at the University of Saskatchewan, whose pilot-scale fractionation equipment can separate barley into whole-grain, endosperm, and germ fractions. Cultivar selection runs through Dr. Aaron Beattie at the Crop Development Centre – the project uses CDC Churchill, chosen for its increasing popularity and expected market share by the time the project wraps up rather than for any unusual fibre profile. The project also has a poultry component, led by Dr. Anna Rogiewicz at the University of Manitoba.

"We know that cultivar selection is important – not all cultivars are the same," Zijlstra says. "We don't want to go down a rabbit hole with a cultivar, and by the time the project is done, nobody's growing it."

Barley's fibre isn't one thing: it contains rapidly fermentable soluble fibre (beta-glucans) alongside slower-fermenting insoluble fibre, and it's still an open question which one matters most for gut health. "We're trying, through an array of trials, to figure out whether it's the rapidly fermentable beta-glucan or the more insoluble fibre that plays an important role in controlling gut health in young pigs," Zijlstra says.

What the project has already shown

Two pieces of the work are complete. The first tested whether barley particles could act as a decoy in the gut – giving *E. coli*, the bacteria behind post-weaning diarrhea, something to bind to besides the gut wall. "We clearly showed that could happen," Zijlstra says.

CONT. FROM PREVIOUS PAGE

The second was a growth trial comparing a wheat-based control diet against a range of barley diets. Fully replacing wheat with barley, once diets were properly reformulated for energy and amino acids, achieved equal growth performance. "Barley should not be underestimated as a feed ingredient to support growth in young pigs," Zijlstra says.

What's still ahead

The remaining work will test whether intact, processed, and enzyme-treated barley fibre can reduce *E. coli* severity and post-weaning diarrhea using live disease-challenge models – and whether any functional benefit can be delivered without sacrificing lean gain, since higher-fibre cultivars may yield less. Economics are also still an open question: no formal cost comparison between barley and wheat (or corn, in regions where that's the alternative) has been run yet.

As a side note unrelated to gut health, Zijlstra pointed out barley (like wheat) produces whiter pork fat than corn-fed pigs – a quality trait valued in premium Asian pork markets, and one more reason barley holds an edge as a swine feed grain.



"Barley should not be underestimated as a feed ingredient to support growth in young pigs."

Dr. Ruurd Zijlstra
University of Alberta

Benefits for producers and the industry

If the remaining work confirms these early results, pork producers could see potentially lower feed cost, improved feed efficiency, better gut health and welfare, reduced reliance on antibiotic and zinc oxide interventions, and stronger protection against *E. coli*-driven disease.

Conclusion

This project helps reposition barley grain from a traditional feed grain to a functional nutritional ingredient. With antibiotics and zinc oxide both under pressure as gut-health tools, barley's unique fibre profile may fill a real gap – and with these building-block studies already complete, the remaining work will determine how far that potential goes.





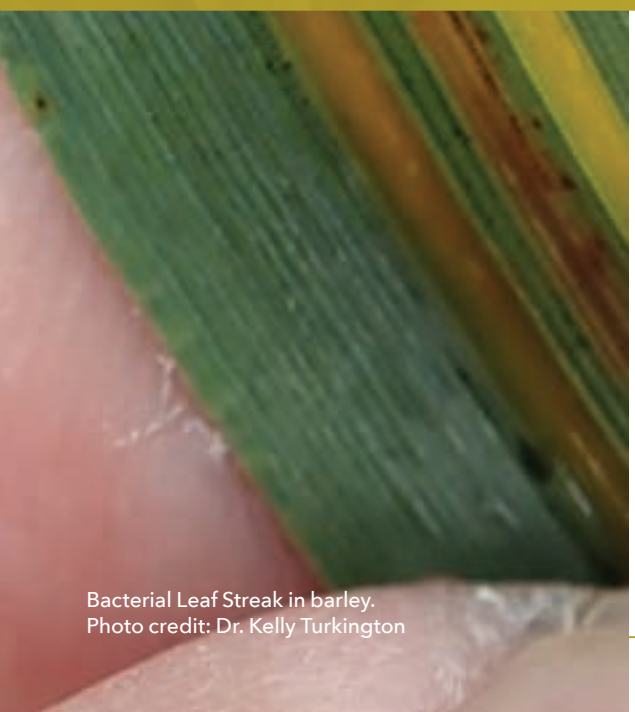
SaskBarley

From Protein to Pests What Your Levy Dollars are Working On

SaskBarley is putting more than $300,000 into twelve research projects on the problems Saskatchewan barley growers bring up most: protein that misses malt specs, best nitrogen management practices, herbicide-resistant weeds, and a bacterial disease with no in-crop fix. Here's a look at a few of the farmer-driven research projects underway this fall, and when growers can expect answers.

THE QUESTION

Why was my malt protein so high?



Bacterial Leaf Streak in barley.
Photo credit: Dr. Kelly Turkington

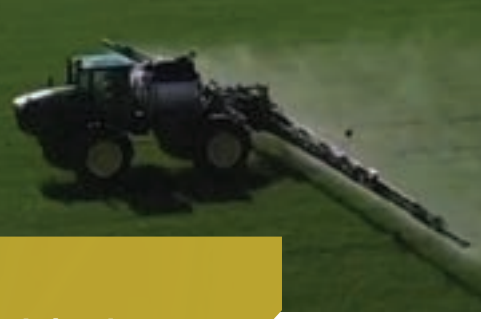
THE PROJECT

Beyond N Rate: Protein Management in Malting Barley

PRINCIPAL INVESTIGATOR: Lana Shaw, South East Research Farm (SERF)
SASKBARLEY COMMITMENT: $40,200
PROJECTED END DATE: 2027

This new project arose out of questions from farmers in 2025. We built this project to help answer questions about protein development in barley. Farms across Saskatchewan experienced higher protein than expected, despite high yields and moderate nitrogen fertilizer application and background soil nitrate. While nitrogen is the largest factor influencing protein, this project evaluates the contribution of nitrogen, sulphur, seeding date and soil testing.

The project is co-funded with ADOPT and is grown at several of the Agri-ARM locations.



CONT. FROM PREVIOUS PAGE

Catch up on more SaskBarley funded research projects at BarleyBin.ca.

THE QUESTION

Can split nitrogen work for malt barley?

THE PROJECT

Continuing 4R Management: Can split applications be managed in malt barley to reduce risk and maintain yield and quality?

PRINCIPAL INVESTIGATOR: Brianne McInnes, Northeast Agriculture Research Foundation (NARF)
SASKBARLEY COMMITMENT: $13,500
PROJECTED END DATE: 2027

Supported also by ADOPT and BMBRI, this project continues the research started in 2025 to evaluate the risks and benefits of split applications and enhanced efficiency fertilizer use in malt barley production. Neither of these practices has received much research focus in malt barley. Split applications have the potential to assist farmers with nitrogen management decisions, but malt growers are often wary of the practices due to the risk of increasing protein beyond malt specifications. Contrasting the 2025 growing season with 2026 will add insight into the practice, across several Agri-ARM locations.

THE QUESTION

How do we stay ahead of resistant kochia and wild oats?

THE PROJECT

A Long-term Management Plan for Herbicide-Resistant Kochia and Wild Oat

PRINCIPAL INVESTIGATOR: Shaun Sharpe, Agriculture & Agri-Food Canada, Saskatoon
SASKBARLEY COMMITMENT: $21,721
PROJECTED END DATE: 2031

Dr. Sharpe led the development of a Strategic Research Initiative proposal to address herbicide-resistant kochia and wild oats. The Strategic Research Initiative invites proposals to address very large problems in the industry, and is managed by the Saskatchewan Ministry of Agriculture, who are lead funders of this project, supported by several other organizations as well. This is a massive project designed to coordinate the efforts of weed scientists across the prairies to make meaningful advancements to address the growing problem of herbicide-resistant wild oats and kochia.

THE QUESTION

Can better genetics and seed treatment stop Bacterial Leaf Streak?

THE PROJECT

Harnessing Genetic Resistance and Cold Plasma for Sustainable Management of Bacterial Leaf Streak in Wheat and Barley

PRINCIPAL INVESTIGATOR: Randy Kutcher, Crop Development Centre, University of Saskatchewan
SASKBARLEY COMMITMENT: $20,700
PROJECTED END DATE: 2029

Dr. Kutcher has been leading the research on bacterial leaf streak (BLS) in barley and wheat for Western Canada for the past six years. This project builds on the strategic approach that he has been developing for the past several years. BLS is a difficult disease because it is not clear how widespread it is, and there are currently no in-crop management options. Fungicides are ineffective because it is bacterial. Building genetic resistance to the disease is a beneficial approach for growers. This approach partners with cold plasma technology, which is a tool that can potentially be utilized in seed – a key point for agronomic intervention in the disease life cycle.

Several funders contribute to this project.

Learn more about BLS in our resource How to Identify Barley Leaf Diseases: A Field Guide at barleybin.ca.



SaskBarley's 5-year average proportion of expenses invested in research is

68%

The Fight Against Fusarium Continues

Here's what the latest SaskBarley funded research found.

By Serra McSymytz | *Communications Manager, SaskBarley*

Does hairy barley give Fusarium a foothold?

Barley hulls are covered in trichomes – the bump-, prickle- and hair-like structures you can feel on the rough awns of a malt variety versus the smooth awns of a good forage type. Researchers wondered whether these tiny structures give *Fusarium graminearum* spores something to grab onto as they colonize the head. Dr. Matthew Bakker (University of Manitoba), funded by SaskBarley and Manitoba Crop Alliance, spent two years imaging barley hulls under electron and CT microscopes to find out.

The surprising result: trichomes don't seem to matter much. *Fusarium* spores adhered to hulls just as readily with or without them, sometimes burrowing into the natural waxy coating instead. The project did turn up a more promising lead, though. The gaps where the two halves of the hull haven't fully fused offer *Fusarium* a free route inside the kernel. That's a new thread for future resistance research to pull on.

Breeding progress you can see in the bin

While that microscopy work was underway, a longer project at the Crop Development Centre was focused on DON (deoxynivalenol, also known as vomitoxin) resistance breeding in new varieties. Dr. Aaron Beattie's team screened roughly 2,250 breeding lines every year for five years, pairing traditional fusarium head blight nurseries with a new genomic selection model that predicts a line's DON accumulation risk straight from its DNA.

The result: three new varieties reached commercial release with intermediate-to-moderate FHB resistance. If FHB is a concern in your growing region, keep your eyes out for CDC Harness and CDC Dillinger (feed) and CDC Pristine (hulless malt) this spring, with more options in the registration pipeline. The genomic model, built with SaskBarley, Alberta Grains, Manitoba Crop Alliance and WGRF funding, now lets CDC breeders cull the worst DON accumulators years earlier, so the next wave of resistant varieties should reach growers faster.

If you want to learn more about the variety registration process, listen to Season 3, episode 4 of the BarleyBin Podcast on the Prairie Recommending Committee for Oat & Barley (PRCOB) or episode 8 where we dive into the origins of disease ratings in the SaskSeed Guide. Find it on Spotify and YouTube.

Read the full story on each project – including what it means for your variety choices – at BarleyBin.ca.

Do Barley's Trichomes Help Fusarium Head Blight Take Hold?

Breeding Better DON-Resistant Barley: Inside Five Years of CDC Research

the BarleyBin

BarleyBin LIVE is coming to Moosomin

December 3, 6-9 PM at Cork & Bone Bistro.

Join SaskBarley for an evening off the screen and into the community – dinner, drinks, and real conversation with fellow barley producers, researchers, and the SaskBarley team.

Hear talks on managing protein in malt barley, the BarleyBin Field Lab's alternate seeding implements trial, and the Yield Enhancement Network - plus open conversation on what's shaping your operation.

Free to attend, but space is limited.
Register today at SaskBarley.com/events.

Hail of a Time

Some people have their favourite colour of combine – green, red, yellow, but it's likely not white. When the "big white combine" rolls through, it comes faster and with more capacity than any machine on the market, but it puts less in the bin.

By Mitchell Japp | *Director of Research & Extension, SaskBarley*

Hail poses significant management challenges for farmers on the Prairies – it is random, erratic and devastating.

While the frequency of hail events is usually less than 100 per year, some years have a notable increase. 2026 seemed to have an unusual number of hailstorms.

Understanding hail

Hail forms when water droplets are carried upwards by updrafts created during strong thunderstorms. Once high enough, the cold air temperature causes the water droplets to freeze, and can continue to grow by colliding with other water droplets. Hail falls when the hailstone size is too large to be supported by the updraft, or if the updraft weakens. Even though hail is formed, it may not reach the ground as hail if it melts before it reaches the ground.

Some parts of the Prairies receive more hail than others, with southern-central parts of Alberta, Saskatchewan and Manitoba home to some of the worst – but we are hardly immune in the rest of Saskatchewan. Different conditions support hail development. Notably in Alberta, the freezing temperatures in the atmosphere are closer to the surface, while elsewhere conditions for storms to build to high altitudes allow updrafts to reach the freezing layers in the atmosphere.

How hail fits in the cropping season

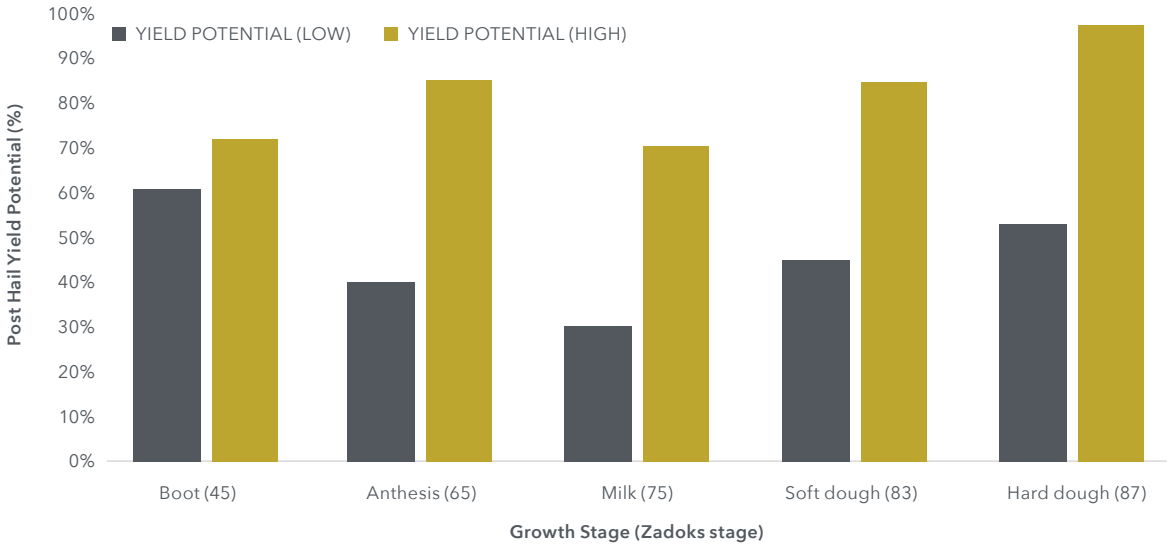
Heat is a contributing factor driving the storms, so most hail occurs in June, July and August, with about 40% occurring in July. The impact of hail damage on barley (and other crops) is dependent on the severity of the hail, but also the stage of the crop. Unfortunately, the most hail occurs when the barley crop tends to be most susceptible.

Assessing hail damage and recovery potential

There is value in understanding the impact on the crop right after the hailstorm, but decisions will generally be better once the crop has had up to a week to recover. The first step after confirming hail is to reach out to any crop insurance you carry that would cover the loss.

Some enterprising barley researchers made the most of a bad situation when hail damage was in the range of 90-100% on some replicated barley yield plots from a storm that occurred near heading time. Despite the significant losses, regrowth led to yields ranging from less than 3 bu/ac to 33 bu/ac – with some of the variation based on heading dates. Barley lines that had just headed out had less damage than barley that had headed 10-15 days before the storm. Calculated losses were in the range of 29-82%, but the plots were not harvested until late October.

In wheat, the estimated yield reduction is based on some older research but is still a valuable resource. Prior to stem elongation, the growing point is still below the ground, so yield recovery potential is very high, but harvest delays are expected and quality may be impacted. Damage potential



Grain yield reduction in spring wheat with 100 per cent of stems bent (adapted from Lauer, 2000, as derived from Busch, 1975).

generally increases until the milk stage.

As is often the case, there is more research available on hail damage to wheat than barley, so we are left to make some inferences based on crop physiology. Barley will tiller following hail damage and tends to recover better than wheat, especially if hail occurs prior to the boot stage. Crops hailed prior to the boot stage should be left to recover as long as green tissue remains.

Damage at the jointing and boot stages can be difficult to assess because spikes will still be able to pollinate and fill, and regrowth from tillers is still possible. This changes assessments about harvest timing, as well as fungicide application decisions. Normally, if there are multiple stages in a crop, most of the yield will come from the main stem and first few tillers. Hail can change that relationship.

Recovery potential is limited by the growing season. The later the hail occurs, the less time there is for crop recovery. While ideal conditions may allow significant yield recovery, that may not be practical in every growing season. A heavy frost in September could stop that recovery short, which could make alternate uses of the crop a choice worth considering.

After the hail

Hail damage is very visually appalling. It creates a desire to help the crop recover. So, a common question after hail is "Can I apply something to help my crop recover?"

There are diseases that require a wound on the plant to infect the plant. Bacterial leaf streak is one of those diseases. Many of the other diseases we are concerned about in barley, such as FHB and leaf diseases (net blotches, spot blotch, scald) do not require wounds to infect the plant tissue. A fungicide will not prevent bacterial leaf streak because it is a bacterial disease.

This is supported by research as well. A relatively recent study by Farming Smarter simulated hail damage in order to test hail recovery products, including fungicides and nutrient blends. Overall, they found that timing of the hail damage was an important factor in crop recovery, with negligible yield impacts at early growth stages. None of the hail recovery treatments they evaluated improved crop recovery, yield or kernel weight. Be especially wary of products that sound too good to be true.

While a preventative fungicide application may not be useful, a hailed crop is experiencing stress and should be monitored closely so a fungicide can be applied if yield potential will be further decreased by disease development.

Planning ahead

Hail happens. Most of the time, the impact is not widespread. But before that hail happens, plan ahead and choose business risk management options that can cover at least some of your losses if it does occur. Whether that includes hail insurance, broader crop insurance or other approaches depends on each farm and the risk tolerance of the farmer.

There is no silver bullet here. Not some fantastic variety that withstands hail damage, or a miracle product to recover with after the hail. Plan ahead for what could happen if hail occurs, and when it does, react by accessing what insurance you have, assessing the crop stage and being patient to give that crop some time to recover before making decisions on next steps.



Resources:

https://cdnsciencepub.com/doi/10.1139/cjps-2020-0231
https://corn.agronomy.wisc.edu/WCM/W075.aspx
https://mbcropalliance.ca/directory/production-resources/evaluating-hail-damage-in-wheat/

CATCH UP ON SEASON 3!

theBarleyBin PODCAST

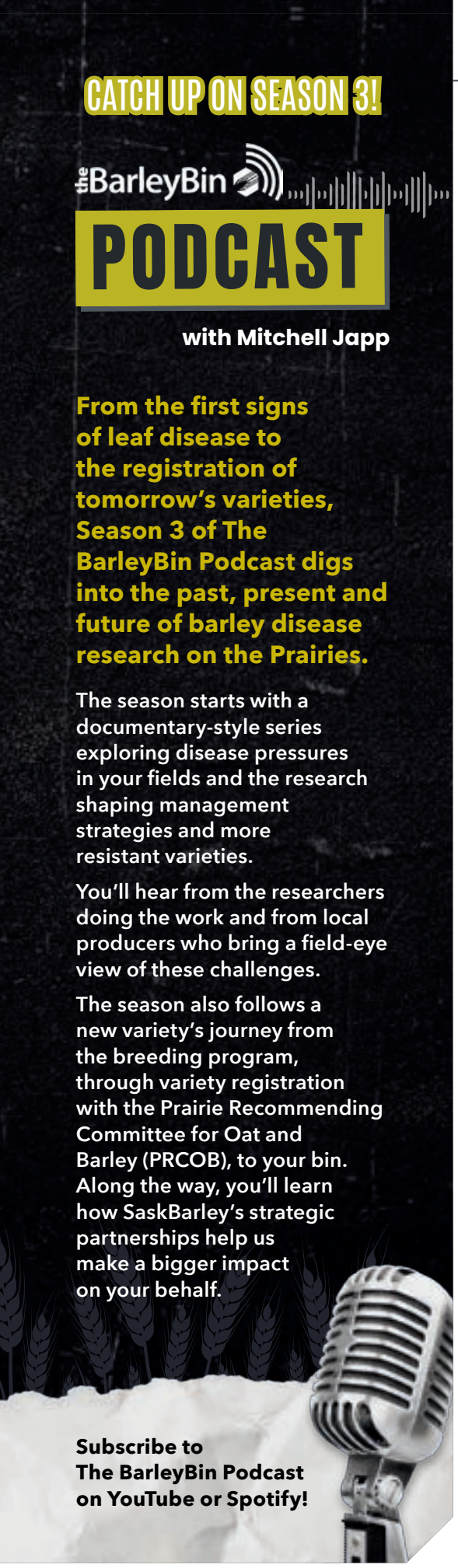
with Mitchell Japp

From the first signs of leaf disease to the registration of tomorrow's varieties, Season 3 of The BarleyBin Podcast digs into the past, present and future of barley disease research on the Prairies.

The season starts with a documentary-style series exploring disease pressures in your fields and the research shaping management strategies and more resistant varieties.

You'll hear from the researchers doing the work and from local producers who bring a field-eye view of these challenges.

The season also follows a new variety's journey from the breeding program, through variety registration with the Prairie Recommending Committee for Oat and Barley (PRCOB), to your bin. Along the way, you'll learn how SaskBarley's strategic partnerships help us make a bigger impact on your behalf.



Subscribe to The BarleyBin Podcast on YouTube or Spotify!

The Lowdown on DON

By Geoff Geddes | *Freelance Writer*

Even if you haven't heard of vomitoxin, you can guess it's not good. Also known as deoxynivalenol (DON), it is found primarily in grains like wheat and barley.

While DON is a byproduct of a fungal infection which is damaging to crops, and the toxin is harmful to people and some livestock, science is seeking ways to minimize the impact on growers by finding options for their infected grain.

"In an ideal world, we wouldn't have any toxins, but in the real world, stuff happens," says Dr. Rex Newkirk, associate professor in the Department of Agriculture and Bioresources at the University of Saskatchewan.

> *"DON is here to stay, so we must find a way to deal with it."*
>
> **Dr. Rex Newkirk**
> Associate professor in the Department of Agriculture and Bioresources at the University of Saskatchewan

"DON is here to stay, so we must find a way to deal with it."

Vomitoxin, or DON, is a mycotoxin produced by *Fusarium*, the fungus responsible for fusarium head blight. It is caused by some *Fusarium species*, including *Fusarium graminearum*, and can lead to feed refusal, gastrointestinal issues, and reduced weight gain in animals, which is why it is regulated in both animal feed and human food. Fusarium often appears in crops during periods of high temperature and humidity, and though it's not usually a severe issue in Western Canada, it can be a factor in very wet years.

"Barley actually flowers while still in the boot, so severe yield loss and shrunken kernels are rare," says Mitchell Japp, Research and Extension Manager for SaskBarley. "Once the head emerges from the boot, it becomes susceptible to infection. It takes some time after infection before growers may start to notice orange growth or dark discolouration on affected kernels. Barley stays susceptible right up to the soft dough stage, but later infections often leave no visible signs at all, even though mycotoxins like DON can still be present in otherwise sound-looking kernels."



Fusarium infected barley head. Photo credit: Dr. Kelly Turkington, AAFC.

"Once the head emerges from the boot, it becomes susceptible to infection. It takes some time after infection before growers may start to notice orange growth or dark discolouration on affected kernels."

Mitchell Japp
Director of Research & Extension, SaskBarley

For growers, the implications of DON-infected barley are widespread. Even small amounts of DON in malt barley can produce fizzy beer and toxic side effects, so that crop is likely to be rejected by maltsters.

When grading barley, buyers check for fusarium damaged kernels (FDKs) and test seeds for DON – high DON levels may result in reduced price or rejection of the barley. Grain samples can be tested a few ways, including enzyme-linked immunosorbent assay (ELISA), mass spectrometry, and lateral flow strip technology. ELISA and mass spectrometry are accurate but slow and require expensive lab equipment, while lateral flow strip technology offers a faster, simpler, and more cost-effective option for quick results.

Though the presence of DON is never positive, the right approach could help mitigate the damage.



Fusarium damaged barley kernels (FDK). Photo source: Agriculture & Agri-Food Canada

CONT. FROM PREVIOUS PAGE

Crunching the numbers

"If you're feeding grain to young animals, CFIA [Canadian Food Inspection Agency] stipulates that it cannot contain more than 2 ppm [parts per million] of DON," says Dr. Newkirk. "But with other livestock, you can have up to 10 ppm. At a beef feedlot, for example, there is silage and other ingredients diluting the diet, so those cows are less sensitive to DON."

When DON levels are high, growers could employ grain cleaning to reduce that amount. Though the grain screened out won't be marketable, farmers can still sell the remaining clean grain.

As part of his research, Dr. Newkirk explored various means of dealing with DON. These included different cleaning systems and using fans to filter out lighter kernels where DON tends to be more prevalent. However, if later fusarium infections occur, around the soft dough stage, DON levels can accumulate in perfectly sound grain kernels and become harder to clean out.

"We also employed a technology called BoMill to separate grain using Near-Infrared Transmission (NIR-T)," says Dr. Newkirk. "This equipment analyzes the inner properties of individual kernels to pinpoint those containing DON and set them aside."

Livestock producers saddled with DON may also use a broader range of ingredients in their feed, incorporating ones that are not hosts for fusarium head blight, such as chickpeas or faba beans.

Many feed mills have compounds that bind with certain toxins and remove them from the grain.

"These compounds are less reliable when applied to DON, but they can serve as an insurance policy during heavy DON years like 2014," says Dr. Newkirk.

A need for feed

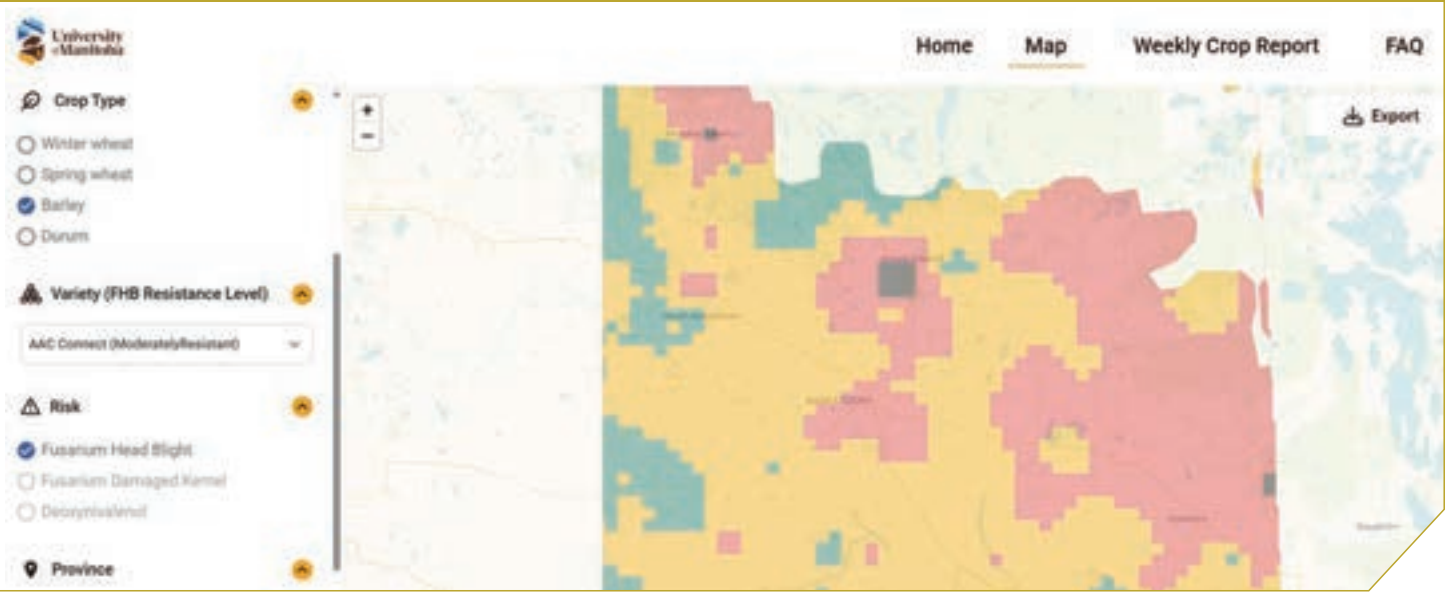
Given that feedlots are more receptive to grain infected with fusarium, they could represent an alternate customer for malt barley growers, though transportation can eat into the bottom line. Oftentimes, it's a matter of selling that grain to different buyers who have varying thresholds for DON.

"If I have 1000 tonnes of DON-free grain in my bin, I might buy some infected grain if the price is right," says Dr. Newkirk. "The seller won't get a great return, though, because I will then need to buy more high-quality grain to offset the bad stuff or get a cleaning system to lessen the effects of that DON-infected grain."

Of course, the best way to deal with DON is to keep it out of your fields in the first place. To that end, there are several strategies that growers can adopt.

"This year we have good fusarium resistant varieties out there, so use them as they were intended," says Dr. Newkirk. "You can adopt cropping practices like spacing and rotation, and work with your agronomist to limit disease pressure."

Find the Prairie FHB Risk Mapping Tool at prairiefhb.ca



"This year we have good fusarium resistant varieties out there, so use them as they were intended ... You can adopt cropping practices like spacing and rotation, and work with your agronomist to limit disease pressure."

Dr. Rex Newkirk
Associate professor in the Department of Agriculture and Bioresources at the University of Saskatchewan

While Ontario has seen a high incidence of FHB in the last several years, there has been less pressure on the Prairies, but that's no reason to relax.

"The fact that we haven't seen fusarium in a while now means it might be just around the corner, so it's vital to keep your guard up," says Dr. Newkirk. "Employ good varieties, regularly check your seed for *Fusarium*, and follow a good fall rotation to keep the pressure down."

Such a rotation might be structured as a pulse – cereal – oilseed rotation to lower your risk. If you see disease pressure and high humidity at the time of flowering, it may be wise to spray a fungicide; Though malt producers are cautioned to follow label restrictions carefully to ensure marketability.

Like seeding or harvesting, addressing the threat of DON is not a one-time event, but an ongoing practice.

"Fusarium is a threat that barley farmers in Saskatchewan have come to know very well," says Japp. "There haven't been any fusarium hot spots since 2016, because we've mostly been fairly dry since then, but it's consistently there in the seed survey at low levels. Once conditions are right, FHB will be back, so it pays to be vigilant – using good crop rotations, choosing varieties with intermediate or better resistance, and applying a well-timed fungicide when conditions warrant it. The Prairie FHB Risk Map is a helpful tool to guide fungicide application decisions."

Like heavy rainfall and drought, DON is hard to predict and tough to overcome, so we best prepare to weather the storm.

"Most of the planet has to live with this problem every year if they suffer from high humidity," says Dr. Newkirk. "DON is common throughout the world's grain systems, and even at low levels it can negatively affect livestock. As a result, farmers must use different mechanisms and a range of ingredients to protect their crops and animals."



Flavour, Fibre and Fun: Barley Brings It All



Barley water is a traditional, nutrient-dense drink made by simmering barley grains in water, then straining off the liquid. Photo credit: Keith Armstrong

You rarely see "fibre" and "fun" together, but then, you rarely see a grain like barley.

As many consumers can attest, barley is a one-stop crop, bringing versatility, variety and great taste from the field to your family. For those who have yet to discover it, there is much to love in this captivating grain.

"Barley is real food, simple and very traditional," says Keith Armstrong, retired head brewer at Great Western Brewing Company Ltd in Saskatoon.

"The most common barley to enhance a meal is 'pearled', which is lightly polished and offers far more nutrition than staples like brown rice."

In cooking, barley has so much to offer. To those seeking delicious comfort food, there is soothing barley soup or a nourishing barley and mushroom casserole. For a uniquely satisfying dish, try lemon barley pilaf.

To optimize your taste experience with this gifted grain, a little tip can go a long way.

"Barley is not rice," says Armstrong. "Many recipes underestimate the amount of water for cooking it. As a result, you may wind up with something that never gets soft."

For best results, cooks are advised to use a water/barley ratio of at least 3-1.

For best results, cooks are advised to use a water/barley ratio of at least 3-1.

Nice to chew and good for you

If you often bemoan that the best tasting foods are never healthy, barley is a breath of fresh air. As a soluble fibre, it offers a host of health benefits.

When people think of fibre, they often mean insoluble fibre like you find in whole wheat bread and celery stalks. In reality, it's vital to balance that with soluble fibre for maximum health effects.

"As a soluble fibre, barley adds a nice creamy texture to meals," says Armstrong. "Perhaps most importantly, by feeding organisms in the gut, barley aids in gut health, something that doctors and scientists deem critical for overall wellbeing."

Barley is one of the richest sources of beta-glucan, which supports cardiovascular and metabolic health by lowering cholesterol, reducing blood pressure and regulating blood sugar. In fact, Dr. Marta Izydorczyk of Winnipeg's Grain Research Laboratory may have said it best: "The number one thing that Canadians can do to improve their health is to eat more barley".

Even for longtime barley fans, there is one novel use for this grain that may have gone unnoticed.

Water Works

"If you cook barley like pasta [with excess water] and drain the water off, don't throw it away as it's full of good stuff," says Armstrong. "Instead, use it to make barley water, a great tasting, healthy and refreshing beverage."



Though barley water has been consumed globally for millennia, Canadians are just catching on.

"You can blend it with all sorts of things, from coffee to citrus fruits to herbal tea," says Armstrong. "If you're seeking a healthy drink for the kids, the neutral flavour means you can mix even 3 parts of barley water with 1 part juice and still have a strong-tasting juice. Try grapefruit juice, passionfruit, raspberry, cranberry or lemonade."

For those with a sensitivity to milk, barley water can add creaminess to tea or hot chocolate.

"When it comes to barley water, almost anything goes," says Armstrong. "Add a squeeze of lemon or a splash of ginger beer. It works especially well with red beers and brown ales and, oddly enough, with Italian aperitifs."

These days, faster is better, and barley water is quick and easy. You can throw barley with plenty of boiling water in a preheated thermos, seal it up the night before and it's ready to go in the morning.

So, what is the deal with this miracle grain? Where did it come from and how did it captivate the world?

"Barley is actually the earliest widely nurtured crop, and remains the most widely grown crop," says Armstrong.

"As a soluble fibre, barley adds a nice creamy texture to meals ... Perhaps most importantly, by feeding organisms in the gut, barley aids in gut health, something that doctors and scientists deem critical for overall wellbeing."

Keith Armstrong
Retired head brewer at
Great Western Brewing Company Ltd
in Saskatoon

"Its fame quickly spread from its birthplace in the Middle East and eventually found its way to Iceland, Greenland and Newfoundland; barley is one tough and adaptable organism."

This crop has been revered and even worshipped across untold cultures. Ancient Egyptians put barley on their coins. Barley's botanical name is *Hordeum*, and the ancient Roman gladiators were known as the Hordearii, or "Barley Men". Their drink of choice was "horchata", meaning barley water.

"With barley, the flavour options are as varied as the number of cultures that have embraced it over the millennia," says Armstrong. "I suggest that people grab a pot and some barley, perhaps a touch of something acidic like lemon juice or malt vinegar, and plenty of water. Cook up your barley, grab the barley water and have a go. Why not start your day with great taste, plenty of heart and lots of gusto?"

Barley is one of the richest sources of beta-glucan, which supports cardiovascular and metabolic health by lowering cholesterol, reducing blood pressure and regulating blood sugar.

Rhubarb Crumble with Strawberries & Ginger

Serves 10 · *From Peace, Love and Fibre by Mairlyn Smith*



Barley is one of the most fibre-rich grains grown on the prairies, thanks to its high beta-glucan content – a soluble fibre linked to lower cholesterol and steadier blood sugar.

It's also refreshingly versatile: as at home in savoury preparations like pilafs, soups and grain salads as it is in sweet ones, where whole grain barley flour lends a nutty depth to baked goods. In this recipe, it anchors the crumble topping alongside oats, bran and flax over a bright rhubarb-and-strawberry filling.

Crisp

- 5 cups chopped rhubarb, cut in 1-inch pieces
- 3 cups strawberries, rinsed, tops removed, cut in half
- 1/4 cup liquid honey (see tip below)
- 1 Tbsp minute tapioca (baking aisle at larger grocery stores)
- 1 tsp grated fresh ginger

Topping

- 1 cup large oat flakes
- 1/3 cup whole grain barley flour
- 1/2 cup oat bran
- 1/4 cup natural wheat germ
- 2 Tbsp flaxseed meal
- 1/2 cup packed dark brown sugar
- 1/4 cup + 2 Tbsp finely diced dried candied ginger (check the label if you have a peanut allergy)
- 1 Tbsp ground cinnamon
- 1/2 cup canola oil

Method

1. **Place a rack in the middle of the oven and preheat to 350°F.** Line an 8 × 11-inch glass or ceramic casserole dish with wet parchment paper; set aside.
2. **Make the crisp.** In a large bowl, mix together the rhubarb, strawberries, honey, tapioca and ginger. Transfer to the prepared pan.
3. **Make the topping.** In a medium bowl, stir together the oat flakes, barley flour, oat bran, wheat germ, flaxseed meal, brown sugar, candied ginger and cinnamon. Add the oil and mix with a fork until well combined – the mixture should look wet. Spread evenly over the fruit.
4. **Bake for 45 to 50 minutes,** until the topping is golden brown and the rhubarb is soft. Let sit for at least 30 minutes before serving. Serve warm or cold. Keeps for up to 2 days in the fridge.

About the author

Mairlyn Smith is a Canadian professional home economist, cookbook author and longtime Cityline food contributor known for her warm humour and unapologetic evangelism for whole grains and dietary fibre. Her personal tagline — peace, love and fibre — captures the tone: healthy eating without the sanctimony.

About the cookbook

Peace, Love and Fibre: Over 100 Fibre-Rich Recipes for the Whole Family (Penguin Random House Canada) is Mairlyn Smith's fibre-forward cookbook — everything from breakfasts and dinner breads to soups, salads, mains, sides and treats, each with a full nutritional breakdown and icons flagging vegetarian, vegan, lactose-free and gluten-free options. It opens with "Fibre 101," a plain-language primer on why fibre matters for blood sugar, gut health and long-term disease risk, then moves through 100+ recipes designed to make high-fibre eating feel less like a health directive and more like everyday cooking. Available at Amazon.ca and Chapters/Indigo.



More Fibre-rich Recipes Featuring Barley

Visit @MairlynSmith on Instagram for more recipes and tips on eating a fibre-rich diet

Per serving (1/10 of the crumble)

313 cal • 13.7 g total fat
1.2 g sat. fat • 0 g trans fat
0 mg cholesterol • 8 mg sodium
48.3 g carb • 5.6 g fibre
26.6 g sugars (23.5 g added)
4.8 g protein • 493 mg potassium
Carbohydrate choice = 3

SeCan
Canada's Seed Partner

BARLEY WITH ATTITUDE



- very high yielding 2-row feed barley
- the CDC Austenson replacement you've been waiting for!
- excellent straw strength

Genes that fit *your* farm®
800-665-7333 secan.com

Certified Seed

Developed by Crop Development Centre, University of Saskatchewan.
Genes that fit *your* farm® is a registered trademark of SeCan.

Return undeliverable Canadian addresses to the below address

SaskBarley

225-415 Wellman Cres
Saskatoon, SK S7T 0J1
General Inquiries: 306-653-7232

Canadian Publication Mail Agreement # 42883517