



MANITOBA
CROP
ALLIANCE

The FENCE POST

November
2021

Bi-Annual Newsletter

REPORT FROM THE CEO'S OFFICE

'Teamwork makes the dream work.'

Most of us have heard that phrase, attributed to John Maxwell. But why is teamwork so important? It has been demonstrated effective teams can greatly improve an organization's operation. As farmers, we know this firsthand. A great team and investment into that team can lead to higher productivity and greater operational efficiency, all improving the organization or farm's bottom line. Why? Because we are **stronger together!** By working together towards a strategic goal, we are more likely to be successful than each individual working on their own.

I can proudly state the team at Manitoba Crop Alliance (MCA) is working together to ensure farmer members' levy dollars are invested strategically. MCA's team is comprised of the delegates of the four crop committees, the board of directors, and the staff who implement the strategic direction of the organization. As members of the team, **we focus on communication, accountability, and collaboration.**

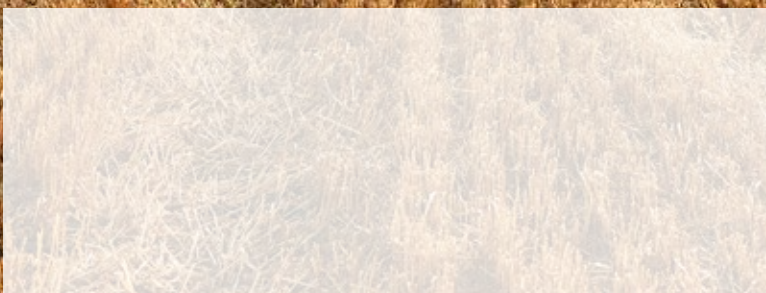
It is with the approach of *'Teamwork makes the dream work'* that MCA shares in the Fall 2021 edition of The Fence Post a few of the initiatives and work underway to better serve our farmer members. There is information focusing on the **market intelligence and market development** work done in collaboration with our key partners. John Heard, soil fertility specialist with Manitoba Agriculture and Resource Development shares his expertise on **managing fertility after a dry year**. There are several upcoming events farmer members should mark on their calendars, including the **Producer Malt Academy** held in partnership with the Canadian Malting Barley Technical Centre (CMBTC) and the **2022 CropConnect Conference**. On the organizational front, MCA's chief operating officer Darcelle Graham shares in her report **MCA's 2021/22 budget**. I also remind producers of MCA's **annual general meeting on February 17, 2022**. It will be a hybrid format, with in-person and online access, to attend and participate.

I hope you enjoy reading the Fence Post. Be sure to subscribe to our monthly e-newsletter and follow us on MCA's social media platforms – Twitter, Instagram, Facebook, YouTube – to keep engaged. Also visit MCA's website – www.mbcropalliance.ca – as it is a great source of information to keep you informed of MCA activities.

Until next time, stay safe and stay healthy!



Pam de Rocquigny
Chief Executive Officer,
Manitoba Crop Alliance



BUDGETING FOR MANITOBA CROP ALLIANCE'S 2021-22 FISCAL YEAR

Darcelle Graham Chief Operating Officer, Manitoba Crop Alliance

As Manitoba Crop Alliance Inc. (MCA) enters year two of operations, the board of directors and its supporting committees met in the months leading up to August to develop the budget for the upcoming year. MCA's Finance Committee met in June 2021 to develop the 2021-22 budget. The committee started with reviewing the revenue projected for the operating year.

MCA's primary source of income is levies collected from the sales of wheat – spring and winter, barley, corn, sunflower and flax. MCA forecasts levy revenues in two steps; the first is to estimate production by calculating planted acres multiplied by average yields. Production estimates are then multiplied by levy rate/tonne or average price/levy rate. As the growing season was unseasonable dry, the Finance Committee has taken into consideration that our levy revenues will be impacted due to a reduction in yields while considering current commodity prices could buffer levies deducted based on gross sales.

An advantage of an amalgamated organization is the opportunity to ride the wave of fluctuating acreage, commodity pricing and the effects of weather on crop production. While MCA will see a decrease in levy revenues this fiscal year, the organization is well positioned to maintain the core priorities identified by our members and our commitments to long-term funding agreements.

For the 2021-22-year, MCA will maintain that **65%** of our expenses will be allocated towards research. **Research and Agronomy** continue to remain our largest priority for the organization with the goal to deliver improved, independent and farmer-driven research and agronomy support to our members.

The investment of **13%** of MCA's funds to **Market Access and Development** programming will see MCA work with our key industry stakeholders to develop new markets and support existing markets for our commodities. MCA holds memberships with Cereals Canada, Barley Council of Canada, Canadian Malt Barley Technical Centre, Flax Council of Canada and Canadian Special Crop Association.

Communication remains an integral part of the organization to ensure MCA builds a strong connection to our investment in research and agronomy programs, and delivers those results to members to increase their profitability and return on investment for their levy dollars. Expenses towards communication will contribute to **5%** of MCA's overall expenses.

The board of directors have identified the value of being **members** to key organizations that support our farmer members in a variety of areas. MCA is a member of the following organizations: Grain Growers of Canada, Keystone Agricultural Producers, Canadian Roundtable for Sustainable Crops, Canadian Special Crops Association, and the Agriculture Institute of Canada. Memberships to these organization account for **2%** of MCA's expenses.

MCA prides itself on running an efficient and lean organization which contributes to low **administrative** and operational expenses totaling **12%** of budgeted expenses.

MCA remains an administrator for the Advance Payments Program (APP) delivered on behalf of Agriculture and Agri-Food Canada. As an administrator, MCA can efficiently use our physical and human resources between our core business and the delivery of APP. Expenses for the **Advance Payments Program** total **3%**, however the overall budget will see a marginal surplus for the delivery of the program that is allocated to program improvements.

The Board of Directors remains committed to maximize our strategic investments in research and market develop to provide each of our farmer members a better return on your levy dollar.

2021-22 BOARD OF DIRECTORS

SUNFLOWER	CORN	WHEAT & BARLEY	FLAX
Mark McDonald Virden, MB	Jonathan Hodson Lenore, MB	Fred Greig – Chair Reston, MB	Nick Matheson Stonewall, MB
Gregg Fotheringham Reston, MB	Leonard Wiebe Carman, MB	Robert Misko – Vice-Chair Roblin, MB	Eric Fridfinnson Arborg, MB
	Warren McCutcheon Carman, MB	Doug Martin – Secretary East Selkirk, MB	
		Ryan Hueging Woodlands, MB	

CALL FOR RESOLUTIONS

The deadline for resolutions to be considered at Manitoba Crop Alliance 2022 annual general meeting is 4:30 pm CST, November 30, 2021.

Please submit resolutions to Pam de Rocquigny, Chief Executive Officer, at pam@mbcropalliance.ca.

For guidelines on submitting a resolution, visit MCA's website at mbcropalliance.ca/about/governance/resolution-procedures or call MCA's office at 204-745-6661.

Note: Resolutions will not be accepted after the deadline or from the floor at the annual general meeting.



Agriculture and Agri-Food Canada
Agriculture et Agroalimentaire Canada
Advance Payments Program
Programme de paiements anticipés

MANITOBA CROP ALLIANCE CELEBRATES 40 YEARS

In 1981, one of Manitoba Crop Alliance's founding organizations – Manitoba Corn Growers Association – issued their first cash advance to Manitoba farmers

Manitoba Crop Alliance (MCA) carries on that service to help farmers with their cash flow needs by administering Agriculture and Agri-Food Canada's Advance Payments Program (APP).

Farmers are eligible to receive a **cash advance of up to \$1,000,000** which includes **\$100,000 interest-free**. MCA advances dollars on over 30 crop kinds. MCA makes applying for an APP cash advance stress-free and straightforward. We pride ourselves in providing quick,

friendly, small town service that our clients deserve! Staff will work directly with you to ensure your application is complete and funds are issued in a timely fashion. Funds can be advanced in as little as **3 to 5 business days** once the application process is completed.

For more information:

Visit: mbcropalliance.ca/advance-payments-program
Call: 204-745-6661

Contact our APP administrators:

Tammy – tammy@mbcropalliance.ca
Rae – rae@mbcropalliance.ca

The Advance Payments Program is a federal loan program administered by Manitoba Crop Alliance. It offers Canadian farmers marketing flexibility through interest-free and low interest cash advances.



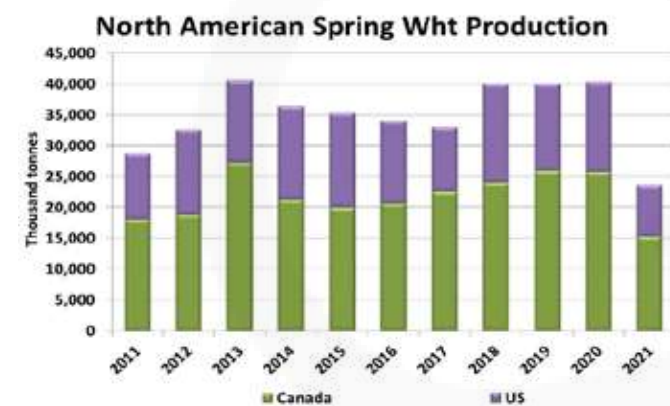
GRAIN MARKETING INSIGHTS

LeftField Commodity Research



Wheat Prices Supported by Small Crops and Good Demand

The price Prairie farmers receive for their wheat is driven by global and local factors, both of which became increasingly supportive as the growing season unfolded. North American spring wheat production was anticipated to decline even prior to the drought, with plantings down in both Canada and the US. When combined with sharply lower yields, the total crop looks to be over 40 per cent smaller. This includes the latest StatsCan estimate of 15.32 million tonnes, compared to nearly 26 million tonnes in 2020, while USDA is pegging the US hard red spring wheat crop at just 8.3 million tonnes, the lowest since 1988. This has increased the value of hard red spring wheat relative to other wheat classes.



In addition, world prices have been strong as supplies shrink across other key exporting countries, including Russia, at the same time demand has been solid. The combination of a rising wheat complex as a whole and a lofty premium for hard red spring wheat, specifically, has allowed Western Canadian wheat bids to trade at their highest level in the post-CWB era.

Markets are effective at quickly incorporating information into prices. For this reason, it may be difficult to squeeze additional premium for Canadian wheat relative to global prices, even though the market will need to ration export volumes by over 7 million tonnes from this past year's record, to just 13 million tonnes in 2021/22. At the same time, a strong world wheat market will help keep prices well supported.

Barley Quantity and Quality a Concern

Early in the growing season it looked like barley supplies could actually get heavy, with plantings up 10 per cent. Old-crop stocks from 2020/21 shrank to next to nil, but even with an average yield, supplies would rebound. And then weather happened (or didn't happen). The 2021 drought cut yields sharply with the latest StatsCan estimate at 43.8 bu/acre, 26 bushels or 37 per cent below the 5-year average. And it wasn't just lower yields; more barley was cut as greenfeed as pastures and other sources of fodder dried up. Our latest crop estimate is 6.7 million tonnes, a full four million tonnes less than last year. So much for a surplus.

The final shoe to drop for the 2021 barley crop is the very poor quality, specifically for the malting industry. Very high protein is fine for livestock feeders but not for malt, and the thin kernels make the situation worse. We don't have hard estimates of quality just yet, but the malt-feed spread is sending very strong signals about how hard it is to find maltable barley.

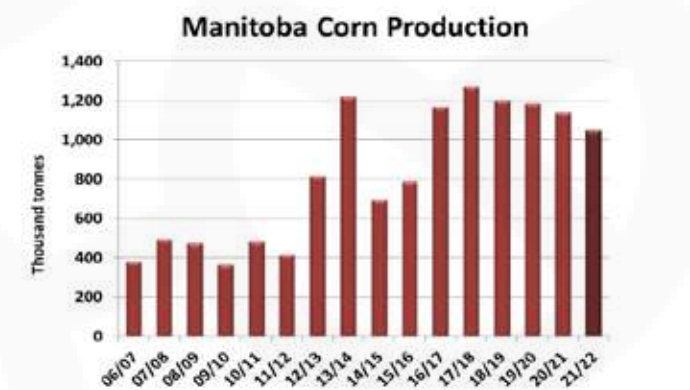


Last year Canada exported 3.8 million tonnes of barley, the most since the early 90s, with over 80 per cent headed to China. This year, only small amounts will move off-shore, mostly what was sold back in spring.

On its own, the small crop with almost no old-crop carryover would be enough to boost barley prices back up to extremes. But with cheaper US corn ready to come into the Prairies to help fill the feed grain shortage, price strength will be capped. The one exception is clearly malt barley. With the quality so unsuitable, it's driving prices to record spreads versus feed until maltsters figure out a way to deal with this "historic" crop.

Corn Prices Reflect Two Different Stories

The corn market reflected two different stories between the Eastern Prairies and the US through much of the summer and fall. US values drifted lower as weather was favorable through many of the key producing states. The Manitoba market was a stark contrast, with record-high bids in response to an extremely tight Prairie feed grain supplies overall. This reflected not just tight supplies coming into the growing season, but also the sharp drop in yields. This includes corn in Manitoba, with the last StatsCan production estimate at just over 1 million tonnes, the lowest since 2015.

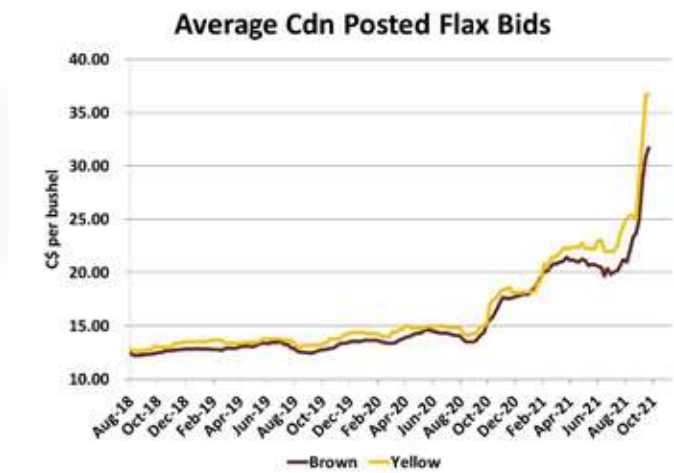


While Manitoba corn production is small within the wider Western Canadian feed grain complex, and achieving an average yield might only have added another 100,000 tonnes to the crop, it does reduce the available supply within a key consuming region. The fact drought conditions also hurt corn yields in the Northern US added to the local tightness.

Western Canada will crank up its imports of US corn by three-fold or more during the coming year, to perhaps as much as 3 - 4 million tonnes. Prairie prices can expect to maintain a premium over US values during that time to ensure imports fill the supply gap, but the frothiness in domestic bids are unlikely to see the levels experienced in summer unless prices south of the border see a surprisingly strong rally.

New Territory for Flax

The rally in flax prices during the summer and fall was stunning, with values literally being double what would have been considered an 'outstanding' price just 12 months earlier. Canadian production looks to be down to perhaps just 370,000 tonnes, over one-third smaller than the previous year. Supplies were already short coming into harvest, and the US crop will also be down, leaving end users scrambling to cover their needs.



While Black Sea production has played a key role in supplying overseas buyers, it's difficult to see how a drop in Canadian exports of up to 200,000 tonnes can get filled given their crop may also be lower this year. This keeps the global market extremely tight, with international prices reflecting this reality.

Most flax end users have limited ability to switch to alternative crops, and the short supply means even some highly inelastic demand will need to get rationed. At some point prices will level off, but values should remain historically strong given there is no supply relief in sight until the next harvest.



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UPDATES FROM THE FLAX COUNCIL OF CANADA



Wayne Thompson Chief Executive Officer – Flax Council of Canada

The Flax Council of Canada (FCC) has been working on several trade issues in 2021 and preparing for the future. The European Union proposed limits for cadmium and hydrocyanic acid in flax. The FCC worked with the Government of Canada and EU partners to provide information and support about why the limits of cadmium and hydrocyanic acid are not of concern in Canadian flax. Despite our efforts the EU proceeded to implement regulations, and as of August 30, 2021 has introduced maximum allowable cadmium in flax for food. The Canadian flax processors and exporters are working to manage exports of flax and meet the regulations. The EU has also proposed a limit for hydrocyanic acid, a naturally occurring product in flax. The EU

has received information from Canada and we are waiting for further engagement to discuss the proposed limit. We are working on new food packaging regulations to be implemented by China on January 1, 2022. The other trade issues have been slow to progress in 2021 because of the focus on the pandemic. However, these issues are top of mind for resolution at the FCC.

Looking beyond 2021, the FCC is preparing itself to take advantage of the opportunities in Canada and around the world. The demand for flax has not decreased during the pandemic. Consumers are becoming more aware of the health benefits of flax and the FCC will continue to lead and support efforts to help everyone learn more about flax. The livestock sector is also demanding more

flax, both to have healthier animals and the improved productivity of the animals.

In 2021 the FCC made some changes while renewing the membership. The office moved to Saskatoon and is co-located with the Saskatchewan Flax Development Commission, and hired Wayne Thompson as the Chief Executive Officer. The intention of all the changes has been to create a more streamlined set of organizations for the flax industry. The connections between the FCC, Manitoba Crop Alliance, and Saskatchewan Flax Development Commission will help serve processors, exporters, and growers for the long run. With new members joining the FCC, we know the organization will be here to work for the flax value chain for many years to come.

Sometimes there isn't a workaround

Protect Midge Tolerant Wheat by following the Stewardship Agreement

There is **NO Plan B**

MIDGE TOLERANT WHEAT
Plant • Protect • Preserve

midgetolerantwheat.ca

#FarmFixes

SUNFLOWER MARKET OUTLOOK



Jody Locke Senior Originator – Scoular Canada

Throughout the 2021 growing season, the prairies experienced moderate to extreme drought conditions causing concerns for producers. There were areas that were hit harder, which was concerning for sunflower yield and oil content. Fortunately, some late rains came, and we are seeing good yields early into the harvest (early October).

Most commodities have seen strong pricing through harvest. Sunflower pricing has also remained strong, and while we hit some high prices this summer, the price is levelling off as we get into harvest. Currently black oil sunflowers are at 35-38 cents/pound, up from a historical price around 23-24 cents/pound. Confection sunflower pricing has also been very strong, making both types of sunflowers excellent options for farmers.

Overall, bird food demand has driven the black oil sunflower market. It is an area that has seen tremendous growth over the last 18 months and sales continue to be strong. Sales are estimated to be up 35-40 per cent, versus pre-COVID sales, and continue to remain strong. During this same period, demand for confection sunflowers has fallen with a forecast to return to pre-COVID volume in 2022. I think its important for farmers to know

sunflowers are a crop that will always be required. The demand is stable for the amount we can produce in Manitoba, Saskatchewan and even Alberta. It's a crop that is always going to be used and provides a good ROI. We expect to see the demand continue for all sunflowers.

In Manitoba, we are experiencing high demand for both black oil and confection sunflowers. The demand for black oil sunflower seed is very high for bird food markets, and confection sunflowers for the human consumption market.

Sunflower supply is going to be tight worldwide, and it is hard to say how COVID will affect the markets again this year. In 2020, sales of bird food were up because people were at home. While we look for that growth to continue, the return to a new normal will dictate what the demand for sunflowers and bird food will be. We will also begin to see a larger demand for the human consumption market as people return to things such as sporting events and outdoor activities.

In terms of acreage for 2022, I believe sunflower prices will compete favorably with other crop prices and sunflowers will gain planted acres. This year through a tough season and drought, sunflowers

have shown they are a hardy crop with drought tolerance beyond most other crops. Sunflowers are a good rotation option for farmers, and where some have shied away from them in the past, we are seeing new farmers getting involved in the market and doing well. Farmers are looking for crops that are going to be drought resistant, and sunflowers are a good option. I anticipate we will see increased acres in 2022.

In conclusion, the sunflower market is currently very healthy and is a good market for farmers to go into. When it comes to ROI and drought conditions, sunflowers are a good crop to consider in your rotation.

Sunflower bids as of October

Confection sunflowers around 35¢ lb

Black oil sunflowers between 33-36¢ lb

NEW CROP MISSIONS REMAIN AS WEBINARS FOR 2021



Harvest continues to wrap up across Canada and wheat samples are coming into Cereals Canada to be prepared into class and grade composites for the New Crop Harvest assessments. The assessments are vital for the New Crop Missions which take place this November and December.

Providing an update on Canada's wheat quality to national and international customers is part of the Cereals Canada commitment on behalf of the value chain. In 2020, there were 48 webinars/virtual meetings involving 28 markets. Technical staff at Cereals Canada, along with the Canadian value chain including farmers, Canadian Grain Commission and industry delivered the crop production and quality update to customers.

With travel restrictions due to COVID-19 still in place, the 2021 New Crop Missions are remaining virtual. "Sharing with our customers what they can expect from the new crop quality is critical and through our online platform, we are able to connect and communicate with the buyers and millers on what they need to know," states Lisa Nemeth, Director of Market Support and Training at Cereals Canada. Cereals Canada also sets up one-on-one meetings with customers, as requested, to answer specific questions based on their needs.

The latest production numbers from Statistics Canada have been released. After a challenging growing season, this year's production of spring wheat is down. It is estimated at 15.3 million tonnes, down from 25.8 million produced last year and the five-year average of 23.8 million tonnes. This would be Canada's smallest spring wheat crop since 2007, when production was 13.8 million tonnes. Winter wheat production is estimated at 2.85 million tonnes, up from 2.77 million last year and up from the five-year average of 2.7 million. Manitoba growers appear to have generally more favourable production conditions than Saskatchewan and Alberta growers, but yields are variable depending on amount and timing of rainfall within

a region. "It has been a tough production season this year across the prairies," says Gregg Fotheringham, farmer and board member with Cereals Canada and Manitoba Crop Alliance. "Although we are seeing lower production numbers across Canada, for the majority of cereal crops quality remains strong."

With lower expected production, availability is going to be a concern, but what about quality? The question being asked is how did the weather impact the quality? Through the harvest assessment which reviews over 100 industry supplied composite samples from across Western Canada, Cereals Canada creates regional composites which are analyzed for quality and functionality.

"The harvest assessment data really tells the story for the upcoming year when it comes to the quality," says Elaine Sopiwnyk, Vice President of Technical Services with Cereals Canada. "Each composite is milled, analyzed and processed into various end-products to assess the functionality so buyers and millers can understand what they will receive in terms of wheat quality in their shipments." Composite assessment includes data on milling and flour/semolina

Last year, over 19 million tonnes of non-durum wheat along with over 5 million tonnes of durum were exported. Canada's cereals sector led the country's agriculture exports with annual exports averaging \$8.5 billion CDN dollars to over 70 countries.

quality as well as end-product quality (bread, pasta and/or noodles) typical for each wheat class. "We are expecting the majority of the crop to be available as No. 1s and No. 2s," states Sopiwnyk.

There are four export-region specific online seminars in November and December which will share the updates on market outlook, quality assessment, milling functionality and grain farming in Canada. The first webinar presentation on November 17 will update the buyers, millers and exporters in Canada, USA and Latin America about Canada's wheat quality.

Learn more about the new crop missions at www.canadiancereals.ca and register to attend the America's session, 2021 New Crop webinar for customers in the Americas shared in English, Spanish and French on November 17, 2021, at 10:00 AM CST.

About Cereals Canada
Cereals Canada is dedicated to support the Canadian cereals value chain (farmers, exporters, developers and processors) and our customers around the world. We are committed to providing timely, expert technical information, delivered with best-in-class customer experience.

COMBINE TO CUSTOMER 2022



The Combine to Customer program will provide insight into grain industry initiatives and what needs to be done to stay competitive and meet the ever-changing requirements of domestic and international grain buyers.

Dates:
February 6-9
February 22-25
March 6-9
Winnipeg, MB

Members can email mallorie@mbcropalliance.ca to register.



A LAY OF THE (POLITICAL) LANDSCAPE

Erin Gowriluk Executive Director - Grain Growers of Canada

At first glance, the political landscape in Ottawa post-election does not appear much different than it did a few months ago, yet a renewed Liberal minority government may operate differently this time around. This is largely due to the fact that it was clear no one wanted a pandemic election this summer, and it is hard to see a scenario where there would be much public appetite in the near future. Combine that with the reality that the political parties will need to restock their campaign war chests, it is tough to think the governing Liberals will have trouble finding support from one of the other opposition parties to move forward with their agenda.

What does this mean for farmers, though? It means environmental policy will remain the focus for agriculture under this government, and we need to continue to grapple with ensuring that MPs, Ministers, and bureaucrats better understand the impacts of certain policy proposals in this space. Additionally, it means we will need to continue to engage with all political parties to ensure our sector's priorities cannot be ignored.

During the lead up to recent federal election campaign, the Grain Growers of Canada (GGC) actively engaged with all of the main political parties to stress the core areas of agricultural policy that we wanted to see included in their respective election platforms. Our areas of focus included:

- Increased funding towards more effective risk-management programs
- Investing in Ag research to better position grain growers for the future
- Refocus regulation to enable innovation and increase Canada's competitiveness
- Modernize the Canada Grain Act to reduce costs, maintain protection, and return excess service fees to farmers
- Break down trade barriers, and aggressively defend Canada's exporters
- A Made-in-Canada approach to environmental policy that recognizes and rewards farmers for being part of the climate change solution

While all the Party platforms lacked any real emphasis on agriculture, we will continue to focus on driving the needs of our sector forward. This starts in earnest as soon as the Prime Minister announces his Cabinet, and Parliament returns this Fall. While many questions remain as to whether we can expect in-person meetings during the remainder of this calendar year, we are planning a series of meetings with key MPs and Ministers in mid-November, and a larger lobby week in February 2022.

To be frank, it is an uphill battle. However, we will continue to raise issues that matter to Canadian farmers to all parties in Ottawa. After a difficult growing season for many producers, rising input costs, and a volatile trade environment, it is more important than ever that we loudly stand up for the needs of Canada's grain growers - and that's just what we are going to do.



INTRODUCING THE NEW HABITAT FRIENDLY WINTER WHEAT ECOLABEL



Manitoba Crop Alliance has partnered with Cereals Canada to develop a new ecolabel in cooperation with western winter wheat commissions, conservation organizations, millers, and food processors. The ecolabel highlights the ecological benefits of winter wheat to consumers and creates new marketing opportunities that increase demand for winter wheat as a result.

Habitat-Friendly Winter Wheat promotes Western Canadian winter wheat while also sharing the environmental benefits that are inherent in this crop. It is an innovative approach to market development that taps into growing consumer demand for sustainable products. It also represents an opportunity to communicate agriculture's positive contributions to the environment.

Through this program, we're sharing with consumers what winter wheat farmers have always known. Besides reducing the need for equipment in the fields in the spring and taking advantage of the moisture in snow melt, growing Western Canadian winter wheat allows upland nesting birds to exist undisturbed through spring and early summer. In fact, studies show that ducks nesting in winter wheat fields are 24 times more successful than those nesting in spring-sown fields.

The Habitat-Friendly Winter Wheat program leverages these unique environmental benefits to unlock new opportunities for farmers, driven by stronger communication with customers. By telling winter wheat's environmental story, farmers can gain higher value markets, processors can differentiate and add value, and consumers can feel good knowing their purchase is made with Habitat-Friendly Winter Wheat.

Thanks to engagement by western winter wheat commissions and Cereals Canada, the ecolabel program has been designed with farmers in mind. Farmers can participate in the program simply by growing Western Canadian winter wheat and delivering it to a certified processor or end-user. Grain handlers, mills, and food manufacturers can become certified through an application and audit to confirm they can appropriately document grain segregation and track flour blending to meet the required 30% minimum percentage of winter wheat for certified flour.

One of the first Habitat-Friendly Winter Wheat-certified businesses is Les Moulins de Soulanges, a specialty flour manufacturer based

in Quebec's Montérégie region, selling to bakers across North America. Chafik Baghdadi, R&D/QA Director at Les Moulins de Soulanges says, "Customers are looking for more transparency and want to know where their flour comes from. I believe the Habitat-Friendly Winter Wheat Ecolabel will emphasize the attributes and meet growing consumer demand for sustainable products."

Bread and flour are obvious products that could be certified, but truly any food product that uses wheat is eligible. For example, Beam Suntory, a world leader in premium spirits, found a fit with this program through its Northern Keep Vodka, a premium craft vodka that puts sustainability and land protection at the forefront.

Nicholas Winters, Supply Chain Manager at Beam Suntory says, "Sustainable winter wheat harvested from farms in Western Canada is a core ingredient in our Northern Keep Vodka. We were aware of the benefits of winter wheat regarding nutrient run off and erosion, but learned from this program about its ecological benefits for nesting habitat. We thought this was a good story to tell and linked with what we are trying to do with Northern Keep Vodka and our sustainability efforts."

Telling a good news story from the field to store shelves is one of the primary goals behind this ecolabel. "By working together as a value chain to launch this project, we're not only creating new market development opportunities, but we're also helping to showcase Canadian agriculture's sustainability story," says Daniel Ramage, Director of Market Access and Trade Policy at Cereals Canada. "The partnerships established through this project demonstrate how shared value can be created when sustainability and business goals converge."

Consumer research conducted over the last several years of developing the ecolabel revealed that 80% of consumers would buy a product that had the Habitat-Friendly Winter Wheat ecolabel. If you were looking for more reasons to grow winter wheat, growing consumer awareness of its benefits through the Habitat-Friendly Winter Wheat Ecolabel just might translate to growing demand and all the reasons you need.

Learn more about the Habitat-Friendly Winter Wheat program at: www.habitatwheat.ca

4R NUTRIENT STEWARDSHIP IN MANITOBA

In December 2020, the Government of Canada released a plan called "A Healthy Environment and a Healthy Economy," with a goal to reduce emissions from fertilizer by 30% below 2020 levels.

At the 2021 Manitoba Crop Alliance (MCA) Annual General Meeting in February, members passed a resolution titled "MCA to encourage a reduction of nitrous oxide gas emissions from soil and fertilizer use through a farmer-to-farmer soil and crop management learning forum."

What exactly is nitrous oxide (N₂O)? Nitrous oxide is a greenhouse gas that contributes to ozone depletion and climate change. There are two biological processes that contribute to nitrous oxide production - nitrification and denitrification.

What is the impact on Canadian agriculture? In Canada, N₂O accounts for about half of the greenhouse gas emissions from agriculture and is the major GHG released from cropping systems. The emission reduction of 30 per cent below 2020 levels could have considerable impact on Canadian farmers' incomes and significantly reduce overall Canadian production and exports of agri-food products, which will ultimately impact the Canadian agri-food economy.

Reducing emissions cannot come at the cost of producing less food. There needs to be a balance between increasing food production and reducing emissions, through increasing the efficiency of agricultural fertilizers.

In response to the resolution, MCA is working with Fertilizer Canada to educate farmers in Manitoba about the 4Rs (Right Source @ the Right Rate, Right Time, and Right Place®). Partnering with Fertilizer Canada enables us to provide consistent messaging about the 4Rs to our members and share educational resources on our website, through our monthly HeadsUp newsletter as well as our social media platforms. MCA is also working with Grain Growers of Canada to provide input to the impact of government policy on farmer member profitability and competitiveness.

In terms of research, MCA is funding research projects to learn more about the current state of fertilizer use in Manitoba and provide advice for nitrogen management in our province. For example, the Fertilizer Use Surveys for sunflowers, corn, flax wheat and barley are conducted yearly to fill the gap of publicly available data for commercial fertilizer use, trends and management practices.

"The data from the Fertilizer Use Survey provides us with critical information on the current state of fertilizer management in Canadian crop production and assessing grower awareness and adoption of 4R Nutrient Stewardship," said Karen Proud, President and CEO of Fertilizer Canada. "The survey shows us how agri-retailers and farmers across Canada are implementing 4R Nutrient Stewardship, which is an approach that has been demonstrated to increase crop production while protecting our environment."

Another example is the Cross-Canada agronomic and environmental benefit of advanced 4R nitrogen management of grain corn project headed by Dr. Mario Tenuta, Dept. of Soil Science at the University of Manitoba with researchers from eastern Canada. An objective of this project is to determine if advanced 4R nutrient management for Quebec, Ontario, and Manitoba conditions change the most economical rate of nitrogen (MERN) and improve grower return on investment (ROI). This project will build on and complement the research we have already funded in Manitoba aimed at updating nitrogen recommendations for modern hybrids and advance grower tools for in-season nitrogen rate determination.

MCA has also completed lots of work looking at fertility, including a recent factsheet summarizing fertility for high yielding wheat, and the On-Farm tests looking at fertility timing both in spring wheat and corn. To learn more about research funded by MCA, please visit www.mbcropalliance.ca/research/projects.

Nutrients are essential inputs for crop production. Following the 4R Best Management Practices (listed below) on your farm will help optimize production, increase your economic return and protect the environment while ensuring a growing economy.

4R Principles:

- » **Source** – select the correct nutrient source for your soil type, and ensure a balanced nutrient supply
- » **Time** – avoid nutrient application on frozen soils or snow, annual nutrient management planning
- » **Rate** – perform annual soil testing, consider crop nutrient requirements, calibrate equipment to apply target rates, take nutrients from all sources into consideration
- » **Place** – place nutrients below the soil surface where then are needed to be taken up by plant roots, respect setback distances along waterways

Visit www.mbcropalliance.ca/resources/4r-nutrient-stewardship-in-manitoba to learn more about 4R Nutrient Stewardship in Manitoba.





GRASSHOPPERS: TIPS ON IDENTIFYING, MONITORING AND MANAGING

John Gavloski Entomologist – Manitoba Agriculture and Resource Development

There were a few insects of more widespread concern on field crops in Manitoba in 2021. The two most problematic were grasshoppers and flea beetles. Grasshoppers can successfully overwinter in Manitoba and are insects to make sure to scout for in 2022. There are many species of grasshoppers in Manitoba, and although most will never get to levels that can damage crops, there are a few that given the right conditions can. This article provides some tips on how to identify the species of grasshoppers that potentially can be crop pests, and how to monitor and manage levels of grasshoppers in field crops.

Grasshoppers – A Diverse Group

In Manitoba there are 85 species of grasshoppers, but most species don't get to very high levels, or feed much on crops, and are not considered crop pests. There are four species that potentially can be crop pests, however. These are the two-striped, migratory, clearwinged and Packard grasshoppers. Under the right conditions, populations of these species can get to damaging levels, and in addition to the natural vegetation, they will move into and feed on crops.

Grasshopper populations have increased overall in the past few years. Some species of grasshoppers, including our potential pest species, generally have more successful development in dry years and increase over a series of dry years. The generally dry summers over the last few years have likely contributed to this increase. In addition, reduced natural vegetation in drier years can force a greater proportion of these pest species of grasshoppers to move to cultivated crops. If this trend of drier summers continues in 2022, farmers and agronomists should keep an eye on grasshopper levels around and in their crops.

Getting to Know the Species of Grasshoppers that can be Crop Pests

Grasshoppers are an important source of food for many species of grassland birds. Recognizing pest from non-pest species can help in managing those grasshopper populations that are a potential threat to a crop, while not over-reacting to non-pest species, which can have a valuable ecological role. Any grasshopper flying before June is not a pest. All of our potential pest species of grasshoppers overwinter as eggs. There are a few non-pest species that overwinter as nymphs. In addition, the pasture grasshopper and clubhorned grasshopper, both non-pest species, hatch in early-spring, while our potential pest species all hatch in mid-spring.

The photos below show the three most common potential pest species of grasshoppers in Manitoba. To learn more about identifying the pest species of grasshoppers, see the Manitoba Agriculture and Resource Development factsheet "Grasshoppers: Identification, Monitoring and Management", which is available online.



Two-striped grasshopper adult (right) and nymphs



Migratory grasshopper

Both migratory and two-striped grasshoppers feed on a variety of types of plants (both crops and non-crop). Clearwinged grasshopper is primarily a grass feeder, and seldom feeds on broad-leaved plants.



Clearwinged grasshopper

What were the Most Dominant Grasshopper Species in 2021?

A grasshopper survey in August of 2021 counted grasshoppers and recorded the dominant grasshopper species at 97 locations in Manitoba. Two-striped grasshopper was generally the most abundant species, but this varied with region. In the Northwest agricultural region, migratory grasshopper was the dominant species in the most locations, followed closely by two-striped. In the Southwest, two-striped grasshopper was the dominant species in 18 of the 19 locations surveyed (migratory being dominant at one site). In the Central region, two-striped was generally the dominant species, with migratory being dominant at just a few locations. In the Eastern region, both two-striped and migratory were of roughly equal dominance at many sites, and in the Interlake two-striped was generally the dominant species, but there were a few location where clearwinged was among the dominant species.

Some Natural Controls of Grasshoppers

Grasshoppers are food for a lot of things. Insects that eat grasshopper eggs include ground beetles, field crickets, and larvae of some species of blister beetles and bee flies. Spiders, robber flies and some wasps feed on grasshopper nymphs and adults. Many species of birds will feed on grasshoppers, including gulls, meadowlarks, hawks, crows, shrikes, killdeers, cranes, etc. Thirteen-lined ground squirrels will feed on grasshopper eggs. Coyotes, skunks and some species of snakes will also eat grasshopper nymphs and adults.

A fungus called *Entomophaga grylli* can help control grasshoppers under warm, humid conditions. This fungal disease leaves corpses of its victims clinging to the stems of plants.

Populations of bee flies, *Epicauta* species of blister beetles, and field crickets were quite noticeable in some locations of Manitoba in 2021. Hopefully this will help reduce the grasshopper egg level somewhat.



Grasshopper infected with *Entomophaga grylli*

Another thing that can reduce grasshopper levels is heavy rainfall, but timing of this is important. The egg stage, which is the overwintering stage of our pest species of grasshoppers, is very resilient to excess moisture. Heavy rains in early spring would not be a major mortality factor for grasshopper eggs. The same heavy rains in early or mid-June, as the nymphs are emerging from the eggs, could be quite detrimental. Start scouting for grasshoppers in late-May or early-June, and focus this early scouting on areas that would have had lush green vegetation late last summer, such as field edges, pastures, late crops, etc.

Control Tips for Grasshoppers

In many years, treating either the crop margin or the border area surrounding the crop is adequate. Using insecticides with long residual activity would be most effective, particularly if egg hatch may not be completed. It is generally best to control grasshoppers when the majority are in the third to fourth nymph stages. The lowest dosage given on the insecticide label can be used when the grasshoppers are small and the vegetative cover is low.

If your crop or area you are applying insecticides for grasshoppers contains flowering plants, it is best to try to apply insecticides either prior to or after flowering if insecticides are needed. If this is not possible, apply the insecticide as late in the day as possible, and try to choose an insecticide that is not harmful to pollinators. Most insecticides registered for grasshoppers in Canada are broad-spectrum and harmful to pollinators, the exceptions being chlorantraniliprole (Coragen) and the bran baits Eco Bran and Nolo Bait.

Research in Wyoming found that in rangelands about 80 to 95 per cent control of grasshoppers was achieved by alternating treated and untreated swaths. This technique is referred to as reduced agent and area treatments, and was the most economical method of using insecticides to manage grasshoppers. Unfortunately, this technique has not been well researched outside of rangelands.

Summary: Start scouting for grasshoppers in late-May or early-June. Focus on areas that would have had lush green vegetation in August and September of 2021, which would attract higher levels of egg laying grasshoppers. Don't forget to consider beneficial insects when making management decisions; many are providing valuable services on the farm.



Blister beetle – *Epicauta* sp. Larvae eat grasshopper eggs

MAKING WITHDRAWALS FROM THE 2021 SOIL NUTRIENT BANK



John Heard CCA, P.Ag., Crop Nutrition Specialist with Manitoba Agriculture and Resource Development

Prairie soils indeed function as a bank in storing nutrients with regular deposits, withdrawals, short- and long-term saving options and even service charges or unwanted withdrawals. This past hot and dry summer dramatically reduced some crop yields, dashing normal expectation of nutrient removal through high-yield and high-quality crops. And such conditions with little soil moisture or rain also minimized some of those pesky withdrawals that routinely drain accounts. Let's consider your nutrient account heading into the 2022 cropping season and what may be available.

Most Manitoba farmers did optimistically fertilize crops this past spring with good yield potential and promising crop prices in mind. A small number who use split application techniques for nitrogen recognized reduced yield potential by June and withheld or reduced their latest deposit. Other than that, most fields received regular rates of nitrogen (N), phosphorus (P), potassium (K) and sulphur (S) fertilizers.

Of course, the only reliable bank statement to consider is the soil test. Using a chequebook approach of additions and withdrawals does not take adequately into account the soil interactions that are confounded in a drought year. For example, the "normal" nitrogen losses that are expected due to leaching on excessively drained, sandy soils or denitrification on saturated soils simply did not occur. Similarly, typical mineralization of N from organic matter was reduced under dry, adverse microbial growth conditions and immobilization in straw was reduced similarly because of smaller straw volumes.

So, the fall soil test is the required audit in order to determine soil bank status. Manitoba has many well-equipped agronomists or crop advisers available with proper equipment to probe and assess, not just the surface, but the full 24" depth of potential nutrients. If your present soil sampler cannot get the full depth of your accounts, perhaps look for an auditor that can.

An early snapshot of nitrogen reserves has been summarized by AgVise Labs (1). It indicates that over 30% of soil samples received from the Red River Valley and Interlake areas are testing over 100 lb N/ac. In general, long term average nitrate-N levels in Manitoba range between 30-40 lb/ac, yet average values this year are 40-80 lb greater than this. The lack of withdrawal in the 2021 crop, has left much to be exploited in 2022. But not all areas are testing high in N. In areas with better crops due to timely and more rainfall, some 25% of samples are testing very low to low in N. So, soil sampling is the reliable auditing tool to be used on a field-by-field basis.

One thing about nitrate-N measurements that makes it such a useful prairie tool is the levels do not change in our five to six months of frozen winter soils (like having your bank account frozen). So, fall sampling is a good indicator of what is available in the spring. It is measure of what N is available on day of sampling, but conditions may change this number between now and spring. Under moist, warm fall conditions, more N may be mineralized from organic matter and crop residues until freeze up, but this is more likely in pulse or oilseed residue than cereals. Excessive rainfall (which we definitely need to recharge soils) may lead to

losses of leaching or denitrification. And those pesky volunteer crops or regrowth is taking up and wasting both water and nitrogen. Studies with cover crops show only a portion of the N taken up by such fall vegetation is available for next years crop, so do not expect any credits, unless they are legume regrowth. I hope you terminated such green growth before they turned bad on you.

High soil nitrate levels need to be exploited and respected. Application of traditional N rates may result in more cereal lodging and produce high protein barley of low malt quality. Similarly high nitrate levels may challenge successful rhizobium nodulation of soybean and pulse crops, particularly if these crops are being grown for the first time. And high nitrate levels contribute to IDC or iron deficiency chlorosis in soybeans, so tolerant varieties should be selected.

Other nutrients such as P, K and S were applied but removed in less than normal levels. Phosphorus and potassium are banked short and long term in the soil, so don't expect to reduce your 2022 rates by those same amounts. Phosphorus fertilizer will have been "fixed" or bound in the soil and will contribute to a slightly higher soil test phosphorus (STP) level. But on Manitoba soils it takes between 15-40 lb P2O5/ac above that removed to increase STP by 1 ppm (using the standard Olsen or bicarb test). So, at most one might expect a 2-3 point increase in soil test levels – a very slight increase. Farmers need to study and discuss STP levels with their crop adviser to plan their fertilization strategy for 2022. With high P prices, some may choose to use a "short-term, sustainability" approach, whereby a lower than crop removal amount is applied as starter, relying on soil reserves for the rest. This is a short-term approach ultimately depleting soil reserves and will demand replenishment through higher P rates in the future. Remember, it is "borrowing and not stealing" from the bank. This approach is most appropriate for those with STP levels in the medium to higher range

Similar to phosphorus, potassium (K) is held in the soil, on surfaces of negatively charged exchange sites on clay and organic matter (OM). Under dry conditions K can be "fixed" or tightly held between clay sheets and not as available for the crop or detection by the soil test. But once soils rewet, this K is readily accessed.

Some farmers chose to harvest crops as

greenfeed or "withdrew before maturity", in order to salvage cereal or other crops as badly needed forage by cattle producers. Although drought caused these to be lower yielding crops, the removal of potassium is >5 fold greater in the whole plant than in grain alone. On sandy or low testing soils, this may have made a sizable dent in soil K levels. Recent Manitoba studies have shown such removals for wheat to be to be 0.23 lb K2O/bu (grain) and 1.4 lb K2O /bu (whole plant), and for oats to be 0.17 lb K2O /bu (grain) and 1.2 lb K2O /bu (whole plant). Similarly, many cereals combined for grain also had straw removed along with this potassium.

The soil test for sulphur is "used with a grain of salt" since variability across the landscape is large and potentially masks

those areas that may be deficient. Soil S tends to be low in well drained, leached areas of the landscape. Such leaching did not occur in 2021, so expect little change in S levels. Most farmers should still apply S to high need crops like canola and alfalfa.

The soil test will be a critical auditing tool of your 2021 nutrient reserve. With current fertilizer process close to 90 cents/lb N, the potential savings are over \$35/ac in many fields. Other fertilizer product savings are not as dramatic, but soil test levels are integral in designing your fertility plan.

1 AgVise Laboratories. Updated Residual Soil Nitrate Trends <https://agviselaboratories.com/ViewEmail/t/249EF1605C17D2E42540EF23F30FEDED/1268714A1EA4268914399806BE9B4083>

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