

Pulse

CROP NEWS



ALBERTA PULSE
GROWERS

SUMMER 2022

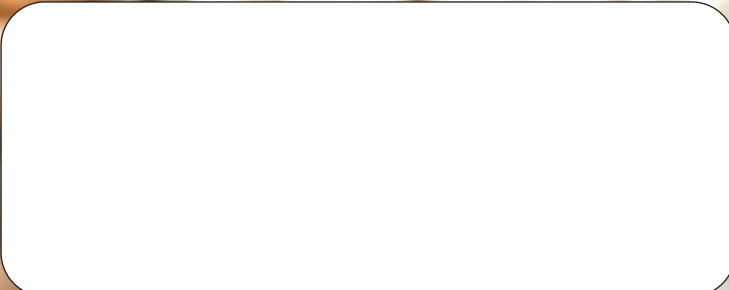
Keeping It Clean &
Product Advisory

Understanding
Acidic Soils

Agricultural Wetland
Stewardship

The Potential for Lupin

www.albertapulse.com



THE X FACTOR

OF BROAD- SPECTRUM DISEASE CONTROL.



Dyax[®]
Xemium[®] Fungicide

You can't afford to ignore the risk of early-season disease. That's why pulse and flax growers count on Dyax[®] fungicide. Powered by increased levels of Xemium[®], it delivers more consistent, continuous control of a broad range of diseases. Of course, its advantages aren't limited to disease management alone. Dyax also packs proven **Plant Health Benefits**¹ that lead to increased growth efficiency, better management of minor stress and greater yield potential². Visit agsolutions.ca/dyax to learn more.

 **BASF**

We create chemistry

¹ **Plant Health Benefits** refer to products that contain the active ingredient pyraclostrobin.

² All comparisons are to untreated, unless otherwise stated.

Always read and follow label directions.

AgSolutions, DYAX and XEMIUM are registered trade-marks of BASF; all used under license by BASF Canada Inc. DYAX fungicide should be used in a preventative disease control program. © 2022 BASF Canada Inc.

CONTENTS

INSIDE



PULSE CANADA UPDATE

08



WETLAND STEWARDSHIP MANAGEMENT

10

Publications Mail Agreement No. #40041861

Return undeliverable Canadian addresses to:

Alberta Pulse Growers

Magazine Editor

Rachel Peterson

Design & Layout

GrainsWest publications society

On the cover – Consumer interest in Alberta pulses continues to grow! APG offers a wide variety of recipe resources for meal and snack time inspiration. See albertapulse.com/recipe for recipes and albertapulse.com/eating-pulses/resources for recipe booklets.



RECYCLING OPTIONS FOR AG PLASTICS

30

MEMBER PRIVACY

Member information is collected and used in accordance with the Personal Information Protection Act and is the property of the Alberta Pulse Growers and will not be shared, sold or viewed by any individual, group or organization outside of the APG Commission unless directly related to member communication which is legislated as a reasonable business activity of the Commission. Please direct your comments or concerns to (780) 986-9398 or email office@albertapulse.com. *Pulse Crop News* is the official journal of and published by Alberta Pulse Growers. This is a producer organization funded by sales of pulse crops (beans, peas, lentils, faba beans, soybeans, and chickpeas) grown in the province of Alberta. Current circulation of this quarterly publication is 6,500+ copies and is distributed to producers, government, and industry involved in the special crops field. The views expressed in articles and advertisements are those of the contributors and do not necessarily represent the views of Alberta Pulse Growers. Contents of this publication can only be reproduced with the permission of APG.



#101, 4721- 47 Avenue, Leduc, AB T9E 7J4
 Telephone: (780) 986-9398 / 1-877-550-9398
 Facsimile: (780) 980-2570
 E-mail: office@albertapulse.com
 Web: www.albertapulse.com



Robert Semeniuk, APG Chair

CHAIR'S REPORT

LEARN ABOUT APG'S WORK IN AREAS THAT AFFECT YOU THROUGH APP, CROP WALKS & OTHER OPPORTUNITIES

I hope that seeding is well underway or finished as this issue lands in your mailbox. When I wrote this report, seeding had begun in parts of southern Alberta and most of the rest of us were waiting for the surprise late blast of winter to pass.

Unfortunately, weather is only one of the variables that we must navigate as farmers. Alberta Pulse Growers is working on research to help mitigate some of the issues pulse farmers face, such as *Aphanomyces* root rot, which was first noticed by pea growers over a decade ago. The work on root rot has proven to be a marathon, not a sprint. While a silver bullet has yet to appear, much headway has been made in understanding the pathogen and its symptoms. We continue to lean into the search for tools and strategies for control. We are thankful for the many scientists who have teamed up to work towards a positive outcome. For more information on the work being done in this space, check out the 2022 edition of *APG's Pulse Crop News 2022 Research Report, Science to Grow*.

You can be the first to learn about new tools and techniques in the fight against pulse diseases and other areas by downloading the APG app. There are some exciting new features underway that will

help farmers with productivity, so stay tuned for those. You can also take the opportunity to ask a question through the Ask an Expert feature during the growing season or throughout the year or check out previously answered questions on topics like residue, estimating yield, and the relationship between nodulation and nitrogen.

The app and other electronic communication tools are great for quick reference, but as we have seen in the last two years, there's no replacement for meeting in person and seeing things for yourself. APG has planned several plot tours and events this summer. Check out the Zone Updates in this issue and watch the Events section of the APG app and website for dates.

APG Directors and Zone Advisors got together in March for the first time in two years. Before COVID the meeting took place annually. This was a day and a half of long-overdue networking and speakers addressing important topics such as market outlooks, carbon, agricultural wetlands, research and extension. If you would like to participate in future events like this as well as contribute to decisions that help pulse farmers, contact APG about becoming an Advisor in your zone.

Meanwhile, we are hearing about several pulse processing facilities that are in various stages of coming to Alberta, which is all great news for us as farmers. Interest from near and far in these sustainable crops that we grow can only mean good things for our bottom line and the environment. This serves as a reminder that pulses are going to be a huge part of our story as farmers for years to come, especially with the federal government's commitment to net zero emissions. APG continues to participate on behalf of farmers in developing what the road map is going to look like as we go down this path. If you missed it, read more in the Winter edition of *Pulse Crop News*.



EXECUTIVE DIRECTOR'S MESSAGE

APG HARVESTING RESULTS IN RESEARCH, ADVOCACY AND EXTENSION

Spring work and seeding will be a memory and farmers will be watching for pests and other issues emerging in the year by the time you get this edition of PCN. APG is also working to ensure the opportunity for a successful harvest for 2022. Part of our good harvest is the work we are doing to ensure that we can access key research to address issues and opportunities for pulses.

Farmers received the latest issue of the APG *Pulse Crop News 2022 Research Report*. This document outlined what we are working on in research with over 32 different projects covering our three strategic priority areas: grow, move and use. If you have not read the magazine, I encourage you to check out what APG has been investing in. It is available online at albertapulse.com/2022/04/pulse-crop-news-2022-research-report/.

The magazine also shared priorities that were developed for national research investment. Currently, APG is reviewing multiple projects that were proposed under Agriculture and Agri-Food Canada's (AAFC) AgriScience Cluster Program funding. This season, while farmers are minding their crops, APG will be working with provincial pulse organizations and Pulse Canada to confirm investment in a final series of projects and submit them to AAFC to access matching funding through

the Cluster program. Next winter we will learn which projects have been approved and we aim to partner to finance the new research activities starting April 2023. Our investment will be for five years and will constitute a significant expenditure for the organization.

Other important activities that APG is focusing upon during the growing season is coordination of #ABBugChat. APG staff are fully engaged with entomologists and farmers to share what is happening right now in the field through Twitter. If farmers have questions about the pests in their fields or want to learn more about what people are seeing across the province, this is a great tool to monitor and engage with. APG staff monitor and engage on #ABBugChat every Wednesday morning through most of the growing season.

APG is a partner in growth of advocacy through Team Alberta Crops. In winter, Team Alberta Crops expanded from the four original commission members: Barley, Canola, Pulse and Wheat to eight members with Alberta Beekeepers Commission, Alberta Seed Growers Association, Alberta Sugar Beet Growers and the Potato Growers of Alberta. To support this expansion, the eight organizations also contributed funding for three years to support a staff member assisting



Leanne Fischbuch, Executive Director

our organizations to target advocacy efforts within the province. APG is pleased to introduce Reg Warkentin as the Government Relations and Policy Manager for Team Alberta Crops. Warkentin began in March and is looking to help partners develop policy, build relationships, and communicate key positions to government, industry, and the public. To learn more about the latest activities with Team Alberta Crops visit www.teamalbertacrops.com.

APG aims to harvest results in research, advocacy, and extension in the areas important to our organization such as defined in our strategic plan under grow, move and use. We continue to thank farmers for your support as we look to address solutions, bring forward ideas and engage to make changes so that we can see pulses on every farm, on every plate. I encourage you to reach out to us if you have any questions by contacting us through our app using 'Ask an Expert,' through our website, email office@albertapulse.com or call our office directly at 780-986-9398. I wish you a successful growing season and a bountiful harvest.



APG'S CHAIR IS DEDICATED TO CONTINUING WORK TOWARDS PULSES ON EVERY FARM, ON EVERY PLATE

The Chair of the Alberta Pulse Growers Commission (APG) was elected for a second year to lead the organization towards achieving its vision of pulses on every farm, on every plate.

Robert Semeniuk of Smoky Lake was re-elected to the role of Chair at a meeting following January's virtual annual general meeting.

"I'm looking forward to continuing the work of this board to maximize opportunities for Alberta's pulse farmers," Semeniuk said. "The addition of two new Directors at Large will bring fresh perspectives as we continue promoting and building upon the economic benefits of growing beans, peas, faba beans, lentils, chickpeas and soybeans, as well as the sustainability of our industry."

Semeniuk grows yellow peas and other crops alongside his wife Angela. He will lead an Executive Committee that includes new Vice-Chair Shane Strydhorst of Neerlandia (Zone 3) and Past Chair Don Shepert of St. Brides (Zone 5).

John Kolk of Picture Butte (Zone 1) and Beverley Wieben of Fairview (Zone 4) were acclaimed as Directors at Large for Bean and Non-Bean respectively.

Kolk has been farming for more than 40 years. He and his family operate 3,000 irrigated acres and 1,000 dry land acres. They grow 750 acres of dry beans and a few quarters of Marrowfat peas most years. He has served on numerous agricultural and community boards and councils.



APG Chair Robert Semeniuk detailed APG's accomplishments and outlined the organization's strategy for the future in the Year in Review 2020-21 video played at the annual general meeting.

He currently chairs the Alberta Biodiversity Monitoring Institute, serves on the RDAR board as Finance and Audit Chair, the bean advisory committee for Viterra and on his local church council.

"Pulses have a great future," Kolk said. "I see pulses and dry beans as a sustainable growth opportunity for Alberta."

Wieben and her family farm 2,300 acres near Fairview. She served as a councillor for the MD of Fairview No. 136 for nine years, as well on the local ag service board for 10 years. She is currently serving a second term on the Land Agent Advisory Committee as a landowner representative.

"I want to be active in Alberta Pulse Growers for I believe that pea protein presents opportunities for all growers to the bottom line of

profitability for the producer," she explained. "I feel it's important to continually expand pulses grown in Alberta and I hope that with new varieties we will see soybeans, lentils, chickpeas, faba beans grown throughout the province as peas are now."

The previous Directors at Large, Will Muller of Bow Island and Peter Konstapel of Spirit River, were elected as Directors for Zone 1 and 4 respectively.

APG's 12-member board also includes Directors Greg Stamp of Enchant in Zone 1, Kevin Auch of Carmangay and Allison Ammeter of Sylvan Lake in Zone 2, as well as Chris Allam of Ardrossan in Zone 3 and Jerome Isaac of Crooked Creek in Zone 4.

Outgoing Directors Caroline Sekulic in Zone 4 and Rodney Volk in Zone 1 were thanked for their service at the



New Director-at-Large (Bean) John Kolk.



New Director-at-Large (Non-Bean) Beverley Wieben (inset) grew this impressive crop of peas in 2020.

annual general meeting. Allam was also recognized for his service in the role of Vice-Chair.

“I joined APG because I wanted to learn about the industry I live in,” Sekulic recalled. “To see the depth of trade, the pursuit of policy and the network of research that keeps Alberta growing has provided the best experience of my ag career. Every farmer deserves to know, support and participate in the strength and voice we have - so join APG!”

Volk also encouraged other pulse farmers to get involved in APG. He cited benefits such as:

1. Meeting other producers from across the province;

2. Seeing first-hand all of the research being done in Agronomy and Marketing;
3. Being involved in areas like the Prairie Pesticide Minor Use Consortium (PPMUC) that have a direct benefit to the pulse industry;
4. Seeing how much advocacy the APG staff is involved in with federal and provincial governments; and
5. Getting the inside track on what is happening in the ag industry.

“The first thing that I think of enjoying with APG is the interaction with the Directors from across the province,” Volk recalled. “We all may grow pulses, some even the

same types, but quite often there is a difference in production system. Quite often these discussions would lead me to thinking of different ways of doing things.”

He continued: “My favourite memory would have to be my first trip to Ottawa for Pulse Canada, seeing first-hand what was involved in these types of events was an eye opener. This was also my first commercial plane trip. It also was my biggest surprise in how involved and well-informed the Senate Standing Committee on Agriculture was. Up until then my opinion of the Senate was fairly low so this was a pleasant surprise.”



Outgoing Zone 4 Director Caroline Sekulic.



Outgoing Zone 1 Director Rodney Volk.



UPDATE FROM OTTAWA: ISSUES ON THE MOVE FOR CANADA'S PULSE INDUSTRY



By Greg Northey, Corporate Affairs
Vice-President, Pulse Canada

There is always a sense of optimism at the start of the growing season across western Canada. While conditions vary from region to region, pulse growers are at work growing the quality Canadian peas, lentils, beans and chickpeas that will be enjoyed whole or as ingredients in products here in Canada and in 130 markets around the world. And the team at Pulse Canada is working on your behalf to maintain, open and develop high-value markets for Canadian pulses and pulse ingredients.

A big part of our efforts involves working with the federal government to advance a number of files of importance to pulse growers.

This includes ensuring important markets for pulses are functioning for Canadian growers and exporters. A recent major win for our pulse industry was India's announcement to exempt Canada from the 4x penalty in lieu of Methyl Bromide fumigation until it permanently recognizes Canada's systems approach for pulses. This move is something that Pulse Canada has long advocated for, and it shows a willingness from India to work toward strengthening our trading relationship.

In that spirit, we were pleased when the federal government recently re-launched the India-Canada Comprehensive Economic Partnership Agreement (CEPA) negotiations and committed to prioritizing concluding an Early Progress Trade Agreement, sometimes referred to as an 'Early Harvest Agreement'. In an Early Harvest Agreement, both sides look for areas of agreement that could be finalized or 'harvested' in advance of a comprehensive free-trade agreement. With support from the pulse industry, the Canadian government has been clear that increasing access and stability for Canadian pulses must be on the table for such an agreement to be reached. We will continue to work to ensure the government builds on this positive momentum by finalizing an agreement that recognizes the quality and safety of Canadian pulses. At the same time, we will push to have the quantitative restrictions in place on Canadian peas removed so that Canada can once again serve the Indian market. This announcement was a step in the right direction, and growers can rest

assured we will continue to work toward a Canada-India agreement that benefits the Canadian pulse industry by addressing all major outstanding issues.

Pulse growers know that while market access is an important piece of the equation, a fully functioning supply chain is needed for our industry to capitalize. With 85% of pulses being exported, and 30% of pulses exported via container, our industry pays very close attention to how Canada's supply chain is functioning. The recent labour disruption at CP is proof our system is vulnerable. We were pleased when the Government of Canada recently delivered on two key asks of the pulse industry by establishing a task force to address supply-chain disruptions and enabling the Competition Bureau to investigate potential market-power abuse in the ocean-shipping market. While we look forward to the task force identifying immediate solutions to our containerized supply chain capacity constraints, all our eggs cannot be in one basket. That is why we have also begun to develop a suite of policy and legislative solutions to strengthen Canada's access to container capacity over the long term. With our partners, we have undertaken work to assess the economic impact on Canadian exporters and importers of the container supply chain disruptions and to identify recommendations for how Canada can make important adjustments to our legislative environment. The findings of our report will be key in holding the government's feet to the fire to help develop solutions that allow Canada's pulse industry to maintain



Bulk pulses sold at a market in India are labelled with their country of origin. Photo: Greg Stamp.

our reputation as a reliable global supplier of pulses and pulse ingredients.

Rounding out the top issues in Ottawa is the Pest Management Regulatory Agency's (PMRA) ongoing transformation. Without public confidence, our food system simply doesn't function. That is why Pulse Canada supports the PMRA in its transformation objectives to continue to protect human health and the environment. It was good to see the recent announcement about increasing the use of real-world data through a national water-monitoring program. This will ensure the review of pest control products are not based on conservative

estimates and are reflective of the actual risk the products may pose. That said, this process must never allow politics to get the better of it. That is why Canada's pulse industry, along with our colleagues across other commodities, believe the Pest Control Products Act is fit for purpose—and all effort should be made by the Government and PMRA to achieve its important objectives without opening the act. That is the message we are taking to parliamentarians and officials on behalf of our members, and we will continue to provide updates as this important process unfolds.

In closing, growers will notice that the Keep it Clean 2022 Product

Advisory is out. Pulse Canada, in collaboration with our colleagues in the cereals and canola sectors, is proud to deliver this important resource to growers aimed at keeping export markets open. If you have questions or want to know more, be sure to get in touch with your grain buyer or with us directly here at Pulse Canada. A copy of the 2022 Advisory is included in this edition of *Pulse Crop News* and can be found anytime online at keepitclean.ca.

As always, if you have questions on any of the initiatives being undertaken on your behalf, please do not hesitate to reach out to me at gnorthey@pulsecanada.com.



APG PROJECT ASSISTANT SHARES RESEARCH DEMONSTRATING HOW AGRICULTURAL WETLANDS CONTRIBUTE TO CLIMATE CHANGE ADAPTATION AND MITIGATION

By Hayley Webster, ART Project Assistant, Alberta Pulse Growers

As an Adaptation and Resilience Training (ART) Project Assistant with Alberta Pulse Growers, I have been working on agricultural water stewardship initiatives. The objective of my work is to improve community resiliency to climate change, through researching how climate change affects watersheds. My research focuses on how agricultural wetlands contribute to climate change adaptation and mitigation. I am also collaborating with other project assistants who are placed with different organizations across Alberta. The research conducted by other project assistants addresses various ways that climate change impacts watersheds, such as flooding, drought and water quality.

Climate change, driven by increasing concentrations of atmospheric greenhouse gases, poses many challenges for the future of agriculture. For example, as climate change progresses, extreme weather events are expected to occur more frequently. Increased intensity and frequency of floods and droughts will have major impacts on crop production. Climate change also impacts biodiversity. Reduced biodiversity can impact agriculture through decreasing the abundance of beneficial insects like pollinators. From water availability



An agricultural wetland being monitored as a part of the Alberta Wetland Stewardship Project.

to pollination, the ways in which climate change impacts agriculture are varied.

As concerns regarding climate change increase, so does the prioritization of improving the resiliency of agricultural practices to environmental factors. Wetlands are unique ecosystems that carry out many ecological services. Some of the services provided by wetlands facilitate climate change mitigation

and adaptation. Thus, incorporating wetlands on agricultural landscapes can improve the resiliency of crop production to climate change.

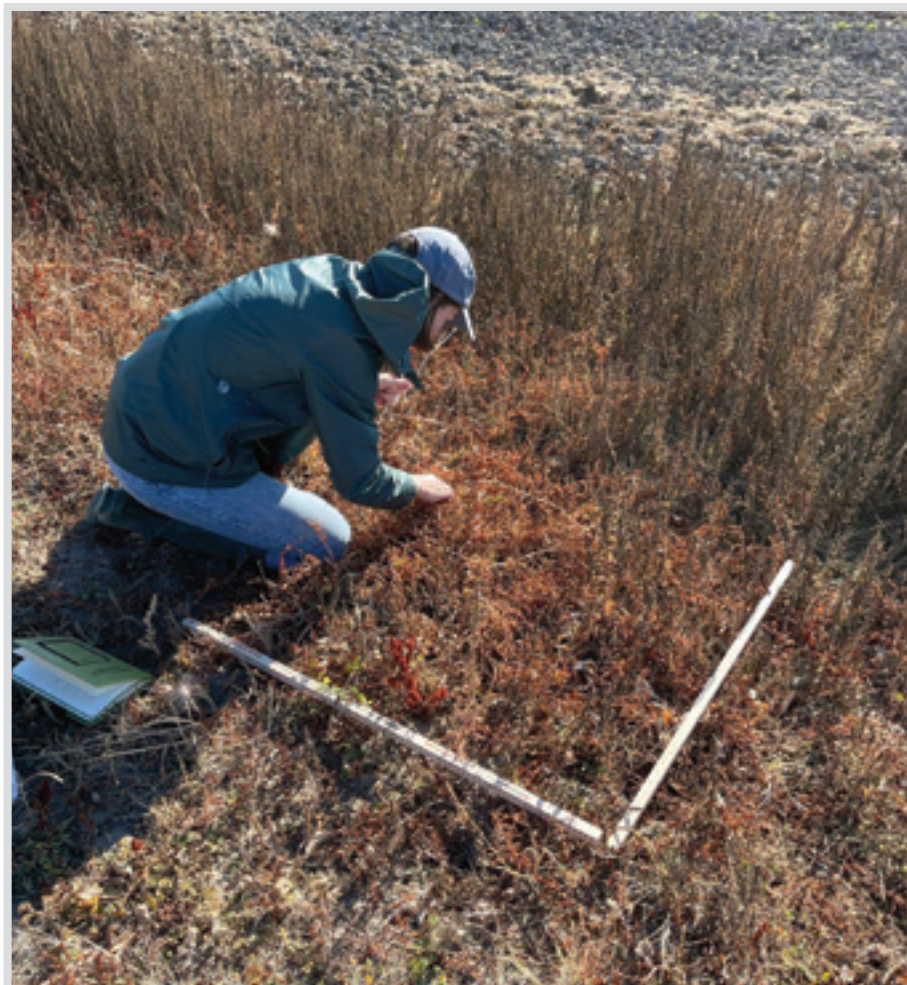
Wetlands contribute to climate change mitigation through sequestering carbon. Wetlands are one of the most important carbon sinks in the prairies. They can rapidly sequester carbon by accumulating plant biomass and storing it as soil organic carbon.

Restoring wetlands increases soil carbon storage on prairie landscapes and conserving wetlands maintains these stores of carbon in the soil. Because wetlands effectively sequester carbon, wetland restoration and conservation have the potential to play key roles in offsetting agricultural carbon emissions.

Mitigation is important for minimizing the progression of climate change. However, while mitigation measures can reduce the severity of climate change, they are not enough to prevent ongoing climate change and associated challenges. Thus, adapting to changing environments is essential for the future of agriculture. The ecological services provided by wetlands improve the adaptability of agricultural landscapes to environmental change.

One way that wetlands contribute to climate change adaptation is by regulating water availability. Wetlands act as sponges on landscapes because they absorb and hold onto water. During flood events, wetlands absorb excess water and reduce the severity of flooding. During drought events, wetlands reduce drought stress because they hold onto moisture and provide a source of water when water availability is limited. While wetlands cannot prevent floods or droughts, they do reduce the severity of damage caused by floods and droughts. As climate change drives increases in floods and droughts, wetlands will be instrumental in regulating water and minimizing agricultural flood and drought damages.

Wetlands also contribute to climate change adaptation by providing wildlife and insect habitat. Many species, including some pollinators, are impacted by climate change. However, because crops like canola and pulses depend on insect pollination, declines in pollinator



Webster identifies vegetation on a tour of wetlands in southern Alberta in 2021.

populations is a major agricultural concern. Wetlands act as a refuge and provide habitat which supports threatened pollinator populations on agricultural landscapes. Agricultural wetlands can maintain high yields of insect pollinated crops by increasing the abundance and diversity of pollinators.

Historically, wetland drainage has been a common agricultural practice in Alberta to increase crop production. However, the agriculture industry is currently facing many environmental changes and wetlands play a key role in navigating these changes. Agricultural wetlands present an opportunity cost for crop production. But as climate change imposes more environmental stressors on crop production, the invaluable ecological services

provided by wetlands may outweigh their opportunity costs. From buffering the effects of floods and droughts to supporting pollinator populations, wetlands improve the resiliency of crop production to climate change.

My work as an ART Project Assistant highlights the importance of agricultural wetlands in light of climate change. The agriculture sector is essential for food production, and the ways that climate change impacts agriculture has severe implications for global food security. Through sharing information regarding beneficial agricultural wetland management, my work aims to inform agricultural practices that increase the resiliency of crop production to climate change.



LOOPING YOU IN ABOUT LUPIN

By Jagroop Gill Kahlon PhD, P. Ag,
APG Research Officer

Pulses have a long history in human nutrition as important sources of protein, vitamins and minerals. This, coupled with the ability to fix atmospheric nitrogen, significantly reduces the energy consumption required to produce a crop, making pulses particularly suitable for low-input systems. Pulse crops provide an agronomic source of diversification, breaking disease, pest and weed cycles and optimizing nutrient management in standard crop rotations. Recently, pulse crops have gained special interest, as a transition towards plant-protein based diets appears pivotal to ensure global food security and preserve the environment.

Lupin is an annual grain legume that fixes nitrogen biologically, similar to other established pulse crops currently grown in western Canada (field pea, lentil, faba bean, chickpea, and dry bean) and may have potential as an alternative pulse crop for Alberta. Globally, there are over 200 species of lupin, this includes annual and perennial types, wild and domesticated species. The three important species grown as field crops in the genus *Lupinus* are *Lupinus angustifolius* (blue), *Lupinus albus* (white) and *Lupinus luteus* (yellow). These three species are 'sweet' lupin, domesticated through breeding efforts to improve harvestability and yield as well as to reduce alkaloid content (lupin has alkaloids such as lupanine, sparteine and anargyrine that can cause bitterness and neurotoxicity, levels of which vary among species).

Sweet lupin is commercially available for use in human and livestock consumption, with about

85% being grown in Australia. Lupin is a competitive choice for producers as they have high protein content (32-35%), excellent nitrogen fixing abilities, are resistant to lodging, have intercropping benefits, and there's some evidence of tolerance to root diseases such as *Aphanomyces eutiches*. The adapted growing region of Alberta is smaller than that of peas or faba beans since lupin is best suited for higher rainfall areas, such as the thin black and black soils located in central Alberta. This coincides with the regions of the province where pulse crops are severely impacted by root diseases, and strengthens the appeal of lupin as an alternative pulse crop in rotational management.

Previous interest in the crop in the early 2010s waned because of lack of reliable market and limited seed supplies. Renewed interest in this crop via expansion in market opportunities, particularly in the sustainable plant protein space, has placed a spotlight on lupin again. Excitement needs to consider the management practices being developed to address agronomic concerns before the crop is ready for large-scale adoption by prairie farmers. Lupin has a moderately deep, thick tap root



“Lupin has a moderately deep, thick tap root (species dependent) increasing the crop’s ability to scavenge water and nutrients.”

(species dependent) increasing the crop's ability to scavenge water and nutrients. It is 'solid stemmed' which makes for great standability but may contribute to shatter loss (despite breeding efforts) at harvest. Lupin responds well to moderate temperatures and moderate to high (not excessive), evenly consistent moisture throughout the growing season - drier areas will not be a fit and pH above 7 will have negative affect on the nodulation. White lupin, however, can tolerate higher than 7 pH and may have potential under irrigation but that potential has not yet been tested.

Previous research conducted by Alberta Agriculture, Forestry and Rural Economic Development has focused on blue lupin. Beginning in 2020, the Alberta Pulse Growers Commission with partners funded two new research projects which will help increase knowledge about the range of adaptability with a focus on development of best management practices. The projects will also identify gaps in knowledge that could result in roadblocks for adoption of both blue and white lupin as a potential pulse crop option. Initial results of the study were significantly impeded by dry, hot conditions. Harvested yields from Year 1 of trials were 47 bu/ac for blue lupin and 28 bu/ac for white lupin. White lupin (preferred by food industry due to white flour and low alkaloid content), have a longer growing season compared to blue lupins. Blue lupin's growth is determinant in nature; meaning the plant has a defined number of days that it grows and then ripens. In contrast, the growth of white lupin is indeterminant, and the plant continues to grow and flower late into the growing season until it is terminated with a harvest aid product. The results of the research should help to define the appropriate growing regions for each of these species, and aid in the creation of unique management strategies allowing for maximum



Healthy looking lupin crop at research trial in Sturgeon County, north of Edmonton, in early August 2021.

success for farmers interested in expanding the suite of crops they grow.

When it comes to market end uses, lupin has suitability as a feed and food, as well as having bio-industrial applications. It is often a substitute for soybean in cattle, sheep, hog, poultry, and farmed fish rations due to its higher protein content, low levels of anti-nutritional factors (phytic acid, saponins, lectins and trypsin inhibitors), digestibility and retention of phosphorus and valuable pelleting qualities for feed. Lupin can be an alternative to cereal ingredients, balancing their amino acid profile and as an egg substitute in breads, cakes, biscuits, pancake mixtures and pasta, making these foods more nutritious. The unique functional properties of protein extracts from lupin are being

used cosmetically and in personal healthcare formulations. The opportunities for lupin are endless in the food, therapeutics, and cosmetics market.

In summary, the commercialization of lupin makes a lot of sense on many fronts and will be a welcomed addition to the crop rotation in Alberta, but to ensure longevity and sustainability, we first need to make sure it is a viable crop here. Strategic advances in genetics and management paired with exploration of markets and end-uses must occur in concert, otherwise we risk the long-term sustainability of lupin as a pulse crop option.

Read more about lupin research currently underway in Alberta by searching "lupin" at albertapulse.com.



UNDERSTANDING ACIDIC SOILS



By Ross H. McKenzie PhD
Retired Agronomy Research Scientist

SOIL ACIDITY RATING

- | | |
|-----------------|----------------------|
| • pH 6.5 to 7.5 | Near neutral |
| • pH 6.0 to 6.5 | Slightly acidic |
| • pH 5.5 to 6.0 | Moderately acidic |
| • pH 5.0 to 5.5 | Strongly acidic |
| • pH <5.0 | Very strongly acidic |



You cannot tell if soil is acidic just by looking at a picture. A soil pH test is the only reliable way to determine if soil is acidic.

“In the past 40 to 50 years across Alberta, surface soil pH has been gradually declining as a result of the long-term use of acidifying nitrogen and sulphur fertilizers.”

Soil pH is one of the characteristics that is measured when soil testing. Soil pH is a measure of hydrogen (H⁺) ion concentration in soil. A soil pH of 7 is neutral, where the hydrogen (H⁺) ion concentration in soil equals the hydroxyl (OH⁻) ion concentration. As soil pH decreases, the concentration of H⁺ ions increase, and the soil becomes more acidic. It is important to note that soil pH can vary by up to a half unit over a growing season.

Hydrogen ion concentration can vary greatly in soil; therefore, soil pH is expressed in log form (soil pH = -log [H⁺]). When pH is one unit lower, it means 10 times more H⁺ in soil solution. If a soil has a pH of 5, it has 10 times more hydrogen ions and is 10 times more acidic than a soil with a pH of 6. If a soil has a pH of 5, it has 100 times more hydrogen ions and is 100 times more acidic than a soil with a pH of 7.

In 1996, it was estimated that Alberta had about one million acres of strongly acid and 4.5 million acres of moderately acid, cultivated soils (Alberta Agriculture Agdex 534-1). These acreages have likely increased in the past 25 years.

Acid soils occur naturally in the Gray and Dark Gray soil zones of Alberta. These soils developed under boreal forest vegetation. They are naturally acidic as a result of the acidic leaf

litter and organic matter added to the soil over several thousand years of soil formation and development. In the past 40 to 50 years across Alberta, surface soil pH has been gradually declining as a result of the long-term use of acidifying nitrogen and sulphur fertilizers. It is becoming more common to have slightly or even moderately acid surface soil in lower relief areas in fields in southern Alberta.

Soil pH affects the physical, chemical, and biological properties of soil. Biological activity in acid soils is often reduced, making crop growth conditions less favourable. Yields of cereal crops and alfalfa will start to slightly decline at about a pH of 6.0. At a pH of 5.5, yield may be reduced by 20% or more.

Pulse and legume crops have the unique ability to allow specific rhizobium bacteria to form nodules on plant roots and fix nitrogen in a symbiotic relationship. This means many pulse crops do not require nitrogen fertilization. However, when soil pH is less than 5.5, hydrogen ion activity can become a major factor restricting the survival and growth of rhizobia bacteria in soil. This means pulse and legume crops are more challenging to grow and are less productive when grown on soils that are strongly or very strongly acidic.

The causes of soil acidity damage to crops are complex. As soil acidity increases and soil pH decreases, forms of aluminum (Al) and manganese (Mn) become more soluble and can gradually increase to toxic levels. Aluminum toxicity will restrict root growth and tie up plant available soil phosphorus, which reduces crop uptake of this nutrient.

A soil pH test is the only reliable way to determine if a soil is acidic. Application of products such as agricultural lime (calcium carbonate, CaCO₃) or in some cases wood ash can be used on acid soils to reduce soil acidity and increase pH.

Table 1. Soil pH variation along a half mile transect on a quarter section with rolling topography south of Lethbridge in the Dark Brown soil zone. Variation in soil P and K are also provided. Variation in soil pH and P are strongly correlated with topographic position.

BENCHMARK NO.	SOIL PH (0-6")	PLANT AVAILABLE PHOSPHORUS (P) (LB/AC IN 0-6")	SOIL POTASSIUM (K) (LB/AC IN 0-6")
1	5.6	40	1079
2	5.7	44	1008
3	5.6	87	1282
4	5.5	117	1689
5	7.4	14	649
6	7.7	11	664
7	7.5	12	907
8	5.2	70	1352
9	7.8	10	711
10	7.7	10	540
11	5.8	91	1361
12	6.3	20	696
13	7.7	6	540
14	7.7	7	484
15	7.7	15	540
16	6.9	41	1173

The addition of lime will reduce soluble aluminum and manganese to non-toxic levels and often will increase availability of soil P. The application of lime to acid soils will improve the biological, chemical, and physical properties of soil.

The increase in soil pH resulting from the application of lime provides a more favourable environment for rhizobia bacteria resulting in more favourable conditions for pulse and legume crops. Overall, soil microbiological activity will improve, resulting in soil organic matter turnover to increase the rate of release of plant nutrients. Over time, improved crop growth from liming will improve soil organic matter levels, soil structure and overall soil health.

Lime application is costly. If lime application is being considered on a soil that is moderately to very

strongly acidic, it is wise to have a Lime Requirement soil test done by a soil testing lab to determine the optimum rate of lime to apply. The productivity of most acid soils can be significantly improved with the application of lime. Often application rates are in the range of 2 to 4 tons/ac of lime depending on the soil acidity level and buffer capacity of the soil. It often takes three or more years after lime application to achieve full benefit.

For more detailed information on liming acidic soil to improve crop production, consult with a well qualified soil agronomist for advice and refer to the Alberta Agriculture publication *Liming Acid Soils* available online at: open.alberta.ca/dataset/8a143d84-86a5-45b0-a432-d35f269de006/resource/d75bfaef-e123-4bfe-bea4-500e1e70e46e/download/1996-534-1.pdf

QUALIFIED ALBERTA PULSE GROWERS ELIGIBLE FOR 18.1% TAX CREDIT FOR INVESTING IN RESEARCH

Alberta Pulse Growers (APG) confirmed that 18.1% of eligible producers' 2021 check-off payment is eligible for the Scientific Research & Experimental Development (SR&ED) tax credit for their investment in APG-funded research and development projects.

Producers who have paid check-off this past year and have not asked for refunds are eligible claimants for the 2021 credit.

For more detailed information about the SR&ED Tax Credit, APG advises

you to contact an accountant or the Canada Revenue Agency. For a history of SR&ED with Alberta Pulse Growers visit albertapulse.com/growing-pulses/sred-tax-credit/. A summary of APG research investments in 2020-21 is available at albertapulse.com/research/.

The federal SR&ED tax program is administered by the Canada Revenue Agency (CRA) and encourages businesses to invest in and perform research and development in Canada.

The SR&ED Tax Credit application form can be downloaded directly from the CRA website at www.canada.ca/en/revenue-agency/services/scientific-research-experimental-development-tax-incentive-program/claim-sred-tax-incentive-how-claim.html. Individual producers need to apply using the form T2038 (IND) and Canadian controlled private corporations should utilize the form T2SCH31.

ASCOCHYTA SCORING SYSTEM

Field ID _____ Time Period _____

Characteristic	Estimation Risk Scale				Prediction Score						
	1	2	3	4	5	6	7	8	9	10	
1. Crop canopy	Thin 0	Moderate 10	Mod/Heavy 15	Heavy 30							
2. Leaf wetness/humidity/dew at noon	None 0	Low 10	Moderate 20	High 40							
3. Percent of plants (crop), showing symptoms	None 0	Low (<20%) 15	Moderate (20-50%) 25	High (50-100%) 40							
4. 5 day weather forecast	Dry 0	Unset 10	Showers 15	Wet 20							
TOTAL											

The estimated risk value is 1+2+3+4= estimated risk value. If the estimated risk value is less than 65, no fungicide application is deemed necessary, but field inspections should continue on a bi-weekly basis. If the estimated risk value is +65, the fungicide spray application is recommended if disease is present. If no disease is present, no spraying is recommended until presence of disease is observed. This score card is for use on fields with good yield potential, which is high plant populations (minimum of seven plants ft²), very good weed control, even crop emergence and high rhizobium nodulation.

Source: K. J. Lopetinsky¹ and S. Strydhorst² 2002

¹Ag Research Division, Alberta Agriculture, Forestry and Rural Economic Development, Barrhead. ²University of Alberta, Edmonton.

TEAM ALBERTA CROPS ADDS VOICES OF FOUR NEW PARTNERS TO ADVOCACY EFFORTS



TEAMALBERTA

Team Alberta Crops is pleased to announce the addition of four new farmer organizations to the collaboration that engages in policy analysis, development and advocacy to benefit Alberta's farmers and crop sector. Team Alberta Crops continues to maximize farmers' dollars by collaborating and sharing resources.

The partnership began with Alberta Barley, Alberta Canola, Alberta Pulse Growers and the Alberta Wheat Commission. After several years of successfully advocating for farmers provincially and federally, the collaboration has recently expanded to further amplify the voice of Alberta farmers by including Alberta Beekeepers Commission, Alberta Seed Growers, Alberta Sugar Beet Growers and Potato Growers of Alberta.

"Team Alberta Crops is effective in representing a wide variety of agricultural products, farmers, beekeepers, and a diversity of perspectives providing robust advocacy delivered on behalf of the sector," said Greg Sears, Chair of the Alberta Wheat Commission. "Over the years, Team Alberta Crops has become widely recognized as an impactful collaboration that advocates and influences policy on behalf of farmers."



Reg Warkentin, Government Relations and Policy Manager, Team Alberta Crops.

The group provides input to policymakers, as well as developing and maintaining stakeholder relationships to ensure access to promote the sector's sustainability. Team Alberta Crops has achieved results in many areas, including Mandatory Entry Level Training (MELT) for Class 1 drivers, business risk management programs and farm sustainability.

"We welcome the opportunity to add the voices of crop producers that may be more specialized in nature like potatoes, sugar beets, bees, and seed growers to Team Alberta Crops," said Tracy Niemela, President of Alberta Seed Growers. "Uniting the advocacy efforts of eight agricultural organizations will increase the effectiveness for all farmers."

Team Alberta Crops is also pleased to announce the addition of a dedicated employee for the group. Reg Warkentin began in the role of Government Relations and Policy Manager in March.

"It is a brilliant initiative to combine the resources and influence of the commissions to address joint interests," Warkentin said. "I plan to apply my skills and experience with multiple stakeholders to work effectively with the Team Alberta Crops partners to develop policy, build relationships, and communicate our key positions to government, industry and the public."

For more information about Team Alberta Crops, visit teamalbertacrops.com.



Know the Market Impacts of Your Crop Protection Decisions

The **2022 Product Advisory** on the other side of this document outlines the market risks that can arise from using certain crop protection products on some crop types. **Growers are encouraged to review this information before proceeding with crop management plans.**

Products listed in the advisory may restrict marketing options due to missing or misaligned maximum residue limits (MRLs) in our export markets or market acceptance issues by certain buyers. Growers must be aware of these restrictions and take appropriate risk mitigation steps to ensure product residues remain below MRLs set by regulatory agencies.

WHAT CAN YOU DO TO MITIGATE RISK?

Ensure product residues remain acceptable for both domestic and export customers by following these tips:



1. USE ACCEPTABLE PESTICIDES ONLY

Only apply pesticides that are both registered for use on your crop in Canada and won't create trade concerns.

- ▶ **Consult with your grain buyer** to ensure the products you are using are acceptable to both domestic and export customers.
- ▶ **Refer to the Product Advisory** (other side) for information on market considerations and classifications of specific crop protection products.



2. ALWAYS READ AND FOLLOW THE LABEL

Always follow the label for application rate, timing and pre-harvest interval (PHI).

- ▶ **Rate:** Follow the product label's application rate.
- ▶ **Timing:** Apply crop protection products only at the product label's recommended crop stage.
- ▶ **PHI:** Stick to the product label's PHI – the number of days between spraying and swathing or straight-cutting the crop.

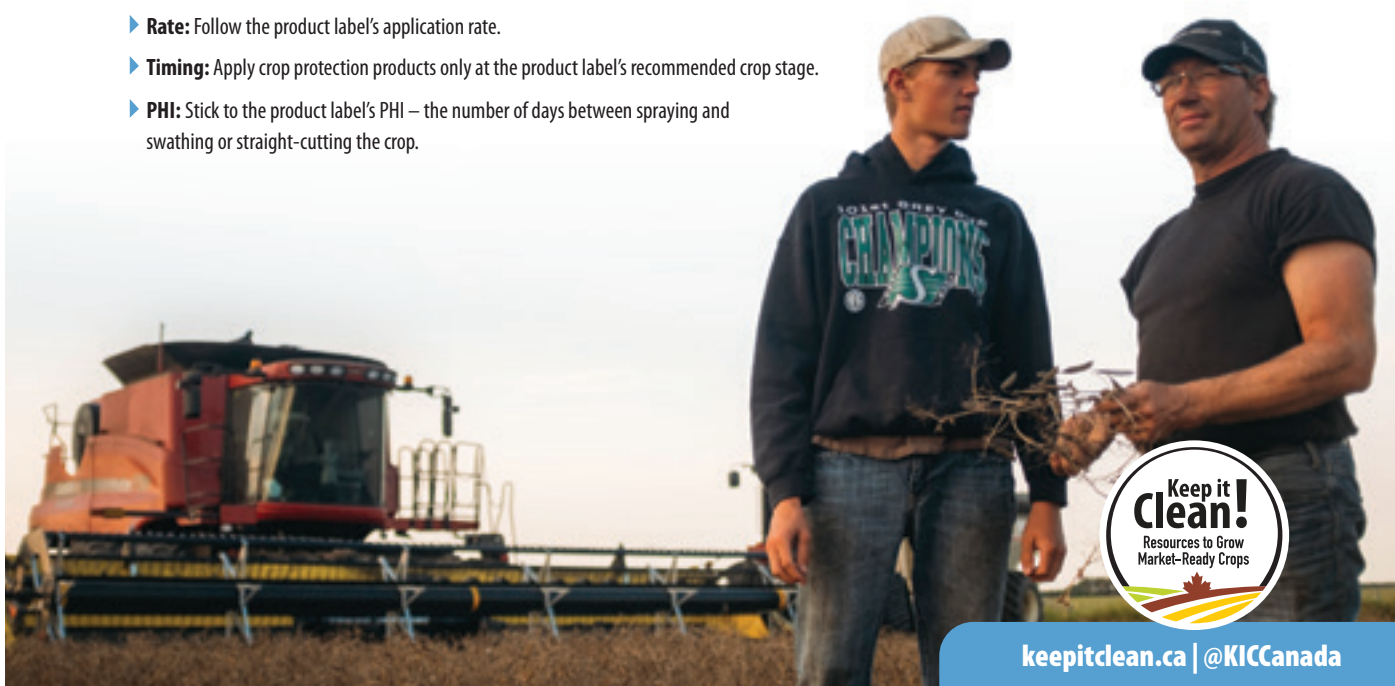
“

I always have a copy of the Keep it Clean Product Advisory on-hand.

It's an important tool to help keep our crops market-ready.

”

COREY LOESSIN | Radisson, SK
canola, lentils, oats, peas and wheat



keepitclean.ca | @KICCanada



2022 Product Advisory

Be aware of market risks associated with these crop protection products/crop types.

CEREALS	OATS	WHEAT	MALT BARLEY	BARLEY		COMMENTS
Fungicide						
Fluopyram (e.g. Prosaro Pro)	REFER TO COMMENTS	✓	✗	⚠		Grain buyers will not accept malt barley if treated with fluopyram. Consult with your grain buyer to confirm contract obligations and acceptance before using fluopyram on barley for feed or food . MRLs are missing or set at low levels in some major markets. No categorization on oats. The intended use of this product on oats is below the threshold as per the Market Acceptance of Pesticide Use Policy and is subject to further review.
Plant Growth Regulator						
Chlormequat (e.g. Manipulator)	✓	✓	⚠	⚠		Check with your grain buyer to confirm contract obligations and acceptance before using chlormequat on barley for malt, food or feed .
Pre-Harvest Weed Control						
Glyphosate (e.g. Roundup)	⚠	⚠	✗	⚠		Grain buyers will not accept malt barley if treated with pre-harvest glyphosate. Glyphosate is registered for pre-harvest weed control. Do not use as a desiccant . To prevent unacceptable residues in the harvested grain, only apply pre-harvest glyphosate when grain moisture content is less than 30% in the least mature part of the field. Consult with your grain buyer before using this product on wheat, barley and oats . Some grain buyers may not accept cereal crops treated with pre-harvest glyphosate. Strictly follow the product label guidelines to minimize scrutiny in the global marketplace. *Secondary growth can impact grain moisture assessment.
Saflufenacil (e.g. Heat)	NR	✓	✗	✓		Grain buyers will not accept malt barley if treated with saflufenacil.
PULSES	PEAS	LENTILS	CHICKPEAS	DRY BEANS	FABA BEANS	COMMENTS
Herbicide						
Sethoxydim (e.g. Poast Ultra)	✓	⚠	⚠	✓	✓	Consult with your grain buyer before using sethoxydim on lentils and chickpeas . The MRL definition of sethoxydim is anticipated to change in the European Union (EU); however, the timeline is unknown. As a precaution, it is not recommended to apply sethoxydim on lentils and chickpeas destined for the EU.
Fungicide						
Chlorothalonil (e.g. Bravo ZN)	✓	✓	⚠	NR	NR	Consult with your grain buyer before using chlorothalonil on chickpeas . MRLs have been revoked in the EU and established at low levels.
Desiccant						
Glufosinate - Western Canada (e.g. MPower Good Harvest)	NR	✗	NR	NR	NR	Do not use glufosinate on lentils as a crop desiccant . There is an elevated risk of MRL-related trade disruption due to missing or very low MRLs in most major markets. Grain buyers will not accept treated lentils.
Glufosinate - Eastern Canada (e.g. Ignite)	NR	NR	NR	⚠	NR	Consult with your grain buyer before using glufosinate on dry beans in Eastern Canada . MRLs are missing or set at low levels in most major markets.
Pre-Harvest Weed Control						
Glyphosate (e.g. Roundup)	⚠ MA	GREEN LENTILS ⚠ MA RED LENTILS ✓	⚠ MA	⚠ MA	⚠ MA	Glyphosate is registered for pre-harvest weed control. Do not use as a desiccant . To prevent unacceptable residues in the harvested grain, only apply pre-harvest glyphosate when grain moisture content is less than 30% in the least mature part of the field, including any areas of re-growth with seed production. Consult with your grain buyer before using pre-harvest glyphosate on pulse crops . MRLs are established in all major markets; however, marketing restrictions may still be present due to scrutiny of glyphosate in the global marketplace. Green lentils are classified "yellow - be informed"; while red lentils are classified "green - no market risks identified". This variation is due to the difference in sensitivities of end use markets between the two market classes. Most dry bean buyers do not accept pre-harvest glyphosate.

CANOLA PRODUCT UPDATE: There are no market concerns with products registered for use on canola.

- ✓ No market risks identified in major markets. Treated crop accepted by most grain buyers.
- ⚠ Be informed. Treated crop may not be accepted by some grain buyers. Consult with your grain buyer before using this product.
- ✗ Do not use. Treated crop will not be accepted by grain buyers.
- NR Not registered. Only use registered product.
- MA Market acceptance issue. Maximum Residue Limits (MRLs) are established in major markets but marketing risks may still be present.

All information on this advisory is provided in good faith as of the date of publication; however, we make no representation or warranty of any kind, expressed or implied, regarding its accuracy, adequacy, validity, reliability, availability or completeness. Growers are encouraged to review this information and consult with your grain buyer about potential market risks before proceeding with crop management plans.



Last update, May 2, 2022. Any further updates will be posted at keepitclean.ca/product-advisory

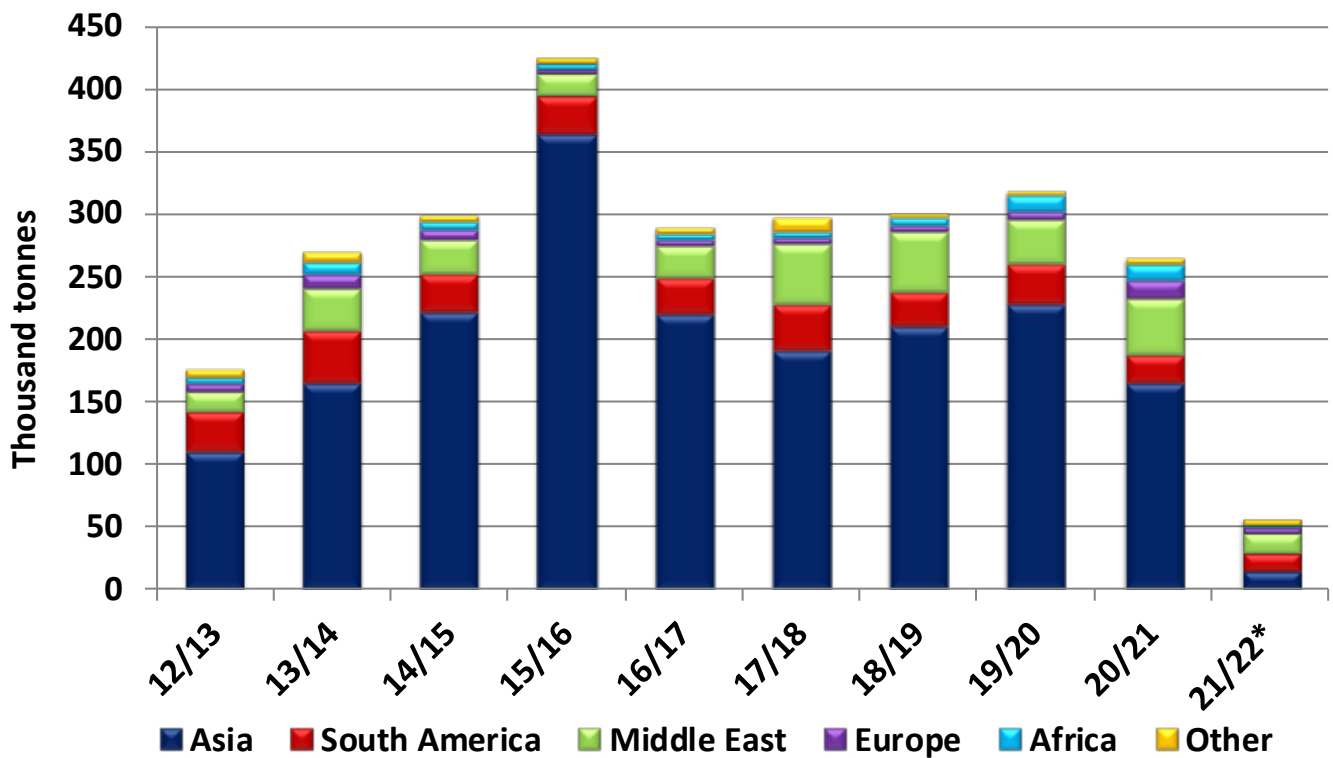


PRICES

CONTAINER ISSUES AFFECT SOME PULSES MORE THAN OTHERS

By Chuck Penner, LeftField Commodity Research

Canadian Green Pea Exports



* Aug-Feb only

Source: Statistics Canada

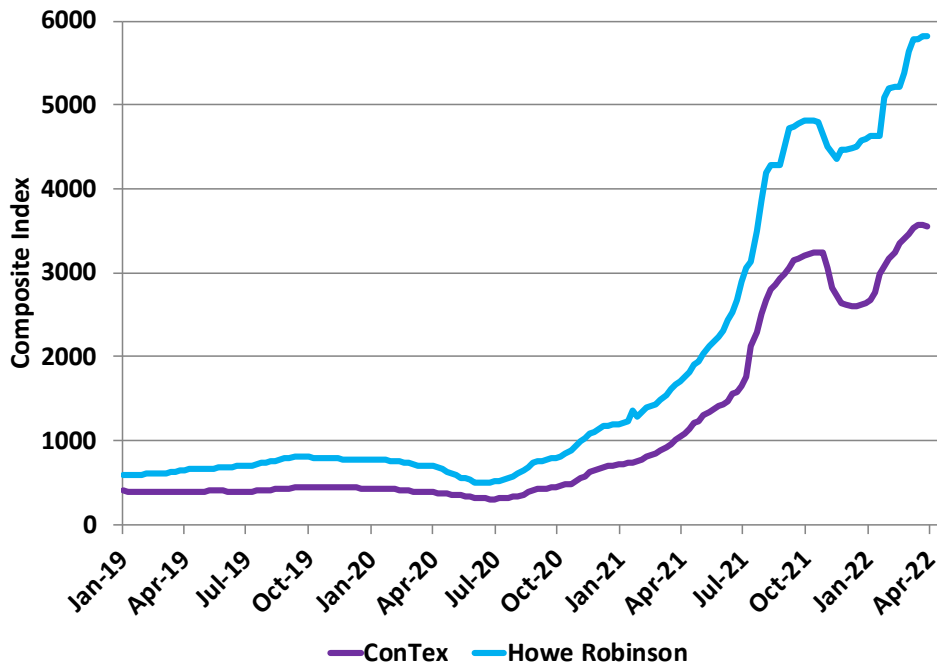
As the 2021/22 shipping season progresses, there's more evidence of how the problems of shipping by containers have affected exports. The issues are critical and have been well-documented. Containers are difficult to access and even when they are available, movement is seriously delayed and costs have gone through the roof. Shippers of pulse crops are forced to deal with these problems but the negative

impact spills over to farmers at one end of the value chain and overseas consumers at the other end.

While the shipping difficulties are causing problems for all pulse crops, certain types are affected more than others. The reason is that certain types of pulses depend much more heavily on container movement than others.

The largest pulse exports are yellow peas and red lentils and the majority of movement is done through bulk vessel shipments. The exact amount moved by bulk vessels varies from year to year, but is typically two-thirds to three-quarters of yellow pea and red lentil exports. While freight costs for this type of movement have also gone up, bulk shipping has been less affected by logistics

Container Freight Rate Indices



Source: [vhbs.de](https://www.vhbs.de), [ksg.co.kr](https://www.ksg.co.kr)

hurdles that have harmed container shipping.

Exports of other pulses like green peas, green lentils, chickpeas and dry beans move almost entirely by container. The impact on these types of pulses has been more severe than on yellow peas or red lentils. For example, green pea exports so far in 2021/22 have been only 57,000 tonnes for Aug-Feb. That's trailing far behind the 130,000 tonnes at the same time last year and is only a small fraction of the 2020/21 full-year total of 265,000 tonnes.

The drop-off in green pea exports isn't entirely caused by shipping issues; last summer's drought reduced 2021/22 supplies of all classes and forced cutbacks in exports. That said, the decline in green pea exports has been more severe than yellows, even though green pea supplies in 2021/22 were relatively more comfortable than yellows.

The difficulties in shipping containers of green peas hasn't just limited export volumes, but has also weighed on prices. Supplies of green peas have been relatively larger than yellows and have limited green pea bids to some degree, but the more serious blockages in container shipping are likely the largest reason why green peas have been trading at a sizable discount to yellows this year.

For lentils, the impact hasn't been as obvious on export shipping of greens versus reds. Volumes of both classes have been restricted by the smaller 2021 Canadian crop. Just like peas, green classes of lentils move almost exclusively by containers while red lentils (like yellow peas) move more frequently in bulk vessel shipments. For red lentils, India has been the main destination for bulk shipments but this year, that demand has been softer due to its larger domestic crop and availability from Australia. The other major buyer of bulk red lentils

is Turkey and economic turmoil there has discouraged trade. As a result, Canadian exports of red lentils have been weaker, aside from shipping difficulties.

For green lentils, export performance has been much more variable. Demand from some key buyers has remained strong, even with a smaller Canadian crop and container shipping difficulties, indicating how "inelastic" green lentil demand is in some countries. There are a couple of large exceptions though, most notably India, which has dropped to 11,600 tonnes in Aug-Feb this year, compared to 81,300 tonnes last year at the same time.

Overseas exports of other pulses such as chickpeas and dry beans move entirely by containers. While prices have been strong, bids to farmers haven't reached their full potential because of the negative effect of the shipping delays and extremely high costs.

Because of its own drought last summer, US demand for Canadian pulses has increased in 2021/22. This destination has also become more attractive due to lower transportation costs. Even though trucking costs have also gone up this year, the US market avoids the extra difficulties of shipping by container. That's why some of the strongest bids this year have come from the US market.

There are multiple reasons behind the extreme highs in container shipping costs, including the complications caused by the pandemic and the sharp rally in fossil fuels. While there are hints that the latest rally in container rates may be running out of steam, there aren't any signs yet that rates will actually be turning lower anytime soon. For farmers at one end of the value chain, this will continue to shave cents off bids and for consumers in other countries, will add to their food bills.



APG DIRECTOR-ADVISOR MARCH MEETING FOCUSED ON PULSES ON EVERY PLATE

Alberta Pulse Growers' elected representatives and staff recently met for the annual spring Director-Advisor Meeting for the first time since the 2020 event.

Directors, Advisors and staff welcomed the opportunity to visit, share ideas and hear from a compelling slate of speakers during the March meeting at the Renaissance Edmonton Airport Hotel.

"It was great to have the time to hold conversations in person with Advisors we haven't seen in a while and meet new Advisors who joined us during the last two years," said APG Chair Robert Semeniuk. "It was also a refreshing change to have most of our speakers in person instead of all on video calls. Many of those in attendance expressed the same sentiment and welcomed the return to pre-COVID life."

Speaker presentations on the second day focused on the theme of Pulses on Every Plate, part of APG's vision. The majority were able to present in-person and included a keynote presentation from the Canada West Foundation on Understanding China.

The Canada West Foundation's Carlo Dade, Director of Trade and Investment, pointed out to the APG Directors, Advisors and staff in attendance that his organization relies on a two-way exchange of information with growers.

"We're a partner with Alberta Pulse," he explained. "You are a supporter of Canada West. That relationship isn't financial. I've actually turned down money from organizations



The Canada West Foundation's Carlo Dade, Director of Trade and Investment (top left of photograph), and Sharon Sun, Trade Policy Economist (not pictured), kicked off the Pulses on Every Plate program's speakers with their insights into trade, how to deal with China as the world's largest economy, keeping an eye on the US, trade infrastructure and farmers' right to repair their ag equipment.

that are only interested in making contributions and aren't interested in engaging in policy discussions, who won't take phone calls from us when we have questions."

Dade encouraged questions from the audience and explained how the two-way flow of information with partners is vital.

He continued: "We turn to each other with questions, we turn to each other when we have problems, when things are emerging. When CBC has a question about western Canada, one of their first phone calls is to Canada West. We need to know what you know, we need to hear about the issues that are affecting you. We can't make this stuff up so we rely on these relationships to effectively do our jobs and understand western interests, and properly articulate that in Ottawa, Mexico City, Tokyo and everywhere else."

The day also included a market outlook from Chuck Penner, Pulse Canada's Denis Tremorin discussing carbon, and a Global Edmonton session about value-added opportunities. APG staff presented to the group on wetland stewardship, carbon footprint reduction, bylaws, as well as research and extension.

It was the first March Director-Advisor Meeting for Landon Sell, who joined Zone 2 as an Advisor in November 2021.

"Attending the meeting is a great resource, being around Directors, other Advisors, and staff really creates a shared vision for the future of pulses," he said. "The highlights were the speakers and the table talk. Reflecting on ideas and brainstorming with others at the table was a great way to meet new people while focusing on the growth of the pulse industry."

NOMINATIONS OPEN FOR 2023 PULSE INDUSTRY INNOVATOR AWARD



Alberta Pulse Growers (APG) is pleased to announce that nominations are currently being accepted for the ninth annual Alberta Pulse Industry Innovator Award.

The eighth annual award was presented posthumously to Barrhead seed grower Cliff Cyre. Cyre, 78, passed away on September 15, 2021. He is survived by his wife, Ida, their three children, five grandchildren, and two great grandchildren.

He is remembered by his colleagues in the pulse industry for his efforts to advance pulse production in Alberta, as well as his enjoyment of interacting with people. Cyre participated in many roles with APG's Zone 3 and on numerous committees to build Alberta's pulse industry. His promotion of seed peas and faba beans helped develop the industry. A tribute to Cyre was included in the Winter 2022 *Pulse Crop News*.

An industry innovator is a person or organization that has worked to help nurture and shape the pulse industry and has helped contribute to the success of the industry as it is today. Innovators may have contributed to the industry through various areas from production, marketing, research, extension, processing, management, promotion and innovation.

To nominate someone, please complete the Pulse Industry

Innovator Nomination Form on the APG website. Nominations will be accepted until December 6, 2022.

Alberta Pulse Growers celebrated its 25th year as a commission by launching the Alberta Pulse Industry Innovator Award and presenting the organization's founding president, Lud Prudek, with the first annual award in 2015. Since that time, the award has been presented to acclaimed pulse researcher

Ken Lopetinsky, life-long pulse supporter Blair Roth, Dr. Hans-Henning Muendel who developed numerous bean cultivars, Kirsty Ross (Piquette) who was instrumental in building the field pea industry in northeastern Alberta, Mark Olson who explored new pulse varieties and production methods in many roles including as Alberta Agriculture's Unit Head for Pulse Crops, and APG's first vice-president Craig Shaw.



APG Zone 3 Director Shane Strydhorst (right) presented Greg Cyre with the 2022 Alberta Pulse Industry Innovator Award trophy won posthumously by his father, Cliff Cyre (pictured at the top right of the page).



THE 7 TYPES OF REST EVERY FARMER NEEDS

By Lesley Kelly, Farmer and Co-Founder of the Do More Agriculture Foundation

Graphics: courtesy of Vecteezy



Have you ever tried to fix an ongoing lack of energy by getting more sleep — only to do so and still feel exhausted?

The 7 types of rest every farmer needs

If that's you, here's the secret: Sleep and rest are not the same thing, although many of us incorrectly confuse the two.

We go through life thinking we'll feel rested by getting a full night's sleep but in reality we are missing out on the other types of rest we desperately need, especially during those peak busy periods like harvest and calving or stressful times, like

increased restrictions, cases and divisiveness around COVID-19. The result of only focusing on a few hours of sleep to feel fully rested is a culture of high-achieving, high-producing, chronically tired and chronically burned-out individuals. We're suffering from a rest deficit because we don't understand the true power and potential of rest.

Rest deficit or exhaustion can look like the following symptoms:

- You get easily irritated or have low patience
- You have a strong desire to be alone, socially withdraw
- You struggle to follow conversation
- You have difficulty sleeping

- Your every action feels like a sacrifice
- You have low energy and feel drained
- You have stopped caring about your stressors; "checked out" mentally and emotionally from things
- You have a hard time concentrating or remembering things
- You have physical symptoms like stomach pains and/or headaches
- You find yourself focusing on the negative
- You feel overwhelmed and frazzled

Let's learn to give ourselves permission to rest. Think of your rest or emotional capacity as a bucket. Your bucket may look different from someone else's as we all have different buckets depending on our genetics, life events, age, health and more. Flowing into the bucket are all areas of your life that can cause stress and exhaustion - farm pressures, family pressures, finances, weather, disagreements with neighbours, not eating well, lack of sleep and rest and more. All of these add water to our bucket and eventually, the water will overflow.

We've now hit our emotional capacity peak and our mental and physical health is impacted. We'll start to feel burnout, exhaustion, and an increase of symptoms of depression or other mental illnesses and unable to cope with life the way we once did. To stop our bucket from overflowing, we need to add holes to let the water flow out in a healthy way. Self care rituals and

routines and different types of rest is a healthy way to add those holes, let the water out and restore your bucket again.

Rest should equal restoration in seven key areas of your life.

Physical rest - Ensuring your body can recharge by allowing it to slow down and repair. Examples: Naps, earlier bedtime, restful lunch breaks

Mental rest - We need to recharge when it's hard to concentrate or our observations are hyper critical/judgemental. Examples: Turn off devices, affirmations, music

Emotional rest - Offloading emotional baggage and sharing vulnerability with a trustworthy listener. Examples: Talking to a friend, therapist, and/or support group

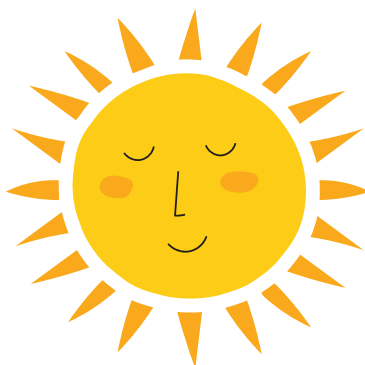
Social rest - Restoring ourselves through connecting with others. Examples: Time with friends that affirm us, coaches, mentors, playing a team sport, connecting with self

Creative rest - Breaks for creativity to re-energize resources and gain inspiration. Examples: Read a good book, walk in nature, cooking, looking at art, woodworking

Sensory rest - Retreating from sensory overload by reconnecting with yourself. Examples: Turning off devices, journaling, fresh air, breathing exercises

Spiritual rest - We need to feel anchored and realigned with our sense of purpose and harmony. Examples: Reading scriptures or philosophy, volunteering, meditation

Don't use rest as a reward for being productive. If you need a break, you need a break. It's not something that you should make yourself earn at the cost of your mental health or your bucket overflowing. Sleep alone can't restore us to the point where we feel rested. So it's time for us to



begin focusing on getting the right type of rest we need and deserve.

If you or someone in your family or farm team are going through a hard and stressful time and/or feeling exhausted or overwhelmed, reach out. For more resources visit domore.ag/resources.

About The Do More Agriculture Foundation:

The Do More Agriculture Foundation is the national voice and champion for mental health in Canadian agriculture and is changing the culture of agriculture to one where all producers are encouraged, supported, and

empowered to take care of their mental wellbeing. Producers are among the most vulnerable when it comes to mental health issues. By collaborating with the entire industry and those working to address the state of mental health in Agriculture, we can and will make a substantial impact.

Do More Ag was established in 2018 to promote mental health awareness, well-being, and research; as well as to empower producers to take care of their mental health through education, training, and public awareness. The foundation is also dedicated to creating a community of belonging, support and resources on mental health. Visit www.domore.ag for more information.



ZONE UPDATES

The zone updates below were supplied by the chair for each zone. If there is any information that you think would be valuable to producers as part of these reports, please email rpeter@albertapulse.com.

ZONE 1

ADVISORS:

- David Pepneck, Chair
- Will Muller, Vice-Chair
- Thomas Lievaart
- Cory Nelson
- Brad Proud
- Greg Stamp
- Shane Keijzer
- John Kolk
- Ryan Mercer

As spring peeks around the corner in Zone 1 all producers are faced with the question: What to plant this spring? With wheat markets moving with unpredictable volatility, planning rotations and cash flows has been difficult. Last year's heat and lack of rain left many dryland and irrigated crops with underwhelming yields in Zone 1. Fortunately, pulses managed to remain competitively priced considering the increase in other commodities. On irrigation, crop type had a large effect on end yield; dry beans managed to have an overall successful year.

2022 has started with high prices for both commodity prices and input costs. Even after paying higher prices there is no guarantee of timely delivery of materials because of supply chain disruptions. One thing remains constant in Zone 1; pulses have a great place in rotation. We wish to showcase some of these pulses in the summer with crop tours so stay tuned for more information.

—David Pepneck

ZONE 2

ADVISORS:

- Peter Hoff, Chair
- Curtis Hoffmann, Vice-Chair
- Allison Ammeter
- Kevin Auch
- Gerry Good
- Barry Grabo
- John Kowalchuk
- Landon Sell

As I write this in April, dry conditions dominate the south and east of Zone 2. Although seeding has begun near Carmangay, cold temperatures this week will slow widespread seeding until after the Easter long weekend. Wet and cold will limit field work until the end of the month in the north and west, especially in the Lacombe area.

Zone 2 is presently supporting a soil health study at CARA near Oyen. We are also supporting Dr. Syama Chatterton's work on *Aphanomyces* in the Three Hills area.

We are looking forward to a zone field day at APG Director Kevin Auch's farm near Carmangay in July. We will see pulse crops grown under no-till irrigation and some nitrogen fixing biological trials.

If you or someone you know wish to join a great group of progressive farmers, there are a few advisor vacancies in Zone 2. We would love to hear from you.

—Peter Hoff

ZONE 3

ADVISORS:

Shane Strydhorst, Chair

Brendin Serna, Vice-Chair

Chris Allam

Lucas Bell

Dawna Nanninga

Zach Olthuis

Dan Visser

Magnus von Rennenkampff

With Drought 21 and COVID-19 both (hopefully) in the rear-view mirror, Zone 3 enters growing season 2022 with cautious optimism. Moisture is generally adequate for crop establishment, but conditions vary widely within the zone. Persistent cool April weather will likely lead to planting delays.

2022 sees many changes to the Zone 3 advisory board. In November 2021, we said farewell and thank you to long-time advisors Nick Jonk and Ryan Kubinec, and welcomed newcomers Dawna Nanninga and Brendin Serna to our board. I accepted the Zone 3 Chair position, taking over for Chris Allam, and Brendin Serna is our new Vice-Chair. Most of our advisors attended the March Director-Advisor joint meeting, allowing many of us to meet face to face for the first time. It was a great opportunity to learn more about the important work done by APG, and engage in great conversations about the many issues and opportunities currently facing agriculture.

Zone 3 is excited to see more research and demonstration plots, conducted by GRO and Lakeland College. The sites will feature RVTs and (among other things) lupins, a new-to-us crop that shows potential to be a good pulse crop option in Zone 3. Stay tuned for updates on summer plot tours and extension events!

–Shane Strydhorst

ZONE 4

ADVISORS:

Martine Piebiak, Chair

Peter Konstapel, Vice-Chair

Jerome Isaac

Ernie Peters

Caroline Sekulic

Beverley Wieben

As I write this, we are waiting to get started on seeding but early reports indicate that a significant number of pea acres are planned in the zone. Zone 4 continues our *Aphanomyces* tissue testing program to gain a better understanding of the presence of this disease on our farms. Sampling information was forwarded for use by agronomists in the zone. The courier cost is paid by sampler, test cost is covered by Alberta Pulse Growers and SGS. Any growers interested in testing plant tissue this season are welcome to participate.

No crop walks are planned for the zone yet this summer, but there is a lot of activity taking place that will be of interest to pulse farmers. For example, the Peace Country Beef and Forage Association (PCBFA) continues its small plot replicated trials for pulse (pea and faba bean) and cereal (oat, barley, triticale) mixtures for improved forage productions, and forage-type pulse crop variety (pea and faba bean) for forage and seed production. These are in addition to testing seed treatment, inoculant response and phosphorus fertilizer application on pea production and residual soil nitrogen. Trial sites for some of these PCBFA projects include various plots in Fairview, Teepee Creek and Debolt.

Zone 4 has a great advisory committee, but we have room for a couple more if you would like to join us. Becoming a zone advisor is a good way to get leadership experience and help shape Alberta's pulse industry.

–Martine Piebiak



ZONE 5

ADVISORS:

Michael Bury, Chair

Zolton Yaremie, Vice-Chair

Harold Haugen

Tom Jackson

Matthew Micklich

Robert Semeniuk

Don Shepert

Spring seeding 2022 will be soon upon us and everyone is hoping for timely moisture this growing season. Zone 5 has had some areas that have pea seed shortages and high residual nitrogen problems in the drought affected areas. Hopefully, producers that want to grow pulses can source seed.

Zone 5 received the 2021 liming project final report from Lakeland College and will be measuring the 2022 barley yields on the liming plot this fall with the cooperation and thanks to land owner Shawn Jacula. Zone 5 has a budget for sponsorship of zone pulse plot tours this spring or summer. Businesses are encouraged to contact their local zone advisor for sponsorship information.

Zone 5 congratulates the 2021 \$1,000 Lakeland College bursary winner Jenna Bowman of Dewberry, a second-year ag student at Lakeland.

Hopefully all goes well for everyone and we will see you in November at the Fall Zone meeting!

–Michael Bury



Zone 5 Advisor Harold Haugen presented a \$1,000 bursary to Jenna Bowman of Dewberry, a second year ag student at Lakeland College.

Which pulse varieties grow best in your zone?



The APG app puts the data in your hands!

www.albertapulse.com





THINKING ABOUT USING GRAIN BAGS FOR PULSE CROPS? FIND OUT ABOUT RECYCLING OPTIONS FOR USED AG PLASTIC

By Agriculture Plastic Recycling Group



Grain bags need to be tightly rolled when returned for recycling to be more efficient for transportation to a recycling facility.

Grain bags are a common sight on the prairies in fall and winter. They serve as a popular temporary storage solution for cereal and oil grain growers. As this trend expands, some pulse growers may be considering adding grain bags to store harvested pulse crops.

Pulse farmers leaning in this direction, as well as all farmers who already use grain bags will want to know how to manage disposal of the used plastic when this multi-layered, heavy gauge agricultural plastic is no longer needed on the farm. The average size grain bag, for example, weighs about 225 kgs.

Contemporary environmental and sustainability best practices advise against disposal at landfill sites. And burning the plastic behind the farm gate releases harmful toxins that can impact human health and the environment.

Fortunately, there is a pilot program in Alberta which provides many convenient locations where farmers can return used, empty, rolled grain bags. The used bags are transported to one of two Alberta ag plastic recycling facilities where the plastic is processed and becomes feedstock to make new products, including other ag plastic film products.

“Burning the plastic behind the farm gate releases harmful toxins that can impact human health and the environment.”

The pilot has dozens of collection sites throughout Alberta where farmers can take rolled grain bags and used baler twine for recycling with no cost to drop them off. Details on collection site locations and how to prepare baler twine for recycling can be found at AlbertaAgPlastics.ca.

Preparing Grain Bags for Recycling

Grain bags that are returned loosely rolled require more space, are time consuming, difficult to manage with equipment, and they weigh very little, which is inefficient for transportation to a recycling facility. Taking these three steps can help ensure used grain bags will be accepted and recycled:

1. Remove debris

Grain bags need to be free of as

much foreign material (spoilage, dirt, rocks, etc.) as possible. Using a proper grain bag roller will help achieve that objective.

2. Roll

Grain bags need to be rolled tightly in order to maximize transport efficiency. They can be rolled with a standalone mechanical grain bag roller or old hay baler (most grain bag extractors roll the bags too loosely), and then secured tightly with twine. In Alberta, grain bag rollers are available for use in some municipalities. Contact your local collection site to inquire if a grain bag roller is available.

3. Return

Contact your local pilot collection site prior to dropping off material if unloading assistance is required

or if you are unsure if you have prepared the roll properly. Collection sites cannot accept unrolled, extractor rolled, or hand-rolled grain bags.

The 'Alberta Ag Plastic. Recycle it!' pilot project is led by the multi-stakeholder Agricultural Plastics Recycling Group with funds granted by the Government of Alberta and administered by Alberta Beef Producers. The 'Alberta Ag Plastic. Recycle it!' pilot program for grain bags and baler twine is operated by Cleanfarms, a national, non-profit industry stewardship organization that designs and develops recycling and disposal solutions for farmers to manage used agricultural plastics and other ag packaging waste to help keep farms and farm communities clean.



Add an Advance Payments Program cash advance from CCGA today.

Cover your operating expenses this growing season with a low-cost financial tool that gives you more flexibility. **Get \$100,000 interest-free, and the rest at prime less 0.75%.**

Call 1-866-745-2256 or visit ccga.ca/cash

50+ Commodities	\$100K Interest-free	\$1M Maximum
---------------------------	--------------------------------	------------------------



Agriculture and Agri-Food Canada

Agriculture et Agroalimentaire Canada

Advance Payments Program

Programme de paiements anticipés



NUTRITION NOTES

THE POWER OF COLLABORATION

By Debra McLennan, RD, APG Food and Nutrition Coordinator

The mission of APG's strategic plan is to lead through innovation and collaboration to add value for Alberta's pulse farmers. Under the USE strategic theme, collaboration has been the key to success for the 2021/2022 food and nutrition activities. With the cancellation of so many in-person events this year, collaborating with other commissions and organizations provided APG the opportunity to effectively connect with our key audiences by leveraging levy dollars to develop and participate in education focused programming and resources.

Stronger Together!

March 16, 2022, saw the much-anticipated launch of three new topics on the *Project Agriculture* website. These new topics include *Agriculture Histories* for Grade 7 Social Studies, *Sustainable Practices* and *Food Diversity* for Grades 7 and 8 Science curriculums. *Project Agriculture* is a free online education program for teachers and students that is aligned with the Alberta curriculum and offers classroom activities, original videos profiling Alberta farmers and agriculture-specific information for students from Grades 7 to 12. The creation of these new topics would not have been possible without partnering with Alberta Canola, Alberta Wheat, and Alberta Barley. This project received 50% of its funding from the Government of Canada and the Government of Alberta through the Canadian Agricultural Partnership, and the remaining 50% from collaborating commissions. This funding collaboration allowed *Project Agriculture* to expand to encompass more educational topics and agriculture sectors, including crops. These curriculum-aligned topics meet APG's goal of education and outreach to key audiences like Alberta teachers, as well as address public trust and sustainability. *Project Agriculture* was originally designed and implemented by Alberta Milk, Alberta Chicken



Debra McLennan and Tara Baycroft in the Alberta Canola kitchen preparing to record food demonstrations for our teacher convention presentations.

Producers, Alberta Turkey Producers, Alberta Hatching Egg Producers and Egg Farmers of Alberta. With the development of these new topics for *Project Agriculture*, we have created a cross-commodity partnership that will provide future opportunities to create more topics so we can continue to bring Alberta's robust agriculture sector to the forefront of the classroom.

Collaborating with Alberta Canola for the 2022 teacher conventions resulted in the greatest uptake to date on teacher convention presentations! The *Crops in a Box*

elementary school presentation was viewed by 586 teachers and the junior/senior high school presentation, *You Eat What You Are: What's Your Food Story?*, was viewed by 469 teachers for a total of 1,055 teachers through seven conventions. This is a 400% increase from the 2019 and 2020 APG only presentations! This increase in participation can be attributed to the topics, the *Crops in a Box* teacher resource package and more teachers participating in the online convention format than 2021. This collaboration builds on the strengths of the staff from both organizations to create presentations that share the story of pulses and canola through curriculum-linked topics. This was a great way to share the newly created Pulse Café along with an assortment of Alberta Canola's Chase Duffy material with elementary school teachers who signed up for the *Crops in a Box* resource package.

July 2021 saw the beginning of another great collaboration with nine Alberta agricultural organizations, along with Agriculture for Life (Ag for Life) and Inside Education. Spearheaded by Alberta Canola, a letter was sent to Education Minister Adriana LaGrange seeking support to include agriculture in the Alberta curriculum and programs of study for all applicable grades and subjects, in addition to asking Alberta

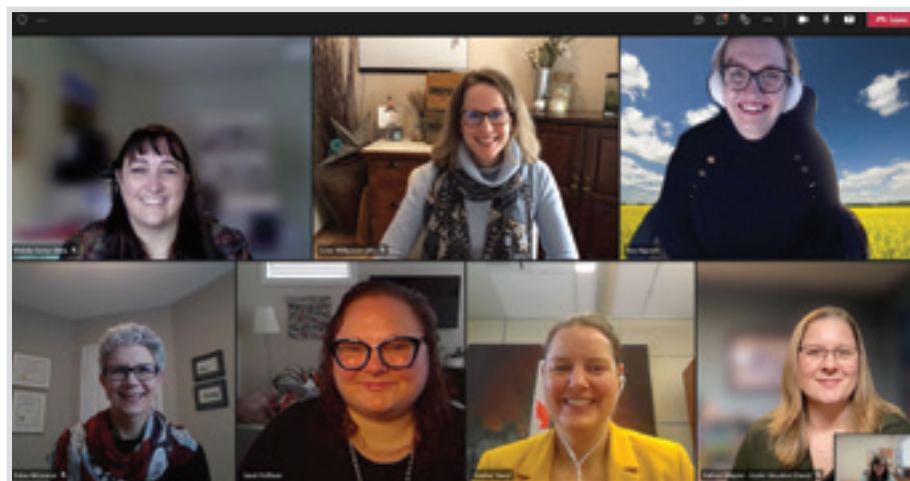
Education to establish an agriculture and natural resources education advisory group. This advisory group would include stakeholders from the commodity organizations, Ag for Life, and Inside Education to advise and provide input on how fact-based agricultural content and examples relating to general and specific learner outcomes can be applied to Alberta’s curriculum and programs of study across all grades and subjects. The letter also provided an appendix of examples of how agriculture content could be infused into current curriculum. While we continue to wait to officially hear from Minister LaGrange, we met with NDP MLAs Sarah Hoffman, Opposition Deputy Leader and Education Critic, and Heather Sweet, Rural Economic Development, Agriculture & Forestry Critic to share the work to date on this request. The group will continue to follow up with government to keep this important initiative moving forward.

Ag for Life is another important partnership that allows APG to leverage levy dollars to provide agriculture education across the province to students and consumers. Ag for Life is the new home for the Classroom Agriculture Program (CAP), which APG has participated in for many years. CAP is presented to Grade 4 students and explains the importance of agriculture in Alberta through storytelling and fun activities. Ag for Life’s multi-faceted “Know Your Food” initiative launches this summer. This program includes a one-of-a-kind “Know Your Food” trailer and complementary website that will contain additional information to what will be in the trailer. This mobile agriculture education unit will be travelling this summer to fairs, festivals and stampedes and then visiting schools in the fall with the goal of engaging Albertans in meaningful conversations about agriculture and food production.

Education is a key activity to achieving APG’s vision, Pulses on every farm, on every plate.



Crops in a Box Resource Package for elementary school teachers who attended presentations at teacher's convention.



Virtual meeting with Alberta NDP MLAs discussing work of our commodity groups to ask Alberta Education to include agriculture in the future curriculum development and programs of study for all grades and applicable subjects and to form an Agriculture and Natural Resources Advisory Working Group to collaborate on future curriculum development and ensure credible resources are included in future curriculum.

Collaborating with other, like-minded groups has proven extremely successful in helping APG connect with key audiences to build public trust by sharing key messages about pulses and their positive impact on human health and sustainability. Developing and linking programs and resources to the education curriculum

will provide an ongoing avenue for sharing our pulse story with teachers and students now and in the future.

Do you have a question about pulse nutrition or APG programs? You can contact me at dmclennan@albertapulse.com or (780) 986-9398 ext. 109.



FEATURE RECIPE

BEANS & RICE MASTER MIX

This master mix makes loads of meals simply minutes away with a complete mix of seasoned beans, rice and meat.

Prep Time: 20 minutes
Cook Time: 15 - 20 minutes

Makes: 4 cups (1 L)

Ingredients

- 1 Tbsp (15 mL) canola oil
- 1 lb (500 g) ground beef, pork, chicken, turkey or crumbled tofu
- ½ cup (125 mL) uncooked, brown rice
- 2 cloves garlic, minced
- 1 sweet red or yellow pepper, diced
- 1 large yellow onion, diced
- 1 medium zucchini, grated
- 1 can (19 oz/540 mL) black beans, pinto beans or mixed beans, drained & rinsed (yields 2 cups/500 mL cooked beans)
- 1 cup (250 mL) salsa (heat level to taste)
- 1 ½ cups (375 mL) beef, chicken or vegetable broth
- 1 cup (250 mL) canned or frozen kernel corn

Directions

1. In a large heavy bottomed skillet, heat oil over medium.
2. Brown ground meat or tofu. Add brown rice and cook for 2 minutes.
3. Add garlic, pepper, onion, zucchini and continue cooking, stirring until onion is soft.
4. Stir in beans, salsa and broth, cover and cook until rice is tender, about 15 minutes. Mixture will be thick.
5. Add corn, heat through and serve!
6. Use in wraps, tacos, quesadillas, enchiladas, nachos, chili, soups and more or cool mixture and pack into desired serving sizes and freeze for later use.

Tips

Want more heat? Add a few hot pepper flakes or a dash of Tabasco sauce along with the salsa!

Variations

- Make it Mexican with ground beef, black beans and picante tomato salsa.
- Go tropical with ground pork, pinto beans and pineapple or mango salsa!
- Try southwest flavours with ground chicken, mixed beans and chipotle salsa.

Nutrients per serving using ground beef (1/2 cup/125 mL)

286 Calories, 10 g Fat, 3 g Saturated Fat, 37 mg Cholesterol, 30 g Carbohydrate, 6 g Fibre, 5 g Sugars, 20 g Protein, 497 mg Sodium, 659 mg Potassium, 42 mcg Folate, 3 mg Iron







DELARO[®]



**MY PULSES
NEVER GET
SECOND BEST.**

Rely on Delaro. The #1 pulse fungicide in Western Canada.*

You want your pulses to have the best protection, and the highest yield potential. In both high and low disease pressure conditions, Delaro[®] fungicide provides proven, broad-spectrum disease control for most major pulse leaf and pod diseases. Give your peas, lentils and chickpeas the industry-leading protection they deserve with Delaro.

Learn more at cropscience.bayer.ca/Delaro

[ItsGrowTime.ca](https://www.itsgrowtime.ca) | 1 888-283-6847 | [@Bayer4CropsCA](https://www.instagram.com/Bayer4CropsCA) | [#AskBayerCrop](https://twitter.com/Bayer4CropsCA)

* 2021 BPI Report — Fungicide West Pulses Report.

ALWAYS READ AND FOLLOW LABEL DIRECTIONS. Always read and follow label directions. Bayer[®], Bayer Cross and Delaro[®] are trademarks of the Bayer Group. Bayer CropScience Inc. is a member of CropLife Canada.
© 2022 Bayer Group. All rights reserved.

**IT'S
GROW
TIME**