

**TIPS for  
TREATING PULSES**

**YOUR 2020  
PEST OUTLOOK**

**KEEPING  
BLACKLEG AT BAY**

# Alberta Seed Guide

*Advancing Seed in Alberta*

SPRING 2020

VALUE and ENTERPRISE

## BEYOND the FARM GATE

From cold pressed canola oil  
and oat and pulse starches and  
protein, to microbreweries and  
craft distilleries, value-added  
opportunities are thriving  
in Alberta.

PROVIDED IN PARTNERSHIP BY THE ALBERTA SEED GROWERS AND THE ALBERTA SEED PROCESSORS

# THIS SEASON, COME PREPARED

The growing season comes with unexpected challenges, and if you knew the outcome, making decisions would be easy. We understand you need to optimize productivity, which is why we continue to partner with Syngenta for best-in-class seed technology. SY Obsidian delivers on competitive yields and a robust disease package, allowing you to focus on what you do best.



Contact your local Richardson Pioneer Ag Business Centre



richardson.ca





## 12 2020 Plant and Disease Outlook

### FEATURES

#### 08 VALUE AND ENTERPRISE BEYOND THE FARM GATE

What opportunities are Alberta producers taking advantage of and who are the value-add up-and-comers?

#### 12 2020 PEST AND DISEASE OUTLOOK

Top pest and disease concerns in Alberta for the coming year.

#### 18 PLANT PROTEIN ALLIANCE OF ALBERTA: STRIVING FOR A PARADIGM SHIFT

The PPAA's goal is to make plant protein a key economic driver of Alberta's economy. To get there, the alliance must change the industry's current mindset.

#### 22 KEEPING BLACKLEG AT BAY

If blackleg levels are on the rise in your canola field, think about adjusting your management tactics.

#### 28 FUSARIUM WATCH

There's a good chance the wet conditions growers experienced last summer will mean high levels of infected seed moving through the system, making Fusarium-free seed tougher to secure for next season.

#### 36 TIPS FOR SUCCESSFULLY TREATING PULSE CROPS

A one-size-fits-all approach to treating seed doesn't work for pulse crops.

#### 44 DO ECONOMICS ALWAYS TRUMP AGRONOMICS?

Is it possible to improve rotations and make money? The answer is yes, say the experts.

#### 48 THE BLOCKCHAIN REVOLUTION BEGINS

A pilot project that followed soybeans from seed to the kitchen table shows how blockchain can be used to transform seed and all of agriculture.

#### 52 THOUSAND KERNEL WEIGHT TEST: WHAT'S IT ALL ABOUT?

Why more growers are ordering this seed test.

#### 54 CELEBRATING 10 YEARS OF MIDGE-TOLERANT WHEAT STEWARDSHIP

A significant milestone is met for the utilization of this technology.



18



36

## GROWER DIRECTORY

Alberta and British Columbia pedigreed seed grower listings are prepared by the Canadian Seed Growers' Association.

70	CEREALS
89	FLAX
90	WINTER CEREALS
92	CANOLA
96	HAY AND PASTURE
102	SILAGE
108	SPECIAL CROPS



40

## DEPARTMENTS

- 04 PRESIDENTS' MESSAGES
- 06 GREETINGS
- 32 SEED PLANT PROFILE
- 34 INSIDERS
- 40 PLANT BREEDER PROFILE
- 56 SEED GROWER PROFILE
- 58 VIEWPOINTS
- 60 GROWER DIRECTORY
- 117 MARKETPLACE
- 126 SEED GROWER DIRECTORY MAP
- 127 SEED CLEANING PLANT DIRECTORY MAP
- 128 ON THE EDGE



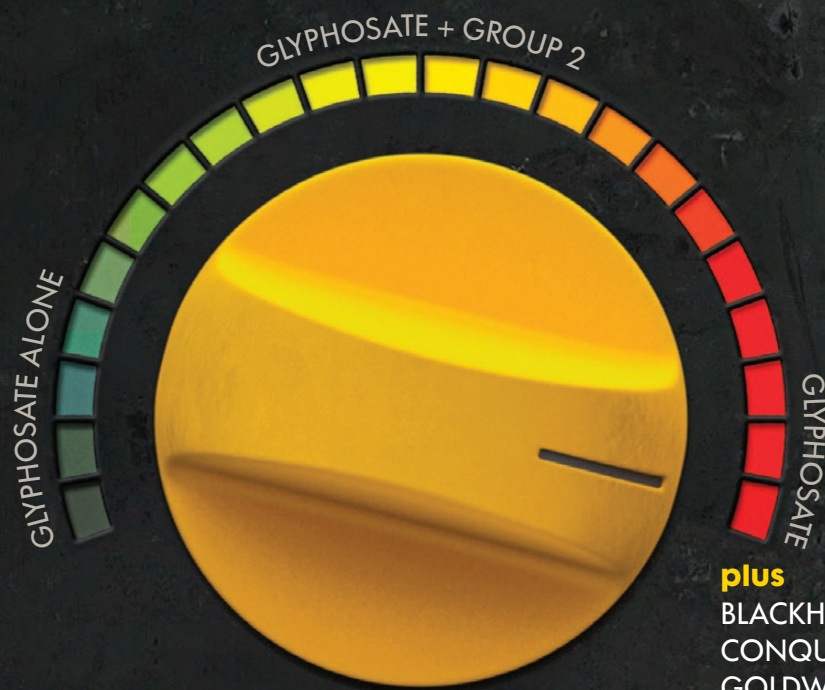
## 91ST ANNUAL GENERAL MEETING

**Kananaskis Mountain Lodge**

February 6-7, 2020  
[www.seedalberta.ca](http://www.seedalberta.ca)

**REGISTER  
TODAY!**

Members and seed industry attendees will receive important updates about their industry.




**plus**  
**BLACKHAWK®**  
**CONQUER® II**  
**GOLDWING®**

# Turn up the burn.

If you're still using glyphosate alone for pre-seed burndown, or choosing a Group 2 herbicide as a tank-mix partner, you may not be getting the early weed control you need. Nufarm's burndown products have multiple modes of action that deliver the power you need to stay ahead of tough weed pressures – giving your canola, cereal, pulse and soybean crops a cleaner start in the spring.


**Amplify your pre-seed weed control with Nufarm.**

**BlackHawk®** 


**CONQUER® II** 

**GoldWing®** 

Ask your local retailer for more information.

1.800.868.5444 | [Nufarm.ca](http://Nufarm.ca) |  [NufarmCA](https://twitter.com/NufarmCA)






Brought to you by 

Always read and follow label directions.  
BlackHawk®, CONQUER® and GoldWing® are registered trademarks of Nufarm Agriculture Inc.  
Bayer®, Bayer Cross and Mix It Up™ are the trademarks of the Bayer Group or its licensors.  
67196-05-01/20

 **Nufarm**  
Grow a better tomorrow



 (780) 554-5945  
 [info@seedalberta.ca](mailto:info@seedalberta.ca)  
 @AntonLakeFarms

**HAPPY NEW YEAR EVERYONE.** Another busy year has come and gone. For many of us, 2019 was a year that brought some unexpected challenges and difficulties. However, 2019 was also a year packed with collaboration, hard work and innovation. Here at Alberta Seed Growers, a lot of that came down to our work on Seed Synergy, and I think it's well worth celebrating and acknowledging the recent efforts we've put in altogether to drive our industry forward.

Three years ago, six major seed organizations across Canada (including the Canadian Seed Growers' Association) banded together to initiate the formation of the one comprehensive seed organization, the Seed Synergy Collaboration Project (SSCP). The SSCP was created with the goal of developing the vision for the next generation seed system in Canada. Since its inception, the Seed Synergy partners have been working hard to develop recommendations and plans for an effective, new Canadian seed system that will meet the demands of the future. That means a system able to adapt to new technologies and business models, an increasingly global marketplace and rising competition from countries around the world.

ASG has been involved in this work, along with all of the other major seed organizations across Canada. Together, we are working to propose reforms to current regulations to streamline the process of bringing innovative new products to market. We are engaging with government in a constructive way that encourages modernization. And we are trying to level the playing field for all seed growers in Canada.

Through Seed Synergy, we are working on your behalf and echoing your concerns, which is why Seed Synergy will benefit all ASG members in numerous ways. For example, we are working together to provide an enhanced breeding program that will deliver you improved varieties in all crops, launch a Single Window system for efficiently navigating regulatory obligations for accreditation, and find new opportunities for marketing your seed in domestic and international markets.

Overall, our involvement in Seed Synergy will lead to more voices speaking up about the future of our industry and more competitiveness for your operations. I'm sure you, like me, are looking forward to a collaborative future.



This time of year is also a great opportunity to look ahead at what's right around the corner: FarmTech and the Alberta Seed Growers' Annual General Meeting. We are looking forward to FarmTech, an exciting three-day event that covers all topics related to crop production and farm management. This year, the event runs January 28 to 30 at the Edmonton Expo Centre. Be sure to stop by our Alberta Seed Growers booth to chat with us about current issues and events.

I am also looking forward to welcoming you all to our 91<sup>st</sup> AGM, which this year starts earlier at 2:00 pm on February 6 and all day February 7, 2020, at the Kananaskis Mountain Lodge. It promises to be another interesting and informative few days, packed with industry updates, presentations and a facilitated session on Seed Synergy to help support you and your business. (And of course, the ASG Awards Banquet is always a fun evening of celebration!) Don't forget to pre-register to attend at [seedalberta.ca](http://seedalberta.ca).

I look forward to another great year working alongside you all.

**Renee Hoyme**  
**President**  
Alberta Seed Growers



 (780) 837-1010  
 avafarms@serbernet.com  
 @HectorOuellette

**AS A NEW** year unfolds, we all prepare for the new challenges this year will bring. However this year, I am also preparing to lay some new roots. This will be my last president's message as I have left the agriculture sector and will no longer be sitting on the Alberta Seed Processors' provincial board of directors.

I look back on my term as a provincial board member, and in this exciting industry, with many fond memories. Together, we have worked hard to address many obstacles the agriculture community has faced. While we might not have achieved all the goals we've set for ourselves, we continue to have conversations about important issues — and these conversations continue to move the needle forward.

I think, in part, that's what makes agriculture such a great industry. We know that the value of our work, our products and our enterprises go well beyond our own farm gates. We don't shy away from hard issues, but instead embrace them and continue to talk about them, such as the Pest Act reform pertaining to Fusarium head blight and ongoing discussions regarding value creation. I think all of us in the crop sector can share our opinions and engage in honest, frank discussions. And when it comes down to it, I think this is what's really important in taking the first step when building something great.

There are lots of opportunities in our industry and our expertise is as valuable as ever. Farmers are the ultimate entrepreneurs, constantly seeking new ways to navigate the many adversities of farming. Even aspects that could be considered beyond our control, like international trade issues, political changes and tough harvest conditions, fuel the movement to add value to the crops we grow. Shifting from being the producers of bulk commodities to producing food, feed, fuel or fibre will take time, patience and capital — and again, working together will be imperative in building a successful value-added sector here in Alberta.

Some farmers are already participating in the value-added markets, be it in the hemp, specialty milling or the emerging protein fractionating and malting sectors.

In fact, some of the 67 Alberta seed processors are involved in conditioning grain, pulses and specialty crops like hemp for end-use. We can all play a role in the growth of processing and the opportunities are numerous, from simple grain and pulse conditioning to participating in boutique international markets.

At our core, our businesses are about seed processing, and of course, that is why we value quality seed so much. After such a tough harvest year, there are reports of poor seed quality, and in some areas, Fusarium head blight is prevalent. Testing seed remains of utmost importance, especially in years like 2019, and relying on visual inspection is never entirely reliable. Remember, you can visit [seedsmart.ca](http://seedsmart.ca) or check out @beseedsmart on Twitter and Instagram to get more information on taking a representative sample of your seed.

Keep up the great work. All the best for 2020 and beyond.

**Hector Ouellette**

**President**

Alberta Seed Processors



[@DevinDVote](https://twitter.com/DevinDVote) | [info@devindreeshen.ca](mailto:info@devindreeshen.ca)

As Minister of Agriculture and Forestry, it is my pleasure to extend greetings on behalf of the Government of Alberta to *Alberta Seed Guide's* readers.

Agriculture is the foundation of Alberta's history and communities, contributing billions to the Province's economy every year. The industry is constantly growing and changing, and *Alberta Seed Guide* ensures producers are kept informed of new research, new practices and new ways to get more out of their operations.

This issue's theme, "Value and Enterprise Beyond the Farm Gate," is increasingly relevant, as more and more producers are looking for innovative ways to get more for their hard work.

Alberta's government is fighting for a stronger agriculture industry for years to come. By empowering farmer-led research, building common-sense farm safety legislation and supporting funding for rural utilities, irrigation districts and agricultural societies, we are focusing government spending on the areas rural Albertans most depend on.

Thank you to Alberta Seed Growers and Alberta Seed Processors for your hard work and dedication to the province's farmers.

Best wishes for the coming growing season.

**Honourable Devin Dreeshen**

Minister, Agriculture and Forestry

# Alberta Seed Guide

Spring 2020



**Kelly Chambers**  
Executive Director  
5030-50 St.  
Lacombe, AB T4L 1W8  
Ph: (403) 325-0081  
[kelly@seedalberta.ca](mailto:kelly@seedalberta.ca)



**Monica Klaas**  
General Manager  
5030-50th St.  
Lacombe, AB T4L 1W8  
Office: (403) 489-9999  
[monica.klaas@cleanseed.net](mailto:monica.klaas@cleanseed.net)

---

PUBLISHED BY  
**ISSUES INK**

403-313 Pacific Avenue  
Winnipeg, MB R3A 0M2  
(204) 453-1965  
[issues@issuesink.com](mailto:issues@issuesink.com)

---

**PUBLISHER**  
Shawn Brook

**MANAGING EDITORS**  
Michelle Clarke, Lindsay Hoffman

**EDITORIAL**  
Kari Belanger

**CONTRIBUTORS**  
Madeleine Baerg, Melanie Epp, Mark Halsall, Treena Hein, Angela Lovell,  
Carolyn King, Marc Zienkiewicz

**ADVERTISING SALES**  
Craig Armstrong, Sam Mostafa, Dean French

**MARKETING**  
Theresa Ramsoomair, Andres Jaramillo

**CREATIVE**  
Lesley Nakonechny, Kyle Dratowany, Theresa Ramsoomair

**CIRCULATION**  
Dean French

---

The *Alberta Seed Guide* makes no expressed or implied warranties of merchantability or fitness for a particular purpose or otherwise, concerning the use of any product and assumes no liability for any injury or damage, direct or consequential, incurred from the use of such products or services therein. Federal, Provincial, and Municipal laws and regulations supersede the information contained herein.

---

Return undeliverable Canadian addresses to the Winnipeg office:  
**Issues Ink**  
403-313 Pacific Avenue  
Winnipeg, MB R3A 0M2

PRINTED IN CANADA

**INTERESTED IN ADVERTISING?**  
Please direct all sales or distribution inquiries to **Dean French** at  
(204) 453-1965 ext 824 or via email at [dfrench@issuesink.com](mailto:dfrench@issuesink.com)

Reproduction in whole, or in part, is prohibited without written permission from the publisher.

Publications Mail Agreement No. 40030841

Canola. Yield. Easy.



We cut the fluff to deliver on what matters—your bottom line. The Brevant™ canola lineup is designed to be flexible, giving you the right agronomic and marketing options for your business. So, when you pull into your local Brevant™ retailer, you get the seed you need, and you can get back to work.

We work hard to make your job easy.

Visit your retailer or learn more at [brevant.ca](http://brevant.ca)



 **BREVANT™** / EASY CHOICE.  
seeds

™ Trademark of Dow AgroSciences, DuPont or Pioneer, and their affiliated companies or their respective owners. © 2020 Corteva.



## GET SERIOUS FLEA BEETLE AND CUTWORM PROTECTION.

Ask your local seed supplier about Lumiderm and learn more at [lumiderm.corteva.ca](http://lumiderm.corteva.ca)

**Lumiderm™**

INSECTICIDE SEED TREATMENT

SERIOUS SEED PROTECTION



™ Trademark of Dow AgroSciences, DuPont or Pioneer, and their affiliated companies or their respective owners. © 2020 Corteva.

# Value and Enterprise Beyond the Farm Gate

What opportunities are Alberta producers taking advantage of and who are the value-add up-and-comers?

**THINK YOU KNOW** Alberta's agriculture industry? Don't blink: it's changing right before your eyes. From border to border and in ways from tiny to enormous, more value-added opportunities are coming to Alberta. While those opportunities are great news for individual innovative and entrepreneurial farmers, collectively they represent a healthy diversification and maturing of Alberta's agriculture industry.

"More and more people are realizing what value-add is and where they can incorporate it into their business," says Darren Walkey, president of innovation and value add with Pleasant Valley Oils near Red Deer, Alta. "For the past 200 years, Canada has been set up as a supply system. In the early days, most of the products produced in Canada would go back to Europe to support the empire. Now we're seeing it doesn't make sense to ship the peas to China and buy back the protein to put into our own products. We're realizing that we're not solely an export nation; we're a nation that can create ingredients and products too."

A decade ago, most farmers attempting to add value to their farm businesses pursued go-it-alone, niche opportunities like growing for farmers' markets, selling direct to restaurants, or offering on-farm agri-tourism. Some stepped into organics, others planted some acres to speciality crops. While opportunities existed, they tended to be relatively small, rarely replaced a farm's commodity production, and often carried significant risk.



Steve Larocque is an agronomist and owner of the consulting business Beyond Agronomy.

Today, consumers' growing interest in (and willingness to spend extra dollars on) locally-produced products, together with increasing domestic and international demand for high-quality plant proteins and other fractionated pulse, grain and oilseed products, is setting the stage for value-add opportunities both big and small. For the most part, opportunities are being enthusiastically imagined, but not yet realized. That said, municipalities around the province are stepping



Geoff Stewart owns and operates Rig Hand Craft Distillery.

forward keenly: many have already completed feasibility studies on new processing plants, most are actively pursuing larger value-add players, and at least one has purchased a quarter section of land beside the railway in order to be particularly attractive to potential future investors.

"We're at the tip of the iceberg. There are all kinds of producer groups and start-up companies that are hitting the ground and ready to roll," says Walkey. "We're going to see more and



Still,  
**STRONG. VIGOROUS. DEPENDABLE.** 

**NEW**



CANADA WESTERN RED SPRING



CANADA WESTERN SPRING WHEAT



CANADA WESTERN SPRING WHEAT



CANADA WESTERN AMBER DURUM WHEAT

**NEW**



BARLEY

**NEW**



FLAX



**SEE HOW OUR TOP  
PERFORMING SEED PRODUCTS  
FIT INTO YOUR FIELDS.**

**ALLIANCESEED.COM**

**1-877-270-2890**

more interest in different crops, plants, and botanical extracts. The world is really going toward that in a number of markets, not just food. There is endless potential for what can be done.”

Walkey has worked with the Pleasant Valley Oils team for the past two years. The company, which is owned by the Pleasant Valley Hutterite Colony, produces cold pressed non-GMO and conventional canola and sunflower oils. As its oil production increases, Pleasant Valley Oils is already looking to move further down the value chain, and to assist other colonies with the development of value-added businesses. To accomplish these goals, Pleasant Valley is expanding into oats and has longer term plans for starch and protein utilization in both oats and pulses, as well as protein and fibre extraction from canola and sunflowers.

Over the last six years, Pleasant Valley Hutterite Colony has been working hard to make its move into value-added processing through Pleasant Valley Oil Mills a reality. Prior to the building of the oil mill, the colony’s agriculture focus was primarily on a mix of crop and livestock operations. Four years ago, they hired Kyle Makila to handle the business development and sales aspects of the value-added oil business. With Makila’s assistance, Pleasant Valley Oil Mills has grown to be one of the largest cold press oil manufacturers in North America. It now exports into Africa, Asia, and the United States, and is moving further down the value chain into crop fractionation and ingredient manufacturing.

Over the last two years, Makila strategically expanded the Oil Mills staff to include a couple of non-colony teams that handle sales, marketing, food safety, business development and R&D, and innovation that directly assists the colony. Meanwhile, the colony manages all of the crop production, operations and processing work.

Unlike many farm businesses considering a move to value-add, the Hutterite colony that owns Pleasant Valley Oils benefits from relatively deep pockets, access to significant volumes of raw materials, availability of manpower and a business model that is both vertically and horizontally integrated. These attributes

“We’re going to see more and more interest in different crops, plants, and botanical extracts. The world is really going toward that in a number of markets, not just food. There is endless potential for what can be done.”

— Darren Walkey



Darren Walkey is the president of innovation and value add at Pleasant Valley Oils.

allow the colony greater risk tolerance and the ability to tackle larger scale projects. That said, the colony’s reason for stepping into value-add isn’t any different than smaller scale farms.

“The colony has a very strong motivation to move into value-add,” says Walkey. “Agriculture is hard to make a living in. The price of land continues to rise. Opportunities in primary commodities are dwindling. A colony’s quota gets split every time the colony splits. There are more and more colonies starting to split and they know they need to create more business opportunities to create a livelihood. They recognize if they can move further up the value chain, there is more economic opportunity.”

Walkey only sees growing demand for high-quality, nutritious, grown- and processed-in-Canada products.

“We’ve always seen certain segments of society being willing to pay for premium

goods and more nutritious food. As we learn more about our food, nutrition and gut microbiome and how they impact health and longevity, I’d expect people would be more willing to pay more for products from Canada.”

He expects value-added opportunities to change quickly, as various markets open up, adjust and are met by various forms of production.

“In the next [few years], we’ll be closer to meeting world demand for pea protein, which will impact the pea market. In order to diversify from that, we are seeing companies make more of a push into other crops and other protein sources, then specify more into specific functionalities. There’s also increasing interest in full crop utilization and adding value to each of the fractions and, of course, a shift towards being more sustainable: using less water in production, reducing the carbon footprint — that sort of thing.”

From cold pressed oils and hemp fibre to microbreweries and protein fractionation, value-add has many faces in Alberta.

### The Alberta Advantage

Geoff Stewart owns and operates Rig Hand Craft Distillery in Nisku, Alta. The largest craft distillery in Western Canada, Rig Hand buys all of its inputs — wheat, rye, corn, potatoes, sugar beets, and more — directly from Alberta farmers. He believes there’s no better place for his business than Alberta.

“We have unlimited access to the best raw materials in the world right here, and they’re outside our door. Yes, we might have to pay a little more for those products from local farmers, but ultimately those products help us make a better product,” he says.

As a craft producer, Rig Hand Craft Distillery's mandate is to source local, employ local and sell local.

"The craft industry was founded on the 'support your local community' ethic," says Stewart. "That's not just words; we live that. We want to build something that adds value to our community and that lasts."

Typically, craft beer costs in the range of 70 per cent more than big-batch beer. Craft spirits' premiums are even higher: they generally cost double or more compared with larger brands of spirits. Yet, demand continues to climb, says Stewart.

"I credit the internet for creating a more informed population who understand where their food comes from," he says. "This wouldn't have worked 10 or 20 years ago, but people are so educated now: people understand the quality difference between mass-produced products compared with food and drinks prepared the way they're supposed to be and with real ingredients."

Though Millennials are driving the move towards local and craft across the food and beverage sector (and, increasingly, into clothing and beyond), Stewart has been surprised they aren't his main customers.

"The people doing most of the buying — it's Millennials' parents and grandparents because they have more disposable income. They're definitely being pushed by the Millennials' ideas, but now the demand for locally-produced, real products has expanded beyond just the Millennial generation," he says.

Is Stewart concerned there is growing interest by other would-be distillers getting in on the craft distilling market? Not a bit. In fact, he welcomes additional craft distillers and says he'll gladly do whatever he can to help market newcomers succeed.

"Right now, craft industries are only scratching at the big companies' market share. On the spirits side, craft distilleries are only capturing about three per cent of the industry. As a craft industry, we need to work together to steal more market share from big companies that have always had a stranglehold on the market. Other craft distillers aren't my competition; I see us all as being on the same team."

Like many value-add businesses, Stewart's offers spin-off value-add opportunities. Farmers who sell direct to him earn better returns on their grains. He adds value to that grain by distilling it. He then passes the spent grain on to a mushroom farmer, who increases the value of the grain again by using it as an ideal growing medium for mushrooms, which he ultimately sells to add value to local restaurants' menus.

"[Our business model] is an example of how businesses can work together, and all help build a healthier, more vibrant local community," says Stewart.

### Farmers Must Step Forward

Teamwork fits Drumheller-area farmer Steve Larocque's value-add vision as well.

Larocque, an agronomist well known for his Beyond Agronomy consulting business, is currently working with three other farms to jointly pursue value-add opportunities for their grain, oilseed and pulses. Their plan is to begin selling to a value-add market in 2020. He's very certain opportunity exists.

"How many people are doing it? Less than one per cent are value-adding their grain, I'd guess. But the access has never been as clear and easy as now. Field to glass, farm to table has been around forever, but it's never been as easy as the last five years. There's desire from consumers; we as farmers just have to step forward into that space."

Larocque and his team's perspective on value-add is different than most.

Most farmers who pursue value-add look first to identify a need or demand in the market and then work backward to their farm fields to figure out how they can grow a product that matches the need. On the upside, starting with a clear and present market gap increases a farmer's likelihood of ultimately selling their product. On the downside, the strategy is risky because the farmer must produce product that aligns with the identified need, which could require growing a new-to-them crop or according to a new production method.

Larocque approaches value-add from exactly the opposite position.

"We don't necessarily want to go out and risk growing specialty crops because they are often really small markets, more risk, more effort, and

often a steep learning curve for not necessarily a lot of return. And, they are often not required in the right scale for the size of farms we manage. The better question to ask is, what can we do with the crops we already grow and we already know how to grow well?" he says. "We know what we know. We already grow excellent product so let's figure out how to get more value for the products we already grow."

He suggests farmers test the crops they already grow to identify characteristics that make them unique: perhaps a higher level of some mineral, or a particularly high protein or oil content, or a specific way of growing what they've grown in the past. Then consider who might value that attribute.

"If your soil is very high in zinc, for example, maybe that would suit someone who has to fortify their corn flakes with zinc. You need to figure out what you're selling: your product and your story," he says. "The hard part isn't growing the product: you already know how to do that. The hard part is coming to [a potential customer] with a story they want to hear, and then building relationships."

Who is coming next to Alberta's value-add scene? Expect hemp to be a major player because of its CBD factors, its nutritional uses, its protein functionality, and its fibre's many industrial applications. Faba beans is another up-and-comer, as shown by Roquette's — a global leader in starch production — investment in that crop. Walkey expects renewed interest in ancient grains, as well as some of the more traditional crops, now the gluten-free market appears to be stabilizing. And there is growing interest in texturizing plant proteins so they can better replicate meat.

Ultimately, farmers will have to ask themselves one key question when they consider delving into value-added opportunities: is the potential gain worth the effort?

Larocque knows exactly where he stands: "For the right type of farmer, absolutely. It won't appeal to everyone, but for those who can make it work, there's huge opportunity."

• Madeleine Baerg

# 2020 Pest and Disease Outlook

Top pest and disease concerns in Alberta for the coming year.

**AFTER A COUPLE** of dry years, 2019 was a wetter year in most areas of Alberta, at least in the second half of the growing season, which allowed some crop diseases to rear their ugly heads. This may very well affect what diseases are most threatening in 2020, but the weather will, as always, be a huge factor.

With cereals and canola, Agriculture and Agri-Food Canada (AAFC) plant pathology research scientist Kelly Turkington explains even though it was dry in 2017 and 2018, there may still have been background low-level infections in lower crop canopies and, thus, potential inoculum, especially for cereal leaf diseases.

“When the moisture arrives, even a low level of cereal leaf spot inoculum on old crop residues can be a concern,” says Turkington, who is based at the AAFC Lacombe Research and Development Centre. “A lot of the leaf spot diseases in barley and wheat are polycyclic, which means they have many cycles of spore production, dispersal, and host infection, with some cycles being as short as seven days. With moisture present, they can quickly produce large amounts of spores and build up to damaging levels.”

Seed testing lab results dating back from before 2012 illustrate the continued expansion of *Fusarium graminearum* in cereal seed samples in Alberta, notes Turkington. Levels of detection decreased in 2017 and 2018, but moist conditions in central and northern Alberta (as well as irrigation in southern Alberta) resulted in *F. graminearum* detections skyrocketing in 2019, but not at 2016 levels.

In cereals, as in years past, Turkington says root rots should not be too much of a problem unless growers are planting barley-on-barley or wheat-on-wheat



A barley leaf with scald symptoms. PHOTO: KELLY TURKINGTON

(although no-till seeding helps reduce the impact of diseases such as common root rot). Disease survey results suggest the development of the Septoria leaf disease complex in wheat and this will also be an issue to watch for in 2020.

In barley, scald is also a threat, but mainly in cooler western Prairie regions. “If you had a significant amount of scald in 2019 and you need to grow barley in the same fields this coming year, you should change varieties and pick a variety with as complete a resistance package as possible, not just for scald,” advises Turkington. “For silage or forage production, keep in mind that we did a trial where we planted a mixture of triticale, oat and barley,

which reduced leaf disease development resulting in better yield than growing the same barley variety continuously.”

In addition, take-all root rot disease is always a risk in wheat-on-wheat, notes Turkington, but it can also infect barley, although levels in both crops appear to be reduced compared to years ago. Growers should also keep in mind that take-all does better in alkaline soil, so Turkington says, “if you’ve applied lime to deal with clubroot in canola, watch out.” In canola, he points to sclerotinia stem rot, clubroot and blackleg as risks for 2020, although the extent will depend largely on the weather.

To mitigate all disease risk in 2020,

CANOLA | CORN | WHEAT | OATS | BARLEY | PEAS | SOYBEANS

# A full lineup that excels where the Seed Hits the Soil.

CANTERRA SEEDS is backed by over 180 seed growers and ag retailers in Western Canada and partnerships with leading seed developers like PRIDE Seeds and Limagrain Cereals Research Canada. Our diverse portfolio is stocked by local investment in plant breeding, access to a global network of germplasm and traits, and guided by one vision:

**To be the company that best  
understands and meets the seed  
needs of farmers.**

Visit [CANTERRA.COM](http://CANTERRA.COM) to find a retailer or seed grower near you, or call 866-744-4321 to speak with a CANTERRA SEEDS sales representative today.



**Seed the Difference.™**



PRIDE SEEDS

**ONLY available at CANTERRA SEEDS.**

Corn hybrids and soybean seed only  
available at CANTERRA SEEDS retailers.



**The easy rewards program.**

Visit [CANTERRA.COM](http://CANTERRA.COM) for details  
and to sign up for savings.

PRIDE® & Design is a registered trademark of AgReliant Genetics Inc.



Blackleg lesion at the base of a canola stem showing small black pycnidia (asexual fruiting bodies) of the blackleg fungus. PHOTO: KELLY TURKINGTON

Turkington advises a close look at field history to help producers choose the best variety possible or to signal the need to extend crop rotations. For example, if they had issues with leaf spot disease and/or *Fusarium* in the cereals planted in previous years, producers should choose a variety with at least a moderate level of resistance. Turkington says there is excellent stripe rust resistance in today's wheat varieties, from moderate to full resistance now available.

The disease ratings of previous variety choices will also give insight into which growers should choose for 2020 or if a more extended rotation is needed. Turkington adds that fungicides are key tools for in-season disease management, and crop scouting will always be critical to determine if the disease risk warrants a fungicide application.

Lastly, besides good crop management practices in 2020, Turkington advises growers to send samples of their 2019 harvested grain to a lab for a "full fungal

**"When the moisture arrives, even a low level of cereal leaf spot inoculum on old crop residues can be a concern."**

**— Kelly Turkington**

scan" test, which will indicate what fungal diseases were present on the crop and to what extent. This information can be used to further tweak a disease management program, with regard to seed and seed treatment choice, as well as length of rotation.

#### **Pulse Outlook**

As with canola and wheat, pulses experienced an upsurge in fungal disease levels in 2019 due to all the moisture. Robyne Bowness Davidson, pulse research scientist at Alberta Agriculture and Forestry, says *Mycosphaerella* (*Ascochyta*) blight was present at high levels in the 2019 field pea crop and if the 2020 growing season is wet again, it will also be a large concern due to higher inoculum levels that will overwinter in the crop debris. "It was present in every single field surveyed regardless of whether or not producers applied a fungicide," she explains. "Downy mildew, another foliar

disease of pea only seen in wet years like 2019, may also be a concern in 2020 due to higher inoculum levels.”

Sclerotinia, a foliar pathogen, and Aphanomyces, a root rot pathogen, were also present in field peas in 2019. Both diseases thrive in high moisture, and overwinter in the soil and affected lentils as well. Sclerotinia is a potential threat in many broadleaf crops, and can move from canola to pulses or vice versa. Ascochyta was also observed in lentils in 2019, but Davidson says the fact that there is not a large acreage of lentils in Alberta at present helps prevent it from becoming a serious concern.

“In faba beans, the main disease concern is chocolate spot (caused by Botrytis), present in 2019 due to the wet weather,” she adds. “It tends to move in later in the season and can affect yield. We will continue our work in this area to determine the application timing, rate and efficacy of various fungicides. Our research on this has actually been going on for four years, but 2019 was the first year this disease was present at high enough levels that we could study it due to the moisture.” In general, faba beans are less affected by root diseases



Fusarium head blight symptoms in wheat. Note the prematurely ripened affected portions of the head, and the brownish discolouration of the rachis and upper stem tissues. PHOTO: KELLY TURKINGTON

## JumpStart® + QuickRoots®

### RESULTS FOCUSED

#### Nature's technology stacked

We can optimize your soil health and plant growth on every acre, from start to finish.

JumpStart and QuickRoots inoculants combine to help create a powerful biological system, helping increase yield potential by:

- Improving nutrient availability, supporting root and shoot growth
- Enhancing early-season vigour in cool soil temps
- Increasing availability of phosphate, nitrogen, and potassium
- Performing in a variety of soil conditions and types

**NexusBioAg shares your focus on maximizing your crop's yield potential. Call your NexusBioAg rep today.**



Your solution for crop nutrition.

[nexusbioag.com](http://nexusbioag.com)

ALWAYS READ AND FOLLOW LABEL DIRECTIONS. © 2019 Univar Inc. All rights reserved. Univar, the collaboration insignia, and other identified trademarks are the property of Univar Inc. or affiliated companies. All other trademarks not owned by Univar Inc. or affiliated companies that appear in this material are the property of their respective owners.

**NexusBioAg**

“Flea beetle populations are exacerbated by low plant populations, but there’s a lot of pressure on growers to seed more lightly because seed is so expensive. You can do that, but as I have been saying to growers all this year, you are risking higher beetle numbers and you’ll have to do things to control them.”

— Scott Meers

due to a larger root structure, she adds. They are resistant to Aphanomyces and seed treatments work very well to control the other root rot fungal threats.

#### Insect Threats

The No. 1 threat for canola producers in 2020 is likely flea beetle, says Scott Meers, insect specialist with Alberta Agriculture and Forestry. These will be striped flea beetles, except in the extreme south of the province where it’s the non-striped variety. “If the canola crop is able to grow fast in the spring, they won’t be as bad,” explains Meers. “There are no new control products available, so I’ve been stressing good plant stand establishment. Flea beetle populations are exacerbated by low plant populations, but there’s a lot of pressure on growers to seed more lightly because seed is so expensive. You can do that, but as I have been saying to growers all this year, you are risking higher beetle numbers and you’ll have to do things to control them.”

Canola growers may also face bertha army worm, where there was an outbreak in the Peace region, and some cases in central and southern Alberta in 2019. Cabbage seed pod weevil is a steady threat in all growing regions, but a little more in the east.

In wheat, Meers reports wheat midge is on the increase in central Alberta due to the wetter weather in the past year, with pockets in various areas. The drier weather in southern Alberta has allowed the wheat stem sawfly to build into a serious problem. Growers in central and southern parts of the province also face serious grasshopper potential. “In barley, there are no real concerns,” he adds. “In peas and fava beans, there’s pea leaf weevil, and every year there is some pea aphid, especially in lentils in southern Alberta depending on the year.”

• Treena Hein

For more information visit the Prairie Pest Monitoring Network Blog at <http://prairiepestmonitoring.blogspot.com/?m=0> and the Fusarium Head Blight Infection Risk Report at <https://agriculture.alberta.ca/acis/fusarium-risk-tool.jsp>.



**In-House  
Optical Sorting  
Demonstrations**

**Can Seed**  
EQUIPMENT LTD.

Providing Processing & Handling  
Solutions for YOUR Business for  
over 35 Years

**WWW.CANSEEDEQUIP.COM**

**1-800-644-8397**



**On-Site Setup  
& Training**

**Alberta | Saskatchewan | Manitoba**

# MAKE EVERY PLANT COUNT



## GET THE MOST OUT OF YOUR INVIGOR.

When you seed your InVigor® hybrid canola this season, aiming for a target plant population of 5 to 7 plants/ft<sup>2</sup> can help you optimize the yield, performance and consistency of your crop. Just a few adjustments to your current practices, such as calibrating your seeding rate based on Thousand Seed Weight (TSW), can help ensure that every plant counts at harvest.

### **BENEFITS OF A TARGETED PLANT POPULATION OF 5 TO 7 PLANTS/FT<sup>2</sup>:**

- Increased plant productivity and yield performance
- More efficient use of available resources
- Improved weed control and reduced intra-crop competition
- Elevated stress tolerance
- More even maturity and uniform plant structure
- Improved lodging resistance and lower sclerotinia incidence

To learn more on how to implement a Targeted Plant Population on your farm this season, visit [agsolutions.ca/InVigorRATE](https://agsolutions.ca/InVigorRATE) or call AgSolutions® Customer Care at 1-877-371-BASF (2273).

**BASF**  
We create chemistry

**InVigor®**

**Always read and follow label directions.**

AgSolutions, and INVIGOR are registered trade-marks of BASF. © 2020 BASF Canada Inc.

# Plant Protein Alliance of Alberta: Striving for a Paradigm Shift

The PPAA's goal is to make plant protein a key economic driver of Alberta's economy. To get there, the alliance must change the industry's current mindset, thereby removing the biggest challenge to significant new investment.

**PLANT PROTEIN PROCESSING** is one of the newer — and most exciting — agricultural value-added opportunities in Alberta. Open any Canadian newspaper these days and you'll likely see a news story about plant proteins. A&W sold out of its Beyond Meat burger barely a month after it hit the menu in 2018, making the pea and beet-based burger the biggest ever launch for Canada's second-largest hamburger chain. Almost all other fast food (and many slower food) restaurants have since jumped on the protein alternative bandwagon, unveiling their own non-meat menu items in speedy succession.

Meat industry giants, including Tyson, Cargill and Maple Leaf, have each announced investments in alternative protein R&D, products and start-up companies. Meanwhile, new announcements of plant protein investments in pet foods, pharmaceuticals and beauty products hit the news daily. With market demand for plant proteins ballooning and global processing capacity still relatively low, countries around the world are scrambling to draw as much processing investment as they can capture.

The Plant Protein Alliance of Alberta (PPAA) wants Alberta farmers to benefit from the huge and growing opportunities in plant protein fractionation and processing. Since its inception one year ago, the PPAA has been working from every angle to encourage plant protein investment in Alberta.

"The world is clamouring for more plant protein," says Allison Ammeter, chair of both the PPAA and Pulse Canada. "The issue is not going to be whether the demand is met, but whether it will be met by processing plants in Canada."

Despite the mainstreaming of plant protein processing, Canada currently exports nearly 95 per cent of the agricultural products it grows as raw commodities.

"I'm not asking for zero per cent: I still want to feed the world," says Ammeter. "But I would dearly love for us to drop that to just

65 or 70 per cent. When we're shipping away raw products, we're shipping away jobs, we're shipping away GDP, and we're shipping away intellectual capacity — and then we're buying it all back again at full cost. We can be so much more."

The PPAA exists to help build Alberta into the "processing powerhouse" Ammeter believes the province can be. The PPAA's mission is to facilitate the development of a diverse, profitable and sustainable plant protein and plant ingredient processing industry in Alberta: in short, to position Alberta as the single best place in the world for anyone looking to invest in plant protein processing.

In addition to clean, natural resources, excellent grower expertise, and globally-recognized food quality, Canada is uniquely positioned to capitalize on the growing demand for plant protein because it already grows a large volume of protein crops. Given the cost of shipping, it makes sense to process near where the primary products are produced.

Admittedly, China currently has a leg-up on Canada for processing. Because China has far less stringent safety, environmental and social regulations, investors can build



processing plants much more quickly and easily there than here. That said, consumers care about where and how their food is produced, which means China isn't at such an advantage.

"I don't see China being a long-term solution," says Ammeter. "A lot of companies are demanding good air, good water, good HACCP [food safety hazard avoidance protocol]. We at times question whether food processors are willing to pay enough for it yet, but customers definitely want it. Whereas a lot of us will put up with clothing, tools, kids' toys manufactured who knows where, food is different."

Dan Dibbelt, executive director of the Peace Regional Economic Development Alliance, agrees.

"The world is changing. People want local, they want to know who grew it, they want to know what area of the world it's from," says Dibbelt. "I used to love canned mushrooms, but will never buy those again. I don't know what's in the water [from mushrooms processed in China]. People are looking more and more at that. They want to know their food is clean, that it's processed properly."

He also believes consumers are moving toward flexitarian diets: additional good news for plant protein processing.

"Quite honestly, I love meat. My dad was a butcher and sausage maker. I'm never giving up meat. But, would I eat a veggie burger — 100 per cent. It's about variety. I don't know it will ever be that we get rid of meat, but I do believe diversification is here to stay. Even here in northern Alberta, where we put gravy in our baby bottles, people are curious, and they're excited about plant proteins."



PPAA's goal is to make plant protein a key economic driver of Alberta's economy. To get there, PPAA is striving toward supporting the development of high-functioning value chains, state-of-the-art infrastructure and commercialized, market-driven products. It sees itself fulfilling four key roles: leading and supporting strategic alliances, encouraging collaborative relationships, cheerleading new ideas, and building awareness.

"We spend a lot of our time with people who are just starting to change their mindset, showing them how important it is to make a shift," says Ammeter. "And, we are also already working with some incredible entrepreneurs who are already in Alberta, connecting them to whomever they need for support, whether that's venture capitalists or angel investors or distributors, et cetera. We see our role as being connectors, introducers, networkers to help in any way with the existing industry and also to motivate those who are thinking of investing."

One of PPAA's major mandates is to lobby various levels of government to improve the competitive environment for plant protein processing in Alberta. Certain regions, especially some eastern U.S. states, are several steps ahead of Canada in providing incentives that draw new processing investment.

"Canada is getting the picture that we have to bend over backwards to attract companies because it benefits all Canadians," says Ammeter. "I'm not talking about wining and dining and crazy things: I'm talking maybe giving them a tax break for a couple of years, maybe making sure there's no red tape. It's a mindset: we need to have government and industry working in tandem to figure out what we can do to have [companies] relocate here."

Already, Canada has drawn some big time investment.

Among the more exciting builds, is the new Roquette plant slated to open in Portage la Prairie, Man., in the spring of 2020. With an annual processing capacity of 125,000 tonnes of yellow peas per year, the company describes the plant as the largest pea processing plant in the world. However, peas are certainly not the only plant protein with potential.

"Hemp seed protein has really taken off. There are so many products right now using hemp seed for everything from hand lotion to hemp milk," says Ammeter. "There are a lot of opportunities for oats right now and, again, we're growing the bulk of them. Canola — there is a lot of opportunity there to extract the protein left in the meal after the oil has been crushed out. Flax, triticale, barley, rye: the world is demanding more protein and, here we are, we have it."

Possibly the very biggest challenge to bringing in significant new investment is industry mindset: the move from growing raw product to growing and then carrying that product right through processing requires a major paradigm shift.

The change isn't impossible: in fact, Canada has

proven its ability to shift toward a processing mentality with canola. In a small number of years, Canadian agriculture and agri-food successfully built a fully integrated canola processing sector that generates far better returns than canola would as a raw commodity. Now, the same needs to occur across commodity types.

“There is a real desire to change. Everyone is starting to recognize that we are at the complete mercy of global markets. Some of those markets do whatever they want without playing by the rules. We want to be part of the global economy, but we don’t want to be at the mercy of countries like China, India, Saudi Arabia, and Italy. They’re not in it for our best interests,” says Ammeter.

Another challenge, at least for some parts of Alberta, is transportation. While northern Alberta has always struggled with adequate access to rail and truck transportation for agricultural commodities, Dibbelt believes value-added opportunities have grown to the point that the north country’s growing advantages almost offset the transportation challenges.

“We’re not there yet, but within the next few years. It’s coming,” says Dibbelt.

Just one year into operation, PPAA doesn’t yet have an assured and consistent stream of funding. That said, Ammeter feels the organization is well supported by government.

“We do feel, as we’ve talked to everyone from the [provincial Agriculture and Forestry] Minister down, that they are all cheering us on because they recognize we can make a difference in the value-add space. In terms of verbal support, we’ve 100 per cent got it. In terms of financial support, ask me in a year or so.”

Additional funds come from certain industry sponsors, as well as membership fees. The membership fee is kept intentionally low to draw a wide and diverse cross section of companies that can benefit from networking together.

Seed growers should welcome the growing interest in plant proteins with open arms. To date, most breeding has focused on improved agronomics (standability, disease resistance, days to harvest, etc.) and more generalized crop attributes (e.g. high protein level and high oil content). Plant protein processors, however, may need uniquely specific product characteristics, which could translate to increased opportunities for seed growers to grow niche varieties.

“I think what will happen more and more is buyers will say, ‘This is great, but is it possible for me to get this in this specific protein level?’ or ‘What I really need is a fibre with these particular characteristics, or a starch that works in this particular way,’ ... I know I sound a little like the Jetsons, but I don’t think I’m that far off,” says Ammeter.

It’s a “total win,” she says, noting the entire value chain has something to gain from Canada — and Alberta — becoming a plant protein powerhouse.

In addition to demand increasing for more specialized varieties, the seed industry may also benefit from increased total demand.



Allison Ammeter is the chair of the Plant Protein Alliance of Alberta and Pulse Canada.

“I may be wrong, but it seems to me that if you’re growing a very specific product for a company, you’re going to use certified seed rather than [farm-saved seed]. You’re not going to take a chance that what you’re selling a company is not absolutely [to specifications],” she says.

Likely, the move to speciality, company-specific varieties will translate to more closed loop systems. While contract growing specialized varieties for a single processor is different than growing for traditional commodity sale, successful closed loops, like Nexerra canola or Viterra’s bean contracting in southern Alberta, are already operating.

“It’s exciting to move toward less of a general commodity and more meeting of specific needs,” says Ammeter. “Go look at Denmark or the Netherlands. They are itty-bitty countries geographically, but everything they produce goes out with value-add. They are leading the world in agricultural exports, not in volume, but in dollars. We could be that country.”

• Madeleine Baerg

# Better protein. Better yield. Better profit.



## Treat your nitrogen with NZONE GL or ContaiN.



### Contact a Distributor for Your Local Retailer

John Turner 403-485-1898  
Autumn Darker 306-292-7319  
Bailey Kohle 306-292-7714  
Korey Conrad 204-723-0423

Bob West 403-485-1615  
Brett Roberson 403-485-1604  
Wayne Chysyk 306-530-6990

To learn more about AgXplore, call Jennifer Posey at 701-341-7527 or [jposey@agxplore.com](mailto:jposey@agxplore.com),



# Keeping Blackleg at Bay

If blackleg levels are on the rise in your canola field, think about adjusting your tactics for managing this yield-limiting disease.

**BLACKLEG-RESISTANT** canola varieties are an excellent tool for managing this potentially serious disease, but we need to take care of them.

“If we deploy the same genetic resistance over and over again, then we put a lot of pressure on that genetic resistance and it could break,” says Michael Harding, a plant pathologist with Alberta Agriculture and Forestry.

That’s the reason researchers are monitoring this fungal pathogen and its races in Alberta and the rest of Western Canada. And that’s why growers need to monitor their own canola fields.

“If you’re growing canola every year or every second year, and you are starting to see an increase in blackleg over time, that is an indicator the races within your field are adapting to overcome the resistance deployed,” says Justine Cornelsen, the blackleg lead for the Canola Council of Canada (CCC). Rising blackleg levels are a reminder to reach into your toolbox for some of your other tools like changing to a canola variety with a different blackleg resistance package and/or extending your crop rotation.

Cornelsen explains two fungal pathogens — *Leptosphaeria maculans* and *Leptosphaeria biglobosa* — can cause blackleg in canola. *Leptosphaeria maculans* is the major concern on the Prairies. Canola residues infected with this fungus release spores that can infect susceptible canola plants as early as the cotyledon stage.

The infection spreads down from the foliage to the base of the stem. The disease can result in stem cankering, lodging and major yield losses, especially if the infection begins when the crop is very young.

## A Look at the Alberta Situation

Harding has been leading Alberta’s blackleg surveys since 2015. He says the province’s blackleg surveys have been sporadic over the past few decades with surveys conducted for a couple of years, then no surveys for a few years, then another survey for a year, and so on. A key issue was whether the person responsible for monitoring canola diseases in Alberta had enough funding in any given year to cover the survey’s manpower and diagnostic costs.

“I was in the same boat; I had some limited resources, but not necessarily enough to do a canola disease survey every



Blackleg infection spreads down to the base of the canola stem, causing black canker and yield loss. PHOTO: JUSTINE CORNELSEN, CANOLA COUNCIL OF CANADA

single year,” he says. Thus, Harding and his group are taking a different approach. “We are coordinating the survey, but we ask for volunteers — people interested in canola disease could help out by surveying a few fields.”

In 2015, Harding’s group partnered with agricultural fieldmen in counties across the province. In 2016 and 2017, they received funding from the Alberta Crop Industry Development Fund and partnered with agricultural research associations in



If blackleg severity is increasing in your field over time, then the races in your field are likely adapting to overcome the genetic resistance in your cultivar.

PHOTO: JUSTINE CORNELSEN, CANOLA COUNCIL OF CANADA

the Agricultural Research and Extension Council of Alberta (ARECA). Last year, and in 2018, they partnered with the agricultural fieldmen again. These surveys include blackleg, sclerotinia and clubroot.

“This has been a really big step forward for us in Alberta to have a consistent, long-term, annual disease survey in canola,” says Harding. “And it is thanks to partnering with groups like the agricultural fieldmen and ARECA. We’re going to continue with this partnering approach.”

They try to survey about one per cent of the canola fields in each county, collecting data on blackleg prevalence, incidence and severity. The table below summarizes the results from the 2015 to 2018 surveys. The blackleg levels were a little higher in 2016 due to wet conditions that favoured the disease.

#### RESULTS FROM ALBERTA BLACKLEG SURVEYS, 2015 TO 2018

Parameter	2015	2016	2017	2018
Number of fields surveyed	208	480	421	339
Prevalence: percentage of surveyed fields that have blackleg symptoms	70.70%	90%	82.20%	80.50%
Incidence: percentage of stems with blackleg symptoms	13.10%	21.20%	14%	13.25%
Severity: rated on a scale from 0 (no disease) to 5 (completely diseased)	0.39	0.42	0.26	0.24

*Courtesy of Michael Harding, Alberta Agriculture and Forestry*

Harding summarizes. “Overall, our surveys show blackleg is widespread in the province, but we generally only see 10 to 20 per cent of the plants with symptoms, and the severity on average is very low in most fields — less than one out of five. Meaning, the resistance in our canola varieties is working very effectively.”

Harding states the 2019 blackleg results could be quite different in various areas of the province. “In 2019, some parts of Alberta had almost no rain, and in other parts it wouldn’t stop raining. For southern Alberta, I’m guessing that the 2019 blackleg numbers will be quite similar to those in 2017 and 2018. But in the central part of the province, where they essentially had rain all season long, we could have much higher levels.”

To try to draw more information from the survey data, Harding and his group have started conducting a hot spot analysis. “The data points in the survey have a precise GPS location attached to them so we can map them. One of the tools in the mapping software can look around each individual point that has a high severity to see how many points nearby also have a high severity. If it reaches a certain threshold, it will tell you there might be a little hot spot there,” he explains.

“This analysis is one way we can distil down an enormous amount of survey data and say, ‘here are some areas we may need to look at a little closer.’”

They first conducted the hot spot analysis in 2018.

“We found a few spots with a little higher severity and maybe a little higher incidence. We don’t yet know what causes the hot spots, whether they might be due perhaps to the appearance of a new virulent race that is overcoming the resistance in our varieties, or maybe the local weather conditions pushed the severity a little higher.”

The 2019 data could help to shed some light on the cause of the hot spots.

“Since a significant part of the province had lots and lots of precipitation and another pretty significant area had almost no rain, that will help us to sort out what the biggest driver is of these hot spots: is it the weather, or is it something else like the crop rotation history or new blackleg races? After we do this analysis for a number of years in a row, we should be able to say with some certainty what is going on.”

### Three Key BMPs for Managing Blackleg

“Our top three best management practices for blackleg really come down to some of the basics for effective disease management,” says Cornelsen.

“Scouting is No.1. Monitoring is key to knowing if you have an issue with your resistant variety.”

She recommends rating the blackleg levels in your canola fields each year, especially if you are using a short rotation and if you think you may have a blackleg issue in some fields.

“The best time for blackleg scouting to help make decisions for future years is at 60 per cent seed colour change, right around when you would typically swath the crop,” says Cornelsen.

“You go into the field, pull up the plants, cut through the top of the root, and rate your plants on that 0 to 5 scale, with 0 being a clean, healthy plant that has no sign of black tissue in the cross section, and 5 is showing complete internal blackening.” Sampling instructions and the rating chart are available on the CCC website.

“You can use this severity rating to determine how much yield you have potentially lost due to blackleg, if you were above or below the provincial average [for the disease], and whether the disease level has been increasing over time in that field,” she says.

“That information helps you to make decisions the next time you grow canola in that field. If the disease levels are rising, then maybe you need a varietal change, or maybe the disease is so severe you need to think about extending your crop rotation on that particular field.”

Crop rotation is the second of the CCC’s top three best management practices (BMPs).

“Blackleg is very easily managed with an extended rotation,” Cornelsen emphasizes. “If you can move to growing canola once out of three years, you allow the old residue which houses the pathogen to die down in the field naturally. That will minimize the risk of the field having severe blackleg.”

“When blackleg showed up as a real force to be reckoned with in Alberta back in the 1970s and 1980s, it was managed with crop rotation. The one-in-four rotation with canola really came about because of blackleg — the fungus does not survive very long in the soil unless it has host tissue,” says Harding. “The lower part of the canola stem persists the longest; it is kind of a woody tissue that survives for two or three years. But once that breaks down, there is nothing left for the blackleg fungus to survive on, so it dies.

The blackleg fungus can also be seed-borne, but close to 100 per cent of the canola seed purchased has been cleaned and

treated with a fungicide to prevent any seed-borne issues with blackleg, he adds.

The third key BMP is using blackleg-resistant varieties.

“In Canada, all commercially available varieties are rated as resistant or moderately resistant to blackleg. We are all doing this BMP already,” says Cornelsen. “The next level is stewarding the varieties better.”

### Rotate Resistance Genes

In addition to the big three BMPs, one of the secondary practices on the CCC’s blackleg BMP list is rotation of resistance genetics.

Blackleg resistance relies on two types of resistance: major gene resistance, which is very effective, but specific to particular blackleg races; and quantitative resistance, which involves multiple genes that each contribute a small amount to the plant’s overall ability to resist the disease at stem cankering.

In major gene resistance, the resistance gene in the plant has to match up with the corresponding avirulent gene in the pathogen. For example, the resistance gene Rlm2 is only effective against races with the avirulence gene Avr1m2.

Since the 1990s, resistant canola varieties with the same one or two major genes have been widely used on the Prairies. That has put selection pressure on the pathogen to shift toward other races. Research by Gary Peng at Agriculture and Agri-Food Canada in Saskatoon and others shows some Avr1m genes have become less common and others have become more common over the past couple of decades in Western Canada.

Each year, as Harding’s group assesses blackleg severity in the stems collected in the Alberta survey, whenever they see a stem with blackleg symptoms, they cut off a one-inch piece and send it to Peng. Peng is currently monitoring the blackleg races in Western Canada. His group isolates the blackleg fungus from the samples and determines which avirulence genes are present. Harding also passes along the hot spot analysis from the Alberta survey in case that helps hone in on some areas that might be a concern for development of new blackleg races.

Peng’s research also suggests many canola cultivars probably have both major gene and quantitative resistance. Even if the pathogen’s population shifts to overcome a race-specific major gene, most cultivars have non-race-specific quantitative resistance that slows the pathogen’s spread in the plant and reduces the disease’s impacts on yields.

Canada now has a voluntary labelling system that identifies the major resistance genes in canola cultivars. At present, DeKalb, Canterra Seeds, Brett Young and Cargill are using this new labelling system.

“The old recommendation was just to switch your variety [if you noticed increasing problems with blackleg in a field]. You could have unknowingly switched to a variety that would actually be worse for that field,” explains Cornelsen. “Now that we’ve got more information, rotation of resistance genes has become a new best management practice.”

Growers and agronomists can submit canola stubble samples to a diagnostic lab to have blackleg races identified. The

pathogen is very diverse, so most fields will likely have multiple races. The idea is to choose a canola variety with resistance to the main avirulence genes in the field, if such a variety is available.

“Right now, we have four major genes identified (some varieties are identifying a fifth unknown gene) in Canadian canola varieties. Looking at our blackleg race profile in Western Canada, there would be the potential to adopt an Rlm7 resistance gene in our varieties, to match up with Avr1m7, which is becoming increasingly common here,” says Cornelsen.

She is hopeful additional major genes will become available in Canadian canola varieties in the coming years. “A lot of the life sciences companies in Canada have access to materials with other resistance genes that are deployed in other countries. Also, researchers with Agriculture and Agri-Food Canada at Saskatoon have identified some new resistance genes, which will be available to the Canadian market. But it takes time — when you’re introducing a new trait or gene it can take upwards of 10 years to get the new varieties out.”

### New Fungicide Options on the Way

“Fungicides are not commonly used for controlling blackleg on the Prairies at present, mainly because producers don’t necessarily see a return on investment within the application year. That is probably because we are missing the critical window of infection,” explains Cornelsen.

“Just in the last year or so, we have really dialled in on when the critical stage for infection occurs for blackleg on the Prairies. It’s the cotyledon to two-leaf stage. The plants infected at that very early stage will be the ones that suffer the greatest yield loss or may not even make it to harvest. If we can protect the plants at that early stage, we will really minimize the severity of the disease in some fields.”

Infection at this really early stage is not unusual. “The infected residue only needs a little moisture and temperatures around 15 to 16 C to start producing spores. [Often in a warm spring,] the pathogen is already releasing spores when the canola cotyledons are popping out of the ground,” Cornelsen says.

She explains the foliar fungicides registered for blackleg in canola are labelled for the two- to six-leaf stage, by which time the plants could already be infected. And even if the fungicides were registered for the cotyledon stage, a foliar application at that timing would likely be impractical. “Growers are often busy with planting when canola is at the cotyledon stage. And it’s tough to wrap your head around the idea of spraying at the cotyledon stage because you would be spraying bare ground.”

However, new seed treatments are on the way. “Within the next few years, we are going to have some new seed treatments coming on the market that can protect the plant at that critical window from the cotyledon to two-leaf stage. I think the new seed treatments will prolong the use of some of the genetics in our blackleg-resistant varieties.”

One of these new products is Syngenta’s Saltro. “We’re excited about what Saltro fungicide seed treatment will bring to the management of airborne blackleg,” says Scott Ewert, head



To evaluate blackleg severity, clip the plant at the top of the root and assess the degree of infection visible in the cross section.

PHOTO: JUSTINE CORNELSEN, CANOLA COUNCIL OF CANADA

of Seedcare with Syngenta Canada. He explains Saltro will provide a new tool as part of an integrated disease management approach, together with crop rotation and genetic resistance, to manage blackleg in canola, minimize yield loss associated with this disease and support the longevity of canola seed genetics.

This seed treatment contains a new active ingredient, adepidyn, which is an SDHI mode of action. Syngenta anticipates registration of Saltro seed treatment in time for use in the 2021 growing season. “What’s unique about Saltro is it will provide protection against airborne blackleg at canola emergence through what we now know to be a critical infection period for the disease, the cotyledon stage,” says Ewert.

“With blackleg management, we can’t rely on just one tool,” says Cornelsen. “I know we put our resistant cultivars up on a pedestal, but we’ve got to look at prolonging their longevity and using all of our management tools. Crop rotation and scouting are really key pieces to managing this disease.”

• Carolyn King

FINCASTLE, ALBERTA



**We have 2 lines of equipment capable of cleaning up to 600 bushels per hour of seed. We are a Registered Seed Establishment thru CFIA, CSI. AWSA certified for treating seed, we apply Syngenta and Bayer seed treatment products.**

#### **Equipment**

Wind and Screens  
Indents  
Gravity Tables  
Color Sorters  
De Bearder

#### **Services**

Pedigreed Seed  
Commercial Cleaning  
Human Consumption  
Dockage Cleaning  
Bagging  
Seed Treating

#### **Processing**

Hemp  
Cereals  
Pulses  
Oil Seeds  
Coriander

#### **Contracting Pinto and Black Beans**

#### **Processing of pedigreed seed for**

Willms Seeds, 403-634-4155, Grassy Lake, AB.  
Carl's Ag Ventures, 403-654-5094, Hays, AB  
Quattro Ventures, 403-545-2222, Bow Island, AB.  
Airth Farms, 403-501-3688, Brooks, AB.  
Mland Farming Company, 403-894-1234, Purple Springs, AB.  
Corns Seed LTD., 403-380-9586 Grassy Lake, AB  
Specialty Seeds Ltd. 403-545-6018, Bow Island, AB

*You grow it,  
We clean it*



## **Taber Seed Cleaning Co-operative Association Ltd.**

**FINCASTLE, ALBERTA 403-223-4141  
GRASSY LAKE, ALBERTA 587-220-6781**

**Joe Hanson Manager**

taberseed.ca Email: joe.hansontsc@yahoo.ca

GRASSY LAKE, ALBERTA



**Our Grassy Lake location is a Registered Seed Establishment thru CFIA and CSI. We are a Organic Certified facility that is capable of cleaning up too 600 bushels per hour of seed. We apply Syngenta and Bayer seed treatment products and are AWSA certified.**

#### **Equipment**

Wind and Screen  
Indents  
Gravity Table  
Color Sorter  
De Bearder  
Aspirator  
DE stoner

#### **Services**

Pedigreed Seed  
Commercial Cleaning  
Human Consumption  
Dockage Cleaning  
Bagging  
Seed Treating

#### **Processing**

Hemp  
Cereals  
Pulses  
Oil Seeds  
Coriander

*Organic Certified*

# Fusarium Watch


There's a good chance the wet conditions growers experienced last summer will mean high levels of infected seed moving through the system, making Fusarium-free seed tougher to secure for next season.

**THE WET WEATHER** last summer in many parts of Alberta has raised concerns about Fusarium head blight (FHB) in this year's cereal crops — and about the availability of Fusarium-free seed for next season.

"There are a lot of positive Fusarium test results, especially in wheat," says Krista Zuzak, chief plant health officer for Alberta Agriculture and Forestry.

Kelly Turkington, a plant pathology researcher with Agriculture and Agri-Food Canada based in Lacombe, Alta., says because precipitation was generally higher than normal in central and northern Alberta, there was a higher risk of FHB infection in those areas during the growing season.

"The concern would be that the moisture many areas got in late June, July and early August could potentially result in some significant issues," he says.



Zuzak believes as a result of the wet weather, many growers who consulted Fusarium risk maps in the summer would have seen a “very high” risk level during the peak flowering period when cereal crops were most vulnerable to FHB infection.

The ability to access such maps is largely a result of new technologies like the Fusarium Head Blight Risk Tool developed by the Alberta Wheat Commission and Alberta Agriculture and Forestry. It can be used on computers and mobile devices so farmers can remotely view updates on Fusarium disease severity for their location.

It provides real-time results including precipitation, temperature and humidity to help assess risk and can be used to determine the need and timing of fungicide application.

“Fusarium is unique in that it is weather dependent and can vary from year to year. With diseases like clubroot you can make maps and once it’s there, you know it’s there for a good chunk of history. Fusarium can show up or be dormant, depending on the weather conditions in any given year,” Zuzak says.

“With Fusarium, in terms of pathology, we need a pathogen in sufficient quantity, a susceptible host like a cereal or corn. If we see another wet year in 2020, there’s a better chance of more infection and higher risk.”

Furthermore, wet years that are followed by a dry year can reduce how much Fusarium rears its ugly head, despite the pathogen being present in the field.

“In that case, it might not manifest itself and won’t infect the grain,” Zuzak adds.

Because it was generally much drier in southern Alberta, the FHB risk was lower there, says Turkington. However, disease could have developed in those instances where too much irrigation water may have been applied, resulting in downgrading of crops, he says.

Turkington points out challenging conditions at seeding and early in the growing season delayed planting in many parts of Alberta, which in turn has led to later harvests. Because of that, it’s likely the FHB picture won’t be fully revealed until early 2020.

Zuzak says the FHB situation is definitely something cereal growers should take note of as they plan for the 2020 growing season. Seed testing is the No. 1 line of defense, she emphasizes.

Growers should test what they’ve pulled off the field, so they have a better idea of what’s out there. Fusarium is a declared pest under the Alberta Agriculture Pest Act.

“You want to use healthy seed with no detectable levels of Fusarium, so you don’t introduce the pathogen to an area. Seed health reports can really help you know the full range of fungus present — not just FHB, but a general seed health report is a great thing to have done.”

**“With Fusarium, in terms of pathology, we need a pathogen in sufficient quantity, a susceptible host like a cereal or corn. If we see another wet year in 2020, there’s a better chance of more infection and higher risk.”**

— Krista Zuzak

Trevor Blois, disease diagnostician supervisor for 20/20 Seed Labs, says in the fight against Fusarium head blight, a DNA test can be helpful.

In cereals, FHB can be caused by four different Fusarium species. The DNA test specifically detects *F. graminearum*.

“In 2019, we saw the second-highest number of positive test results for FHB since 2016. Fifteen per cent of samples are testing positive in Alberta across all crop types. We’re really seeing an increase in FHB in wheat and barley. This correlates with where we are seeing the Fusarium being distributed in the province,” Blois says.

The DNA test analyzes 400 to 600 seeds, compared to 200 seeds for conventional culture plate testing. When a plate test

comes out negative for Fusarium, it can in rare cases still come out positive with a DNA test. If it does, this means very low levels of Fusarium are present.

"In this instance, you can still use the seed, but you have the added insight that it's present in your area and the seed has been exposed in some way. Seed treatment is recommended in those cases, so that low-level, late-season surface infection can be managed better," he adds.

Another important management strategy is to keep in mind that short rotations of cereals or corn can allow for a buildup of Fusarium, Zuzak adds. The pathogen can survive on infested field residue.

"Cereals back-to-back can be a problem. We do have fungicides that include Fusarium on the label for the list of fungi that are controlled by them. Keep in mind treating cereal and corn intended for use as seed in Alberta is a good idea. There are fungicide applications that are possible. Also, ensuring you have a registered product and proper timing for fungicide application is a good idea," Zuzak says.

• Mark Halsall and Marc Zienkiewicz

## A Word About the Fusarium Head Blight Risk Tool

Alberta's wheat farmers can add a Fusarium head blight (FHB) risk tool to their agronomy toolbox, improving their ability to make well-informed decisions related to FHB disease management. The risk tool was developed in a partnership between the Alberta Wheat Commission and Alberta Climate Information Service (ACIS) with expert support from researchers based at Agriculture and Forestry (AF) and Agriculture and Agri-Food Canada (AAFC).

This local disease infection risk tool is optimized for use on mobile devices, enabling farmers to remotely view hourly updates on FHB disease severity for their location. Risk is based on a seven-day history of rain, temperature and humidity.

The tool also features a live updating provincial map of Alberta with the Disease Severity Index for every weather station as well an info tab containing best management practices.

It can be accessed at  
[agriculture.alberta.ca/acis/m#!fusarium](http://agriculture.alberta.ca/acis/m#!fusarium)

## BE LIKE BRIAN

Brian said they saved \$22.50 per acre using their new seeding system.

### 5 YEAR LEASE PROGRAM

What does \$22.50 per acre in canola savings look like on your farm?  
Over a 5 year period, you almost can't afford not to.

YOU DO THE MATH

SEED  MASTER



# Raxil<sup>®</sup> PRO

# HAVE A BREAK THROUGH SEASON

As a grower, you face many challenges throughout the growing season. Protecting your seed's potential from the start means your crops can emerge healthier and stronger. That's why more growers trust Raxil<sup>®</sup> PRO, the #1 selling cereal seed treatment brand ten years running<sup>1</sup>. When your seeds emerge stronger, so do you.

• EMERGE STRONGER •

[EmergeStronger.ca](http://EmergeStronger.ca) | 1 888-283-6847 | @Bayer4CropsCA | #AskBayerCrop

<sup>1</sup>2019 BPI Report – Cereal Seed Treatments

Always read and follow label directions. Bayer, Bayer Cross, BayerValue™ and Raxil<sup>®</sup> are trademarks of the Bayer Group. Bayer CropScience Inc. is a member of CropLife Canada. © 2020 Bayer Group. All rights reserved.



## 600 AC. OF RAXIL PRO SAVES YOU 5%!

Maximize your savings on Raxil PRO, and everything else you need for a breakthrough season. See how the rewards add up at [GrowerPrograms.ca](http://GrowerPrograms.ca)



# Paying Attention to the Basics for 36 Years

A good crop starts with good seed, says the manager of Battle River Seed Cleaning Co-operative.

**MARK KAESE** has been in the seed cleaning business for 36 years, and in that time, he has seen many changes in technology, new seed varieties and products. However, one thing that has never changed, and never will, is the basic fact that a good crop starts with good seed.

“You don’t breed a cattle herd by getting rid of your best cows and bulls,” says Kaese, who is manager at the farmer-owned Battle River Seed Cleaning Co-operative at Paradise Valley, Alta. “It’s the same with seed. You clean your biggest and best seed to put it in the ground because all the inputs in the world won’t grow your crop if the seed isn’t any good.”

It’s by paying attention to the basics and providing the best quality seed that Battle River has stayed in business since 1954, serving its 167 members and other producers in the area.

## New Technology

Last year, Battle River bought a new colour sorter to replace its previous monochromatic one, which has allowed the company to provide even better service to its customers.

“The colour sorter has made a tremendous difference, especially to remove ergot out of wheat and things like that, which were hard to get out before,” says Kaese. “It gives us the ability to provide a better product to our customers.”

The new, state-of-the-art true colour sorter has a 14-inch touchscreen and infrared cameras that see true colour differences in the seed and gives improved accuracy and increased flexibility to sort out things like ergot, wild oats, green seed, split peas or any other chosen parameters.

“We can do more things with this sorter because it sees the full spectrum of colour, whereas the old one could only see dark and light,” says technician, Dan Fehr. “For example, if we have wheat going through and some of it is green, we can get rid of the green wheat. Whereas, before, the sorter couldn’t distinguish between the red and green kernels. It fine-tunes the finished product.”

Battle River was one of the original seed cleaning co-operatives in Alberta established as a provincial-federal-community enterprise, and is governed by a board of 10 directors, with four staff who operate the plant. The co-operative has two full-time and two part-time employees who help out in the busy season from December to the end of May, and offers a profit share incentive.



Mark Kaese (left) is manager and Dan Fehr (right) is assistant manager of the Battle River Seed Cleaning Co-operative.

## A Six-Step Process

Battle River Seed Cleaning Co-operative is a registered seed establishment approved by the Canadian Seed Institute for pedigreed seed cleaning, and handles around 900,000 bushels of seed a year, a little over half of which is pedigreed seed. It can clean and treat coarse grains, oilseeds and peas using a six-step process.

First, the grain goes through a debearder that removes hulls or beards from grains making it easier to clean.

"It is like a stationary threshing machine," says Kaese. "There are rub bars in it that rub off the hull and when you put barley through it, it knocks the beards off the ends so it's easier to clean up."

The seed then goes through a nine-roll Carter Day indent machine. "The indent machine has a cylinder with rolls that have different sized indents, so it takes the good heavy seed up and the light chaff and broken seeds fall out of the indent and go into the screenings," says Kaese.

Next, the seed runs over a 525 Ultrafine Carter Day Air & Screen, which blows away any lighter chaff still remaining and sorts according to seed size.

"There is air going through the machine that pulls off any light material we missed earlier, then it flows over round-holed screens that let grain of a certain size through," says Kaese. "We size it for the larger material, so if there are stalks or anything, they will go into screenings. The seeds drop onto different-sized, slotted screens, depending on the size of the good grain we want to end up with."

The next step is the LMC Gravity Table Marc Model 500, which uses specific gravity to move heavy kernels up an inclined shaking screen and discharge them into the colour sorter, which is the final cleaning step.

## Seed Treatment has Come a Long Way

Battle River also has a USC 2000 automated seed treater, which offers the option to add a seed treatment before the customer picks the seed up. Kaese says that's probably one of the biggest changes he's seen in the business over the past few years.

"The quality of seed treating equipment has come a long way over the past five years or so, and it's easier to put precisely the right amount of seed treatment on each seed," he says, adding when he first started in the industry in 1983, there weren't too many farmers treating seed, and nowhere near as many products available as there are today. That has changed a lot and has been driven by the development of higher yielding varieties.

"Back in the '80s, if farmers had a 40-bushel wheat crop, they had a bumper crop. Now if they have a 40-bushel wheat crop, they think it's a crop failure because the yields are up in the 80- to 90-bushel per acre range on average in this area," says Kaese. "Now, pretty well everybody treats their seed because farming has become a business and farmers want to protect that yield as much as possible."

## Staying Up to Date

Kaese says he sees some changes coming in the next 10 or



A new colour sorter allows the Battle River plant to provide a better product to its customers.

so years, including the continued release of new hybrids and varieties, but isn't sure how the adoption of proposed royalties to fund cereal wheat development, which are still under discussion, might affect the industry. However, Kaese strongly believes it's important for growers to continue to have the ability to clean their own seed.

With other seed cleaning co-operatives close by to the north, south and west, Battle River has always focused on serving its local market well, and to do that they are committed to upgrading to the best and latest equipment as it comes available and staying ahead of industry trends.

"When anything new and better comes along on the market, we look at it and if it's going to be better than what we have, we install it because we are always striving to be proactive rather than reactive to what the consumer wants," says Kaese. "Our board always has in mind that our customers are also the owners. We want to operate as cost-effectively as we can, while taking care of what we need to do to be viable and up to date with everything, so we can give something back to them at the end of the day."

• Angela Lovell

# INSIDERS

Here, experts from across the industry will discuss issues that are top of mind, share technical advancements, talk about tips for success and provide perspective on policy.



## AGRONOMY SOLUTIONS Optimizing Your Corn Crop

**Perry Ross** Product Line Representative for Forages and Corn with Nutrien Ag Solutions in Alberta

**CORN USED TO** be grown only in southern Alberta and a handful of other places in the province. But that's not the case anymore.

Corn can now be found in areas you'd never expect, stretching as far north as the Peace River Country. Some growers may only be trying it on a few dozen acres, but as they achieve success with the crop and see their neighbours are too, corn is gaining a lot of converts among Alberta farmers.

What's behind this trend? I think it has a lot to do with the wealth of information that's available today, both online and elsewhere. It's easy for Alberta growers to find do's and don'ts and learn from others' experiences to expand their knowledge about growing corn.

Here's an example. A farmer I know near Nanton grew corn for the first time last year and had mixed results. It was a different story this year. Some research on the agronomics of growing corn allowed him to get a better handle on what was required, and the result is a good crop that he's excited about.

Of course, the biggest driver for the expanding corn acres in our province is the new short-season corn hybrids that are head and shoulders above what was available 10 years ago.

Thanks to technological advancements in seed, corn is now suitable for many different climates within Alberta.

If you're thinking about adding corn to your rotation, the key is selecting the right corn hybrid to maximize your yield potential while at the same time minimizing your risk.

These days, many Alberta growers are choosing dual purpose hybrids, which are designed to have high yield and quality potential for both silage and grain corn crops.

The primary benefit is flexibility. If it's a good season weather-wise and your crop has flourished, you can sell it for grain, but if growing conditions aren't great or an early snowfall



sets your crop back, you have the silage market to fall back on.

When it comes to selecting seed, growers can consult with their neighbours and agronomists about what kind of corn hybrids have been successful in their area.

They can also review trial data such as the Proven Performance Trials focusing on corn grain/silage results that Proven Seed has been running across Alberta for the past few years to see which hybrids are the highest performers in their region.

Yield, of course, is always top of mind, but there are other important attributes that growers look for in their corn hybrids. These include disease tolerance, early season vigour, standability, grain dry down and the right balance between feed quality (starch level) and yield.

After determining which hybrids offer the best match for the environmental conditions in your area, I recommend planting two or three different ones, if you can, and using a corn planter if possible for the best results. By selecting a diverse mix of hybrids, you will minimize your risk.





## Home Grown High Quality Canadian

We multiply and deliver both traditional and the latest varieties of seed.

### Barley

AAC Connect  
AAC Synergy  
CDC Copeland  
AC Metcalfe  
CDC Austenson  
Canmore

### Peas

AAC Ardill  
AAC Carver  
CDC Meadow  
CDC Forest (green)

### HRS Wheat

AAC Brandon  
CDC Go  
AAC Cameron VB  
AAC Redberry  
AAC Starbuck VB  
AAC Wheatland VB  
Jake  
Sheba

### CPS Wheat

AAC Crossfield

### Soft White

Sadash VB

### Durum

AAC Stronghold

### Winter Wheat

AAC Wildfire  
Emerson

### Red Lentils

CDC Proclaim

### Oats

CS Camden

### Faba Beans

CDC Snowbird

### Kabuli Chickpeas

CDC Leader

### Canola

Brett Young  
Canterra

### Forages

Brett Young

### Also Available

- Nodulator Duo
- Tag Team
- Bio Boost
- Diatomaceous Earth

### On Site Services

- 90' Scale on Site
- Storm Seed Treater
- Mini Bulk Bagging & Shipping



Ph: 403-443-2577 Email: [tanya@penwestcanada.ca](mailto:tanya@penwestcanada.ca) Three Hills, AB  
[www.penwestseeds.ca](http://www.penwestseeds.ca)

# Tips for Successfully Treating Pulse Crops

A one-size-fits-all approach to treating seed doesn't work for pulse crops.

**ALTHOUGH THEY'RE** often lumped together, the seeds of pulse crops are unique. Yellow peas, lentils, dry beans and chickpeas may be challenged by many of the same soil- and seed-borne diseases, but how you protect them varies from crop to crop. A one-size-fits-all approach doesn't work for pulse crops. Application strategies differ, depending on shape, texture and size. Two industry experts offer tips and recommendations for getting the most out of your seed treatment.

## Understanding Size, Shape and Texture

Seed treatments adhere to seed very differently, depending on size, shape and texture, explains Bayer SeedGrowth Specialist Nicholas Petruic. Lentils, for example, can have a dry, flaky surface, while beans and peas can have a smooth, glass-like surface.

Seed size also impacts application rates, says Petruic. "Trilex EverGol has a standard application rate of 328 millilitres per 100 kilograms of seed, but if you were to try to apply just that amount of rate across a large kabuli chickpea seed your coverage would be very, very poor," he says. "In hindsight, if you took that same amount of volume and applied it to a small red lentil, you actually could be over-applying and have too wet of a seed.

"It's a fine balance of understanding seed wetness to seed coverage," he adds. "Generally, treating pulses is trial and error on your farm, and having an adaptable product — something that can be manipulated very easily — will help you achieve the best results."

Seed shape and texture also impact coverage. Chickpeas, for example, have deep crevices on the seed's surface, which can make complete coverage a challenge. They require a lot more water volume when mixing product to get good coverage, says Petruic.

## Ensure Treatment is Dry before Seeding

Seeds that require extra coverage will need more solution to increase the application rate, but they do not require more active ingredient, Petruic clarifies. Because more volume is needed for adequate coverage, sometimes seed requires more drying time.

"If you don't do that, it can cause you challenges when trying to put wet seeds through an air drill," he says. "By allowing it longer time, the moisture actually moves inside the seed and it will dry on the seed's surface."

Seed treatment on wet seed can be lost on the surface of the auger as it moves, which means you're not going to get what you're paying for.

Adding or removing products from the mix can also change treatment consistency, and, therefore, how much drying time is needed.

"Everybody wants the agronomic benefit of a micro, or something like that, on the seed, and that's fine," says Petruic. "Realize it's not just throw it on and go."

## Handle with Care

Pulse crop seed coats tend to be a bit more fragile too, which means they need to be handled with care and as infrequently as possible.

"Using things like conveyors help if you're handling dry seed," says Petruic. "And what we've found is when you can put a liquid seed treatment on prior to handling it with a flighted auger, it greatly reduces the amount of cracking that will happen."

Cracks, he adds, act as gateways to disease. "It's like an open doorway," he says. "If you have a crack on that seed, but you're able to fill it with seed treatment, it's like closing the door."

To further ensure seed quality at the time of planting, handle seed as few times as possible. Following a tough harvest, seed coats can be very brittle. Even applying a little water before moving them will help the integrity of the seed, says Petruic. He recommends using conveyors on low speed where and when you can.

## Keep an Eye on Temperature

When warm liquid is applied to seed that is too cold, flash-freezing can occur. Flash-freezing will give very poor coverage. Ice crystals will form on the surface of the seed, and the seeds won't get the smooth coverage necessary for proper protection. As seed moves through the auger, friction can remove the ice crystals, which means seed will be left untreated.

"If you've got seed in the bin with an aeration fan and you can warm that seed up prior to treating, great," says Petruic.

He recommends raising seed temperature to somewhere between 3 and 5 C.

## Even the Best Seed Needs Protection

It's always recommended to plant the best seed possible, but even good seed needs protection. However, high-quality seed

# AAC GATEWAY

Winter Wheat

*Gamechanger*



## AAC GATEWAY

- ☑ Consistent Yields
- ☑ Best Lodging
- ☑ Less Fusarium
- ☑ High Protein
- ☑ Shorter
- ☑ Medium Maturity



[www.seeddepot.ca](http://www.seeddepot.ca)

*"Working Hard...  
to Earn Your Trust"*

<b>Walt Smith</b>	<b>204-825-2000</b>
<b>Airth Farms Ltd.</b>	<b>403-362-4372</b>
<b>Mercer Seed Ltd.</b>	<b>403-327-9736</b>
<b>Sleepy Hollow Seeds Ltd.</b>	<b>403-647-2228</b>
<b>Specialty Seeds Ltd.</b>	<b>403-545-6018</b>
<b>Stamp Seeds</b>	<b>403-739-2233</b>
<b>Willms Seed Farms</b>	<b>403-655-2434</b>

**AAC Gateway-The Gold Standard in Quality and Agronomics for Winter Wheat**



### BARLEY:

CDC Copeland  
CDC Austenson  
CDC Thompson

### CANOLA:

Roundup Ready  
Liberty Link

### SOYBEANS:

NSC Leroy RR2Y  
NSC Watson RR2Y

### OATS:

AC Morgan

### WHEAT:

AAC Connery  
AAC Penhold  
AAC Brandon  
AAC Viewfield  
CDC Landmark VB  
AAC Crossfield  
AC Andrew  
CS Accelerate (2021)  
AAC Wheatland (2021)  
AAC Goodwin (NEW)  
Ellerslie (2021)  
Parata (NEW)

### FLAX:

AAC Marvelous

### PEAS:

CDC Spruce (NEW)  
CDC Inca  
AAC Barrhead  
CDC Amarillo  
AAC Chrome (NEW)

### FABABEANS:

Snowbird

### WINTER WHEAT:

AAC Wildfire

### HYBRID RYE

KWS Bono  
KWS Gatano  
KWS Trebiano

**A CSGA Member since 1946**

**Treating of Cereal Seeds and  
Pulses Available**

**Inoculation of Pulses Available**

54174 Range Rd. 225 Fort Saskatchewan, Alberta T8L 3Z9

E-Mail: [gallseed@gallowayseeds.com](mailto:gallseed@gallowayseeds.com) | Bus. (780) 998-3036 | Fax (780) 998-1288

Website: [www.gallowayseeds.com](http://www.gallowayseeds.com) | [@gallowayseeds](https://twitter.com/gallowayseeds)



is only one piece of the puzzle. Crops face soil-borne disease all the time. Diseases, such as Fusarium, affect both pulse and cereal crops, making them hard to get around in tight rotations. They're especially problematic in no-till situations, says Petruic. Tillage can break up residue, which helps manage disease.

"All the ground out there is potentially going to have soil-borne disease, and if you don't treat for them, you're essentially putting your high-quality seed at risk," he says. "And pulses, because they go into cool, moist soils usually, it seems like Rhizoctonia AG 2.1 and AG4 and Pythium are two diseases that are really prevalent in those types of soils."

Because the diseases are soil-borne, producers "can't use a seed test for them, they're either there or they're not," he adds. "Predominantly, if you've been growing pulses and canola, there's a good chance they're going to be there."

Petruic has two last tips for growers when it comes to seed treatments: make sure the seed treatment you're using is compatible with your inoculant of choice and know your application window.

"You don't want to have two things on the seed that are killing each other," he says.

To do this, he recommends checking the labelled instructions. "If it says 24 hours or 48 hours compatibility, then you adhere to that," he says.

### Use the Right Product for the Task at Hand

Nevin Rosaasen, policy and program specialist for Alberta Pulse Growers, adds a few points to this list of tips. First, he says, it's



Nevin Rosaasen is a policy and program specialist for the Alberta Pulse Growers.

important to make sure growers are treating seed with the correct product.

One thing producers must ensure is if they're looking at using a fungicide, they should know what target pathogens are controlled with that seed treatment. If they have a problem with Fusarium root rot, they need to make sure the active ingredient will give them control or suppression of that pathogen.

Insecticide treatments can be quite costly. If producers are treating yellow peas with a neonicotinoid seed treatment to protect against pea leaf weevil, for example, they should make sure they've either had pea leaf weevils feeding on their crop or that they've consulted a pea leaf weevil map from the previous year to ensure the pest's presence.

"I would strongly encourage growers to not treat seed with an insecticide if they don't have that pest of concern," says Rosaasen.

"It's very important if you decide to use a seed treatment that it is because you indeed have the risk of yield reduction, either through pathogens or through an insect pest of concern," he adds.

Insect forecast maps for 2020 can be found on Alberta Agriculture and Forestry's website.

"Increasingly, neonicotinoid seed treatments are under scrutiny and when deciding when to use a product, it shouldn't be a decision made on the best insurance, but rather its protection against a pest you have confirmed you have in your area," Rosaasen concludes.

Pulse crops are grown in a wide variety of regions. They're adaptable, but they come with their own unique set of challenges. When it comes to treating them, growers shouldn't take a one-size-fits-all approach. Understanding how best to treat them will increase a producer's chance of success.

• Melanie Epp



**Seed for Success**  
in 2020

<b>HRS Wheat</b>	
AAC Connery	AAC Viewfield
CDC Landmark VB	AAC Brandon

**Barley** - AAC Synergy, Sirish  
**Oats** - CS Camden, CDC Arborg  
**Yellow Pea** - AAC Carver, AAC Chrome  
**Green Pea** - AAC Comfort

**treat for Success**  
with our new USC drum treater





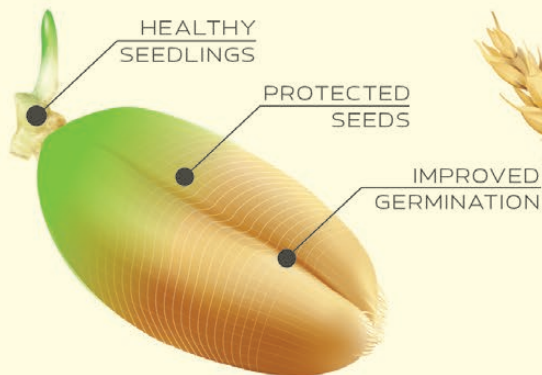




**Nick and Caroline Sekulic**  
[www.prestville.com](http://www.prestville.com) [seed@prestville.com](mailto:seed@prestville.com) 780.402.8910



PREMIUM SEED NUTRIENT DRESSING



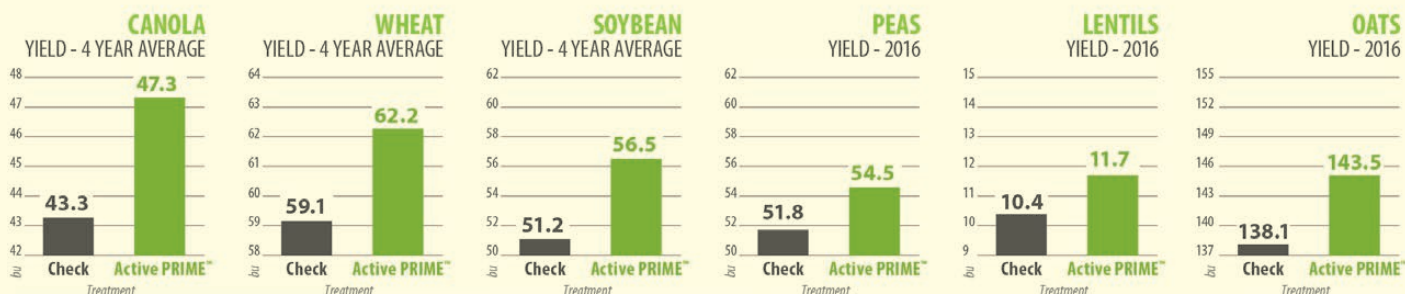
## Benefits of Active PRIME™

- Enhanced germination
- Stronger root growth
- Reduced transpiration
- Increased water use efficiency
- Increased nutrient mobilization and absorption
- Increased performance under stress conditions
- Increased function under wide range of pH

HIGHER QUALITY CROPS & GREATER YIELD

## Effects of Active PRIME™

Active PRIME™ enhances the seeds' ability to germinate and quickly produce more and stronger roots. This results in hardier seedlings, more capable of withstanding less than ideal environmental conditions. Ultimately, the increased number of robust plants, produces a higher crop yield.



## Grower solutions for next level performance



Email to learn more: [activeprime@taurus.ag](mailto:activeprime@taurus.ag)

[www.taurus.ag](http://www.taurus.ag)



AGRONOMY & SOIL HEALTH



FERTILITY



PLANT ENHANCEMENT TECHNOLOGY



BIOLOGICALS

THE STARTING POINT FOR AN INFORMED AGRONOMIC-BASED STRATEGY

THE FOUNDATION FOR SUCCESSFUL PLANT GROWTH

TAKING TECHNOLOGY PAST THE POINT OF NUTRITION

HARNESSING THE SYMBIOTIC BENEFITS OF THE LIVING SOIL

# A Breed Apart

For more than three decades, Rob Graf's dedication to wheat breeding in Canada has led to his contribution as principal developer of 12 wheat cultivars and co-developer of 12 other wheat and triticale cultivars. He's now focusing his considerable abilities on winter wheat.

**LAST FALL, ROBERT GRAF**, a wheat breeder at Agriculture and Agri-Food Canada's (AAFC) Lethbridge Research and Development Centre, seeded his 34<sup>th</sup> year of plot trials and nurseries.

Graf has headed up AAFC's winter wheat breeding program since 1999, but he began his career 12 years earlier. Shortly before completing his PhD in plant breeding and agronomy at the University of Saskatchewan, he was hired by the Saskatchewan Wheat Pool, where his focus was primarily on developing Canada Western Red Spring (CWRS) wheat varieties. During that time, he developed three varieties, including McKenzie, the first doubled haploid wheat variety registered and released in North America. It remains Canada's most successful, privately developed CWRS wheat variety to date.

"It's no longer grown on any appreciable acres, but it was among the top five CWRS varieties for almost 10 years and has been used extensively as a parent," says Graf. "Having producers and other breeders see value in what we do is what we strive for — it's part of what makes us tick."

Today, Graf works exclusively on winter wheat, primarily of the Canada Western Red Winter (CWRW) class. Although many of the desired characteristics are the same as any other wheat class, such as high yield, excellent agronomics, good disease resistance and the appropriate quality profile, winter wheat varieties also need good cold tolerance to allow them to survive the winter, which presents added challenges for breeders.

"Because winter wheat has a vernalization requirement or, in other words, it needs that cold period during its seedling phase so it can become reproductive, we're not able to use contra-season [warm winter location] nurseries like spring crop breeders do to speed up the breeding process. That means the breeding cycle is longer for a winter cereal or a fall sown crop," says Graf.

## Focus on Quality Characteristics

One of Graf's main projects, funded by the cluster program of the Canadian Agricultural Partnership — whose funding partners include the Alberta Wheat Commission, Saskatchewan Wheat Development Commission, Manitoba Wheat and Barley



Growers' Association, Saskatchewan Winter Cereal Development Commission, Winter Cereals Manitoba, and the Western Grains Research Foundation — is to develop field-ready CWRW cultivars for Western Canada. Funding from the Ducks Unlimited Canada Western Winter Wheat Initiative enhances these efforts.

Another project Graf is working on is the development of “premium quality” winter wheat to add more value for producers and processors. “One of the challenges with winter wheat has been marketing,” says Graf. “Historically, we’ve had a couple of quality deficiencies that, if we could correct, would go a long way toward increasing the farm gate price for hard red winter wheat. And by increasing the price, along with the yield advantage that winter wheat already has, I feel it would drive acreage.”

The first characteristic that Graf is trying to improve is protein concentration. “We are working on increasing the protein potential from a genetic standpoint, and we have germplasm that makes us very optimistic that this can be achieved,” says Graf. “We’ve developed several lines that show much better protein concentration along with other desirable traits and are using them as parents for further improvements.”

The second quality characteristic — flour water absorption — has been far more difficult to improve. When flour is milled, the flour absorbs a certain amount of water upon mixing to create dough, but winter wheat generally has lower water absorption than spring wheat, so it produces less dough and therefore fewer loaves of bread; a disadvantage to a baker.

“We’ve been working on this characteristic for over 15 years and finally have some promising lines,” says Graf. “We’re at a point now where we’re crossing high protein lines with those that have improved water absorption to develop varieties that correct both deficiencies. The end result, at some

point, may be quality that’s comparable to our premium quality Canada Western Red Spring class.”

If Graf does that it will be something that no one else has tackled, and he already has a line in registration trials that could be a prototype.

Over the past 20 years, Graf and other western Canadian winter wheat breeders have also made a lot of progress incorporating disease resistance into new varieties — characteristics that were rare in winter wheat when he started.

**“We’re at a point now where we’re crossing high protein lines with those that have improved water absorption to develop varieties that correct both deficiencies.”**

**— Rob Graf**

In fact, Graf has a line that was approved for registration in 2019 (W569) that exceeds the requirements for all five priority one wheat diseases; Fusarium head blight, leaf rust, stem rust, stripe rust and common bunt.

“Disease resistance has been a major focus of my program, but I would still say that the resistance package in our Canadian winter wheat varieties is rather shallow. In other words, most of the resistance genes are on their own because we don’t have effective pyramids of a number of genes that would serve as backups. If there’s a race

shift for a particular disease it could wipe out the resistance in several varieties, but we’re working very hard on that and making wonderful progress,” says Graf.

Graf has also produced a hard white wheat variety for specialty markets — AAC Icefield — and is working on soft winter wheat for the food processing and ethanol markets.

### **Changing Landscape**

There have been a lot of changes since Graf began his career back in 1987, not the least of which was the introduction of doubled haploid technology in the early 1990s.

“When McKenzie was registered in 1997, it was considered to be ‘biotech wheat,’ but doubled haploid technology is simply regarded as a regular plant breeding process these days, as it should be. There was a lot of excitement at the time and Canadian breeding programs were early to embrace this technology because it speeds up the process dramatically,” says Graf. “Doubled haploidy has made a big difference, particularly in winter wheat.”

So has the development of molecular markers and sequencing of the wheat genome, says Graf. “We know wheat has over 107,000 genes, and the reference genome identified about four million genetic markers,” he says. “The big challenge now is to associate the traits that we’re interested in with those markers. And along with that, we need an understanding of what the effects and interaction of the various genes are. So, there’s a huge amount of work to be done, but the future is really bright.”

### **Challenges Ahead**

In the future, Graf sees gene editing as a tool that could move the industry forward in many exciting ways, but that doesn’t mean the plant breeder’s job is going to be without its challenges.

“Our ability to very precisely change gene sequences, possibly turning genes on or off, or reengineering defeated disease resistance genes are examples of

some of the things being thought about,” he says.

“There are countless possibilities, but plant breeders will still need to incorporate the lines with these changes back into their breeding programs. It also has to be remembered that there are likely to be pleiotropic effects, something that plant breeders deal with all the time. When one thing is changed various other traits are often affected, things you may not expect. A very simple example is as yield is increased, there’s a negative correlation with protein concentration. The plant breeder’s job is to try to shift those correlations as much as possible and expand the boundaries of those relationships.”

Graf also sees challenges in terms of explaining breeding technologies to people who aren’t well informed about science and food production, and determining a new funding model for cereal breeding in Canada.

“Currently, there are value creation discussions going on and I think it’s fair to say producers will be expected to contribute more towards plant breeding,” says Graf. “That’s not necessarily a bad thing since it could enhance the tremendous success of our public breeding efforts; efforts that have been in partnership with various producer groups. At the same time, having worked in private industry, I have first-hand knowledge of the advantages they might bring, and developing a model that encourages private investment while maintaining a strong public presence is important. The question becomes, what is the right public-private balance? How this evolves, and what Canadian cereal breeding looks like in the future, is something we need to get right.”

Climate change is another area where Graf sees challenges for breeders, especially as, with milder winters, the potential exists for new pests to move northwards and diseases to evolve more quickly, but he also sees technology providing a lot of solutions as well.

“Since 2000, we’ve seen shifts in stripe rust races that have higher temperature optima, so they’re much more virulent,” says Graf. “There’s also the well-known threat of Ug99 stem rust races. Those are



Graf was recently awarded the 2020 Canadian Plant Breeding and Genetics Award, co-sponsored by the Canadian Seed Trade Association and *Germination* magazine. PHOTO: GEORGE CLAYTON.

**“We need an understanding of what the effects and interaction of the various genes are. So, there’s a huge amount of work to be done, but the future is really bright.”**

**— Rob Graf**

just a couple of examples that, as plant breeders, we need to be ready for and always be forward looking. With the technologies we’re using now and future technologies such as genomic selection and gene editing, we’ll become more efficient in our breeding efforts, and hopefully bring advancements quicker than ever before.”

To date, Graf is the principal developer of 12 wheat cultivars (nine winter wheats and three spring wheats) as well as co-developer of 12 other wheat and triticale cultivars.

He was recently announced as the recipient of the 2020 Canadian

Plant Breeding and Genetics Award, co-sponsored by the Canadian Seed Trade Association and *Germination* magazine. He received the ASTech Leadership Foundation Award for Innovation in Agricultural Science in 2016, the AAFC Gold Harvest Award for Innovation, Collaboration and Service Excellence, and was co-author of the Canadian Society of Agronomy Best Paper in 2015. Graf has also been awarded Honorary Life Memberships by both the Alberta Seed Growers’ and the Canadian Seed Growers’ Associations.

• Angela Lovell



# BOLDLY GROW.

Start your season with the right seed treatment.

## Insure® Cereal FX4

Xemium® Fungicide Seed Treatment

- Enhanced Fusarium control
- More uniform plant stand
- Increased yield potential\*

Visit [agsolutions.ca/InsureCerealFX4](https://agsolutions.ca/InsureCerealFX4)  
or call **AgSolutions®** Customer Care  
at 1-877-371-BASF (2273) to learn more.

 **BASF**  
We create chemistry

 **AgCelence®**  
Expect more

\*All comparisons are to untreated unless otherwise stated.

**Always read and follow label directions.**

AgSolutions, AgCelence, and INSURE are registered trade-marks of BASF. INSURE CEREAL FX4 fungicide seed treatment should be used in a preventative disease control program. © 2020 BASF Canada Inc.

# Do Economics Always Trump Agronomics?

Is it possible to improve rotations and make money?  
The answer is yes, say the experts.

**ALTHOUGH PRODUCERS IN** the Canadian Prairies have evolved beyond continuous wheat or wheat-fallow cropping systems, simple wheat-canola rotations are still common. This lack of diversity is risky, as it can result in herbicide resistance, increased disease and insect pressure and soil degradation. Understandably though, economics often trump agronomics. Industry experts offer recommendations to improve rotations while still allowing growers to make money.

Most producers know what a good rotation is, but for financial reasons, most do not follow a good rotation, says Harry Brook, a crop specialist with Alberta Agriculture and Forestry.

Work done by Murray Hartman, a retired oilseed specialist with Alberta Agriculture and Forestry, revealed a large percentage of Alberta farmers, particularly in north-central Alberta and the Peace region, followed a rotation that included canola and just one other crop, mostly wheat or barley.

“The reason being, of course, was financial,” says Brook. “When you’ve got canola over \$10.50 to \$11 a bushel, that’s really pushed the rotation and squeezed it.”

However, since Canada has been faced with trade issues, canola prices have dropped, making these tight rotations less defensible.

Despite the trade issues, canola acreage in 2019 was still high, says Brook. “The thing about Roundup Ready or Liberty Link canola is they’re easy. People like easy.”

And yet, last year, Brook spoke with Alberta producers who said their biggest money maker was feed barley. A 100-bushel

feed barley crop nets far more than a 40-bushel canola crop because the cost of canola is so much higher than any other crop.

“Just because something’s worked for the past 10 years, does not necessarily mean it’s going to continue to work, especially with trade issues,” says Brook.

Today, markets are unpredictable at best. Saudi Arabia’s purchases of barley have stopped. India has reduced purchases of lentils and peas. China has stopped purchasing canola from Canada, and Italy has been using country of origin labelling to reduce purchases of Canadian durum wheat. The trade issues seem endless when examined closely, and this has an obvious effect on rotation.

The benefits of lengthier rotations are often underemphasized, says Brook.

Longer rotations generally interrupt insect, disease and weed life cycles that, in turn, allow for a wider variety of crop protection tools to be used. More complex crop rotations definitely assist in managing the build-up of pesticide resistance because, typically, different groups of crop protection products are used on different crops.

“This is part of the reason why we have a problem with clubroot in Alberta,” says Brook. “We grow canola so frequently that it’s allowed for a rapid increase in the number of spores produced in a field. Before you know it, you have a field where canola is no longer profitable because the clubroot is removing 50 per cent or greater of the yield potential.”

If it’s not clubroot, it’s blackleg. And while resistance genetics





# 10 COMMANDMENTS FOR FUSARIUM MANAGEMENT



**1. EDUCATE, COMMUNICATE.** You can't control what you don't know: go to all of those information meetings, read all the articles, & call your local agronomist. Understanding the disease triangle is key to fighting fusarium. If you don't understand the disease life cycle & what conditions favor the disease & why a multi-pronged approach to control is required, you'd best find out!

**2. TEST.** your seed. Now that most areas of Alberta have Fusarium, seed testing should be used as a tool to select the best seed to ensure a healthy uniform crop. Request a seed health report including disease screening to assist in selecting the best seed treatment to control seed borne disease beyond & including fusarium. Using disease free seed only slows the spread of the disease. Fusarium can spread by a spore in the wind, or by infected crop residue & feed/bedding, hence disease-free seed on its own is not a strong defense mechanism.

**3. TREAT.** all cereal and corn intended for use as seed in Alberta with a fungicide seed treatment that includes the Fusarium on the label. ONLY use registered label rates.

**4. ROTATE.** Continuous or short rotation cereals or corn allow for a build-up of *F. graminearum* on infested fields. Leave at least two years between host crops (all cereals, corn). Avoid corn in rotation with cereals. Corn is also a host of *F. graminearum*; spores can be easily spread from corn fields to cereal fields. Broad leaf crops (pulses, canola) help to break pathogen build up when properly used in a strategic rotation.

**5. SEGREGATE.** Field location can be an important consideration as *F. graminearum* can move from one field to the next. If practical, avoid planting small grain cereals immediately adjacent to cereal or corn fields where elevated levels of *F. graminearum* are known or suspected to occur.

**6. COMPENSATE.** Increase seeding rates to promote a more uniform stand, reduced tillering and a shorter flowering period. This approach helps reduce the flowering period, which is the growth stage most at risk for infection. Uniform flowering helps improve foliar fungicide efficacy because most, if not all, of the crop will be at the key growth stage for application.

**7. MANAGE RISK.** Stagger planting dates to avoid having all cereals on the farm flowering synchronously and potentially being exposed to weather conducive to disease development at the same time. Humid weather during flowering (anthesis) in wheat or heading in barley favours infection.

**8. SELECT VARIETIES WITH CARE.** Grow varieties with the best available levels of resistance; however, this practice will not completely eliminate the risk of FHB. Consult annual variety guides (ALBERTA SEED GUIDE MAGAZINE) or [www.seed.ab.ca](http://www.seed.ab.ca) for more information.

**9. PROTECT WITH FOLIAR.** When an elevated risk of FHB is suspected, use a well-timed fungicide application at RECOMMENDED RATES for FHB management. Pay attention to coverage; skimping on water volumes typically is risky. Disease forecasting systems are available in Alberta through the ACIS website. Check out the vast amount of information at <https://agriculture.alberta.ca/acis/m#!fusarium>.

**10. SANITIZE.** Same as washing your hands! Remove any loose crop residue from all equipment before leaving an infested field. Control volunteer cereals and grassy weeds on infested land, including headlands. Remove feed and/or livestock bedding from fields to reduce the risk of spreading the pathogen through infected straw/feed.



Brian Beres is a researcher for Agriculture and Agri-Food Canada.



Harry Brook is a crop specialist with Alberta Agriculture and Forestry.

has improved the situation, over time they've begun to break down as well.

"Common sense would say don't keep growing the same crop because you're going to increase some pests that will eventually make it no longer profitable to grow that crop," says Brook.

There are other paths to profitability, Brook points out. Last year, barley was the big crop. This year it could be oats, he says.

"It's not a cookie-cutter system. You have to know your land, what it can produce, and be aware of those markets that are available to you and take advantage of them," says Brook.

"It requires a little effort into looking into alternatives and finding where you can find the niche to make extra profit."

Flax has potential, but when farmers get into small acreage crops, they really have to look into marketing. Solidifying prices and finalizing contracts ahead of time is always recommended.

Hemp is another interesting crop, although the economics are an important factor to finalize.

"You don't want to lose your shirt with a new crop just because it's new," says Brook. "There has to be a home for it, and you have to get some money."

Excitement about new crops is not a recent phenomenon. It's been going on as long as farming has existed. Small acreage crops, like mustard, come and go. In some years, growers get paid well for those crops. In others, they don't. Jerusalem artichoke, evening primrose, flax, quinoa and borage are all potential alternative crops that have come and gone. However, there are established small markets for mustard and hemp.

Hay production offers another alternative, says Brook. Hay works really well in a rotation to reduce disease and pest pressures, but growers usually have to be situated in an area where there are a lot of cattle or livestock in order to make it work.

Brook has a few last words of advice for those who want to experiment.

"If you're going to try something new, try it on a small scale first to make sure it works, that it's got profitability, and use it as a learning tool to make sure you understand the agronomics," he says.

But don't forget the economics. "Economics cannot be ignored. In fact, economics take front and centre," says Brook.

## Two Sides to the Rotation Story

According to Agriculture and Agri-Food Canada researcher Brian Beres, there are two sides to the rotation story. One takes the short-term economical viewpoint, and the other looks at the long-term vision that incorporates what the scientific community says in terms of crop and soil response to varying degrees of rotational diversity.

In 2018, Beres completed a study that looked at the impact of cropping diversity on the response of triticale. Beres and his team examined the effects of rotational diversity on cereals in cropping sequences with canola, field pea or an intercrop of triticale and field pea. The results were intriguing in terms of soil health, yield and stability.

Results showed when triticale was grown in highly diverse rotational systems, it produced superior grain yield and biomass. Triticale benefitted from the inclusion of both field pea and canola, but for different reasons. Field peas increased soil available nitrogen, improved soil structure and properties, and increased soil organic matter.

Although the researchers don't know why for certain, their study shows that when canola is removed from the rotation, triticale yields drag, says Beres. Adding canola to the rotation

and extending the cycle from two to three years helped improve triticale yield gain. Beres theorizes the benefit may relate to the fact that canola is not a host for arbuscular mycorrhizal fungi, and the non-host break benefitted the succeeding cereal crop.

In terms of yield, canola did not respond to increased rotational diversity. Beres says the two-year rotation with triticale looked every bit as good as the three-year rotation.

“From a yield perspective, it was exactly the same. You can understand why producers would commit to a shorter rotation with canola,” says Beres.

“Not only in the short term was it giving them that kind of additional economic returns, there was really no perceived downside to it,” Beres adds. “The only thing we noticed from our dataset was as soon as you pull canola out, you get a yield drag on the wheat, which underscores the importance of canola to cereal crop phases.”

Although tighter canola rotations might be more profitable in the short term, in the long term, disease, insect and weed pressure, as well as soil health issues, are sure to increase overall costs.

Similar studies conducted by Neil Harker at AAFC have shown rotational diversity, as a long-term strategy for canola, is important. Yields increase as blackleg and root maggot damage is reduced. Not only that, short-term benefits might be short-lived, says Beres, pointing out that a seven-year study might not be enough to really see the effect of those tight rotations.

In high-production environments, where growers have

tightened canola rotations, Beres has seen soil health issues and clubroot incidents escalate. Growers, he says, are changing their thinking on tight rotations as a result.

It's not just soil health and disease pressure that's driving change. In the near future, growers will likely want to change rotations in order to adapt to changing climate conditions. Beres suggests winter wheat and other crops with a winter growth habit could play a more important role in rotations in the future.

“If there's a crop that's going to adapt better or be more resilient as we begin to adapt to climate change, winter-type crops like winter wheat are poised to benefit from it,” he says.

Another option may be ultra-early planted spring wheat. In addition, Beres and his team are currently working on a project to determine which crops work best with winter wheat, and how a winter wheat phase compares to respective spring wheat class phases in terms of production, economic returns, and soil carbon sequestration.

The study consists of a range of rotational schemes comparing three-year rotations of durum, CWRS, CNHR, CPS and CWGP with canola and peas to determine what stands out in terms of yield, economic returns and agronomics.

In this study, however, data shows that triticale responded positively to increased rotational diversity. It also showed greater stability when field pea was included, and increased rotational diversity led to improved profitability and sustainability overall.

• Melanie Epp

**THIS GUY JUST PICKED UP 44MT OF PERFECTLY TREATED WHEAT IN 38 MINUTES!**

Search “G40 Seed Treater” on  
and see for yourself.  
[www.seedtreating.com](http://www.seedtreating.com)



Brian Ellis  
Phone: 403-556-2846  
Fax: 403-556-6604  
[gseed@telusplanet.net](mailto:gseed@telusplanet.net)



**GRAHAM**  
Seed Treating Systems



# The Blockchain Revolution Begins

A pilot project that followed soybeans from seed to the kitchen table shows how blockchain can be used to transform seed and all of agriculture.

**THE FUTURE IS NOW** for farm-to-table traceability thanks to a pilot project that used blockchain technology to follow locally produced certified soybean seed through production and processing, ending with freshly packed tofu hitting grocery store shelves.

And according to experts who played a key role in the project, blockchain technology could mean one thing for farmers — more revenue.

The pilot was supported by an investment from Agriculture and Agri-Food Canada's Canadian Agricultural Adaptation Program (now the Canadian Agricultural Strategic Priorities Program) and through additional support from Grain Farmers of Ontario. A partnership between the Canadian Seed Growers' Association (CSGA) and Grain Discovery, it represents the first time blockchain has been used in the seed industry — something that CSGA's managing director of certification and technology services, Doug Miller, believes is going to change the seed sector forever.

Miller is completing an MBA in business at the University of Guelph and his thesis centres around the use of blockchain in the seed industry. He was heavily involved in the pilot project from start to finish.

"We wanted something we could put in people's hands that was tactile, that they could interact with and say, 'This looks just like a normal app,' but behind the scenes is the blockchain technology that has a lot of potential to bring next-level traceability to market and really fundamentally change things," Miller says.

"It's been eye-opening to say the least. This is not a technology that should be feared, but one that should be embraced — and people are now able to see that."

The pilot created an end-to-end solution to track Identity Preserved (IP) soybeans throughout the value chain, from the breeding institution to tofu consumer. Every step the soybean seed took was recorded onto one blockchain, creating a digital food passport that could be accessed by scanning a QR code with a phone on the final packaged product.

The QR code takes the consumer to a website showing them the entire value chain from beginning to end: the variety of soybean seed used to produce the tofu; the seed grower who grew that seed; the person who transported the seed to the



Crosby Devitt serves as vice-president of the Grain Growers of Ontario.

farmer; the farmer who produced grain from the seed; the person who took the grain to the elevator; the elevator that stored it; the person who transported the grain to the tofu manufacturer; the manufacturer who made those soybeans into the tofu product purchased at the grocery store; and finally the company that distributed it to grocery stores in Ontario.

It provides an opportunity for the end user to dig into a specific stage and learn more about the product, says Miller.

"Traditionally, consumers are told that a certain type of soybean or barley or what-have-you shows up on the scene and is then used to make a product. That's a hugely condensed version of the story. You can't make tofu with just any soybean," Miller notes. "That's why IP programs that preserve varietal identity through the value chain are important and desired by end users."

"From the end user's perspective, this provides a curated story. We can tell that 'farm-to-fork' story in a way that resonates with them without overloading them with too much data."

That "farm-to-fork" story is something consumers increasingly demand, research shows. A recent study provides further understanding into the tides of public opinion around



Doug Miller is managing director of certification and technology services for the Canadian Seed Growers' Association.

Canadian food, how it's grown, and the relationship consumers want with farmers and those who process their food.

*Public Opinion: A Study of Canadian Conversations Online on Food and Farming* led by the Canadian Centre for Food Integrity uncovered how food, farming and a handful of hot button issues capture national interest in millions of conversations online. The issues Canadians are most engaged with include climate change and the links to food production, organic foods, and discussions on GMOs.

Blockchain presents an opportunity for the seed industry to be a part of those conversations by showing the consumer how their food is produced.

Miller echoes recent recommendations from the Agri-Food Economic Strategy Table, which advises blockchain pilots be done immediately in low-risk environments to provide insights for the rest of the industry on how the technology can be applied.

"Projects like this allow the agriculture industry to look under the hood, so to speak, and see how this technology really works. Blockchain has been surrounded by so much hype that people often have the wrong idea about it."

### **More Money for Farmers**

Blockchain is a relatively new technology, so pilots like this are required to determine what type of value it can provide, Miller says.

Blockchain is often associated in the minds of the public with cryptocurrencies like Bitcoin, notes Grain Discovery CEO Rory O'Sullivan. An Ontario-based startup, the company uses blockchain technology to create efficient, transparent and secure transactions in the ag space.

"People hear the word blockchain and they often get a negative image in their mind. Now that the initial buzz about blockchain has died down, we can show people that this technology is a great tool with very practical applications that will make a difference in their lives," O'Sullivan says.

"Agriculture is moving away from being a pure commodity business to an ingredients business, where consumers look at a crop as something very personal to them. This project is the first mile of the journey to see how blockchain will fit into the supply chain."

And that, he believes, is why farmers stand to reap the financial benefits that blockchain could present.



Rory O'Sullivan is CEO of Grain Discovery.

"Farmers generate a lot of data now. Up to now, the pain point has been the lack of a database that can connect the various data silos together. Blockchain is the ideal enabler of that. And that data is very valuable, especially in this era of growing ingredients," he says.

"For identity preserved soybeans, there's a 35 per cent premium based on traceability. The advent of on-farm storage

allows us to potentially de-commoditize the commodity. How do you grow an ingredient and not just a commodity? The ability for a farmer to capture existing data and share it and get paid for it is key. Farmers are willing to record information more accurately if there's monetary value attached to it."

Looking forward, O'Sullivan believes one of the benefits of blockchain is the anticipation of a new type of co-op model for the industry.

"We see many organizations joining as equal participants offering their services [and involving their clients] to share in the benefits of the model [i.e. seed, input, insurance, logistics, financial services and government regulators]," he adds.

"Blockchain has the potential to be key in an ever-expanding toolbox for the farm and food sector, by potentially linking all this data together. Blockchain is about collaboration for mutual benefit, a unified marketplace of goods and services that enables greater efficiencies, transparency and true price discovery along the supply chain."

The implications for traceability are clear. Miller notes blockchain goes well beyond traceability. Organizations/value chains across the globe are looking at how blockchain can increase their operational efficiencies and reduce administrative burden.

"For example, part of an IP program involves the use of certified seed. With blockchain we can create digital handoffs versus paper handoffs and re-imagine an IP program."

### Potential for Digitally Connected Value Chains

What has happened as part of this pilot project is a digitally connected value chain has been created, Miller says. "As a result, we are allowing consumers to connect and interact with producers in a new way. One example of this is using the payment capabilities of blockchain technology to introduce a tipping feature," he says.

Support from the grain industry will be key. Crosby Devitt, vice-president of the Grain Farmers of Ontario, says the pilot project will help the grain sector better understand the implications of blockchain.

"Now comes the challenge of figuring out how we create value out of this. There are a lot of steps between the farmer and consumer, and if you close those gaps you get better signals from the market. The consumer can now literally see the farmer who grew the food they bought," he says.

As for next steps, Miller says this pilot has provided key insights into how blockchain technology can be used by the seed and the agriculture sector.

"We hope to build upon this pilot by expanding into new crop kinds and more pilot projects. CSGA, along with its Seed Synergy partners and other key value chain partners, recently submitted a funding request to Innovation, Science and Economic Development Canada's Strategic Innovation Fund where blockchain technology was a pillar of the submission."

O'Sullivan adds that blockchain offers a whole new value proposition for countless parties within the industry.

"It is also important to note that blockchain does not replace legacy systems — it's a layer that sits above your system and enhances the value of it."

• Marc Zienkiewicz

**Serving You For More Than 31 Years**

- SUKUP** Grain Bins, Aeration, Bucket Elevators & Chain Conveyors
- HUTCHINSON** Grain Pump Chain Conveyors
- RAD** Bucket Elevators & Chain Conveyors
- LAMBERTON** Bucket Elevators & Chain Conveyors
- WESTEEL** Grain Bins & Aeration
- MERIDIAN** Hopper Bins
- TEMPERATURE/MOISTURE MONITORING** Bin Sense / Intra Grain - OPI Cables

**SKYWAY GRAIN SYSTEMS INC.**

PH: 403-948-7810 Fax: 403-948-3189  
**1-800-561-5625**  
 Representatives in Alberta, Saskatchewan & Manitoba  
[www.skywaygrainsystems.com](http://www.skywaygrainsystems.com)  
 E-mail: [contact@skywaygrainsystems.com](mailto:contact@skywaygrainsystems.com)

## Follow the Soybeans: Snapshot of the Pilot Project

Grain Discovery, in partnership with the Canadian Seed Growers' Association (CSGA) and support from AAFC and the Grain Farmers of Ontario (GFO), used blockchain to follow locally produced certified soybean seed through production and processing, ending with freshly packed tofu on grocery store shelves.

The intention of the pilot was to provide a mechanism for the Ontario soybean supply chain to capitalize on consumer demand for transparency and build additional value into their product at home and internationally. This was achieved by recording every step the soybean seed took onto a blockchain, creating a digital food passport that could be accessed by scanning a QR code on the final packaged product.

The OAC Kent pedigreed soybean seed used in this pilot, a variety developed by the University of Guelph, was produced by Szentimrey Seeds Ltd., planted and harvested by Minten Farms, stored at the Beechwood Agri Services Inc. elevator, processed at Ying Ying Soy Food Ltd. and distributed by FreshSpoke.

You can follow the soybean journey at [id.graindiscovery.com](http://id.graindiscovery.com).



The soybeans were processed into tofu by Ying Ying Soy Food Ltd. in Mississauga, Ont.



FreshSpoke distributed the tofu throughout multiple markets in the Ontario Greater Golden Horseshoe region.



*SIDE BAND*



*GUMBO DRY FERTILIZER KNIFE*



*PAIRED ROW*

Products available at:  
Twin Valley Seed & Supply  
Ph: 780-886-0772



***Fertilizer Knives and Seed Tips for JD 1870 & Conservapak***  
**306-708-4327 | [info@pbosupply.com](mailto:info@pbosupply.com) | Yorkton, SK**

# Thousand Kernel Weight Test: What's It All About?

Why more growers are ordering this seed test.

**THIS SPRING**, if you are a farmer who asks for a Thousand Kernel Weight (TKW) test on cleaned samples of each of your seed lots, you already understand why this information matters. TKW is the weight, in grams, of 1,000 seeds from a random sample. It's highly useful for calculating the optimal seeding rate for a given crop type or variety, and it can also be used to calibrate a seed drill as well as estimate yields.

As stated in an Alberta Agriculture and Forestry (AAF) guide called *Using 1,000 Kernel Weight for Calculating Seeding Rates and Harvest Losses*, TKW and seed size are attributes that, beyond varying among crops and between varieties, can vary from year to year or from field to field. The guide notes in addition to using TKW for seeding rate, calibration of the seed drill and performing yield estimates, it can also be used to estimate shattering and combine losses.

"Farmers are understanding that germination and disease tests matter, but seed size also matters," explains Sarah Foster, president and senior seed analyst at 20/20 Seed Labs in Nisku, Alta. "If you don't know your TKW, you will overplant, causing competition for nutrients and moisture. That will also increase your costs unnecessarily as the cost of seed, fuel and other farm input costs continue to increase."

Planting too little seed is also a possibility, says Foster, if you don't have TKW. An inadequate stand in pulses means the weed population can get an easier foothold. In cereals, she adds, this can result in tillering, which is good for yield but also can cause variability in maturity.

Foster believes that TKW, combined with the germination or vigour seed test result, should be considered the true standard by which seed quality should be measured (replacing use of just the germination/vigour test). The standard germination test, she adds, has long been used as the benchmark in assessing the planting potential of a crop, but TKW is the most practical tool in calculating optimal seeding rate.

In order to calculate the optimal seeding rate, producers will need the TKW and germination percentage test results for the seed lot, as well as the desired plant population (DPP). They'll also need to calculate an estimate of seedling survival rate, expressed in decimal form. For example, 90 per cent is expressed as 0.90. In cereals, the seedling survival rate is 80 to 95 per cent (0.80 to 0.95) if growing conditions are good at planting, but lower if conditions are poor.

Canola mortality often ranges from 30 to 60 per cent (survival rate of 0.40 to 0.70). In its guide, AAF advises that "since mortality depends on the combination of conditions and practices of individual farms, producers should keep records

## Where on the Web

A free app for calculating seeding rate for many different crops using TKW is available at <https://apps.apple.com/us/app/id1257514147>

Using 1,000 Kernel Weight for Calculating Seeding Rates and Harvest Losses is available at [https://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex81/\\$file/100\\_22-1.pdf](https://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex81/$file/100_22-1.pdf).

The Canola Council of Canada seeding rate guidelines are available at <https://www.canolacouncil.org/canola-encyclopedia/plant-establishment/seeding-rate/>.

of emergence (and thus mortality) on their fields." These sentiments are echoed in the Canola Council of Canada seeding rate guidelines. If a producer has a TKW of six grams and uses a seeding rate of 1,800 grams (4 pounds) per acre (60 seeds/m<sup>2</sup> or about 6 seeds/ft<sup>2</sup>) and has 0.50 seed survival, the crop has only 30 plants/m<sup>2</sup> or 3/ft<sup>2</sup>.

"This does not leave much margin for competition with weeds or plant death [due to disease, frost, insects or other factors] before yield potential starts to drop," states the seeding rate guidelines. "Therefore, considering seed size, seedling survival rates and target plant populations when setting seeding rates can minimize risk and save money."

## Looking Forward

Foster is pleased that TKW tests, which have been available for many years, are now being used much more by growers. The cost is quite low — getting a TKW done at her firm, for example, is about \$18 (based on counting three one-thousand seed samples and calculating the average weight).

She reports a new development in the industry for the use of TKW by seed firms is to provide seeding rate on the label of bags of seed here in Canada and beyond, with seed now being sold as an acre package. This means seed companies are now basing how many seeds are in the bag on the unit count or TKW. "They sell the exact amount of bags the grower needs to seed his or her known acreage," she says.

• Treena Hein



## PEDIGREED SEED FOR SALE

### BARLEY

- AC Metcalfe
- CDC Austenson
- CDC Bow
- CDC Coalition
- CDC Copeland
- CDC Cowboy
- CDC Thompson
- Vivar

### HRS WHEAT

- AAC Brandon
- AAC Connery
- AAC Redberry
- AAC Redwater
- AAC Viewfield
- Carberry
- CDC Landmark VB
- Parata

### CPS WHEAT

- AAC Crossfield
- AAC Foray VB
- AAC Goodwin
- AAC Penhold
- CDC Terrain

### CWSP WHEAT

- KWS Alderon

### CW SOFT WHITE WHEAT

- AAC Chiffon VB

### OATS

- AC Morgan
- AC Mustang
- CDC Arborg
- CDC Haymaker
- CDC Ruffian
- CS Camden
- ORe3542M

### PEAS

- AAC Barrhead
- AAC Carver
- AAC Lacombe
- CDC Amarillo
- CDC Forest
- CDC Horizon
- CDC Inca
- CDC Meadow
- CDC Raezer
- CDC Spectrum
- CDC Spruce
- Cooper

### FABA BEANS

- CDC Snowbird



## PROCESSORS & RETAILERS FOR THE FOLLOWING GROWERS:

### Chad Benson

780-349-1758

### Bar 3 Farms – Bill Baier

780-348-5791 | 780-349-1434

### Beamish Seed Farms Ltd.

780-954-2166 | 780-307-4742

### Brian Miller

780-674-1240

### Colin Felstad

780-349-9505

### Cross Seed Farms

780-349-1453 | 780-307-2712

### Cyre Seed Farms

780-307-4332

### Dewindt Farms Ltd.

780-398-2377 | 780-699-6789 | 780-554-5945

### Forward Seed Farms

780-674-3822 | 780-307-4343  
780-307-4380

### Galloway Seeds Ltd.

780-998-3036

### McNelly Seed Farms Ltd.

780-348-5749 | 780-349-0685

### Meinczinger Seed Farms Ltd.

780-307-5049 | 780-349-9515

### MKM Joint Ventures

780-398-2336 | 780-699-4073

### Nick Jonk

780-349-5458 | 780-349-0483 | 780-307-6416

### Raymond & Ken Moffitt

780-736-2205 | 780-818-6550

### Rick's Pedigreed Seed

780-674-6713 | 780-305-9517

### Trueblood Farms Ltd.

780-954-3745 | 780-349-0444

### True Seeds Ltd.

780-777-5885

### Victoor Seed Farm Inc.

780-459-3253 | 780-914-6027

**“OVER 425,000 BUSHELS OF PEDIGREED SEED STORAGE ON SITE”**

**P (780) 349-3944** | F (780) 349-3623 | E [wscp@telus.net](mailto:wscp@telus.net)

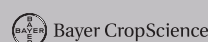
**WWW.WESTLOCKSEED.CA**

10016 93 Ave. Westlock, AB | Manager: Wayne Walker

T7P 2P2



**Seed Treating Available**





# Celebrating 10 Years of Midge-Tolerant Wheat Stewardship

A significant milestone is met for the utilization of this technology.

**ALBERTA PRODUCERS HAVE** been successfully seeding midge-tolerant wheat varieties for the past 10 growing seasons. That's a significant milestone for a technology that was launched with stewardship strings attached.

"Since day one, midge-tolerant wheat growers have had to sign a stewardship agreement that limits the use of farm-saved seed to one generation past certified," says Mike Espeseth, co-chair of the Midge Tolerant Wheat Stewardship Committee and communications manager of the Western Grains Research Foundation. This requirement ensures the variety's built-in refuge is maintained, which prevents the development of a resistant midge population.

"When the technology was introduced to growers in 2009, we explained that without an interspersed refuge system, midge tolerance could break down within 10 years. We've maintained this message over the past decade and are grateful to growers and industry for respecting it."

Several significant milestones have been achieved thanks to this ongoing commitment, starting with a growth in the number of midge-tolerant wheat varieties available to producers. At launch, just four varieties were available — today, there are 35.

"There's now just about something in every wheat class," says Todd Hyra, western business manager for SeCan, one of the first companies to offer a midge-tolerant wheat variety to growers. "In addition, a broad range of adaptation has happened within the genetics. It's a very complete management package for producers. They've got everything they would want in a wheat variety — top yields, improved Fusarium ratings, short, strong straw for manageability and, on top of all of that, midge tolerance."

According to StatCan data, 27 million acres of midge-tolerant wheat have been grown across the Prairies since its first planting in 2009. An even more impressive number is the financial advantage to farms.

## \$1 Billion in Benefits to Growers

"Research shows that producers achieve \$36 per acre in yield and grade benefits when growing midge-tolerant wheat," says Hyra. "When you apply that advantage across all those acres over the past 10 years, it adds up to an estimated \$1 billion. That's a significant return to producers."

This billion-dollar achievement has only been possible with the cooperation of many people. Prior to launching midge-

tolerant wheat to growers, industry worked together to create a strategy to collectively manage the stewardship and ensure that resistance was not broken. The result was the Midge Tolerant Wheat Stewardship Committee — a broad industry coalition representing plant breeders, government, seed growers, seed distributors and producer groups.

"It was really cool how everybody came together to ensure that the stewardship program was developed. It was very much a team approach," says Hyra.

"Today, we continue to work together to ensure that this technology lasts."

Seed retailers also play a key role by sharing stewardship best practices with growers. Approximately 550 front-line retailers have completed midge-tolerant wheat training to ensure they understand the technology and can effectively communicate about it to growers.

Anyone who sells midge-tolerant wheat is also responsible for ensuring growers have signed a stewardship agreement. In 2016, the Midge Tolerant Wheat Stewardship Assurance Site was launched to replace the paper agreements that were originally in place. The secure, web-based tool for use by seed distributors, seed retailers and seed growers has made the process of documenting the movement of certified midge-tolerant wheat seed more efficient.

A compliance survey is also conducted annually to follow up with midge-tolerant wheat growers on their stewardship practices. "They are questioned in terms of understanding and respecting the technology, and results are consistently strong," says Hyra. "In the past several years, 98 per cent of users have been in compliance."

**"In the past several years, 98 per cent of users have been in compliance."**

— Todd Hyra



## Reduced Insecticide Use

Another stewardship win is the fact that midge-tolerant wheat has prevented growers from having to spray to control orange blossom wheat midge. "This has resulted in several millions of litres of insecticide not purchased and not applied," says Hyra. This not only saves growers time and input costs, but it reduces the environmental impact of an insecticide and decreases diesel fuel usage as well.

The savings also add up in terms of a producer's time. "It frees up time to be able to spend with your family or coaching soccer or doing whatever you want to do, rather than worrying about killing bugs," says Hyra. It also eliminates the tricky task of staging spray timings for effective midge control.

Another impact of not spraying is the protection of beneficial insects. "If we're not spraying the wheat, then we're not spraying out the beneficial insects," says Tyler Wist, field crop entomologist with Agriculture and Agri-Food Canada based in Saskatoon, Sask. When beneficials are protected, they are able to do their part in helping to control the midge population.

"Using midge-tolerant wheat helps to maintain the level of the parasitoids in the crop," says Wist. It's important to support these beneficial insects because they work by laying eggs into wheat midge larvae and eggs, eventually killing the pest. "Macroglènes penetrans is an example of a parasitoid that does a really good job of managing the overwintering populations of wheat midge," he says.

"There is no doubt that midge populations are way down across the Prairies," confirms Wist. "The fact that so much midge-tolerant wheat is being used is having a level of depression on the midge population. But we also have to qualify that some dry springs have contributed to a reduced midge population as well."

Wist also points out midge-tolerant wheat varieties have saved producers a lot of worry over the past decade. "It is just so convenient, right? Plant it and forget about it. You don't have to be wandering through your wheat field on the July long weekend at dusk looking for little flies," says Wist.

Hyra agrees that midge-tolerant wheat gives users peace of mind. "You just let the technology do its job," he says. There have also been no reported incidences of resistant midge, which is evidence that the stewardship program is working.

## Stewardship Works

The bottom line is stewardship only works because of the

commitment of everyone involved in the midge-tolerant wheat system — from the seed growers and distributors to the producers who plant it.

"Midge-tolerant wheat continues to be an effective tool because farmers and industry work together to preserve the technology," says Espeseth.

"A big thanks to everyone who has done their part to protect this important technology," adds Hyra. "This trait was identified by public breeders for the good of all wheat growers in Canada. All that we ask is that as an industry we take care of it for several more decades."

For more information about midge tolerance and the stewardship agreement, visit [midgetolerantwheat.ca](http://midgetolerantwheat.ca).

• The Midge Tolerant Wheat Stewardship Committee



- ✓ specialize in cereals and pulses
- ✓ organic crops
- ✓ pedigreed seed certified

**Plant Manager: Jim Davenport**  
☎ 403.784.3777 ✉ [cliveseed@platinum.ca](mailto:cliveseed@platinum.ca)

**Processors of pedigreed seed for:**  
**Wildeman Seed Farm & Oatway's Seed Farm**

**For all your seed cleaning, colour sorting and treating needs**



## Chin Ridge Seeds Ltd.

Taber, Alberta

*Quality you can seed!*

- AAC Viewfield HRSW	- AAC Wildfire Winter Wheat	- AB Cattlelac Feed Barley <b>New!</b>	- CDC Inca Yellow Pea
- CDC Landmark VB HRSW	- AAC Stronghold Durum <b>New!</b>	- CDC Bow Malt Barley	- CDC Leroy Forage Pea
- AAC Brandon HRSW	- AAC Congress Durum	- CDC Austenson Feed Barley	- CDC Blazer Maple Pea
	- AAC Spitfire Durum	- CDC Maverick Feed Barley	- AAC Chrome Pea
	- AC Transcend Durum	- CDC Impulse Red Lentils	- AAC Bravo Flax

For more varieties of our wheat, durum, barley, oats, flax, peas and lentils please visit us at [www.chinridge.com](http://www.chinridge.com)

Don - [dhubble@chinridge.com](mailto:dhubble@chinridge.com) ♦ 1.800.563.7333 / 403.223.3900 ♦ Kelly - [kelly@chinridge.com](mailto:kelly@chinridge.com)

# In on the Ground Floor

Sendziak Seed Farm is involved in propagating new varieties in annual breeder plots developed by AAFC, Canadian universities and private institutions. This means the seed farm can provide its customers with important knowledge about how those new varieties will perform in the local region, both environmentally and agronomically.

**FATHER AND SON** Donald and Stephen Sendziak are proud that for the 47 years their family has been in the pedigreed seed business, they have remained totally *Fusarium graminearum*-free in all of their pedigreed seed crops every year thanks to their focus on good management practices.

“*Fusarium graminearum* is a prevalent crop disease across the Prairies. It’s a significant hazard for our pedigreed industry and we have been able to maintain zero per cent *Fusarium graminearum* through preventative practices like applying top-quality seed treatments and fungicides in order to mitigate the risk of any disease,” says Stephen.

## In on the Ground Floor

That’s an impressive record, however, it’s also typical of the family’s philosophy when it comes to producing high-quality seed for its customers. “It is important to us that our pedigreed seed customers are happy with all the product lines that we offer,” says Stephen. “We focus on excellent quality assurance and quality control of all pedigreed varieties to ensure that the product is all true to its kind.”

Maintaining purity in its seed lines is a big reason Sendziak Seed Farm, which is located near Thorsby, Alta., is heavily involved in the research and breeding side of the industry. For example, the seed farm is involved in propagating new varieties in annual breeder plots developed in Western Canada by Agriculture and Agri-Food Canada (AAFC), Canadian universities and private institutions, such as Canterra Seeds and SeCan, of which the Sendziaks are also shareholders.

“We strive for varietal purity in the growing process and that doesn’t come without roguing our select plots and breeder plots throughout the year,” says Donald. “That has to be done in order to avoid any contamination and maintain varietal purity.”

Being involved at the ground floor with new varieties means Sendziak Seed Farm can always provide their customers with important knowledge about how those new varieties will perform in the local region, both environmentally and agronomically.

## A True Family Business

Sendziak Seed Farm grows pedigreed wheat, oats, barley, peas, soybean and flax seed on 1,700 acres, and is a true family operation. Donald and wife, Krystyna, and his son, Stephen, and wife, Tasha, are the main principles of the business handling all day-to-day operations, marketing and administration. Stephen’s three sons, Peter (5), Jakob (3), and



Donald and Krystyna Sendziak of Sendziak Seed Farm. PHOTO: SENDZIAK SEED FARM

Christian (1), aren’t yet involved in the business, but are keen co-pilots on the combine. During busy times, such as harvest, Stephen’s four sisters and their husbands — Tanya and Paul Hyshka, Natasha and Anthony Plitt, Andrea and Colin Stanchuk and Nicole Sendziak — are always there to lend a helping hand.

The Sendziaks believe it is important to be involved in the seed industry and communicate with other growers and stakeholders to stay up to date on things like trends, technology and markets. They regularly attend annual events, such as the FarmTech Conference in Edmonton, and Agri-Trade Equipment Expo in Red Deer, Alta., and are also members of the Canadian Seed Growers’ Association. Donald has also served as president of the Alberta Seed Growers.

“It’s an important thing to do because you’ve got to develop varieties that are going to be able to be distributed in the global market,” says Donald.

As well as selling their high-end pedigreed seed to other grower colleagues, the Sendziaks retail to commercial growers in their area direct from their seed farm and via the Warburg Seed Cleaning Plant.

They recently consolidated all aspects of their business, including their land, machinery and equipment into one entity,



Stephen and Tasha Sendziak with their three children, Jakob, Peter and Christian. PHOTO: SENDZIAK SEED FARM

with everything now located at one main site near Thorsby, Alta., close to the original spot where Donald's father and grandfather first homesteaded in 1903.

"Before, we were operating our business from three separate locations. We decided it was time to consolidate it, and that has made us a lot more efficient," says Stephen.

### A Few Challenges

Like all farmers, the Sendziaks have faced challenges over the years, not least of which has been the extremely wet conditions over the last four crop seasons.

"Never in our history had we ever thought about buying a dryer because our seed always came off in good condition," says Donald. "The environment in the last four years has changed so drastically for us, we had to amend our operations totally. We had to get a grain dryer, which has added value and more operations during the harvest that we have had to manage."

They also do quality checks at several points in the operation, including a pre-germination test, which is especially important in years when the weather doesn't cooperate. "Last year we had three bouts of snow in September, which decreased the germination value of our seed," says Donald. "We did have a loss of value on some of our seed in cases where the germination wouldn't meet standards we expect."

Weather is something farmers can't control, so the Sendziaks take those challenges as they come, but they are concerned about some of the discussions currently underway about how Canadian seed industry research and development will be funded in the future.

"There is a lot of resistance for things like end-point royalties and trailing royalties because the commercial grower has no way of recouping any of those costs," says Donald. "Market prices are always dictated by global values in the seed chain,

and the commercial seed industry is currently facing suppressed crop market values, which, in turn, impact the viability of our pedigreed seed industry."

"As pedigreed seed growers, we feel it is crucial that the responsibility of future plant breeding programs have full support from Agriculture and Agri-Food Canada, as the benefits of new varieties are for the greater good of the public consumer," says Stephen.

### An Eye to the Future

The Sendziaks would like to expand their operations in the future, however, they recognize they first need to build their operational and management teams. While Donald and Stephen focus primarily on the marketing and research side of things, and other family members are a great help at busy times, they want to recruit more people on the farming end of things who will be with them long term.

"Some of the seasonal workers we've had over the past have been very good, but sometimes employment with us is only a short-term goal for them, and we'd like to bring on some individuals that would join us on a career path for the long term," says Donald.

They do feel there is a lot of opportunity for the seed industry going forward, especially if more raw agricultural commodities can be processed in Canada, rather than in other countries.

"For example, there is a push right now toward plant-based proteins and we need to jump on that and begin processing more of these products here in Canada," says Donald.

The Sendziaks say they appreciate all of their customers and industry partners for their continued support for their pedigreed seed operation in Leduc County. "We really appreciate their business, and we look forward to a new and exciting year working with everyone again this upcoming crop season," says Donald.

• Angela Lovell

# A Canola Pricing Strategy

Neil Blue takes a look at the canola futures market in a strong carrying charge situation.

**CANADIAN CANOLA STOCKS** at the 2018-19 crop year-end are estimated near four million tonnes, a new record, according to Statistics Canada. The carryover at the end of this crop year is yet to be determined, but it may not increase as much as some have suggested, says Neil Blue, provincial crop market analyst with Alberta Agriculture and Forestry. He says the unfinished canola harvest and unknown timing of a potential resolution of the canola trade restrictions imposed by China leaves the 2019-20 canola carryover uncertain. *Alberta Seed Guide* discusses the canola market with the crop market analyst.

## ASG: What is the current canola market situation?

**NEIL BLUE (NB):** Cash canola prices are about five per cent lower than a year ago. The basis levels, or difference between the cash and futures price, is mediocre, which implies plenty of supply relative to demand. That is not an unusual situation for the harvest period. Because of a rise in world vegetable oil prices relative to canola prices, crush margins have strengthened, and that is supporting crusher demand.

## ASG: What is the canola futures market looking like?

**NB:** The canola futures market is in a strong carrying charge situation, which is a reflection of the large canola inventory and currently restricted demand. That is, the futures market is significantly higher in successive futures months within this crop year.

## ASG: Can you explain a carrying charge market?

**NB:** Carrying charges include:

- commercial storage rates — as in a commercial buyer's facility
- interest — typically bank prime interest rate
- insurance costs for that crop — a minor cost

A carrying charge market is one where the higher prices into the future pays all or a large portion of the costs of storing a crop from one period to the next.

## ASG: What are the current carrying charges in the canola futures market?

**NB:** Here are the closing canola futures prices and spreads for November 12, 2019, in dollars per tonne.

January	462.10	
March	471.60	\$9.50 above January
May	480.40	\$8.80 above March
July	487.90	\$7.50 above May

The higher successive canola futures prices are not a forecast for higher prices in the future. They reflect the current carrying charge the market builds in for storage, interest and insurance.

**ASG: Can those futures market spreads be compared to a calculated carrying charge?**

**NB:** Yes, one can estimate the commercial cost of carrying canola. Using the 60-day period of January to March and applying a commercial storage rate of \$0.12 per tonne per day, 60 days storage totals \$7.20 per tonne. At \$462.10 per tonne for January futures and using a four per cent annual interest rate, the interest cost of carrying that canola would be  $\$462.10 \text{ per tonne} \times 4\% \div 12 \text{ months} \times 2 \text{ months} = \$3.08 \text{ per tonne}$ . The sum of calculated storage and interest costs is \$10.28 per tonne. The insurance cost is relatively minor.

So, if the canola market was trading at “full carry” with January canola futures trading at \$462.10 per tonne, March futures would be trading at \$472.38 per tonne. In this example, with the actual March futures at a \$9.50 per tonne premium to January futures, the March futures is considered to be trading at 92 per cent of full carry ( $9.50/10.28 \times 100$ ). A futures market for a storable commodity that is trading near full carry is implied to be well supplied relative to demand.

**ASG: What does that carrying charge mean to a canola producer holding unpriced canola in storage?**

**NB:** It means the futures market is offering the producer a fee to store canola, but that storage payment is only collectable if the producer takes some form of forward pricing action. As time passes, that carrying charge erodes out of the market.

**ASG: What contracting alternative is there to capture the carrying charge?**

**NB:** Crop buyers may have several contract types. A deferred delivery contract is the most common one to consider in capturing the carrying charge by forward pricing with a buyer of physical canola. Those forward prices, the result of futures price minus basis levels, vary among canola buyers. To judge the best price, producers should shop among the various buyers for the best farm-gate equivalent prices for those forward delivery months. One can then determine how much of the carrying charge within the futures market is being passed along in those forward cash market bids.

**ASG: Are there some other pricing alternatives that a producer can use?**

**NB:** A producer with a futures account could sell futures in a forward delivery month to capture carrying charge. This strategy would retain the ability to shop among the various canola buyers for the strongest basis level. Also, it would avoid the physical buyer commitment of delivering No. 1 canola when quality may be uncertain. With this futures strategy, usually the futures hedge is removed when the canola pricing is completed with a physical buyer. Meanwhile, while that futures position is held, the carrying charge will erode out of the market, adding potential profit to the futures trade.

**ASG: What about using the options market?**

**NB:** That is another alternative. One could buy a put option for a forward delivery period. If the futures market falls during the period that the option is owned, then the option will likely gain value, capturing some of that carrying charge in the futures market. Buying an option has the trade-off of having to pay a premium for the price insurance, but will not require margin or incur any margin calls.

**ASG: In summary, then, a carrying charge for a storable commodity reflects the amount of storage and interest that the market is willing to pay.**

**NB:** Yes, and although a carrying charge market is a sign the market is well supplied with product relative to demand, some of that carrying charge can be captured through proactive marketing.

For more information on these strategies:

Neil Blue, Provincial Crop Market Analyst with Alberta

Agriculture and Forestry

Phone: 780-422-4053

Email: [neil.blue@gov.ab.ca](mailto:neil.blue@gov.ab.ca)

• Marc Zienkiewicz



# Varieties of Cereal and Oilseed Crops for Alberta

**THIS ANNUAL PUBLICATION** provides information on cereal and oilseed variety performance in Alberta and northeastern British Columbia. Important agronomic characteristics and disease resistance information is provided for varieties of wheat, barley, oat, rye, triticale, flax and canola. The Alberta Regional Variety Testing program for cereals and flax is coordinated by the Alberta Regional Variety Advisory Committee (ARVAC) and Alberta Agriculture and Forestry (AAF). Funding for the program is provided by:

- Alberta Agriculture and Forestry
- Alberta Wheat Commission
- Alberta Barley Commission
- Alberta Oat Growers Association
- Alberta Seed Growers
- Alberta Seed Processors
- Prairie Oat Growers Association
- Entry fees for the varieties being tested

Data for this publication come from various sources, including:

- Alberta Agriculture and Forestry
- Agriculture and Agri-Food Canada
- British Columbia Grain Producers
- Nutrien Ag Solutions
- University of Alberta
- Alberta Innovates Technology Futures
- Farming Smarter
- SARDA Ag Research
- Battle River Research Group (BRRG)
- Chinook Applied Research Association (CARA)
- Gateway Research Organization (GRO)
- Lakeland Applied Research Association (LARA)
- McKenzie Applied Research Association (MARA)
- Northern Peace Applied Research Association (NPARA)
- Prairie Grain Development Committee
- Canola Council of Canada
- Lakeland College

The following individuals are the 2019 Regional Variety Trial and crop specific coordinators:

- Regional Variety Trial Coordinator, A. Fedko
- Spring wheat, Drs. H. Randhawa, D. Spaner and S. Strydom
- Barley, J. Anderson
- Oat, Dr. J. Mitchell-Fetch
- Triticale, M. Aljarrah
- Winter Wheat, Dr. R. Graf
- Fall Rye, Dr. R. Ragupathy

- Winter Triticale, M. Aljarrah
- Flax, M. Cutts

Sincere thanks are extended to all individuals and organizations who contribute to this publication.

## Yield Results and Reporting

Variety choice should never be based solely on yield performance, as it is only one factor that affects net return. The genetic yield potential of a variety is often masked by numerous factors, some of which can be controlled through variety choice and others through astute agronomic management. Producers are encouraged to consider other characteristics such as maturity, plant height, lodging and disease/pest resistance when deciding which varieties to grow. Long-term satisfaction with a variety is often related to non-yield characteristics.

### Yield Reporting in 2020

In 2018 and 2019, the yield data for CWRS wheat were reported in two formats. In 2020, only the traditional format will be reported as ARVAC reevaluates the best way to report head-to-head comparisons. Annual head-to-head comparison tables are likely to reappear in 2021.

Producers have asked for additional checks in the regional variety trials that reflect more commonly grown varieties. Starting in 2018, two additional varieties were grown as “benchmark” checks and reflect the two most popular varieties for the crop or within a market class during the previous year, based on crop insurance data. These checks will change as the popularity of varieties changes.

Exercise caution when making yield comparisons among varieties. Variety yield should only be directly compared to the standard reference check. Actual head-to-head testing between other varieties may not have occurred. Small plot agronomic trials are expensive to grow and new varieties are registered every year. It is simply impractical to grow all varieties at the same time. Following several years of data collection, the yield performance for a particular variety stabilizes relative to the check and further testing is no longer required. It is for these reasons that the check varieties are grown every year (e.g. Carberry for CWRS wheat, AC Metcalfe for barley) and that changes to these checks are infrequent. The “Overall Station Years of Testing” column provides an indication of the unbalanced nature of the dataset.

At least eight site-years of yield data collected over two years are required prior to reporting the figures in this publication. For new varieties, Overall Yield is often the first indication of yield potential relative to the check. As additional data become available, yield performance is also expressed on the

basis of environmental productivity (Yield Test Categories of Low, Medium, High and Very High). Where there are less than eight site-years of data for a yield column, an indication will be made that there is insufficient data to describe, symbolized by reporting an “XX.” Yield rankings among varieties can change substantially due to growing conditions. To reflect these differences, results from a test site that produced high yield in a particular year are placed into the database for “high” yielding environments. The same site may contribute to the “low” yield category in a drought year, when yields are low. Consistent performance over all Yield Test Categories indicates that a variety has environmental responses similar to the check and may have good yield stability over a wide range of environments. Scientific studies conducted on variety performance in Western Canada have shown that Yield Test Category analysis provides a more reliable indication of yield performance than results organized by geographic region.

The yield comparison tables have several features:

- Overall actual yield of the check (bushels/acre) based on all data available to the testing program is provided along with the number of station years of testing.
- The range in yield for each Yield Test Category is defined.
- Actual yield of the check in each Yield Test Category is reported.
- For varieties with sufficient data, the Overall Yield and performance in each Yield Test Category is expressed relative to the check.

To make effective use of the yield comparison tables, producers should set a realistic yield target for the season and determine where it fits within the Low, Medium, High and Very High Yield Test Categories. This approach facilitates matching of variety choice to expected productivity levels and is similar to that used when making decisions on other levels of inputs. Please note that the actual yield levels indicated are from small plot trials, which may be 15 to 20 per cent higher than yields expected under commercial field production.

## Maturity Ratings

Based on feedback from producers, the six category scale for maturity (Very Early, Early, Medium, Late, Very Late, Extremely Late) has been replaced with average differences in days, relative to the check. Be aware that these are averages from several years over the vast agricultural production area of Alberta and growth environment has a tremendous influence on maturity dates. Hot, dry conditions will compress the reported maturity differences just as cool, wet conditions will expand them. For example, a variety of CWRS wheat may mature in 98 days in Lethbridge, but take 103 days in Edmonton. Likewise, a variety that is on average two days later maturing across the province may be only one day later in southern Alberta but could be three or more days later in a northern location.

Falling Number and Resistance to Pre-harvest Sprouting



Falling number is a measurement of the extent to which endosperm starch in the seed has been metabolized to simple sugars during the germination process. There are many interrelated genetic, environmental and management factors that influence seed germination prior to harvest. In general, conditions in which the crop is harvested soon after maturity

prior to inclement weather will result in the retention of high falling number. Thus, the use of earlier maturing varieties with Good or Very Good pre-harvest sprouting resistance in short-season areas is usually an effective management decision for maintaining high quality. A rating for pre-harvest sprouting resistance is provided for most of the reported wheat varieties based on controlled environment conditions. These ratings reflect genetic differences. Varieties with Good or Very Good pre-sprouting resistance will normally retain their falling number for longer periods of time under cool, wet harvest conditions. However, even these varieties will initiate germination when mature and exposed to prolonged conditions favourable to sprouting, resulting in falling number reductions. Note that falling number can be reduced without visible signs of sprouting.

## Seed Size and Plant Populations

Seed size within a crop kind will vary from variety to variety, requiring adjustment of seeding volumes to achieve desired plant populations. Some of the tables provide an average 1000 kernel weight (TKW), which can be used as a guide for variety differences. The best approach is to determine the 1000 kernel weight of the seed to be planted, germination rate, emergence mortality, and in the case of fall seeded crops, an estimate of winterkill. For more information and user-friendly seeding rate calculators that take into account these and other considerations, please see [www.agric.gov.ab.ca/app21/ldcalc](http://www.agric.gov.ab.ca/app21/ldcalc).

## Plant Breeders' Rights

Plant Breeders' Rights (PBR) are a form of intellectual property rights by which plant breeders can protect new varieties in the same way an inventor protects a new invention with a patent. In 2015, Canada amended the PBR Act to bring it into conformity with UPOV91. Varieties protected under the previous legislation (UPOV78) are indicated with the  logo, whereas those protected under the new UPOV91 legislation that are shown with the new  logo. For more information on Plant Breeders' Rights, please see [www.pbrfacts.ca](http://www.pbrfacts.ca) or the Canadian Food Inspection Agency website at [www.inspection.gc.ca](http://www.inspection.gc.ca).

## Varieties Reported in the Tables

A variety must be registered to appear in the tables. Publication normally occurs after two years of testing; however, entries are accepted with the understanding that testing will occur for at least three years. When there are limited data for a new variety, yield information may only appear in the Overall Yield column. An “XX” is reported in any column when there is insufficient data. Single year data will not be reported as it is often an unreliable indicator of performance.

Varieties without pedigreed seed production in Alberta within the past two years, following five years of full registration to facilitate adoption, will be flagged for removal from the tables. After the variety has been flagged for removal for one year, it may be removed from the tables unless an objection is received for consideration at the annual meeting. Notwithstanding the above criteria, a variety can be retained in a table if a compelling case is made. In cases where both the breeding institution and seed distributor wish to have a variety deleted

from the table, removal can occur without a notification flag. Please note that under normal circumstances, removal from a table does not indicate variety cancellation has occurred.

### Variety Cancellation versus Reclassification

Variety cancellation (often referred to as deregistration) and variety reclassification are two distinct processes that have been subject to some confusion in recent years. Variety cancellation is a process in which the Canadian representative and breeder make a request to CFIA to cancel the registration of a given variety. Under the protocol, a three-year notification of cancellation period applies to all crop kinds except hybrid canola and rapeseed, which require a one-year notification period. This timeline provides the Canadian representative and breeder sufficient time to ensure that seed stocks of the variety have been cleared from the marketplace and producers have been notified, well in advance, to clear seed from their operations. This facilitates planning and helps to minimize financial risk. Notifications are posted on August 1 and the notification period is from that date forward. Following variety cancellation, varieties are removed from the appropriate Canadian Grain Commission Variety Designation List and are only eligible for the lowest grade available. For more information please visit the Canadian Food Inspection Agency website at [www.inspection.gc.ca](http://www.inspection.gc.ca) and the Canadian Grain Commission website at [www.grainscanada.gc.ca](http://www.grainscanada.gc.ca).

In recent years, several wheat varieties have been reclassified, meaning they have been moved from one quality class to another. This process was undertaken by the Canadian Grain Commission in consultation with industry to ensure

the varieties designated to a class met the current quality definitions and reflected the expectations of end-use customers of Canadian wheat. Several years of advance notice is provided when this type of change takes place. It is important to note that reclassification is not variety cancellation. Reclassified varieties may still be grown and receive grades under the class for which they are designated, but must not be misrepresented by declaring their former class. Variety Designation Lists can be found at the Canadian Grain Commission website at [www.grainscanada.gc.ca/en/grain-quality/variety-lists/](http://www.grainscanada.gc.ca/en/grain-quality/variety-lists/).

### Canola

The Alberta Regional Variety Advisory Committee (ARVAC) does not take any responsibility for accuracy or validity of the canola performance data.

### Diseases, Seed Treatment and Seed Testing

- Disease ratings are compiled from various data sources in Alberta and other prairie provinces.
- Loose smut resistance ratings for wheat will not be reported after 2020 as it is no longer a registration requirement for wheat and routine testing has been discontinued.
- Treat rye and flax seed to control seedling blight, cereal seed for smuts and fusarium, canola seed to control flea beetle, seedling blight and the seed-borne phase of virulent blackleg.
- Wheat with Moderately Susceptible (MS) or Susceptible (S) ratings for common bunt should be treated with a systemic fungicide as low levels of infection will restrict marketability.
- Refer to labels for maximum storage periods of treated seed.



**ESTABLISHED 1943**  
**KEMP FARMS LTD.**

**Pedigreed Seed**  
Wheat: AAC Penhold & AAC Brandon  
Barley: CDC Copeland & CDC Austenson  
Oats: AC Morgan

**Rick Kemp 403-318-1793, or Innisfail Seed Cleaning Plant 403-227-3400**  
[kempfarmsltd@gmail.com](mailto:kempfarmsltd@gmail.com)  
28541 Twp Rd 355A, Red Deer County, AB. T4G 0H5



**PHOENIX FARMS LTD.**  
Pedigreed Seed Growers

Box 327 Nobleford, AB  
Ph: (403) 824-3585  
Fax: (403) 824-3900

**Barley:** Amisk, CDC Austensen  
**Peas:** 4010 (Forage), CDC Saffron, CDC Meadows  
**Triticale:** Pronghorn

Custom Forage Blends  
Dual Mix/Triple Mix





Certified seed...the way to grow!

**SOLICK SEEDS LTD.**



















Len, Kelsey or Corwin  
Box 97  
Halkirk, AB T0C 1M0  
Ph. (403) 884-2358  
Fax: (403) 884-2360  
(L) Cell (403) 323-0317  
(K) Cell (403) 323-0315  
(C) Cell (403) 916-5582  
Email: [solickseeds@syban.net](mailto:solickseeds@syban.net)  
or [ksolick@gmail.com](mailto:ksolick@gmail.com)



**Wheatcrest** Est. 1906

**Specializing in the production and processing of pedigreed seed.**

**Glenn & Marie, Douglas & Heather Logan**  
Box 249, Lomond, AB T0L 1G0  
Phone (403) 792-3696 | Fax (403) 792-3397  
[www.wheatcrest.com](http://www.wheatcrest.com)  
e-mail: [doug@wheatcrest.com](mailto:doug@wheatcrest.com) [wheatcrest.farms@telus.net](mailto:wheatcrest.farms@telus.net)







- Treated seed must not be fed to livestock, poultry or wildlife, and cannot be sold for feed.
- Leaf spot ratings in the wheat tables are a combination of resistance to tan spot and septoria leaf disease complex.
- Fusarium head blight (FHB), caused by *Fusarium graminearum* and other species, is an increasing problem in Alberta. The relative ranking of crops from most susceptible to least susceptible is durum wheat, spring and winter wheat, triticale, barley and oat. Corn is a host of *F. graminearum* and can serve as a source of infection when residue is left on the ground. FHB infection is highly influenced by the environment and heading date. A resistant (R) tolerance rating for FHB does not equate to immunity. Under severe epidemics, all varieties will sustain damage. All seed should be tested for the presence of FHB and treated with an appropriate seed treatment. Producers are advised to choose varieties with the best FHB tolerance whenever possible and always use best management practices to slow the spread of this disease.
- Seed used in the Alberta Regional Variety Testing program comes with a “fusarium-free” certificate and trials are inspected for FHB during the growing season.

#### Laboratories participating in the FHB testing program:

- 20/20 Seed Labs Ltd., Nisku, AB: 1-877-420-2099
- BioVision Seed Research Ltd., Edmonton, AB: 1-800-952-5407
- BioVision Seed Research Ltd., Grande Prairie, AB: 1-877-532-8889

- Parkland Laboratories, Red Deer, AB: 403-342-0404
- Precision Seed Testing, Beaverlodge, AB: 780-354-2259
- Seed Check Technologies Inc., Leduc, AB: 780-980-8324

#### Agronomic Practices Used in Small Plot Trials

Small plot trials are conducted using the following best agronomic practices:

- N, P, K and S fertilizer rates are based on soil test results for 1.25x the area average yield goal of the past four years, as reported in the AFSC Yield Alberta publication.
- All wheat, barley and oat seed is treated with Cruiser Maxx Vibrance Cereals. Triticale is treated with Dividend XL RTA. Flax seed is not treated.
- Seeding rates are adjusted for TKW and germination to reach the following target plant populations listed in Table 1.0.

**Table 1.0 Target Plant Populations Used to Determine Seeding Rates**

Crop	Wheat						
	Class	CWRS	CPSR	CNHR	CWSP	Durum	Winter CWSWS Wheat
Target Plant Population (plants/sq ft)		31	31	31	31	28	31 33

# YOU HAVE ENOUGH ON YOUR MIND.

## Put it at ease with an Advance Payments Program CCGA Cash Advance.

Get the farm cash flow you **need** and the control you **want** to sell at the best time and the best price.

Our experienced team makes it easy to apply. Call 1-866-745-2256 or visit [ccga.ca/cash](http://ccga.ca/cash)

50+  
commodities

up to  
**\$500K**  
interest-free\*

**\$1M**  
maximum



Canada

\*\$100k interest-free for all eligible commodities. Additional \$400k interest-free for 2019 and for canola only.

Interest-bearing portion at prime less 0.5%



REPAIRS MARKETS  
QUALITY  
LABOUR  
INPUTS  
WEATHER  
SAFETY  
TRANSPORTATION  
TRADE  
PESTS



Crop	Barley		Oat	Triticale	Flax	
Class	2 row	6 row			Brown	Yellow
Target Plant Population (plants/sq ft)	25	25	28	29	75	84

- Foliar fungicides are not applied to the trials which allows for expression of genetic differences between cultivars for their disease resistance. Under disease pressure, the application of a foliar fungicide may significantly increase yields on some cultivars.

### Abbreviations and Rating Scales

- TKW = Thousand kernel weight.
- XX = Insufficient data to describe.
- Resistance Ratings: VP = Very Poor, P = Poor, F = Fair, G = Good, VG = Very Good, EX = Excellent.
- Disease Tolerance Ratings: R = Resistant, MR = Moderately Resistant, I = Intermediate, MS = Moderately Susceptible, S = Susceptible.
- Kernel Type (winter wheat): HR = Hard Red, SR = Soft Red, HW = Hard White, SW = Soft White.
- Awns (wheat): Y = Yes (bearded), N = No (awnless).
- Awn Type (barley): R = Rough, S = Smooth, SS = Semi-smooth.
- Seed Size (flax): S = Small, M = Medium, L = Large.
- ☺ Protected under UPOV78 Plant Breeders' Rights legislation.
- ☺ Protected under UPOV91 Plant Breeders' Rights legislation.
- † This variety has been "flagged" for removal. Varieties without pedigreed seed production in Alberta within the past two years, following five years of full registration to facilitate adoption, will be flagged for removal from the tables. After the variety has been flagged for removal for one year, it may be removed from the tables unless an objection is received for consideration at the annual meeting.

### Other Variety Information

For additional information, including varieties not listed in this publication, please call the Alberta Ag-Info Centre toll-free at 310-FARM (3276) or check the Alberta Agriculture and Rural Development website, Ropin' the Web at: <https://open.alberta.ca/dataset/varieties-of-cereal-and-oilseed-crops-for-alberta>

### Fact sheet information and tables prepared, reviewed and approved by:

Alberta Regional Variety Advisory Committee (ARVAC)

### Data preparation and factsheet coordination by:

Alex Fedko  
Coordinator RVT/Crop Research Technologist  
Alberta Agriculture and Forestry

### Alberta and British Columbia Pedigreed Seed Growers Directory of Varieties Produced in 2019

Grower listings were prepared by the Canadian Seed Growers' Association for varieties eligible for sale in Canada and crops issued certificates at the time of publication. Breeding institution and distributor listings were prepared by the publisher. PBR status is noted following the variety. CSGA assumes no responsibility for errors or omissions in any listings. Pedigreed class code is listed after the grower's phone number. S=Select; F=Foundation; R=Registered; C=Certified. BI=Breeding Institution; Dist.=Canadian Distributor(s). Varieties with a star (\*) after the pedigreed class code are carryover seed.

# SeCan

## Our genes only come in blue.

When you purchase SeCan certified seed you're getting the promise and performance of SeCan genetics. And with certified seed, you're investing in the future of plant breeding and new varieties that contribute to your bottom line.

Make the comfortable choice.  
Choose SeCan certified seed.



**For genes that fit your farm,  
visit [www.secan.com](http://www.secan.com)**



# Breeding Institutions and Seed Distributors of Varieties Listed in this Publication

## DISTRIBUTOR CONTACT INFORMATION

Alliance Seed.....	1-877-270-2890 / allianceseed.com
CANTERRA SEEDS .....	204-988-9750 / canterra.com
Cargill.....	cargillgrows.ca
Corns Brothers.....	403-380-9586 / cornsbrothers.ca
Crop Development Centre – University of Saskatchewan .....	306-966-5855 / agbio.usask.ca/research/centres-and-facilities/crop-development-centre.php
FP Genetics .....	1-877-791-1045 / fpgenetics.ca
K3 Seeds.....	403-738-4517 / k3seeds.com
La Coop fédérée.....	(514) 384-6450 / lacoop.coop
Lefsrud Seed .....	780-336-2500 / telusplanet.net/public/lefsrud/
Mastin Seeds.....	403-556-2609 / mastinseeds.com
Progressive Seeds Ltd. ....	403-347-4925
Proven Seed/Nutrien Ag Solutions, Inc .....	1-888-569-9444 / provenseed.ca
Richardson International .....	1-866-217-6211 / richardson.ca
SeCan .....	1-800-764-5487 / secan.com
Seed Depot .....	204-825-2000 / seeddepot.ca
Solick Seeds Ltd. ....	403-884-2358
SeedNet Inc. ....	403-715-9771 / seednet.ca
Syngenta Canada .....	1-877-964-3682 / syngenta.ca
Wagon Wheel Seed Corporation.....	306-896-2236 / wagonwheelseeds.sk.ca

Variety	Breeding Institution	Distributor
<b>FEED AND FOOD BARLEY</b>		
<b>TWO-ROW</b>		
Altorado	Highland Specialty Grains	Proven Seed/Nutrien Ag Solutions, Inc
Brahma	Westbred, LLC.	Proven Seed/Nutrien Ag Solutions, Inc
Busby	FCDC (Lacombe)	Mastin Seeds
Canmore	FCDC (Lacombe)	CANTERRA SEEDS
CDC Austenson	U of S - CDC	SeCan Members
CDC Coalition	U of S - CDC	CANTERRA SEEDS
CDC Cowboy	U of S - CDC	SeCan Members
CDC Maverick	U of S - CDC	SeCan Members
CDC Trey	U of S - CDC	FP Genetics
Claymore	Highland Specialty Grains	Proven Seed/Nutrien Ag Solutions, Inc
CONLON	NDSU	Seed Depot
Gadsby	FCDC (Lacombe)	SeCan Members
Oreana	Highland Specialty Grains	Proven Seed/Nutrien Ag Solutions, Inc
Seebe	FCDC (Lacombe)	SeCan Members
Sirish	Syngenta AG	Syngenta Canada
<b>SIX-ROW</b>		
AB Advantage	FCDC (Lacombe)	SeCan Members
AB Cattelac	FCDC (Lacombe)	Alliance Seed

AC Ranger	AAFC (Brandon)	FP Genetics
Amisk	FCDC (Lacombe)	SeCan Members
Chigwell	FCDC (Lacombe)	SeCan Members
Sundre	FCDC (Lacombe)	Mastin Seeds
Trochu	FCDC (Lacombe)	SeCan Members
Vivar	FCDC (Lacombe)	SeCan Members

## HULLESS - FOOD AND FEED BARLEY

CDC Ascent	U of S - CDC	SeCan Members
Falcon	FCDC (Lacombe)	Progressive Seeds Ltd

## MALTING BARLEY

### TWO-ROW

AAC Connect	AAFC (Brandon)	CANTERRA SEEDS
AAC Synergy	AAFC (Brandon)	Syngenta Canada
AC Metcalfe	AAFC (Brandon)	SeCan Members
Bentley	FCDC (Lacombe)	CANTERRA SEEDS
CDC Bow	U of S - CDC	SeCan Members
CDC Clear (hulless)	U of S - CDC	SeCan Members
CDC Churchill	U of S - CDC	SeCan Members
CDC Copeland	U of S - CDC	SeCan Members
CDC Copper	U of S - CDC	FP Genetics
CDC Fraser	U of S - CDC	SeCan Members
CDC Goldstar	U of S - CDC	CANTERRA SEEDS
CDC Kindersley	U of S - CDC	SeCan Members
CDC Meredith	U of S - CDC	SeCan Members
CDC PlatinumStar	U of S - CDC/ Sapporo/PML	CANTERRA SEEDS

Cerveza	AAFC (Brandon)	Mastin Seeds
Lowe	FCDC (Lacombe)	SeCan Members
Major	AAFC (Brandon)	Alliance Seed
Merit 57	Busch Ag Res. Inc.	CANTERRA SEEDS
Newdale	AAFC (Brandon)	FP Genetics

#### SIX-ROW

Legacy	Busch Ag Res. Inc.	Proven Seed/FP Genetics
--------	--------------------	-------------------------

#### OAT

##### MILLING

AC Juniper	AAFC (Lacombe)	Mastin Seeds
AC Morgan	AAFC (Lacombe)	SeCan Members
Akina	Lantmannen SW Seed	La Coop Fédérée
CDC Arborg	U of S - CDC	FP Genetics
CDC Dancer	U of S - CDC	FP Genetics/Cargill
CDC Endure	U of S - CDC	Alliance Seed
CDC Minstrel	U of S - CDC	FP Genetics
CDC Norseman	U of S - CDC	SeCan Members
CDC Orrin	U of S - CDC	FP Genetics/Cargill
CDC Ruffian	U of S - CDC	FP Genetics
CDC Seabiscuit	U of S - CDC	CANTERRA SEEDS
CS Camden	Lantmannen SW Seed	CANTERRA SEEDS
Derby	U of S - CDC	Proven Seed/Mastin Seeds
Kara	Lantmannen SW Seed	La Coop Fédérée
ORe3541M	Oat Advantage	SeCan Members

ORe3542M	Oat Advantage	SeCan Members
Triactor	Lantmannen SW Seed	CANTERRA SEEDS

#### FEED

AC Mustang	AAFC (Lacombe)	Mastin Seeds
CDC Nasser	U of S - CDC	T & L Seeds

#### FORAGE

CDC Baler	U of S - CDC	FP Genetics
CDC Haymaker	U of S - CDC	SeCan Members

#### FALL RYE

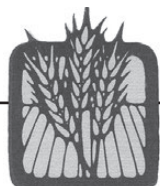
Brasetto	KWS Lochow GMBH	FP Genetics
Guttino	KWS Lochow GMBH	SeedNet Inc.
KWS Bono	KWS Lochow GMBH	FP Genetics
KWS Daniello	KWS Lochow GMBH	SeedNet Inc.
KWS Gatano	KWS Lochow GMBH	FP Genetics
Hazlet	AAFC (Swift Current)	SeCan Members
Prima	AAFC (Swift Current)	SeCan Members

#### TRITICALE - SPRING

AAC Delight	AAFC (Lethbridge)	Fabian Seeds Ltd.
AC Ultima	AAFC (Swift Current)	FP Genetics
Brevis	AAFC (Swift Current)	Wagon Wheel Seed Corp
Bunker	FCDC (Lacombe)	FP Genetics
Pronghorn	FCDC (Lacombe)	Progressive Seeds
Sunray	AAFC (Lethbridge)	SeedNet Inc.
Taza	FCDC (Lacombe)	Solick Seeds
Tyndal	FCDC (Lacombe)	SeCan Members

#### TRITICALE - WINTER

Bobcat	FCDC (Lacombe)	Corns Brothers Farm
--------	----------------	---------------------



**Three Hills  
& District**  
Seed Cleaning  
Plant Ltd.

*For All Your Seed Cleaning,  
Colour Sorting & Treating Needs*

Manager: Greg Andrews

PO Box 1235,  
Three Hills, AB, T0M 2A0

Toll Free: (866) 443-5464  
Ph: (403) 443-5464  
Fax: (403) 443-5450  
Web: [www.thscp.ca](http://www.thscp.ca)  
[thscp@telusplanet.net](mailto:thscp@telusplanet.net)



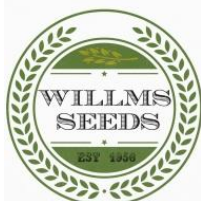
Bill, Brian  
& Craig Knight

R.R. #1 Tees, AB  
T0C 2N0  
(403) 784-3633

CDC Copeland Barley  
CDC Bow Barley  
AC Morgan Oats

## Willms Seeds Ltd.

Pedigreed  
Seed Growers Since 1956



Spring Wheat  
Soft Wheat  
Durum  
Winter Wheat  
Rye  
Flax

Peas  
Lentils  
Chickpeas  
Faba Beans  
Soybeans

Tim Willms 403-634-4155 [willms.seeds@gmail.com](mailto:willms.seeds@gmail.com)  
Grassy Lake, Alberta



*Producing Quality Seed for over 35 years*

CDC Austenson, CDC Coalition, AC Morgan,  
AAC Brandon CWRS, AAC Crossfield CPSR,  
CDC Meadow Peas, AAC Carver Peas



57311 - Highway 44  
Box 138, Busby, AB  
T0G 0H0

Steven Meinczinger 780-307-5049  
Matt Meinczinger 780-349-9515  
email - [meinczingerseedfarms@gmail.com](mailto:meinczingerseedfarms@gmail.com)

Louma	FCDC (Lacombe)	Corns Brothers Farm
Metzger	FCDC (Lacombe)	K3 Seeds

## FLAX

AAC Bravo	AAFC (Morden)	FP Genetics
AAC Bright	AAFC (Morden)	SeCan Members
AAC Marvelous	AAFC (Morden)	FP Genetics
AAC Prairie Sunshine	AAFC (Morden)	SeCan Members
CDC Bethune	U of S - CDC	SeCan Members
CDC Buryu	U of S - CDC	SeCan Members
CDC Dorado	U of S - CDC	SeedNet
CDC Glas	U of S - CDC	SeCan Members
CDC Neela	U of S - CDC	CANTERRA SEEDS
CDC Plava	U of S - CDC	SeCan Members
CDC Rowland	U of S - CDC	SeCan Members
CDC Sanctuary	U of S - CDC	SeCan Members
CDC Sorrel	U of S - CDC	SeCan Members
Prairie Sapphire	AAFC (Morden)	Alliance Seed
Topaz	CPS Canada Inc.	Alliance Seed
VT50	CPS Canada Inc.	Proven Seed/Nutrien Ag Solutions, Inc
WestLin 60	CPS Canada Inc.	Proven Seed/Nutrien Ag Solutions, Inc
WestLin 71	CPS Canada Inc.	Proven Seed/Nutrien Ag Solutions, Inc
WestLin 72	CPS Canada Inc.	Proven Seed/Nutrien Ag Solutions, Inc

## CANADA WESTERN AMBER DURUM

AAC Congress	AAFC (Swift Current)	CANTERRA SEEDS
AAC Grainland	AAFC (Swift Current)	SeCan Members
AAC Raymore	AAFC (Swift Current)	SeCan Members
AAC Spitfire	AAFC (Swift Current)	SeCan Members
AAC Stronghold	AAFC (Swift Current)	SeCan Members
AAC Succeed VB	AAFC (Swift Current)	FP Genetics
AC Navigator	AAFC (Swift Current)	Proven Seed/Nutrien Ag Solutions, Inc
Brigade	AAFC (Swift Current)	Proven Seed/Nutrien Ag Solutions, Inc
CDC Alloy	U of S - CDC	FP Genetics
CDC Carbide VB	U of S - CDC	Proven Seed/Nutrien Ag Solutions, Inc
CDC Credence	U of S - CDC	CANTERRA SEEDS
CDC Dynamic	U of S - CDC	Proven Seed/Nutrien Ag Solutions, Inc
CDC Fortitude	U of S - CDC	Proven Seed/Nutrien Ag Solutions, Inc
CDC Vivid	U of S - CDC	Proven Seed/Nutrien Ag Solutions, Inc
Strongfield	AAFC (Swift Current)	SeCan Members
Transcend	AAFC (Swift Current)	FP Genetics

## CANADA WESTERN RED SPRING

AAC Alida VB	AAFC (Swift Current)	SeCan Members
AAC Brandon	AAFC (Swift Current)	SeCan Members
AAC Cameron VB	AAFC (Brandon)	CANTERRA SEEDS
AAC Connery	AAFC (Swift Current)	CANTERRA SEEDS



**Clifford & Lynda**

Ph: (780) 745-2268  
Fax: (780) 745-2218  
Cell: (780) 808-3300  
E-mail: harbin@telusplanet.net  
www.harbinseed.ca

**Bruce & Joni**

Ph: (780) 745-2462  
Cell: (780) 872-8723

Cereals, Canola, Peas, Forage, Grass

## TONY CROOYMANS & SONS

Pedigreed Seed



www.CrooymansandSons.com

Box 1124, Bow Island  
Alberta, T0K 0G0

**Durum:** AAC Spitfire, CDC Precision, AAC Congress, AAC Stronghold  
**HRSW:** CDC Go, AAC Brandon, AAC Connery, AAC Viewfield, Rednet, AAC Starbuck VB and AAC Wheatland VB  
**HRWW:** AAC Wildfire  
**SWSW:** AC Sadash VB  
**Barley:** CDC Austenson  
**Flax:** CDC Glas  
**Peas:** CDC Inca, AAC Chrome

\* We can source other varieties \*

Dealers for:

**Dekalb:** Canola, Corn, Soybeans  
**Pickseed:** Alfalfa, Grasses, Forages, Corn  
**Canterra Seeds:** Cereals, Pulses, Canola, Inoculants

403-580-7264 403-545-6333(shop) 403-545-6509 403-545-6206



**David & Lori Webb**  
**Harold & Jan King**  
RR2, Three Hills, AB  
T0M 2A0

Fax (403) 443-7992  
David Cell (403) 443-3333  
Harold Cell (403) 443-0005  
Email: kingsseedfarm@gmail.com

## WILDEMAN SEED FARMS

Specializing in

- Amisk 6-row seed
- AAC Brandon Wheat
- AC Morgan Milling Oats
- CDC Spectrum Peas



**Russell Wildeman • Clive, AB • 403-470-8528**

AAC Elie	AAFC (Swift Current)	Alliance Seed
AAC Jatharia VB	AAFC (Winnipeg)	SeCan Members
AAC LeRoy VB	AAFC (Brandon)	Alliance Seed
AAC Magnet	AAFC (Brandon)	FP Genetics
AAC Pervail VB	AAFC (Winnipeg)	Alliance Seed
AAC Redberry	AAFC (Swift Current)	Alliance Seed
AAC Redwater	AAFC (Winnipeg)	SeCan Members
AAC Starbuck VB	AAFC (Swift Current)	SeCan Members
AAC Tisdale	AAFC (Swift Current)	SeCan Members
AAC Viewfield	AAFC (Swift Current)	FP Genetics
AAC Warman VB	AAFC (Brandon)	SeCan Members
AAC Wheatland VB	AAFC (Swift Current)	SeCan Members
Carberry	AAFC (Swift Current)	SeCan Members
Cardale	AAFC (Winnipeg)	Seed Depot
Coleman	U of Alberta	Lefsrud Seed
CDC Abound	U of S - CDC	Proven Seed/Nutrien Ag Solutions, Inc
CDC Adamant VB	U of S - CDC	FP Genetics
CDC Bradwell	U of S - CDC	SeCan Members
CDC Go	U of S - CDC	Public release U of S - CDC
CDC Hughes VB	U of S - CDC	Proven Seed/Nutrien Ag Solutions, Inc
CDC Landmark VB	U of S - CDC	FP Genetics
CDC Ortona	U of S - CDC	Proven Seed/Nutrien Ag Solutions, Inc
CDC Plentiful	U of S - CDC	FP Genetics

CDC Stanley	U of S - CDC	Proven Seed/Nutrien Ag Solutions, Inc
CDC Titanium VB	U of S - CDC	Proven Seed/Nutrien Ag Solutions, Inc
CDC Utmost VB	U of S - CDC	FP Genetics
CDC VR Morris	U of S - CDC	Proven Seed/Nutrien Ag Solutions, Inc
Glenn	NDSU	CANTERRA SEEDS
Go Early	U of Alberta	Mastin Seeds
Jake	U of Alberta	CANTERRA SEEDS
Parata	U of Alberta	SeCan Members
Muchmore	AAFC (Swift Current)	FP Genetics
Shaw VB	AAFC (Winnipeg)	SeCan Members
Stettler	AAFC (Swift Current)	SeCan Members
Superb	AAFC (Winnipeg)	SeCan Members
SY Gabbro	Syngenta Seeds Canada Inc.	Syngenta Canada
SY Chert VB	Syngenta Seeds Canada Inc.	Syngenta Canada
SY Obsidian	Syngenta Seeds Canada Inc.	Richardson Intl
SY Slate	Syngenta Seeds Canada Inc.	Syngenta Canada
SY Sovite	Syngenta Seeds Canada Inc.	Syngenta Canada
SY Torach	Syngenta Seeds Canada Inc.	Alliance Seed
Thorsby	U of Alberta	CANTERRA SEEDS
Tracker	U of Alberta	CANTERRA SEEDS

# WARBURG SEED CLEANING CO-OP LTD.



- Cleaning services for cereals, oilseeds and forage seed
- Treating available for cereals and oilseeds
- Optical sorting now available

## PEDIGREED SEED AVAILABLE

- Wheat:** AAC Brandon, AAC Connery, AAC Penhold, AAC Crossfield, AAC Goodwin, CS Accelerate, Ellerslie, AAC Ryley
- Barley:** Canmore, ACC Connect, CDC Hilose, CDC Clear, CDC Austenson
- Oats:** CS Camden, ORe 3542M, AC Morgan
- Peas:** CDC Amarillo, CDC Limerick, AAC Carver, CDC Meadow, CDC Canary



**Drop off point for Seed Check Technologies.**  
Retailers for: **Proven Seed, Inland Plastics, Union Forage, Powerrich.**



PH/FAX: **780-848-2365** MANAGER: **Tom Luethi** Box 60, Warburg, Alberta T0C 2T0 [warburgseed.com](http://warburgseed.com)

### CANADA WESTERN HARD WHITE SPRING

AAC Cirrus	AAFC (Swift Current)	FP Genetics
AAC Iceberg	AAFC (Winnipeg)	Alliance Seed
CDC Whitewood	U of S - CDC	SeCan Members
Snowbird	AAFC (Winnipeg)	FP Genetics
Whitehawk	AAFC (Winnipeg)	SeCan Members

### CANADA PRAIRIE SPRING RED

5700PR	Syngenta Seeds Canada Inc.	Proven Seed/Nutrien Ag Solutions, Inc
AAC Crossfield	AAFC (Winnipeg)	CANTERRA SEEDS
AAC Entice	AAFC (Winnipeg)	Proven Seed/Nutrien Ag Solutions, Inc
AAC Foray VB	AAFC (Winnipeg)	SeCan Members
AAC Goodwin	AAFC (Swift Current)	SeCan Members
AAC Penhold	AAFC (Swift Current)	SeCan Members
AAC Ryley	AAFC (Swift Current)	SeCan Members
CDC Terrain	U of S - CDC	FP Genetics
SY Rowyn	Syngenta Seeds Canada Inc.	Alliance Seed

### CANADA WESTERN SPECIAL PURPOSE

AAC Awesome VB	AAFC (Lethbridge)	SeCan Members
AAC Innova	AAFC (Lethbridge)	Alliance Seed
Alderon	KWS-UK	SeCan Members
Pasteur	Wiersum Plant Breeding	SeCan Members
Sparrow VB	KWS-UK	SeCan Members

### CANADA WESTERN SOFT WHITE SPRING

AAC Chiffon VB	AAFC (Lethbridge)	SeedNet Inc.
AAC Indus VB	AAFC (Lethbridge)	SeCan Members
AAC Paramount VB	AAFC (Lethbridge)	SeCan Members
AC Andrew	AAFC (Lethbridge)	SeCan Members
Sadash VB	AAFC (Lethbridge)	SeCan Members

### CANADA NORTHERN HARD RED

AAC Concord	AAFC (Swift Current)	CANTERRA SEEDS
AC Foremost	AAFC (Swift Current)	SeCan Members
Elgin ND	NDSU	FP Genetics
Harvest	AAFC (Winnipeg)	FP Genetics

### CANADA WESTERN RED WINTER

AAC Elevate	AAFC (Lethbridge)	SeCan Members
AAC Gateway	AAFC (Lethbridge)	Seed Depot
AAC Goldrush	AAFC (Lethbridge)	FP Genetics
AAC Wildfire	AAFC (Lethbridge)	SeCan Members
CDC Buteo	U of S - CDC	SeCan Members
Emerson	AAFC (Lethbridge)	CANTERRA SEEDS
Moats	U of S - CDC	SeCan Members
Radiant	AAFC (Lethbridge)	CANTERRA SEEDS

### CANADA WESTERN EXPERIMENTAL WINTER WHEAT

AAC Icefield	AAFC (Lethbridge)	FP Genetics
--------------	-------------------	-------------

### CANADA WESTERN SPECIAL PURPOSE WINTER WHEAT

Pintail	FCDC (Lacombe)	Maxtin Seeds
---------	----------------	--------------



## We work for You

Knowing your seed quality is the key to unlocking it's potential. Our team is dedicated to making that happen. 20/20's seed testing services give our clients the resources they need to make the best decisions possible.

Call us today at **1.877.420.2099** or visit **2020seedlabs.ca** to learn more.



# CANADA WESTERN RED SPRING

Variety	Overall Station Years of Testing	Yield Category (% Carberry):				Agronomic Characteristics:								Disease Tolerance:					
		Overall Yield	Low < 55 (bu/ac)	Medium 55 – 80 (bu/ac)	High > 80 (bu/ac)	Mat. Rating (Days +/- of Carberry)	Pro-tein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to:		Loose Smut <sup>†</sup>	Bunt	Stripe Rust	Leaf Spots	FHB	
												Ldg.	Sprt.						
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to Carberry)																			
Carberry (bu/ac)		70	45	65	95														
Carberry 🌾	126	100	100	100	100	104	13.9	63	40	84	Y	VG	F	MR	R	MR	MS	MR	
AAC Alida VB 🌾	45	101	98	103	99	0	0	63	41	88	Y	G	VG	R	I	MR	MS	MR	
AAC Brandon 🌾	35	105	XX	103	107	0	-0.3	63	41	85	Y	G	P	MR	S	MR	I	MR	
AAC Jatharia VB 🌾	45	106	96	110	105	0	-0.2	64	43	96	Y	F	G	S	MS	I	I	I	
AAC LeRoy VB 🌾	31	105	XX	106	105	0	-0.5	63	41	89	Y	G	G	XX	I	MR	MS	MR	
AAC Magnet 🌾	31	97	XX	99	97	-2	0.2	62	42	87	Y	G	F	XX	S	I	MS	MR	
AAC Starbuck VB 🌾	31	106	XX	106	108	0	-0.4	62	41	86	Y	G	F	MR	S	MR	S	MR	
AAC Viewfield 🌾	73	110	108	108	113	0	-0.4	64	40	80	Y	VG	G	S	MR	R	I	I	
AAC Warman VB 🌾	31	98	XX	97	99	-1	-0.3	62	40	97	Y	G	F	MR	S	MS	I	MR	
AAC Wheatland VB 🌾	31	107	XX	105	109	0	-0.5	63	41	85	Y	VG	G	R	MR	I	S	I	
CDC Go	73	102	95	104	104	-1	-0.3	62	44	85	Y	G	P	MS	I	MS	S	MS	
CDC Landmark VB 🌾	59	106	100	106	107	-1	-0.1	63	43	86	Y	G	G	MR	MS	MR	I	I	
CDC Ortona 🌾	31	105	XX	105	106	-1	-0.7	63	36	91	N	VG	G	XX	S	R	XX	MS	
Jake 🌾	31	99	XX	96	102	-3	0.6	63	38	91	Y	G	XX	XX	MR	R	XX	I	
Parata 🌾	45	94	90	94	96	-4	0.8	63	39	89	Y	F	F	MR	S	MR	I	I	
Stettler 🌾	96	105	104	105	104	0	0.2	63	39	90	Y	G	G	R	MR	I	MS	I	
SY Chert VB 🌾	45	102	94	105	102	0	-0.2	63	40	90	Y	F	F	R	R	R	MS	MS	
SY Gabbro 🌾	31	107	XX	105	108	-1	-0.2	62	43	90	Y	VG	F	R	I	I	MS	I	
SY Obsidian 🌾	45	101	97	103	100	-1	-0.2	63	41	86	Y	VG	F	R	MS	MR	I	MR	
SY Torach 🌾	31	98	XX	98	99	-1	0.4	62	37	85	Y	VG	F	R	MS	MS	MS	MS	
Tracker 🌾	31	101	XX	103	103	-3	0.2	62	36	90	N	F	G	XX	S	R	XX	MR	
Previously tested varieties																			
Carberry 🌾		100	100	100	100	104	14.0	63	39	79	Y	VG	F	MR	R	MR	MS	MR	
AAC Cameron VB 🌾	42	109	100	118	107	-1	-0.6	62	44	94	Y	G	F	S	R	S	I	I	
AAC Connery 🌾	42	99	93	103	102	-1	0	0	40	81	N	VG	G	MR	I	R	I	MR	
AAC Elie 🌾	41	107	104	113	105	0	-0.1	64	38	81	Y	G	F	I	I	MR	I	I	
AAC Prevail <sup>†</sup> 🌾	42	99	94	103	102	0	-0.6	0	39	96	Y	G	G	S	S	R	MS	I	
AAC Redberry 🌾	42	101	98	105	99	-3	-0.1	63	41	84	Y	G	G	R	I	R	MS	I	
AAC Redwater* 🌾	41	96	91	101	98	-3	0	64	35	87	Y	G	VG	MS	I	MR	MS	I	
AAC Tisdale 🌾	45	101	100	101	102	-1	0.4	63	42	88	Y	F	F	MR	MR	S	MS	MR	
Cardale <sup>†</sup> 🌾	41	98	95	100	98	-1	-0.3	63	37	84	Y	G	G	I	S	MS	MS	MR	
Coleman	43	94	88	99	93	-3	0	64	37	93	Y	F	P	S	S	MR	I	MR	
CDC Abound 🌾	88	103	99	107	105	-1	-0.1	63	40	82	Y	G	F	I	I	MS	MS	S	
CDC Adamant VB	45	104	97	106	104	-1	-0.1	63	39	83	Y	P	F	S	S	MS	MS	I	
CDC Bradwell	42	101	97	105	101	0	-0.3	63	38	84	Y	VG	F	MR	R	MS	MS	I	
CDC Hughes VB	45	103	102	103	103	-1	0	63	44	83	Y	G	G	MR	MS	I	I	I	
CDC VR Morris <sup>†</sup> 🌾	41	102	97	107	100	-2	-1.0	65	37	84	N	G	P	I	I	XX	I	MR	
CDC Plentiful 🌾	41	99	95	104	99	-2	-0.2	64	35	87	N	VG	P	R	I	MR	I	MR	
CDC Stanley 🌾	76	106	103	109	107	-1	-0.8	63	34	87	N	G	G	MR	S	I	I	MS	
CDC Titanium VB 🌾	41	101	99	106	96	-2	0.5	65	41	87	Y	G	P	MS	I	R	MS	MR	
CDC Utmost VB 🌾	53	105	105	105	107	-2	-0.2	64	36	85	N	G	G	MS	S	I	I	MS	
Glenn 🌾	61	97	96	96	101	-1	-0.2	65	36	85	Y	VG	F	I	I	MR	I	I	
Go Early 🌾	42	97	93	103	95	-4	0.3	0	40	93	Y	G	P	I	MR	I	S	I	
Muchmore* 🌾	53	103	104	102	107	0	-0.9	63	37	75	Y	VG	G	MR	R	MR	MS	MS	
Shaw VB <sup>†</sup> 🌾	53	105	104	105	107	-1	-0.9	63	37	92	N	G	G	S	MR	I	MS	MS	
Superb <sup>†</sup> 🌾	184	105	101	109	109	0	-0.4	62	42	85	Y	G	F	I	MR	S	S	MS	
SY Slate 🌾	42	101	98	106	99	-1	0.2	62	41	85	Y	F	P	MS	S	MR	MS	I	
SY Sovite 🌾	45	97	98	100	95	0	0.2	62	43	89	Y	F	F	R	MS	R	MR	MR	
Thorsby 🌾	43	99	90	106	99	-2	-0.5	64	38	89	N	G	F	I	S	R	MS	I	

**Remarks:** For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. \* Effective August 1, 2021 the Canadian Grain Commission will designate AAC Redwater and Muchmore to the CNHR wheat class. For more information see the Canadian Grain Commission website [www.grainscanada.gc.ca](http://www.grainscanada.gc.ca). Fusarium Head Blight (FHB) infection is highly influenced by the environment and heading date. Under high levels of FHB all varieties will sustain damage. Moderately Resistant (MR) and Resistant (R) ratings for FHB do not equate to immunity. Varieties rated Intermediate (I) to Susceptible (S) for loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for infection. CDC Adamant VB has a solid stem that confers resistance to the wheat stem sawfly. CDC Landmark VB and CDC Hughes VB have a semi-solid stem. 5604HR CL, 5605HR CL, CDC Abound, CDC Imagine, CDC Thrive and WR589 CL are tolerant to the CLEARFIELD® herbicides Adrenalin SC and Altitude FX. VB - designates a varietal blend to preserve the Sm1 orange wheat blossom midge tolerance gene. New CWRS registrations: Bolles, AAC Broadacres (BW5028), AAC Russell (PT252), BW1064, BW5031, Daybreak (BW5056), CS11200104-11, CS11200214-17, Ellerslie (PT784), PT598, PT652, Rednet (PT783); insufficient data to describe: Bolles, AAC Broadacres, AAC Russell, BW1064, BW5031, Daybreak (BW5056), PT598, PT652, Rednet. XX - Insufficient data to describe. † - Flagged for possible removal in 2021.

## WHEAT - CWRS

## AAC BRANDON

## BI: AAFC (Swift Current), DIST: SeCan Members

	S	F	R	C
Airth, Jock & Linda / Brooks / (403) 362-4372				C
Alect Seeds / Three Hills / (403) 443-9599			R	C
Amyotte, Phillip / Mallaig / (780) 635-4010				C
Archer, Nathan / Didsbury / (403) 556-0693			R	
Assure Seeds Ltd. / Acme / (403) 510-9260				C
Baier, Bill & Dean / Clyde / (780) 348-5791				C
Beamish, Dale / Jarvie / (780) 954-2166				C
Benci, Dennis / Carmangay / (403) 643-2294	S			C
Brummelhuis, Mitchell & Mack / Vauxhall / (403) 654-7515			R	C
Cailliau, Cecile Dana & Dave / Enchant / (587) 813-0312				C
Carlson, David / Gwynne / (780) 352-6871				C
Catherwood, James / Calgary / (403) 836-9699			R	
Chin Ridge Seeds Ltd. / Taber / (403) 223-3900				C
Clark, Todd / Edmonton / (780) 499-5060				C
Croymans, John, Joseph & Andrew / Bow Island / (403) 545-6333			R	
Cyre, Clifford & Greg / Barrhead / (780) 307-4332				C
Davidson, E. Daryl & Dean / Kitscoty / (780) 846-2456			R	
Dyck, Ernie / La Crete / (780) 821-9445				C
Dyck, Heinz W., Colin, Alan & Kelton / Rosemary / (403) 378-3321	S	F	R	
Ellis, Brian / Olds / (403) 556-2890				C
Fabian, Patrick V. / Tilley / (403) 377-2000			R	
Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036				C
Goldstrom, David / Red Deer County / (403) 227-2133				C
Good, Kevin / Carstairs / (403) 852-2389				C
Goode, Tim / Lacombe / (403) 506-9424			R	
Hadway, W. Tom & Carol / Didsbury / (403) 335-4929				C
Harbin, Clifford T. & Bruce Clifford / Rivercourse / (780) 745-2268				C
Hierath, Michael Wayne / Milk River / (403) 647-2347				C
Hoff, Peter Edward / Gleichen / (403) 734-2140				C
Huvenaars, Carl / Hays / (403) 725-2213		F		C
Kapitski, Lawrence / Andrew / (780) 365-2134				C
Kemp, Richard L. / Red Deer County / (403) 227-4836			R	
King's Seed Farm / Three Hills / (403) 443-3333			R	
Kittle, James William & Andrew / Viking / (780) 336-2583				C
Klapstein, Dallas / Calmar / (780) 819-4993				C
Klassen, Ethan / Coaldale / (403) 345-3770			R	
Konieczny, Scott / Mannville / (780) 581-5693				C
Kopjar, Gerald M. / Rowley / (403) 368-2409		F	R	
Lessing, Timothy / Millet / (780) 387-6373				C
Limoges, Richard / McLennan / (780) 324-2335				C
Lindholm Seed Farm / New Norway / (780) 352-3240				C
Lindholm, Luke & Stevan / Camrose / (780) 781-6077				C
LS Land & Cattle / Didsbury / (403) 335-3694				C
Massey, Derwin & Kirby / Stettler / (403) 883-2503				C
Meinczinger, Matthew Jr. / Busby / (780) 349-2456				C
Metzger, Marty / Carbon / (403) 572-3284				C
Miller, Brian / Barrhead / (780) 674-5001				C
Mracek, Stan John / Dawson Creek / (250) 782-0220				C
Mueller, Darcy / Three Hills / (403) 820-4115				C
Nemetz, Charlie, Jerritt & Lewis / Stettler / (403) 742-0436				C
Nikkel, Ed & Darren / Lethbridge / (403) 312-4070				C
Pare, Raymond A. / Wainwright / (780) 842-2073	S		R	
Penwest Seeds / Three Hills / (403) 443-2577			R*	
Pepneck, David / Vauxhall / (403) 424-0096				C
Prestville Farms Ltd. / Rycroft / (780) 814-2849			R	
Rasmuson, Dennis G. & Cory Dean / Gwynne / (780) 312-1148		F		C
Richard, Gerald / Spirit River / (780) 864-2339				C
Rix, Graham / Wetaskiwin / (780) 360-9234				C
Sand, Ron W. & David R. / McLaughlin / (780) 745-2251				C
Sayer, Roger / Carstairs / (403) 337-5847				C
Sekulic, Warren, F / Rycroft / (780) 765-2234				C
Sendziak Seed Farm / Edmonton / (780) 434-1322				C
Solick Seeds Ltd. / Halkirk / (403) 884-2358			R	
Specialty Seeds / Bow Island / (403) 545-6018			R	
St. Paul Municipal Seed Cleaning Plant / St. Paul / (780) 645-3939				C
Stamp Seeds / Enchant / (403) 739-2233				C
Strathmore Seed Cleaning Plant / Strathmore / (403) 934-3421				C
Thompson, M. Ellwood & Kelly / Red Deer County / (403) 728-3535				C
Victoor, Rene & Jamie / Sturgeon County / (780) 459-3253			R	
Wagner, Terry & Loree / Lacombe / (403) 782-2107			R	
Webber, Curtis / Parkland County / (780) 963-6897			R	
Wildeman, Russell / Clive / (403) 784-3695				C
Willms, Timothy H. / Grassy Lake / (403) 655-2434	S			
Wood, Robert & Patricia & Marshall / Bowden / (403) 588-3548			R	
Zwack, Bryan / Daysland / (780) 608-9426			R	
Zwack, Thomas / Daysland / (780) 374-2450				C

## AAC CONNERY

## BI: AAFC (Swift Current), DIST: Canterra Seeds

Beaulieu, Emery / Fairview / (780) 835-8525				C
Boisvert, Marc / Girouxville / (780) 618-4724				C
Cross, Douglas / Westlock / (780) 349-2587				C
Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036	S			C
Goode, Tim / Lacombe / (403) 506-9424				C
Hallett's Hay & Seed / Carstairs / (403) 337-3072			R*	C*
Lindholm Seed Farm / New Norway / (780) 352-3240			R	
Plante, Jacques / St. Paul / (780) 645-4604				C
Prestville Farms Ltd. / Rycroft / (780) 814-2849			R	
Raaen, Sylvan / Rolla / (250) 759-4778				C
Rix, Graham / Wetaskiwin / (780) 360-9234				C
Sendziak Seed Farm / Edmonton / (780) 434-1322			R	
Solick Seeds Ltd. / Halkirk / (403) 884-2358				C*
Victoor, Rene & Jamie / Sturgeon County / (780) 459-3253			R	

## AAC ELIE

## BI: AAFC (Swift Current), DIST: Alliance Seed

Ellis, Brian / Olds / (403) 556-2890			R*	C*
Holmstrom, Darrell / Killam / (780) 385-3574				C
Howard, Fred / Wanham / (780) 694-2427			R	
King's Seed Farm / Three Hills / (403) 443-3333	S		R	
Konieczny, Scott / Mannville / (780) 581-5693				C
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736				C*
Sim, Darwin & Derek / Ponoka / (780) 372-2111			R	
Specialty Seeds / Bow Island / (403) 545-6018				C
Stamp Seeds / Enchant / (403) 739-2233		F		
Wheatcrest Farms / Lomond / (403) 792-3696				C
Wood, James / Elnora / (403) 596-4189			R	

## AAC REDBERRY

## BI: AAFC (Swift Current), DIST: Alliance Seed

Alect Seeds / Three Hills / (403) 443-9599			R	C
Alliance Seed Corporation / Winnipeg / (204) 272-2890			R	
Dargis, Richard / St. Vincent / (780) 635-2333			R	
Ellis, Brian / Olds / (403) 556-2890			R*	C
Herzog, Blair / Delia / (403) 857-9596				C
Hierath, Michael Wayne / Milk River / (403) 647-2347		F	R	
Hierath, Philip / Milk River / (403) 647-2281				C
Holmstrom, Darrell / Killam / (780) 385-3574			R	
Howard, Fred / Wanham / (780) 694-2427				C
Konieczny, Scott / Mannville / (780) 581-5693			R	
Lopushinsky, Julian / Bruderheim / (780) 796-2048			R	
McDonald, Gerald / Co. Of Grande Prairie #11 / (780) 538-3868			R	
Pare, Raymond A. / Wainwright / (780) 842-2073	S	F	R	
Penwest Seeds / Three Hills / (403) 443-2577				C
Richard, Gerald / Spirit River / (780) 864-2339				C
Selte, Donald / Vermilion / (780) 853-2484			R	
Sich, Ivan & Martin & Livia / Three Hills / (403) 443-8402			R	
Stamp Seeds / Enchant / (403) 739-2233				C
True Seeds / Redwater / (780) 777-5885			R	C*
Wood, James / Elnora / (403) 596-4189			R	

## AAC REDWATER

## BI: AAFC (Swift Current), DIST: SeCan Members

Alect Seeds / Three Hills / (403) 443-9599				C
Hallett's Hay & Seed / Carstairs / (403) 337-3072				C*
Hegland, David Olaf / Wembley / (780) 766-2450				C
Trueblood, Brian G. / Dapp / (780) 954-3745				C
Webber, Curtis / Parkland County / (780) 963-6897				C

## AAC TISDALE

## BI: AAFC (Swift Current), DIST: SeCan Members

Amyotte, Phillip / Mallaig / (780) 635-4010			R	
Hill, Gordon P. & Blair / Taylor / (250) 789-3469	S		R	C



## MERCER SEEDS LTD.

Spring Wheat: AAC Viewfield, AAC Elie, CDC Bradwell

Winter Wheat: AAC Elevate, AAC Gateway

Durum: CDC Precision, AAC Congress, CDC Credence

Barley: Canmore, CDC Austenson, CDC Copeland

Flax: WestLin 71 Brown, CDC Dorado Yellow

Peas: AAC Chrome, CDC Inca, Garde Green

Mustard: Andante Yellow, Adagio Yellow, Centennial Brown, AAC Hybrid Brown 18, Cutlass Oriental, Vulcan Oriental and Forage Oriental

Hemp: Grandi, Finola

To serve you better, we now have a state-of-the-art seed treater on-site.

Ryan Mercer

1905035 TWP Rd 72

Lethbridge County, AB T1K 8G9

P: 403-327-9736

C: 403-308-2297

E: rmercerc@mercarseeds.ca

[illegible]

# CANADA WESTERN HARD WHITE SPRING

Variety	Overall Station Years of Testing	Yield Category (% Carberry):				Agronomic Characteristics:								Disease Tolerance:				
		Overall Yield	Low < 55 (bu/ ac)	Medium 55 – 80 (bu/ac)	High > 80 (bu/ ac)	Mat. Rating (Days +/- Car- berry)	Pro- tein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to:		Loose Smut +	Bunt	Stripe Rust	Leaf Spots	FHB
												Ldg.	Sprt.					
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to Carberry)																		
Carberry (bu/ac) ☼	70	45	65	95														
Carberry	126	100	100	100	100	104	13.9	63	40	80	Y	VG	F	MR	R	MR	MS	MR
AAC Cirrus ☾	45	101	93	101	103	-1	0.1	63	36	86	Y	VG	F	MR	I	R	R	I
Previously tested varieties																		
Carberry ☼	100	100	100	100	104	14.0	63	39	79	Y	VG	F	MR	R	MR	MS	MR	
AAC Iceberg ☾	39	97	92	101	102	-1	-0.7	64	39	86	Y	G	P	MS	I	MR	MS	I
CDC Whitewood +	43	100	95	106	96	-1	-0.9	64	38	87	Y	G	G	S	S	I	MS	I
Snowbird ☼	94	94	91	97	94	-1	-0.2	62	36	89	N	G	G	MR	MS	MS	S	I
Whitehawk ☼	42	100	99	101	100	-2	-0.9	63	33	90	N	G	G	I	MS	MS	MS	I

**Remarks:** For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. Fusarium Head Blight (FHB) infection is highly influenced by the environment and heading date. Under high levels of FHB all varieties will sustain damage. Moderately Resistant (MR) and Resistant (R) ratings for FHB do not equate to immunity. Varieties rated Intermediate (I) to Susceptible (S) for loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for infection. XX - Insufficient data to describe. + - Flagged for possible removal in 2021.

# CANADA PRAIRIE SPRING RED

Variety	Overall Station Years of Testing	Yield Category (% Carberry):				Agronomic Characteristics:								Disease Tolerance:					
		Overall Yield	Low < 55 (bu/ ac)	Medium 55 - 80 (bu/ac)	High > 80 (bu/ ac)	Maturity Rating (Days +/- Car- berry)	Pro- tein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to:		Loose Smut <sup>+</sup>	Bunt	Stripe Rust	Leaf Spots	FHB	
												Ldg.	Sprt.						
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to Carberry)																			
Carberry (bu/ac)	73	41	63	93															
Carberry ☼	76	100	100	100	100	104	13.8	63	40	79	Y	VG	F	MR	R	MR	MS	MR	
AAC Penhold ☽	63	112	108	112	114	-2	-1	63	44	73	Y	VG	G	I	R	MR	I	MR	
CDC Terrain ☽	63	114	117	114	114	0	-1.3	61	44	87	Y	G	G	MR	MR	R	I	MS	
Previously tested varieties																			
Carberry ☼	100	100	100	100	0	13.9	63	40	79	Y	VG	F	MR	R	MR	MS	MR		
5700PR ☼	117	110	108	113	109	-1	-1.8	62	42	75	Y	VG	F	MS	R	MS	MS	MS	
AAC Crossfield ☽	43	115	115	113	118	-1	-1.1	62	42	80	Y	G	P	MS	I	R	I	I	
AAC Entice ☽	47	108	102	108	111	-1	-0.7	62	41	78	Y	G	P	MS	S	R	MS	I	
AAC Foray VB ☽	41	121	117	123	123	0	-1.6	63	51	85	Y	G	G	MS	I	MR	MS	I	
AAC Goodwin ☽	48	115	112	116	117	-1	-0.5	63	41	83	Y	VG	G	MS	MS	R	I	I	
AAC Ryley <sup>†</sup> ☼	37	111	108	112	110	-1	-0.5	60	48	82	Y	G	G	I	R	S	MS	MS	
SY Rowyn ☽	47	106	102	109	105	-1	-0.9	62	36	77	Y	G	F	I	S	MR	I	MR	

**Remarks:** For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. Several CPSR varieties will be reclassified to the CNHR wheat class. AC Foremost, AC Taber, Conquer and Oslo were reclassified on August 1, 2018 and AC Crystal was reclassified on August 1, 2019. For more information see the Canadian Grain Commission website [www.grainscanada.gc.ca](http://www.grainscanada.gc.ca). Fusarium Head Blight (FHB) infection is highly influenced by the environment and heading date. Under high levels of FHB all varieties will sustain damage. Moderately Resistant (MR) and Resistant (R) ratings for FHB do not equate to immunity. Varieties rated Intermediate (I) to Susceptible (S) for loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for infection. VB - designates a varietal blend to preserve the Sm1 orange wheat blossom midge tolerance gene. New CPSR registrations: Accelerate (HY2077) and HY2068. Insufficient data to describe: AAC Castle VB, Accelerate and HY2068. XX - Insufficient data to describe. + - Flagged for possible removal in 2021.



AAC Penhold CPS Wheat, CDC Austenson Barley,  
CDC Inca Peas, Parata Wheat,  
and CDC Fraser Malt Barley

Proud member of



**WARD OATWAY**  
RR#1, Clive, AB T0C 0Y0  
CELL: 403-318-9026 HOME: 403-784-3001  
TWITTER: @WOatway  
oatwaysseedfarm@yahoo.ca

**LEFSRUD SEED and PROCESSORS LTD.**  
**KEVIN, KYLA, ED & ELLEN LEFSRUD**

**Certified, Registered and Foundation Seed  
Cleaning and Treating**



R.R. #1 Viking, Alberta  
Tel & Fax (780) 336-2500  
or (780) 336-2588  
Cell: 336-5700 Kevin | 336-6700 Ed  
E-mail: [lefsrud@telusplanet.net](mailto:lefsrud@telusplanet.net)  
[www.telusplanet.net/public/lefsrud](http://www.telusplanet.net/public/lefsrud)

## WHEAT - CWHWS

### AAC ICEBERG

**BI: AAFC, DIST: Alliance Seed**

Mercer Seeds Ltd. / Lethbridge / (403) 327-9736  
Stamp Seeds / Enchant / (403) 739-2233

### AC Whitehawk

**BI: AAFC (Winnipeg), DIST: SeCan Members**

Mercer Seeds Ltd. / Lethbridge / (403) 327-9736

## WHEAT - CPSR

### 5700PR

**BI: Syngenta Canada, DIST: Nutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / High River / (403) 603-6011  
Rasmussen, Brian Dale & Joel Trevor / Standard / (403) 644-3800

### AAC CROSSFIELD

**BI: AAFC (Winnipeg), DIST: Canterra Seeds**

Cyre, Clifford & Greg / Barrhead / (780) 307-4332  
Ellis, Brian / Olds / (403) 556-2890  
Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036  
Goode, Tim / Lacombe / (403) 506-9424  
LS Land & Cattle / Didsbury / (403) 335-3694  
Meinczinger, Matthew Jr. / Busby / (780) 349-2456  
Penwest Seeds / Three Hills / (403) 443-2577  
Prestville Farms Ltd. / Rycroft / (780) 814-2849  
Rasmussen, Brian Dale & Joel Trevor / Standard / (403) 644-3800  
Rix, Graham / Wetaskiwin / (780) 360-9234  
Sendziak Seed Farm / Edmonton / (780) 434-1322

### AAC ENTICE

**BI: AAFC (Winnipeg), DIST: Nutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / High River / (403) 603-6011

### AAC GOODWIN

**BI: AAFC (Swift Current), DIST: SeCan Members**

Benci, Dennis / Carmangay / (403) 643-2294  
Cyre, Clifford & Greg / Barrhead / (780) 307-4332  
Ellis, Brian / Olds / (403) 556-2890  
Forward Seed Farm / County Of Barrhead / (780) 674-3822  
Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036

Gibson, Donald / Sangudo / (780) 785-2214  
Klapstein, Dallas / Calmar / (780) 819-4993  
LS Land & Cattle / Didsbury / (403) 335-3694  
Miller, Brian / Barrhead / (780) 674-5001  
Nikkel, Ed & Darren / Lethbridge / (403) 312-4070  
Ohrn, Norman / Thorsby / (780) 985-2263  
Reiman, Kyle / Wanham / (780) 897-3320  
St. Paul Municipal Seed Cleaning Plant / St. Paul / (780) 645-3939  
Victoor, Jesse / Sturgeon County / (780) 459-3253

### AAC PENHOLD

**BI: AAFC (Swift Current), DIST: SeCan Members**

Amyotte, Phillip / Mallaig / (780) 635-4010  
Baier, Bill & Dean / Clyde / (780) 348-5791  
Beamish, Dale / Jarvie / (780) 954-2166  
Bright, David / New Norway / (780) 855-2240  
Clark, Todd / Edmonton / (780) 499-5060  
Dallas, Bradley C. / Bowden / (403) 224-2162  
Davidson, E. Daryl & Dean / Kitscoty / (780) 846-2456  
Dewindt, Harry & Hoyme, Renee / Thorhild / (780) 398-2377  
Diachyshyn, Mike / Waskatenau / (780) 691-7104  
Ellis, Brian / Olds / (403) 556-2890  
Felstad, Colin / Dapp / (780) 349-9505  
Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036  
Goldstrom, David / Red Deer County / (403) 227-2133  
Hadland, Edward / Baldonnel / (250) 793-9746  
Hadway, W. Tom & Carol / Didsbury / (403) 335-4929  
Harbin, Clifford T. & Bruce Clifford / Rivercourse / (780) 745-2268  
Hundeby, Arron / Wetaskiwin / (780) 335-5111  
Jackson, Thomas / Killam / (780) 385-2332  
Jones, Greg Thomas & Tristan / Ponoka / (403) 783-6495  
Kemp, Richard L. / Red Deer County / (403) 227-4836  
Lawrence, Cody / Wainwright / (780) 842-0285  
Limoges, Richard / McLennan / (780) 324-2335  
Lindholm Seed Farm / New Norway / (780) 352-3240  
Lindholm, Luke & Stevan / Camrose / (780) 781-6077  
LS Land & Cattle / Didsbury / (403) 335-3694  
Macy, Tim / Radway / (780) 699-4073  
Mueller, Richard J. & R. R. & Rosemary / Barrhead / (780) 674-6713  
Nisbet, Andrew E. & Diane E. / Mountain View County / (403) 224-3788  
Oatway Seed Farm / Clive / (403) 784-3001



**SEEDCHECK TECHNOLOGIES INC.**

Seed testing experts in purity, germination, vigour and seed health.

**YOUR SEED LAB**

1-866-980-8324 OFFICE@SEEDCHECK.NET SEEDCHECK.NET LIKE US ON 

Ohrn, Norman / Thorsby / (780) 985-2263	S	F		C
Pare, Raymond A. / Wainwright / (780) 842-2073				R
Radke, Bryan Victor / Barrhead / (780) 674-5715			R	C
Sand, Ron W. & David R. / McLaughlin / (780) 745-2251				C
Sayer, Roger / Carstairs / (403) 337-5847				R
Schermund, Donnie / Sturgeon County / (780) 967-2850			R	C
Sendziak Seed Farm / Edmonton / (780) 434-1322				C
Shaw, Tom / Country Of Grande Prairie No.1 / (780) 814-4046			R	C
Sim, Darwin & Derek / Ponoka / (780) 372-2111				C
Svean, Alan Carl & Scott / Rivercourse / (780) 745-2578				C
Thompson, M. Ellwood & Kelly / Red Deer County / (403) 728-3535			R	
Wood, Robert & Patricia & Marshall / Bowden / (403) 588-3548	S	F		C
<b>AAC RYLEY</b> ☼				
<b>BI: AAFC (Swift Current), DIST: SeCan Members</b>				
Ohrn, Norman / Thorsby / (780) 985-2263			R	
<b>CS ACCELERATE</b> ☼				
<b>BI: N/A, DIST: Canterra Seeds</b>				
Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036		F	R	
Hallett's Hay & Seed / Carstairs / (403) 337-3072			R	
Lindholm Seed Farm / New Norway / (780) 352-3240	S	F	R	
Sendziak Seed Farm / Edmonton / (780) 434-1322	S	F		
<b>CDC REIGN</b>				
<b>BI: CDC, DIST: N/A</b>				
Sand, Ron W. & David R. / McLaughlin / (780) 745-2251	S			
<b>CDC TERRAIN</b> ☼				
<b>BI: CDC, DIST: FP Genetics</b>				
Stamp Seeds / Enchant / (403) 739-2233		F		
True Seeds / Redwater / (780) 777-5885			R	
<b>WHEAT - CWESW</b>				
	S	F	R	C
<b>AAC GOLDRUSH</b> ☼				
<b>BI: AAFC, DIST: FP Genetics</b>				
Geldreich, Dave / Bow Island / (403) 545-2222	S	F		



UA ALFA GOLD  
UA BOUNTY GOLD

# 6KING GENETICS

RR1 Viking, Alberta T0B4N0

## TWO CERTIFIED CANOLA SEED VARIETIES FROM THE UNIVERSITY OF ALBERTA

**UA Alfa Gold and UA Bounty Gold available at 6King Genetics**

### Open Pollinated Conventional Canolas

Canada Certified #1

Treated and in 25kg Bags

Edmund or Kevin Lefsrud

lefsrud@telusplanet.net

[www.telusplanet.net/public/lefsrud](http://www.telusplanet.net/public/lefsrud)

Edmund 780-336-6700c • 780-336-2588h

Kevin 780-336-5700c • 780-336-2500h

**CERTIFIED  
SEED**



## 《GROW IT》

## 2020 Seed Varieties

**AAC Brandon HRS Wheat**  
**AAC Connery HRS Wheat**  
**AAC Viewfield HRS Wheat**  
**AAC Penhold CPS Wheat**  
**AAC Crossfield CPS Wheat**  
**CS Camden Oats**  
**Canmore Barley**

**Contact Wetaskiwin Co-op Agro**  
780-352-3359 | 1-888-352-NPKS

**Our GROW Team is available to assist with all of your farm's needs**

Soil Sampling | Crop Planning | Field Scouting  
Crop Protection | Nutrient Planning & Management








**CO-OP AGRO  
WETASKIWIN** IT'S HERE

3702 47<sup>th</sup> St  
Wetaskiwin AB  
T9A 2J1

rgerrard@wetaskiwincoop.com

# CANADA NORTHERN HARD RED

Variety	Overall Station Years of Testing	Yield Category (% Carberry):					Agronomic Characteristics:							Disease Tolerance:				
		Overall Yield	Low < 55 (bu/ ac)	Medium 55 - 80 (bu/ac)	High > 80 (bu/ ac)	Maturity Rating (Days +/- Carberry)	Pro- tein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to:		Loose Smut +	Bunt	Stripe Rust	Leaf Spots	FHB
												Ldg.	Sprt.					
Carberry (bu/ac)	73	41	63	93														
Carberry 	76	100	100	100	100	104	13.8	63	40	80	Y	VG	F	MR	R	MR	MS	MR
AC Foremost 	50	112	109	111	113	-1	-1.6	62	42	75	Y	VG	F	I	R	S	MS	S
Previously tested varieties																		
Carberry 	100	100	100	100	104	13.9	63	39	79	Y	VG	F	MR	R	MR	MS	MR	
AAC Concord + 	45	103	103	104	103	-1	-0.8	62	41	87	N	F	F	I	MR	R	I	MS
Elgin ND + 	43	110	112	112	107	-1	-0.8	63	38	87	Y	G	F	XX	S	MR	I	I
Harvest +	118	96	92	96	100	-1	-0.3	62	36	84	N	VG	VG	MR	S	MR	MS	S

**Remarks:** For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. Several CWRS and CPSR varieties were reclassified to this new CNHR class, effective August 1, 2018. The CWRS variety is Harvest, the CPSR variety is AC Foremost. For more information see the Canadian Grain Commission website [www.grainscanada.gc.ca](http://www.grainscanada.gc.ca). Fusarium Head Blight (FHB) infection is highly influenced by the environment and heading date. Under high levels of FHB all varieties will sustain damage. Moderately Resistant (MR) and Resistant (R) ratings for FHB do not equate to immunity. AAC Concord has a solid stem that confers resistance to the wheat stem sawfly. Varieties rated Intermediate (I) to Susceptible (S) for loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for infection. XX - Insufficient data to describe. + - Flagged for possible removal in 2021.

## WHEAT - CNHR

### AAC Concord

BI: AAFC (Swift Current), DIST: CANTERRA SEEDS LTD.  
Solick Seeds Ltd. / Halkirk / (403) 884-2358

### AC FOREMOST

BI: AAFC (Swift Current), DIST: SeCan Members  
Hadway, W. Tom & Carol / Didsbury / (403) 335-4929  
Radke, Bryan Victor / Barrhead / (780) 674-5715

S F R C

S\* F\* R\* C


## WHEAT - CWSWS

### AC ANDREW

BI: AAFC (Lethbridge), DIST: SeCan Members  
Degenhardt, Keith, Terry Lee & Kerry / Hughenden / (780) 856-2383  
Kittle, James William & Andrew / Viking / (780) 336-2583  
Sand, Ron W. & David R. / McLaughlin / (780) 745-2251  
Willms, Timothy H. / Grassy Lake / (403) 655-2434

S F R C

R C C C



**Westway Farms Ltd.**

Telephone: 403-335-4929  
Email: [westway@airenet.com](mailto:westway@airenet.com)

**BARLEY:**  
CDC BOW  
CDC COPELAND  
CDC FRASER

**PEAS:**  
CDC MEADOW

**WHEAT:**  
AAC BRANDON  
AAC PENHOLD  
PARATA

Select Growers & Seed Processors

CDC HAYMAKER OATS

Tom & Carol Hadway & Family  
P.O. Box 544, Didsbury, Alberta T0M 0W0

**WETASKIWIN SEED & GRAIN CO-OP LTD.**

Seed cleaning – Colour sorting – Treating  
Seed Sales – Certified & common varieties available  
Distributor of seed for Nutrien Ag Solutions and Co-op Agro Wetaskiwin.

4710-40 Avenue, Wetaskiwin, AB T9A 0A2  
Phone: (780) 352-6212 Fax: (780) 352-6219  
E-mail: [seedclean@telus.net](mailto:seedclean@telus.net) Toll free: 1-877-352-6212

**Rick's Pedigreed Seeds**



Rick & Sharon Mueller  
780-674-6713  
Richard & Rose Mueller  
780-674-2595

2421 Twp Rd 593A RR1  
Barrhead, AB T7N 1N2  
[smueller@mcsnet.ca](mailto:smueller@mcsnet.ca)

Focused on barley, oats and peas  
Cell: (780) 305-9517

**VICTOOR Seed Farm Inc.**








26514A Twp Rd 534  
Sturgeon County, Alberta  
T8T 1K3

Rene (780) 499-3387  
Jamie (780) 914-6027



## CANADA WESTERN SOFT WHITE SPRING

Variety	Overall Station Years of Testing	Yield Category (% AC Andrew):				Agronomic Characteristics:								Disease Tolerance:				
		Overall Yield	Low < 65 (bu/ac)	Medium 65 - 100 (bu/ac)	High > 100 (bu/ac)	Maturity Rating (Days +/- Carberry)	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to:		Loose Smut <sup>†</sup>	Bunt	Stripe Rust	Leaf Spots	FHB
												Ldg.	Sprt.					
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to AC Andrew)																		
AC Andrew (bu/ac)	88	53	86	123														
AC Andrew	166	100	100	100	100	105	10.9	62	40	80	Y	VG	P	S	S	I	MS	I
Carberry - 	68	79	79	82	76	-1	2.9	63	40	79	Y	VG	F	MR	R	MR	MS	MR
AAC Paramount VB 	44	102	XX	106	101	0	0.1	61	41	87	Y	VG	P	MR	S	R	I	MS
Sadash VB 	90	105	108	105	103	0	-0.1	63	40	83	Y	VG	P	I	S	R	I	S
Previously tested varieties																		
AC Andrew	100	100	100	100	100	105	10.9	62	40	80	Y	VG	P	S	S	I	MS	I
AAC Chiffon VB 	39	104	106	105	101	0	-0.4	62	46	88	Y	G	P	S	S	MR	I	S
AAC Indus VB 	39	104	96	108	105	2	-0.2	61	42	87	Y	VG	P	S	MS	R	MS	MS
Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. In addition to traditional markets, SWS wheat varieties may have demand as a feedstock for ethanol production. Varieties rated Intermediate (I) to Susceptible (S) for loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for infection. VB - designates a varietal blend to preserve the Sm1 orange wheat blossom midge tolerance gene. XX - Insufficient data to describe. † - Flagged for possible removal in 2021.																		

## CANADA WESTERN SPECIAL PURPOSE

Variety	Yield Category (Carberry):					Agronomic Characteristics:								Disease Tolerance:				
	Overall Station Years of Testing	Over-all Yield	Low < 55			Maturity Rating (Days +/- Car- berry)	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Awns (Y/N)	Resistance to:		Loose Smut +	Bunt	Stripe Rust	Leaf Spots	FHB
			55 (bu/ ac)	Medium 55- 80 (bu/ac)	High > 80 (bu/ac)							Ldg.	Sprt.					
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to Carberry)																		
Carberry (bu/ac)		75	36	58	87													
Carberry ☼	68	100	100	100	100	104	13.8	63	40	80	Y	VG	F	MR	R	MR	MS	MR
Pasteur	44	130	XX	XX	132	3	-1.9	63	41	83	N	VG	G	MS	S	MR	I	I
Previously tested varieties																		
Carberry ☼		100	100	100	100	104	14	63	40	79	Y	VG	F	MR	R	MR	MS	MR
AAC Awesome VB ☼	41	135	XX	134	139	0	-2.5	62	44	89	Y	G	P	I	I	R	I	I
AAC Innova + ☼	38	128	XX	126	130	1	-3.4	60	41	82	Y	G	P	S	S	R	I	S
Alderon ☼	41	135	XX	122	143	4	-2.8	58	41	74	N	VG	F	XX	MS	MR	I	MS
Sparrow VB	41	136	XX	130	141	4	-2.6	60	41	79	N	VG	G	XX	I	MR	I	MR
Remarks: For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. Fusarium Head Blight (FHB) infection is highly influenced by the environment and heading date. Under high levels of FHB all varieties will sustain damage. Moderately Resistant (MR) and Resistant (R) ratings for FHB do not equate to immunity. Varieties rated Intermediate (I) to Susceptible (S) for loose smut or bunt should be treated with a systemic seed treatment to reduce the potential for infection. VB - designates a varietal blend to preserve the Sm1 orange wheat blossom midge tolerance gene. New CWSP registration and insufficient data to describe: WPB Whistler (GP214). XX - Insufficient data to describe. + - Flagged for possible removal in 2021.																		

## WHEAT - CWSP

## KWS ALDERON

BI: KWS-UK, DIST: SeCan Members

Forward Seed Farm / County Of Barrhead / (780) 674-3822

Huvenaars, Carl / Hays / (403) 725-2213

Stamp Seeds / Enchant / (403) 739-2233

Templeton, Doran & Brant / Lethbridge / (403) 345-4144

Witdouck, Dale / Iron Springs / (403) 738-4395

## PASTEUR

**BI: Wiersum Plant Breeding, DIST: SeCan Members**

Sim, Darwin & Derek / Ponoka / (780) 372-2111

Witdouch, Dale / Iron Springs / (403) 738-4395

## WPB WHISTLER

BI: Wiersum Plant Breeding, DIST: SeCan Members

Benci, Dennis / Carmangay / (403) 643-2294

Hadway, W. Tom & Carol / Didsbury / (403) 335-4929

# Diamond Dust Acres

**Production**

***Spring Wheat***

- AAC Brandon
- Carberry

**Pollination**

***Alfalfa Seed***

- High Performance Grazing Blend
- Algonquin \*coming Fall 2020

***VERY competitive Grower Direct Bulk Pricing  
from \$10.50/bu wheat and \$1.75/lb alfalfa***

[www.DDacres.ca](http://www.DDacres.ca)

**587.813.0312   admin@DDacres.ca   Enchant, AB**



**SeCan**  
Canada's Seed Partner

## WHEAT - MIDGE TOLERANT

## AAC ALIDA VB

BI: AAFC (Swift Current), DIST: SeCan Members

Huvenaars, Carl / Hays / (403) 725-2213  
 Nikkel, Ed & Darren / Lethbridge / (403) 312-4070  
 Reiman, Kyle / Wanham / (780) 897-3320  
 Skaley, Wayne / Rycroft / (780) 765-2175

## AAC AWESOME VB

BI: AAFC (Lethbridge), DIST: SeCan Members

Degenhardt, Keith, Terry Lee & Kerry / Hughenden / (780) 856-2383  
 Markert Seeds Ltd. / Vulcan / (403) 485-6708  
 Stamp Seeds / Enchant / (403) 739-2233  
 Willms, Timothy H. / Grassy Lake / (403) 655-2434

## AAC CAMERON VB

BI: AAFC (Brandon), DIST: Canterra Seeds

Boisvert, Marc / Girouxville / (780) 618-4724  
 Penwest Seeds / Three Hills / (403) 443-2577  
 Solick Seeds Ltd. / Halkirk / (403) 884-2358

## AAC CHIFFON VB

BI: AAFC (Lethbridge), DIST: SeedNet Inc.

Moffitt, Kenneth & Raymond / Radway / (780) 818-6550  
 Witdouch, Dale / Iron Springs / (403) 738-4395

## AAC FORAY VB

BI: AAFC (Winnipeg), DIST: SeCan Members

Hoff, Peter Edward / Gleichen / (403) 734-2140  
 Huvenaars, Carl / Hays / (403) 725-2213  
 Lopushinsky, Julian / Bruderheim / (780) 796-2048  
 Markert Seeds Ltd. / Vulcan / (403) 485-6708  
 True Seeds / Redwater / (780) 777-5885

## AAC INDUS VB

BI: AAFC (Lethbridge), DIST: SeCan Members

Huvenaars, Carl / Hays / (403) 725-2213  
 Howard, Fred / Wanham / (780) 694-2427  
 Stamp Seeds / Enchant / (403) 739-2233

## AAC PARAMOUNT VB

BI: AAFC (Lethbridge), DIST: SeCan Members

Alect Seeds / Three Hills / (403) 443-9599  
 Benci, Dennis / Carmangay / (403) 643-2294  
 Stamp Seeds / Enchant / (403) 739-2233  
 Willms, Timothy H. / Grassy Lake / (403) 655-2434

## AAC RUSSELL VB

BI: AAFC, DIST: N/A

Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036  
 Geldreich, Dave / Bow Island / (403) 545-2222  
 Stamp Seeds / Enchant / (403) 739-2233

## AAC STARBUCK VB

BI: AAFC (Swift Current), DIST: SeCan Members

Benci, Dennis / Carmangay / (403) 643-2294  
 Crooymans, John, Joseph & Andrew / Bow Island / (403) 545-6333  
 Dyck, Heinz W., Colin, Alan & Kelton / Rosemary / (403) 378-3321  
 Huvenaars, Carl / Hays / (403) 725-2213  
 Penwest Seeds / Three Hills / (403) 443-2577  
 Willms, Timothy H. / Grassy Lake / (403) 655-2434

## AAC WARMAN VB

BI: AAFC (Brandon), DIST: SeCan Members

Alect Seeds / Oyen / (403) 664-9617  
 Benci, Dennis / Carmangay / (403) 643-2294

## AAC WHEATLAND VB

BI: AAFC (Swift Current), DIST: SeCan Members

Crooymans, John, Joseph & Andrew / Bow Island / (403) 545-6333  
 Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036  
 Hoff, Peter Edward / Gleichen / (403) 734-2140  
 Holmstrom, Darrell / Killam / (780) 385-3574  
 Huvenaars, Carl / Hays / (403) 725-2213  
 Mercer Seeds Ltd. / Lethbridge / (403) 327-9736  
 Mueller, Darcy / Three Hills / (403) 820-4115  
 Pare, Raymond A. / Wainwright / (780) 842-2073  
 Penwest Seeds / Three Hills / (403) 443-2577  
 Solick Seeds Ltd. / Halkirk / (403) 884-2358  
 Stamp Seeds / Enchant / (403) 739-2233  
 Willms, Timothy H. / Grassy Lake / (403) 655-2434

## AAC SADASH VB

BI: AAFC (Lethbridge), DIST: SeCan Members

Assure Seeds Ltd. / Acme / (403) 510-9260  
 Benci, Dennis / Carmangay / (403) 643-2294  
 Crooymans, John, Joseph & Andrew / Bow Island / (403) 545-6333  
 Feenstra, Lloyd / Barons / (403) 757-3737  
 K3 Seeds / Picture Butte / (403) 715-7989  
 LS Land & Cattle / Didsbury / (403) 335-3694  
 Penwest Seeds / Three Hills / (403) 443-2577  
 Witdouch, Dale / Iron Springs / (403) 738-4395  
 Zwack, Thomas / Daysland / (780) 374-2450

## AC SHAW VB

BI: AAFC (Winnipeg), DIST: SeCan Members

Haralie Seed Farms / Beaver County / (780) 662-2617  
 Maisonneuve, Andre / Guy / (780) 925-3074

## CDC ADAMANT VB

BI: CDC, DIST: FP Genetics

Sleepy Hollow Seeds Ltd. / Milk River / (403) 647-2228

## CDC HUGHES VB

BI: CDC, DIST: Nutrien Ag Solutions/Proven Seed

Nutrien Ag Solutions (Canada) / High River / (403) 603-6011

## CDC LANDMARK VB

BI: CDC, DIST: FP Genetics

Danielson, Lionel & Bonnie / Okotoks / (306) 594-7417  
 Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036  
 Markert Seeds Ltd. / Vulcan / (403) 485-6708  
 Prestville Farms Ltd. / Rycroft / (780) 814-2849  
 Sand, Ron W. & David R. / McLaughlin / (780) 745-2251  
 Stamp Seeds / Enchant / (403) 739-2233  
 True Seeds / Redwater / (780) 777-5885

## CDC TITANIUM VB

BI: CDC, DIST: Nutrien Ag Solutions/Proven Seed

Nutrien Ag Solutions (Canada) / High River / (403) 603-6011  
 Wheatcrest Farms / Lomond / (403) 792-3696

## KWS SPARROW VB

BI: KWS-UK, DIST: SeCan Members

Huvenaars, Carl / Hays / (403) 725-2213  
 Witdouch, Dale / Iron Springs / (403) 738-4395



## Select Seed Grower &amp; Processor

Andrew Kittle | 780 - 336 - 2583

Bill Kittle | 780 - 385 - 4900

Box 296, Viking, AB T0B 4N0



Malt Barley Varieties:

AAC Connect  
 AAC Synergy  
 AC Metcalfe  
 CDC Copeland  
 CDC Bow

Durum Varieties:

AAC Spitfire

Yellow Peas:

AAC Carver  
 CDC Inca

Wrentham, AB • P: 403 222 2258 • E: eliasonfarms@gmail.com

# CANADA WESTERN AMBER DURUM

Variety	Overall Station Years of Testing	Yield Category (% Strongfield):				Agronomic Characteristics:							Disease Tolerance:				
		Over- all Yield	Low < 45 (bu/ ac)	Medium 45 - 70 (bu/ac)	High > 70 (bu/ ac)	Maturity Rating (Days +/- Strong- field)	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Resistance to:		Loose Smut <sup>†</sup>	Bunt	Stripe Rust	Leaf Spots	FHB
											Ldg.	Sprt.					
Strongfield (bu/ac) ☼	64	34	59	94													
Strongfield	162	100	100	100	100	107	14.3	63	45	84	F	F	S	I	MR	MS	S
AAC Grainland	11	100	XX	XX	XX	1	-0.2	62	43	82	F	G	R	R	R	MS	MS
AAC Stronghold ☼	17	101	XX	XX	XX	2	-0.6	62	47	81	VG	G	R	I	MR	I	MS
AAC Succeed VB ☼	19	106	110	XX	100	0	0.2	63	45	83	F	F	R	R	I	MS	MS
Brigade ☼	88	103	104	103	101	3	-0.6	63	47	87	G	F	MS	R	MR	I	MS
CDC Alloy ☼	25	101	108	XX	99	1	0.1	63	43	84	F	F	I	R	R	MS	MS
CDC Credence ☼	19	104	105	XX	101	1	-0.3	63	42	86	F	F	MR	R	MR	I	MS
Transcend ☼	54	100	100	102	98	2	0.5	63	44	88	F	F	S	R	R	I	MS
Previously tested varieties																	
Strongfield ☼	100	100	100	100	107	14.3	63	45	84	F	F	S	I	MR	MS	S	
AAC Congress ☼	23	104	109	100	104	1	-0.3	63	44	81	F	P	MR	R	R	MS	MS
AAC Raymore ☼	34	97	99	98	94	-1	0.8	62	47	82	F	F	MS	MR	MR	I	S
AAC Spitfire ☼	25	97	100	96	XX	0	-0.4	61	46	82	G	P	MS	R	R	MS	S
AC Navigator	65	95	102	93	93	2	XX	63	45	77	G	G	S	R	R	S	S
CDC Carbide VB ☼	25	100	104	100	XX	0	0	62	45	85	G	P	MS	R	R	MS	MS
CDC Dynamic ☼	21	96	94	97	96	0	0.6	62	43	81	F	F	I	R	MR	I	MS
CDC Fortitude ☼	32	102	102	102	103	1	-0.6	63	45	81	G	F	MS	R	R	MS	MS
CDC Vivid ☼	34	100	104	99	98	-1	0.1	62	45	83	G	F	I	R	MR	I	S

**Remarks:** For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. Generally, durum wheat is best adapted to southern Alberta. Outside of this area, durum tends to be late maturing and often subject to quality loss. Durum varieties are generally more susceptible to Fusarium Head Blight than CWRS wheat varieties. AAC Grainland, AAC Raymore, AAC Stronghold and CDC Fortitude have a solid stem that confers resistance to the wheat stem sawfly. VB - designates a varietal blend to preserve the Sm1 orange wheat blossom midge tolerance gene. New registrations and insufficient data to describe: AAC Donlow (DT890), AAC GoldNet (DT887), CDC Defy (DT1004) and DT591. XX - Insufficient data to describe. + - Flagged for possible removal in 2021.

## WHEAT - CWAD

	S	F	R	C
<b>AAC CONGRESS</b> ☼				
<b>BI: AAFC (Swift Current), DIST: Canterra Seeds</b>				
Huvenaars, Carl / Hays / (403) 725-2213			R	C
K3 Seeds / Picture Butte / (403) 715-7989				C
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736			R*	C*
<b>AAC DONLOW</b>				
<b>BI: AAFC (Swift Current), DIST: N/A</b>				
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736	S			
<b>AAC GRAINLAND</b> ☼				
<b>BI: AAFC (Swift Current), DIST: SeCan Members</b>				
Benci, Dennis / Carmangay / (403) 643-2294		F		
Willms, Timothy H. / Grassy Lake / (403) 655-2434	S	F		
<b>AAC SPITFIRE</b> ☼				
<b>BI: AAFC (Swift Current), DIST: SeCan Members</b>				
Benci, Dennis / Carmangay / (403) 643-2294				C*
Specialty Seeds / Bow Island / (403) 545-6018				C
<b>AAC STRONGHOLD</b> ☼				
<b>BI: AAFC (Swift Current), DIST: SeCan Members</b>				
Barany, Lawrence Walter / Taber / (403) 223-3900			R	
Benci, Dennis / Carmangay / (403) 643-2294	S		R	C
Croymans, John, Joseph & Andrew / Bow Island / (403) 545-6333			R	C
Hierath, Michael Wayne / Milk River / (403) 647-2347				C
Huvenaars, Carl / Hays / (403) 725-2213				C
Nikkel, Ed & Darren / Lethbridge / (403) 312-4070			R	
Penwest Seeds / Three Hills / (403) 443-2577		F		
Sleepy Hollow Seeds Ltd. / Milk River / (403) 647-2228			R	C
<b>BRIGADE</b> ☼				
<b>BI: AAFC (Swift Current), DIST: Nutrien Ag Solutions/Proven Seed</b>				
Nutrien Ag Solutions (Canada) / High River / (403) 603-6011				C
<b>CDC ALLOY</b> ☼				
<b>BI: CDC, DIST: FP Genetics</b>				
Benci, Dennis / Carmangay / (403) 643-2294				C
Quattro Ventures / Bow Island / (403) 545-2222			R	C
Stamp Seeds / Enchant / (403) 739-2233				C
<b>CDC CREDENCE</b> ☼				
<b>BI: CDC, DIST: Canterra Seeds</b>				
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736	S	F		

### CDC DEFY

**BI: CDC, DIST: N/A**

SeCan Association / Kanata / (613) 592-8600

### CDC DYNAMIC

**BI: CDC, DIST: Nutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / High River / (403) 603-6011

### CDC PRECISION

**BI: CDC, DIST: Alliance Seed**

Hierath, Michael Wayne / Milk River / (403) 647-2347

Hierath, Philip / Milk River / (403) 647-2281

Markert Seeds Ltd. / Vulcan / (403) 485-6708

Mercer Seeds Ltd. / Lethbridge / (403) 327-9736

Specialty Seeds / Bow Island / (403) 545-6018

Stamp Seeds / Enchant / (403) 739-2233

### CDC VIDID

**BI: CDC, DIST: Nutrien Ag Solutions/Proven Seed**

Willms, Timothy H. / Grassy Lake / (403) 655-2434

### TRANSCEND

**BI: AAFC (Swift Current), DIST: FP Genetics**

Benci, Dennis / Carmangay / (403) 643-2294

Quattro Ventures / Bow Island / (403) 545-2222

Stamp Seeds / Enchant / (403) 739-2233

## WHEAT - MIDGE TOLERANT CWAD

### AAC SUCCEED VB

**BI: AAFC (Swift Current), DIST: FP Genetics**

Geldreich, Dave / Bow Island / (403) 545-2222

Sleepy Hollow Seeds Ltd. / Milk River / (403) 647-2228

Stamp Seeds / Enchant / (403) 739-2233

### CDC CARBIDE VB

**BI: CDC, DIST: Nutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / High River / (403) 603-6011

# MALTING BARLEY

Variety	2 or 6 Row	Awn Type	Overall Station Years of Test- ing	Over- all Yield	Yield Category (% AC Metcalfe):				Agronomic Characteristics:					Disease Tolerance:						
					Low < 75 (bu/ ac)	Med. 75 - 100 (bu/ ac)	High 100 - 125 (bu/ ac)	V. High > 125 (bu/ ac)	Maturity Rating (Days +/- AC Metcalfe)	Test Weight (lb/ bu)	TKW (g)	Height (cm)	Resist- ance to Lodg- ing	Loose Smut	Other Smuts	Root Rot †	Scald	Net Blotch:		
																		Spot form	Net form	FHB
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to AC Metcalfe)																				
AC Metcalfe (bu/ac)				101	60	88	109	137												
AC Metcalfe	2	R	552	100	100	100	100	100	97	52	46	79	F	R	I	I	S	I	S	I
AAC Connect ☺	2	R	56	104	XX	108	102	105	0	51	50	80	G	S	R	MS	S	MR	I	MR
AAC Synergy ☺	2	R	83	113	119	114	111	113	1	52	49	79	F	S	I	I	S	R	MR	I
CDC Churchill ☺	2	R	29	114	XX	XX	115	113	1	52	48	81	G	MS	MR	XX	S	MR	MR	MS
CDC Copeland ☺	2	R	151	103	98	104	104	105	1	51	48	83	F	MS	I	I	S	I	I	I
CDC Copper ☺	2	R	29	113	XX	XX	112	110	1	51	49	80	G	I	MR	XX	MR	MR	MR	MS
CDC Goldstar ☺	2	R	41	110	XX	XX	106	111	0	53	49	86	G	I	R	XX	S	MR	I	MS

Previously tested varieties																				
AC Metcalfe	2	R		100	100	100	100	100	97	52	46	79	F	R	I	I	S	I	S	I
Bentley ☺	2	R	77	105	109	102	105	106	2	52	47	81	G	MS	MR	MR	S	R	MS	I
CDC Bow ☺	2	R	42	104	XX	106	105	104	1	51	48	77	VG	S	I	MS	MS	MR	S	MS
CDC Clear (hullless) ☺	2	R	43	95	XX	92	100	XX	2	62	47	85	G	R	R	I	S	R	MS	MR
CDC Fraser ☺	2	R	39	109	XX	114	110	108	1	51	49	76	G	R	MR	MS	MS	MR	MR	I
CDC Kindersley + ☺	2	R	47	104	XX	102	104	104	-1	53	43	78	G	S	R	I	S	MR	MS	I
CDC Meredith + ☺	2	R	65	107	102	108	108	107	2	51	46	76	F	R	MR	MR	S	R	S	I
CDC PlatinumStar ☺	2	R	42	106	XX	108	107	102	1	53	49	82	F	R	R	S	S	MR	I	MR
Cerveza ☺	2	R	49	109	XX	109	108	109	1	51	46	74	F	R	R	I	S	MR	MS	I
Lowe ☺	2	R	42	111	XX	113	117	106	3	51	50	87	F	R	R	XX	MR	MR	I	MR
Merit 57 + ☺	2	R	87	109	110	108	109	111	4	51	44	79	F	MS	S	I	MS	MR	MS	MS
Newdale ☺	2	R	94	105	106	104	105	106	0	52	46	73	F	S	MR	MR	MS	MR	I	I
Legacy	6	SS	122	99	93	95	102	103	-1	49	39	82	G	I	MR	MR	S	MR	S	MS

**Remarks:** For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. Varieties rated Intermediate (I) to Susceptible (S) for smuts should be treated with a systemic seed treatment to reduce the potential for infection. The Canadian Malting Barley Technical Centre (CMBTC) evaluates and recommends malting barley varieties for industry acceptance. Please refer to the 2019-2020 CMBTC Recommended Malt Barley Variety List for more information. CDC Clear is a hullless malting variety. XX - Insufficient data to describe. + - Flagged for possible removal in 2021.

## BARLEY - MALTING SIX ROW

	S	F	R	C
<b>LEGACY</b>				
<b>BI: Busch Ag Res. Inc., DIST: Nutrien Ag Solutions/Proven Seed</b>				
Wood, Robert & Patricia & Marshall / Bowden / (403) 588-3548	S	F	R	C

## BARLEY - MALTING TWO ROW

	S	F	R	C
<b>AAC CONNECT ☺</b>				
<b>BI: AAFC (Brandon), DIST: Canterra Seeds</b>				
Eliason, Bruce W. / Wrentham / (403) 222-2258			R	C
Ellis, Brian / Olds / (403) 556-2890				C
Goode, Tim / Lacombe / (403) 506-9424				C
Herzog, Brent / Olds / (403) 556-6441				C
K3 Seeds / Picture Butte / (403) 715-7989				C
Lefsrud Seed / Viking / (780) 336-2500		S		
LS Land & Cattle / Didsbury / (403) 335-3694			R	
Penwest Seeds / Three Hills / (403) 443-2577			C	
Raaen, Sylvan / Rolla / (250) 759-4778			C	
Rasmussen, Brian Dale & Joel Trevor / Standard / (403) 644-3800			C	
Richards, Dan / Sexsmith / (780) 766-2266			R	C
Sendziak Seed Farm / Edmonton / (780) 434-1322	F		R	
Solick Seeds Ltd. / Halkirk / (403) 884-2358		F*	R	C*
Unrau, George / La Crete / (780) 926-1133			C	
<b>AAC SYNERGY ☺</b>				
<b>BI: AAFC (Brandon), DIST: Syngenta Canada</b>				
Eliason, Bruce W. / Wrentham / (403) 222-2258			R	C
Ellis, Brian / Olds / (403) 556-2890				C
Gatez, Blaine Gerald / Crossfield / (403) 888-1623			R	C
Harbin, Clifford T. & Bruce Clifford / Rivercourse / (780) 745-2268			R	C
Holtman, Scott / Taber / (403) 634-4525			C	
Lindholm Seed Farm / New Norway / (780) 352-3240			R	C
Markert Seeds Ltd. / Vulcan / (403) 485-6708			C	
Prestville Farms Ltd. / Rycroft / (780) 814-2849			R	
Strathmore Seed Cleaning Plant / Strathmore / (403) 934-3421			C	
Syngenta Canada / (877) 964-3682	S	F	R	C
Willms, Timothy H. / Grassy Lake / (403) 655-2434			C	
<b>AC METCALFE</b>				
<b>BI: AAFC (Brandon), DIST: SeCan Members</b>				
Cornish, Bob / Airdrie / (403) 948-3070			R*	C*

Dueck, Ralph E. & Brent / Olds / (403) 556-2602				R
Eliason, Bruce W. / Wrentham / (403) 222-2258				R
Lefsrud Seed / Viking / (780) 336-2500				R
Limoges, Richard / McLennan / (780) 324-2335				C
McNelly, Bevin / Clyde / (780) 348-5749				R
Murray, Bruce & Wesley / Lethbridge County / (403) 327-9389				C
Penwest Seeds / Three Hills / (403) 443-2577				R*
Webber, Curtis / Parkland County / (780) 963-6897				C
Wheatcrest Farms / Lomond / (403) 792-3696				C
<b>BILL COORS 100</b>				
<b>BI: Molson/Coors, DIST: Stamp Seeds</b>				
Stamp Seeds / Enchant / (403) 739-2233	S	F		
<b>CDC BOW ☺</b>				
<b>BI: CDC, DIST: SeCan Members</b>				
Alect Seeds / Three Hills / (403) 443-9599				C
Assure Seeds Ltd. / Acme / (403) 510-9260				C
Barany, Lawrence Walter / Taber / (403) 223-3900				R
Eliason, Bruce W. / Wrentham / (403) 222-2258				C
Goldstrom, David / Red Deer County / (403) 227-2133				C
Hadway, W. Tom & Carol / Didsbury / (403) 335-4929				R
Herzog, Blair / Delia / (403) 857-9596				R
Huvenaars, Carl / Hays / (403) 725-2213				R
Kemp, Richard L. / Red Deer County / (403) 227-4836				C
Kopjar, Gerald M. / Rowley / (403) 368-2409				C
LS Land & Cattle / Didsbury / (403) 335-3694				C
Metzger, Marty / Carbon / (403) 572-3284				C
Nisbet, Andrew E. & Diane E. / Mountain View County / (403) 224-3788	S	F		R
Solick Seeds Ltd. / Halkirk / (403) 884-2358				R*
True Seeds / Redwater / (780) 777-5885				C
Wagner, Terry & Loree / Lacombe / (403) 782-2107				C
Wheatcrest Farms / Lomond / (403) 792-3696				R
Witdouck, Dale / Iron Springs / (403) 738-4395				R
Wood, Robert & Patricia & Marshall / Bowden / (403) 588-3548				R
<b>CDC CHURCHILL</b>				
<b>BI: CDC, DIST: SeCan Members</b>				
SeCan Association / Kanata / (613) 592-8600	S	F		
<b>CDC COPELAND ☺</b>				
<b>BI: CDC, DIST: SeCan Members</b>				
Alect Seeds / Three Hills / (403) 443-9599				C
Archer, Nathan / Didsbury / (403) 556-0693				R
Barany, Lawrence Walter / Taber / (403) 223-3900				R

Bright, David / New Norway / (780) 855-2240				C		Wiebe, Paul & Julie / Acme / (403) 510-9260				C
Carlson, David / Gwynne / (780) 352-6871				C		Wood, James / Elnora / (403) 596-4189			R	C
Dallas, Bradley C. / Bowden / (403) 224-2162			R	C		Zwack, Thomas / Daysland / (780) 374-2450				C
Dueck, Ralph E. & Brent / Olds / (403) 556-2602	S	F	R			<b>CDC COPPER</b>				
Dyck, Ernie / La Crete / (780) 821-9445			R			<b>BI: CDC, DIST: FP Genetics</b>				
Eliason, Bruce W. / Wrentham / (403) 222-2258			R	C		King's Seed Farm / Three Hills / (403) 443-3333	S	F		
Ellis, Brian / Olds / (403) 556-2890			C*			Solick Seeds Ltd. / Halkirk / (403) 884-2358	S			
Forward Seed Farm / County Of Barrhead / (780) 674-3822			C			<b>CDC FRASER</b> ☺				
Goldstrom, David / Red Deer County / (403) 227-2133			C			<b>BI: CDC, DIST: SeCan Members</b>				
Hadway, W. Tom & Carol / Didsbury / (403) 335-4929			C			Dueck, Ralph E. & Brent / Olds / (403) 556-2602	S		R	
Hallett's Hay & Seed / Carstairs / (403) 337-3072			C			Hadway, W. Tom & Carol / Didsbury / (403) 335-4929		F		C
Harris, William P., Linda, Thomas & Alexander / Beaverlodge / (780) 354-2823	S	F	R	C		Holmstrom, Darrell / Killam / (780) 385-3574			R	R
Hartzler, Leonard / Carstairs / (403) 337-2416			R	C		Jones, Greg Thomas & Tristan / Ponoka / (403) 783-6495			R	C
Kemp, Richard L. / Red Deer County / (403) 227-4836			C			Niemela, Terrance & Tracy / Sylvan Lake / (403) 746-2645			R	C
King's Seed Farm / Three Hills / (403) 443-3333			R*	C		Oatway Seed Farm / Clive / (403) 784-3001			C	C
Kittle, James William & Andrew / Viking / (780) 336-2583			C			Sayer, Roger / Carstairs / (403) 337-5847				C
Knight, William, Craig & Brian / Tees / (403) 784-3633			R			<b>CDC GOLDSTAR</b> ☺				
Konieczny, Scott / Mannville / (780) 581-5693			C			<b>BI: CDC, DIST: Canterra Seeds</b>				
Kopjar, Gerald M. / Rowley / (403) 368-2409			R	C		Harbin, Clifford T. & Bruce Clifford / Rivercourse / (780) 745-2268			R	
Lindholm Seed Farm / New Norway / (780) 352-3240			C			<b>CDC MEREDITH</b> ☺				
Macyk, Tim / Radway / (780) 699-4073			C			<b>BI: CDC, DIST: SeCan Members</b>				
Markert Seeds Ltd. / Vulcan / (403) 485-6708			C			Harris, William P., Linda, Thomas & Alexander / Beaverlodge / (780) 354-2823	F			C*
Massey, Derwin & Kirby / Stettler / (403) 883-2503			C			Mercer Seeds Ltd. / Lethbridge / (403) 327-9736			R	
McNelly, Bevin / Clyde / (780) 348-5749			R			Wheatcrest Farms / Lomond / (403) 792-3696				
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736			C			<b>CERVEZA</b>				
Moffitt, Kenneth & Raymond / Radway / (780) 818-6550			C			<b>BI: AAFC (Brandon), DIST: Mastin Seeds</b>				
Mueller, Darcy / Three Hills / (403) 820-4115			C			Mastin, Robert B. / Sundre / (403) 556-2609			R	
Mueller, Richard J. & R. R. & Rosemary / Barrhead / (780) 674-6713			R			<b>LOWE</b> ☺				
Murray, Bruce & Wesley / Lethbridge County / (403) 327-9389			C			<b>BI: FCDC (Lacombe), DIST: SeCan Members</b>				
Niemela, Terrance & Tracy / Sylvan Lake / (403) 746-2645			R			Mueller, Darcy / Three Hills / (403) 820-4115	S			
Nisbet, Andrew E. & Diane E. / Mountain View County / (403) 224-3788	S	F	R			<b>MERIT 57</b>				
Penwest Seeds / Three Hills / (403) 443-2577			C			<b>BI: Busch Ag Res. Inc., DIST: Canterra Seeds</b>				
Richards, Dan / Sexsmith / (780) 766-2266			C			Eliason, Bruce W. / Wrentham / (403) 222-2258			R	
Schmermund, Donnie / Sturgeon County / (780) 967-2850			C			<b>SIRISH</b> ☺				
Selte, Donald / Vermilion / (780) 853-2484			R	C		<b>BI: Syngenta Canada, DIST: Syngenta Canada</b>				
Sich, Ivan & Martin & Livia / Three Hills / (403) 443-8402			C			Ellis, Brian / Olds / (403) 556-2890			R	C
Sim, Darwin & Derek / Ponoka / (780) 372-2111			C			Lindholm Seed Farm / New Norway / (780) 352-3240			R	
Strathmore Seed Cleaning Plant / Strathmore / (403) 934-3421			C			LS Land & Cattle / Didsbury / (403) 335-3694			R	
Svean, Alan Carl & Scott / Rivercourse / (780) 745-2578			C			Prestville Farms Ltd. / Rycroft / (780) 814-2849			R	
Unrau, George / La Crete / (780) 926-1133			R			Syngenta Canada Inc. (Cereals) / Melfort / (306) 752-5397	S	F	R	C
Victoor, Rene & Jamie / Sturgeon County / (780) 459-3253		F	R			Willms, Timothy H. / Grassy Lake / (403) 655-2434			R	
Wagner, Terry & Loree / Lacombe / (403) 782-2107			R							

## What does the Farm Freedom and Safety Act (FFSA) mean for your farm or ranch?

**AgSafe**  
ALBERTA

Your safety – your way

### Employment Standards

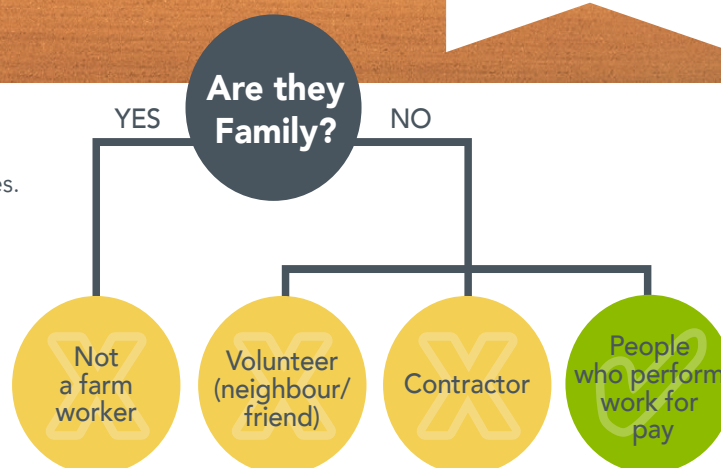
These will only apply to farms with over 5 employees.

### Insurance

Farms now have options to cover their employees. Investigate these options to ensure they provide enough coverage for your employees.

### OHS Act

The Act applies to **ALL** farms and ranches with employees.



Changes come into effect January 31, 2020. Request a **FREE** advisory visit and find tools and resources for growing the safety culture on your farm at [agsafeab.ca](https://agsafeab.ca)

# FEED AND FOOD BARLEY

Variety	2 or 6 row	Awn Type	Overall Station Years of Testing	Overall Yield	Yield Category (% AC Metcalfe):				Agronomic Characteristics:					Disease Tolerance:										
					Low < 75 (bu/ ac)	Med. 75 100 (bu/ ac)	High 100 125 (bu/ ac)	V. High > 125 (bu/ ac)	Mat. Rating (Days +/- to AC Met- calfe)	Test Weight (lb/ bu)	TKW (g)	Height (cm)	Resist- ance to Ldg.	Loose Smut	Other Smuts	Root Rot <sup>†</sup>	Scald	Net Blotch:						
																		Spot form	Net form	FHB				
GENERAL PURPOSE																								
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to AC Metcalfe)																								
AC Metcalfe (bu/ac)				101	60	88	109	137																
AC Metcalfe	2	R	552	100	100	100	100	100	97	52	46	79	F	R	I	I	S	I	S	I				
AB Advantage ☺	6	S	29	113	XX	XX	108	119	2	51	49	105	G	MR	I	XX	I	I	MS	S				
AB Cattlelac ☺	6	SS	29	108	XX	XX	104	112	1	51	45	98	G	I	R	XX	I	MR	MS	S				
Altorado ☺	2	R	68	112	XX	119	109	114	1	52	49	77	G	MR	MR	MR	S	MR	S	I				
CDC Austenson ☺	2	R	106	113	110	113	111	115	3	53	48	80	G	S	R	I	S	R	MS	I				
Claymore ☺	2	R	83	114	107	114	111	117	2	52	47	80	G	S	R	I	S	I	S	MR				
Oreana ☺	2	R	83	111	105	110	113	111	3	53	51	67	VG	S	R	I	S	MR	S	S				
Previously tested varieties																								
AC Metcalfe	2	R		100	100	100	100	100	97	52	46	79	F	R	I	I	S	I	S	I				
Brahma ☺	2	R	87	111	112	109	113	111	1	53	47	74	G	MS	R	MR	S	I	I	I				
Busby ☺	2	R	45	104	107	103	106	103	-1	53	49	78	G	S	MR	S	I	MR	MS	I				
CDC Coalition ☺	2	R	57	110	107	112	108	109	2	53	47	74	G	R	R	I	S	MR	S	I				
CDC Cowboy ☺	2	R	75	95	107	94	93	96	2	52	55	103	F	MS	MR	I	MS	MR	I	MR				
CDC Maverick ☺	2	S	43	95	XX	90	97	96	2	54	55	98	F	S	R	I	MS	MR	I	MR				
CDC Trey	2	R	106	103	101	105	101	105	0	52	50	80	G	MS	R	MR	MS	R	I	I				
Canmore ☺	2	R	40	107	XX	104	111	108	1	52	49	73	G	R	R	I	MR	MR	MS	I				
CONLON ☺	2	S	63	94	97	93	93	96	-3	52	52	80	G	I	I	MR	S	MR	I	MR				
Gadsby ☺	2	R	45	112	XX	114	114	108	1	53	51	83	F	R	R	I	R	MR	MS	I				
Seebe <sup>+</sup> ☺	2	R	229	101	97	100	102	100	4	52	50	86	G	S	R	I	MR	MS	S	MR				
Sirish ☺	2	R	42	112	XX	114	110	113	2	51	49	69	G	S	R	XX	MR	MS	MS	MS				
AC Ranger	6	S	48	107	101	99	118	107	2	49	43	74	F	MS	I	MR	MS	MR	I	S				
Amisk ☺	6	SS	40	105	XX	105	104	108	1	49	46	69	VG	S	MS	MS	I	MR	I	S				
Chigwell ☺	6	S	43	104	XX	98	106	111	1	49	41	76	G	MS	MR	MS	MR	MR	I	S				
Sundre ☺	6	S	72	110	100	105	112	117	2	51	43	86	G	MS	R	MS	R	I	S	S				
Trochu ☺	6	S	136	107	101	102	109	112	-1	49	41	78	G	MS	MR	MR	I	MR	S	I				
Vivar ☺	6	R	175	109	97	105	109	115	-1	0	44	73	VG	I	R	MR	I	MR	R	S				
HULLESS																								
Previously tested varieties (Yield and agronomic data only directly comparable to AC Metcalfe)																								
CDC Ascent ☺	2	R	42	97	XX	108	93	94	1	60	44	82	G	MR	MR	I	MS	MR	S	MR				
Falcon <sup>+</sup>	6	S	181	83	72	83	91	89	-2	58	35	68	VG	MS	MR	I	I	I	I	S				

**Remarks:** For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. Varieties rated Intermediate (I) to Susceptible (S) for smuts should be treated with a systemic seed treatment to reduce the potential for infection. Hulless varieties leave the hull in the field and thus grain yields comparable to hulled varieties are 9 - 12% lower. Handling of hulless varieties should be minimized to avoid seed damage. Falcon is a normal starch barley suitable for food use. XX - Insufficient data to describe. <sup>+</sup> - Flagged for possible removal in 2021.



**MOUNTAIN VIEW  
SEED CLEANING PLANT**

ALBERTA  
SEED  
PROCESSORS

**Alastair Truesdale**  
Manager

Email: [mvsclpl@hotmail.com](mailto:mvsclpl@hotmail.com)  
[www.mountainviewseed.ca](http://www.mountainviewseed.ca)  
 Phone: 403-337-3155  
 Fax: 403-337-3146  
 Box 359, Carstairs, AB T0M 0N0

**COLOUR SORTING NOW AVAILABLE**  
 For all your cleaning and treating needs call us.

**Sexsmith Co-operative  
Seed Cleaning Association Ltd.**

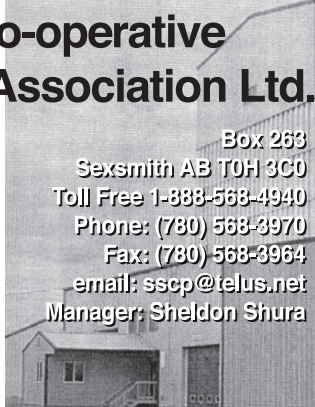
Your complete  
cleaning facility

Agents for pulse crops  
and producer car loading

Box 263  
Sexsmith AB T0H 3C0  
Toll Free 1-888-568-4940  
Phone: (780) 568-3970  
Fax: (780) 568-3964  
email: [sscp@telus.net](mailto:sscp@telus.net)  
 Manager: Sheldon Shura

ALBERTA  
SEED  
PROCESSORS

Licensed with  
Canadian Seed Institute



## BARLEY - FEED SIX ROW

### AB CATTLELAC

**BI: FCDC (Lacombe), DIST: Alliance Seed**

Chin Ridge Seeds Ltd. / Taber / (403) 223-3900

Holmstrom, Darrell / Killam / (780) 385-3574

Sim, Darwin & Derek / Ponoka / (780) 372-2111

Stamp Seeds / Enchant / (403) 739-2233

Wood, James / Elnora / (403) 596-4189

### AC RANGER

**BI: AAFC (Brandon), DIST: SeCan Members**

Airth, Jock & Linda / Brooks / (403) 362-4372

### AC ROSSER

**BI: AAFC (Brandon), DIST: SeCan Members**

Haralie Seed Farms / Beaver County / (780) 662-2617

### AMISK

**BI: FCDC (Lacombe), DIST: SeCan Members**

Assure Seeds Ltd. / Acme / (403) 510-9260

Beamish, Dale / Jarvie / (780) 954-2166

Benci, Dennis / Carmangay / (403) 643-2294

Dallas, Bradley C. / Bowden / (403) 224-2162

Feenstra, Lloyd / Barons / (403) 757-3737

Haralie Seed Farms / Beaver County / (780) 662-2617

LS Land & Cattle / Didsbury / (403) 335-3694

Mans, John / Nobleford / (403) 824-3585

Mueller, Richard J. & R. R. & Rosemary / Barrhead / (780) 674-6713

St. Paul Municipal Seed Cleaning Plant / St. Paul / (780) 645-3939

Thompson, M. Ellwood & Kelly / Red Deer County / (403) 728-3535

Webber, Curtis / Parkland County / (780) 963-6897

Wildeman, Russell / Clive / (403) 784-3695

### CDC EARL

**BI: CDC, DIST: SeCan Members**

Airth, Jock & Linda / Brooks / (403) 362-4372

### CHIGWELL

**BI: FCDC (Lacombe), DIST: SeCan Members**

Feenstra, Lloyd / Barons / (403) 757-3737

### SUNDRE

**BI: FCDC (Lacombe), DIST: Mastin Seeds**

Feenstra, Lloyd / Barons / (403) 757-3737

Hallett's Hay & Seed / Carstairs / (403) 337-3072

Jones, Danny / Beaverlodge / (780) 354-8089

Lyster, Norman / Stettler / (403) 742-4456

Mastin, Robert B. / Sundre / (403) 556-2609

### TROCHU

**BI: FCDC (Lacombe), DIST: SeCan Members**

Kittle, James William & Andrew / Viking / (780) 336-2583

Webber, Curtis / Parkland County / (780) 963-6897

### VIVAR

**BI: FCDC (Lacombe), DIST: SeCan Members**

Beamish, Dale / Jarvie / (780) 954-2166

McDonald, Grant / Didsbury / (403) 335-8188

## BARLEY - FEED TWO ROW

### ALTORADO

**BI: Highland Specialty Grains, DIST: Nutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / High River / (403) 603-6011

### BRAHMA

**BI: WestBred LLC., DIST: Nutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / High River / (403) 603-6011

Wheatcrest Farms / Lomond / (403) 792-3696

### CANMORE

**BI: FCDC (Lacombe), DIST: Canterra Seed**

Benci, Dennis / Carmangay / (403) 643-2294

K3 Seeds / Picture Butte / (403) 715-7989

King's Seed Farm / Three Hills / (403) 443-3333

Lindholm Seed Farm / New Norway / (780) 352-3240

LS Land & Cattle / Didsbury / (403) 335-3694

Mercer Seeds Ltd. / Lethbridge / (403) 327-9736

Penwest Seeds / Three Hills / (403) 443-2577

Plante, Jacques / St. Paul / (780) 645-4604

Rasmussen, Brian Dale & Joel Trevor / Standard / (403) 644-3800

Rix, Graham / Wetaskiwin / (780) 360-9234

Sendziak Seed Farm / Edmonton / (780) 434-1322

Sleepy Hollow Seeds Ltd. / Milk River / (403) 647-2228

Solick Seeds Ltd. / Halkirk / (403) 884-2358

### CDC AUSTENSON

**BI: CDC, DIST: SeCan Members**

Alect Seeds / Three Hills / (403) 443-9599

Barany, Lawrence Walter / Taber / (403) 223-3900

Benci, Dennis / Carmangay / (403) 643-2294

Bright, David / New Norway / (780) 855-2240

Advancing Women

In Agriculture  
Conference

Join us to get informed, be  
inspired and get growing!

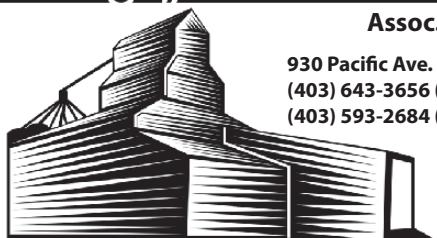
March 23 & 24, 2020  
Hyatt Regency Downtown,  
Calgary, Alberta

Register now. Network and learn from women  
passionate about agriculture from across Canada.  
[AdvancingWomenConference.ca](http://AdvancingWomenConference.ca)

Brummelhuis, Mitchell & Mack / Vauxhall / (403) 654-7515		F	C
Card, Gordon B. & Rhett / Magrath / (403) 758-3444			C
Clark, Todd / Edmonton / (780) 499-5060			C
Corns, Whitney / Grassy Lake / (403) 360-0833			C
Davidson, E. Daryl & Dean / Kitscoty / (780) 846-2456			C
Dyck, Heinz W., Colin, Alan & Kelton / Rosemary / (403) 378-3321	S	F	C
Fabian, Patrick V. / Tilley / (403) 377-2000		R	
Foster, Norman R. / Beaverlodge / (780) 354-2107			C
Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036			C
Gibson, Donald / Sangudo / (780) 785-2214			C
Hadland, Edward / Balldonnel / (250) 793-9746	S		C
Hallett's Hay & Seed / Carstairs / (403) 337-3072		R	C
Hartzler, Leonard / Carstairs / (403) 337-2416		R	C
Hoff, Peter Edward / Gleichen / (403) 734-2140		F	C
Huvenaars, Carl / Hays / (403) 725-2213		R	C
Jones, Greg Thomas & Tristan / Ponoka / (403) 783-6495		F	C
Kemp, Richard L. / Red Deer County / (403) 227-4836			C
Kiffiak, Nathan John & Anderson, Tim / Foremost / (403) 867-2338			C
Klapstein, Dallas / Calmar / (780) 819-4993		R	
Klassen, Ethan / Coaldale / (403) 345-3770			C
Klassen, Ken / Rosemary / (403) 378-4408			C
Limoges, Richard / McLennan / (780) 324-2335		R	C
Markert Seeds Ltd. / Vulcan / (403) 485-6708		R	
Massey, Derwin & Kirby / Stettler / (403) 883-2503			C
McNelly, Bevin / Clyde / (780) 348-5749		R	C
Meinczinger, Matthew Jr. / Busby / (780) 349-2456			C
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736		R	C
Metzger, Marty / Carbon / (403) 572-3284			C
Mueller, Richard J. & R. R. & Rosemary / Barrhead / (780) 674-6713	S	F	R
Nemetz, Charlie, Jerritt & Lewis / Stettler / (403) 742-0436		R	C
Niemela, Terrance & Tracy / Sylvan Lake / (403) 746-2645		R	C
Oatway Seed Farm / Clive / (403) 784-3001		R	C
Pare, Raymond A. / Wainwright / (780) 842-2073	S	F	R
Penwest Seeds / Three Hills / (403) 443-2577			C
Rasmuson, Dennis G. & Cory Dean / Gwynne / (780) 312-1148			C
Richard, Gerald / Spirit River / (780) 864-2339		R	
Schmermund, Donnie / Sturgeon County / (780) 967-2850			C
Selte, Donald / Vermilion / (780) 853-2484			C
Sim, Darwin & Derek / Ponoka / (780) 372-2111			C
Stamp Seeds / Enchant / (403) 739-2233			C
Templeton, Doran & Brant / Lethbridge / (403) 345-4144		R	
Webber, Curtis / Parkland County / (780) 963-6897			C
Witdouch, Dale / Iron Springs / (403) 738-4395		R	

## Carmangay Seed Cleaning

Assoc. Ltd



930 Pacific Ave.  
(403) 643-3656 (w)  
(403) 593-2684 (c)

**PLANT MANAGER - CHRIS BLENKIN**  
carmangay@seedcleaningplant.com

**For all your cleaning and treating needs  
give us a call.**

- Specialize in all cereals, pulses and oilseed crops
- Pedigreed seed certified
- Mobile and on-site treating

### CDC COALITION ☺

**BI: CDC, DIST: Canterra Seeds**

Cross, Douglas / Westlock / (780) 349-2587  
Felstad, Colin / Dapp / (780) 349-9505  
K3 Seeds / Picture Butte / (403) 715-7989  
Lindholm Seed Farm / New Norway / (780) 352-3240  
Meinczinger, Matthew Jr. / Busby / (780) 349-2456

### CDC COWBOY ☺

**BI: CDC, DIST: SeCan Members**

Benson, Chad / Dapp / (780) 349-1758  
Dechaine, Louis / St. Lina / (780) 635-2235  
Degenhardt, Keith, Terry Lee & Kerry / Hughenden / (780) 856-2383  
Haralie Seed Farms / Beaver County / (780) 662-2617  
McNelly, Bevin / Clyde / (780) 348-5749  
Selte, Donald / Vermilion / (780) 853-2484  
Stewart, E. Wilbur & Eldon / Big Valley / (403) 876-2784  
Webber, Curtis / Parkland County / (780) 963-6897

### CDC MAVERICK ☺

**BI: CDC, DIST: SeCan Members**

Card, Gordon B. & Rhett / Magrath / (403) 758-3444  
Degenhardt, Keith, Terry Lee & Kerry / Hughenden / (780) 856-2383  
Hadland, Edward / Balldonnel / (250) 793-9746  
Hallett's Hay & Seed / Carstairs / (403) 337-3072  
Haralie Seed Farms / Beaver County / (780) 662-2617  
Herzog, Blair / Delia / (403) 857-9596  
McDonald, Gerald / Co. Of Grande Prairie #1 / (780) 538-3868  
Metzger, Marty / Carbon / (403) 572-3284  
Mueller, Darcy / Three Hills / (403) 820-4115  
Selte, Donald / Vermilion / (780) 853-2484  
Shaw, Tom / Country Of Grande Prairie No.1 / (780) 814-4046  
Webber, Curtis / Parkland County / (780) 963-6897

### CDC THOMPSON

**BI: CDC, DIST: N/A**

Thompson, M. Ellwood & Kelly / Red Deer County / (403) 728-3535  
Trueblood, Brian G. / Dapp / (780) 954-3745

### CDC TREY

**BI: CDC, DIST: FP Genetics**

Wood, Robert & Patricia & Marshall / Bowden / (403) 588-3548

### CLAYMORE

**BI: Highland Specialty Grains, DIST: Nutrien Ag Solutions/Proven Seed**  
Nutrien Ag Solutions (Canada) / High River / (403) 603-6011

### CONLON ☺

**BI: NDSU, DIST: Seed Depot**

Airth, Jock & Linda / Brooks / (403) 362-4372  
Sleepy Hollow Seeds Ltd. / Milk River / (403) 647-2228

### GADSBY ☺

**BI: FCDC (Lacombe), DIST: SeCan Members**

Harris, William P., Linda, Thomas & Alexander / Beaverlodge / (780) 354-2823  
Webber, Curtis / Parkland County / (780) 963-6897

### OREANA ☺

**BI: Highland Specialty Grains, DIST: Nutrien Ag Solutions/Proven Seed**  
Nutrien Ag Solutions (Canada) / High River / (403) 603-6011

### SEEBE

**BI: FCDC (Lacombe), DIST: SeCan Members**

Webber, Curtis / Parkland County / (780) 963-6897

## BARLEY - HULLESS TWO ROW

### CDC ASCENT ☺

**BI: CDC, DIST: SeCan Members**

Sim, Darwin & Derek / Ponoka / (780) 372-2111

### CDC CLEAR

**BI: CDC, DIST: SeCan Members**

Sendziak Seed Farm / Edmonton / (780) 434-1322

**Loughheed Co-op Seed Cleaning Plant**  
P.O. Box 123, Loughheed, AB, T0B 2V0  
Manager: Jeremy Simpson, 780-386-3771,  
lscp@xplornet.com, loughheedprocessing.ca

## OAT

Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% CDC Dancer):				Agronomic Characteristics:					
			Low < 70 (bu/ac)	Medium 70 - 100 (bu/ac)	High 100 - 130 (bu/ac)	V. High > 130 (bu/ac)	Maturity Rating (Days +/- CDC Dancer)	Test Weight (lb/bu)	TKW (g)	Height (cm)	Resistance to Lodging	Tolerance to Smuts
MILLING												
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to CDC Dancer)												
CDC Dancer (bu/ac)		101	48	84	110	150						
CDC Dancer 🌾	173	100	100	100	100	100	98	41	37	106	G	R
CDC Arborg 🌾	35	118	XX	XX	126	114	2	41	41	109	VG	R
CDC Endure 🌾	24	117	XX	XX	124	113	2	41	41	110	VG	R
CDC Ruffian 🌾	62	110	110	110	115	106	4	41	40	97	G	R
CS Camden 🌾	51	111	XX	109	113	108	2	40	40	97	VG	I
ORe3541M 🌾	35	103	XX	XX	107	102	1	41	41	101	VG	R
ORe3542M 🌾	35	106	XX	XX	111	103	2	40	42	99	VG	R
Previously tested varieties												
CDC Dancer 🌾		100	100	100	100	100	98	41	37	106	G	R
AC Juniper +	80	104	102	104	106	105	0	41	38	104	VG	I
AC Morgan	86	113	114	110	117	114	3	40	41	0	VG	I
Akina 🌾	30	109	XX	103	114	111	3	40	39	99	VG	R
CDC Minstrel 🌾	61	104	103	103	105	105	4	39	38	102	VG	R
CDC Norseman 🌾	27	101	XX	100	101	XX	0	41	38	107	G	MS
CDC Orrin + 🌾	52	109	113	107	107	XX	3	41	40	106	G	R
CDC Seabiscuit + 🌾	30	111	124	106	108	108	3	39	41	103	G	MR
Derby +	79	101	103	102	96-	105	4	41	39	109	G	MS
Kara 🌾	33	111	XX	102	116	110	3	41	41	0	VG	MR
Triactor + 🌾	47	110	109	108	114	110	3	38	38	102	G	R
FEED												
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to CDC Dancer)												
AC Mustang	60	114	120	115	114	110	3	42	38	116	G	I
Previously tested varieties												
CDC Nasser	31	116	132	107	115	110	4	39	36	107	G	MR
FORAGE												
Previously tested varieties												
CDC Dancer 🌾		100	100	100	100	100	98	41	37	106	G	R
CDC Baler	42	99	96	106	96	XX	4	40	43	109	XX	S
CDC Haymaker	28	104	XX	103	105	XX	4	39	40	110	F	MR

**Remarks:** For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. A review of historical data (2004-2018) has shown that the long-term average height for CDC Dancer is 106 cm and is a more accurate representation relative to more recent varieties. Varieties rated Intermediate (I) to Susceptible (S) for the smuts should be treated with a systemic seed treatment to reduce the potential for infection. New registration and insufficient data to describe: CDC Skye (OT3097). XX - Insufficient data to describe. + - Flagged for possible removal in 2021.



# True Seeds Ltd.

## Performance Pedigreed Seed Farm

Box 1363 Redwater, Alberta T0A 2W0 • Chelsea Tomlinson Cell: (780) 777-5885

[www.trueseeds.ca](http://www.trueseeds.ca) / [sales@trueseeds.ca](mailto:sales@trueseeds.ca)



### Oats

CS Camden  
CDC Ruffian  
CDC Arborg

### Barley

CDC Austenson  
CDC Copeland  
CDC Bow

### CPS Wheat

AAC Foray VB (Midge)  
CDC Terrain

### HR Wheat

CDC Landmark VB (Midge)  
AAC Viewfield  
AAC Redberry (Early)  
AC Muchmore

### Yellow Peas

AAC Carver (Early)  
CDC Inca  
CDC Spectrum

*For your convenience we now have scale on site for quick loading.*

*We are ready to meet your needs. Give us a call to discuss what we can do to help you this spring. FCC Financing is available.*

*Seed available for pickup at Westlock & Loughheed Seed plants.*



- Very Accurate And Fast Loading
- Treating Facilities
- Retail And Wholesale
- Custom Pollination (Leaf Cutter And Honey Bee's)



### SEED VARIETIES

#### HR WHEAT

AAC Viewfield  
AAC Brandon

#### SOFT WHEAT

AAC Chiffon VB  
AAC Paramount VB  
AAC Sadash VB

#### WINTER WHEAT

AAC Wildfire  
AAC Gateway

#### YELLOW FLAX

CDC Dorado

#### DURUM

AAC Spitfire  
GP WHEAT

#### PASTEUR

KWS Sparrow VB  
KWS Alderon

#### BARLEY

CDC Austenson  
CDC Bow

#### HYBRID FALL RYE

Daniello  
ProPower

#### YELLOW PEA

AAC Lacombe  
CDC Inca

#### LENTILS

CDC Proclaim

#### HEMP

Picolo  
Katani  
Finola

#### OATS

AC Morgan

Dale Witdouck, 403-635-0099, dale@witdouckfarms.com  
Box 65, Iron Springs, AB, T0K 1G0

## OATS - FEED

### AC LU

BI: AAFC (Lacombe), DIST: SeCan Members

Haralie Seed Farms / Beaver County / (780) 662-2617

### AC MUSTANG

BI: AAFC (Lacombe), DIST: Mastin Seeds

Barany, Lawrence Walter / Taber / (403) 223-3900

Feenstra, Lloyd / Barons / (403) 757-3737

Hallett's Hay & Seed / Carstairs / (403) 337-3072

Jonk, Nicholas / Westlock / (780) 349-5458

Lyster, Norman / Stettler / (403) 742-4456

Mastin, Robert B. / Sundre / (403) 556-2609

Richard, Gerald / Spirit River / (780) 864-2339

### CDC NASSER

BI: CDC, DIST: T & L Seeds

Harbin, Clifford T. & Bruce Clifford / Rivercourse / (780) 745-2268

Huvenaars, Carl / Hays / (403) 725-2213

King's Seed Farm / Three Hills / (403) 443-3333

Sand, Ron W. & David R. / McLaughlin / (780) 745-2251

St. Paul Municipal Seed Cleaning Plant / St. Paul / (780) 645-3939

### CDC SO-I

BI: CDC, DIST: N/A

LS Land & Cattle / Didsbury / (403) 335-3694

### WALDERN

BI: AAFC (Lacombe), DIST: SeCan Members

Airth, Jock & Linda / Brooks / (403) 362-4372

## OATS - FORAGE

### CDC BALER

BI: CDC, DIST: FP Genetics

Airth, Jock & Linda / Brooks / (403) 362-4372

Sim, Darwin & Derek / Ponoka / (780) 372-2111

Wood, Robert & Patricia & Marshall / Bowden / (403) 588-3548

### CDC HAYMAKER

BI: CDC, DIST: SeCan Members

Archer, Nathan / Didsbury / (403) 556-0693

Degenhardt, Keith, Terry Lee & Kerry / Hughenden / (780) 856-2383

Hadland, Edward / Balldonnel / (250) 793-9746

# THANK YOU

## HARVEST HOWLER 2019 SPONSORS

### GOLD



GERMINATION



HyTech Production Chile S.A.



POELMAN  
APIARIES Ltd.



### SILVER



### BRONZE



Hadway, Walter Thomas / Didsbury / (403) 335-4929	S*	F*		C
Haralie Seed Farms / Beaver County / (780) 662-2617			R	C
Herzog, Blair / Delia / (403) 857-9596				C
Jonk, Nicholas / Westlock / (780) 349-5458				C
McDonald, Gerald / Co. Of Grande Prairie #1 / (780) 538-3868	S			C
Mueller, Darcy / Three Hills / (403) 820-4115	S	F		C
Selte, Donald / Vermilion / (780) 853-2484				C
Shaw, Tom / Country Of Grande Prairie No.1 / (780) 814-4046				C
<b>MURPHY</b>				
<b>BI: AAFC (Lacombe), DIST: SeCan Members</b>				
Haralie Seed Farms / Beaver County / (780) 662-2617	S*	F*		
<b>OATS - MILLING</b>				
	S	F	R	C
<b>AC MORGAN</b>				
<b>BI: AAFC (Lacombe), DIST: SeCan Members</b>				
Benci, Dennis / Carmangay / (403) 643-2294	S			C
Corns, Whitney / Grassy Lake / (403) 360-0833			R	C
Degenhardt, Keith, Terry Lee & Kerry / Hughenden / (780) 856-2383				C
Froese, Cornelius H. / La Crete / (780) 927-4645				C
Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036				C
Haralie Seed Farms / Beaver County / (780) 662-2617				C*
Holmstrom, Darrell / Killam / (780) 385-3574	S*	F*		
Jonk, Nicholas / Westlock / (780) 349-5458			R	C
Kemp, Richard L. / Red Deer County / (403) 227-4836				C
Klapstein, Dallas / Calmar / (780) 819-4993				C
Klassen, Ken / Rosemary / (403) 378-4408				C
Limoges, Daniel / Girouxville / (780) 833-1287				C
Markert Seeds Ltd. / Vulcan / (403) 485-6708				C
Mieczinger, Matthew Jr. / Busby / (780) 349-2456				C
Miller, Brian / Barrhead / (780) 674-5001				C
Mueller, Richard J. & R. R. & Rosemary / Barrhead / (780) 674-6713				C
Ohrn, Norman / Thorsby / (780) 985-2263				C
Richard, Gerald / Spirit River / (780) 864-2339			R	
Selte, Donald / Vermilion / (780) 853-2484		F		C
Victoor, Rene & Jamie / Sturgeon County / (780) 459-3253				C
Haralie Seed Farms / Beaver County / (780) 662-2617			R	
Webber, Curtis / Parkland County / (780) 963-6897				C
Wildeman, Russell / Clive / (403) 784-3695				C
Witdouch, Dale / Iron Springs / (403) 738-4395				C
<b>CDC ARBORG</b>				
<b>BI: CDC, DIST: FP Genetics</b>				
Danielson, Lionel & Bonnie / Okotoks / (306) 594-7417			R	
Prestville Farms Ltd. / Rycroft / (780) 814-2849			R	
Stamp Seeds / Enchant / (403) 739-2233		F		
True Seeds / Redwater / (780) 777-5885			R	
<b>CDC ENDURE</b>				
<b>BI: CDC, DIST: Alliance Seed</b>				
Selte, Donald / Vermilion / (780) 853-2484	S			
<b>CDC RUFFIAN</b>				
<b>BI: CDC, DIST: FP Genetics</b>				
True Seeds / Redwater / (780) 777-5885				C
<b>CS CAMDEN</b>				
<b>BI: Lantmannen SW Seed, DIST: Canterra Seeds</b>				
Beaulieu, Emery / Fairview / (780) 835-8525			R	
Jonk, Nicholas / Westlock / (780) 349-5458			R	C
Lefsrud Seed / Viking / (780) 336-2500	S		R	
Lindholm Seed Farm / New Norway / (780) 352-3240				C
Penwest Seeds / Three Hills / (403) 443-2577				C
Plante, Jacques / St. Paul / (780) 645-4604				C
Prestville Farms Ltd. / Rycroft / (780) 814-2849				C
Senzak Seed Farm / Edmonton / (780) 434-1322				C
Solick Seeds Ltd. / Halkirk / (403) 884-2358				C
True Seeds / Redwater / (780) 777-5885				C
Unrau, George / La Crete / (780) 926-1133				C
Wuthrich, David / Cecil Lake / (250) 781-3527				C
<b>ORE3542M</b>				
<b>BI: Oat Advantage, DIST: SeCan Members</b>				
Alliance Seed Cleaning Association Ltd. / Alliance / (780) 879-3927				C
Chin Ridge Seeds Ltd. / Taber / (403) 223-3900			R	
Corns, Whitney / Grassy Lake / (403) 360-0833			R	
Dechaine, Louis / St. Lina / (780) 635-2235				C
Froese, Cornelius H. / La Crete / (780) 927-4645				C
Haralie Seed Farms / Beaver County / (780) 662-2617				R*
Hill, Gordon P. & Blair / Taylor / (250) 789-3469	S	F		C*
Jones, Greg Thomas & Tristan / Ponoka / (403) 783-6495		F		
Jonk, Nicholas / Westlock / (780) 349-5458			R	C
Kapitski, Lawrence / Andrew / (780) 365-2134				C
Klassen, Ken / Rosemary / (403) 378-4408				C

## Trait Stewardship Responsibilities Notice to Farmers

**Monsanto Company is a member of Excellence Through Stewardship® (ETS).** Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. These products have been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from these products can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for these products. Excellence Through Stewardship® is a registered trademark of Excellence Through Stewardship.

**ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.** Roundup Ready® Technology contains genes that confer tolerance to glyphosate. Roundup Ready® 2 Technology contains genes that confer tolerance to glyphosate. Roundup Ready 2 Xtend® soybeans contains genes that confer tolerance to glyphosate and dicamba. LibertyLink® Technology contains genes that confer tolerance to glufosinate. Glufosinate will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Glufosinate will kill crops that are not tolerant to glufosinate. Contact your local crop protection dealer or call the technical support line at 1-800-667-4944 for recommended Roundup Ready® Xtend Crop System weed control programs. Insect control technology provided by Vip3A is utilized under license from Syngenta Crop Protection AG.

**FOR CORN, EACH ACCELERON® SEED APPLIED SOLUTIONS OFFERING** is a combination of separate individually registered products containing the active ingredients: **STANDARD** offering for corn without SmartStax® Technology: fluoxastrobin, prothioconazole, metalaxyl and clothianidin. **STANDARD plus DuPont® Lumivia®** offering for corn: fluoxastrobin, prothioconazole, metalaxyl and cyantraniliprole. **STANDARD plus Poncho®/NOTIVO®** offering for corn with SmartStax® Technology: fluoxastrobin, prothioconazole, metalaxyl, clothianidin and Bacillus firmus I-1582. **COMPLETE** offering for corn with SmartStax® Technology: metalaxyl, clothianidin; prothioconazole and fluoxastrobin at rates that suppress additional diseases. **COMPLETE plus Poncho®/NOTIVO®** offering for corn with SmartStax® Technology: metalaxyl, clothianidin, Bacillus firmus I-1582; prothioconazole and fluoxastrobin at rates that suppress additional diseases. **COMPLETE plus DuPont® Lumivia®** offering for corn: metalaxyl, cyantraniliprole, prothioconazole and fluoxastrobin at rates that suppress additional diseases. Class of 2019 and 2020 base genetics are treated with BioRise® 360 seed treatment. **FOR SOYBEANS, EACH ACCELERON® SEED APPLIED SOLUTIONS OFFERING** is a combination of separate individually registered products containing the active ingredients: **BASIC:** prothioconazole, penflufen and metalaxyl. **STANDARD:** prothioconazole, penflufen, metalaxyl and imidazolidin. **STANDARD plus Fortenza®:** prothioconazole, penflufen, metalaxyl and cyantraniliprole. **FOR CANOLA** seed treatment offerings can include: Prosper® EverGol® seed treatment containing the active ingredients clothianidin, penflufen, metalaxyl and trifloxystrobin. Fortenza® Advanced seed treatment consisting of Fortenza Seed Treatment insecticide containing the active ingredient cyantraniliprole and Rascendo® Seed Treatment insecticide containing the active ingredient sulfoxaflor. Helix® Vibrance® seed treatment containing the active ingredients thiamethoxam, difenoconazole, metalaxyl-M, fludioxonil and sedaxane. Jumpstart® XL inoculant containing the active ingredient penicillium biliae.

Acceleron®, BioRise®, Bayer, the Bayer Cross Design, DEKALB and Design®, Prosper® EverGol®, RIB Complete®, Roundup Ready 2 Technology and Design®, Roundup Ready 2 Xtend®, Roundup Ready 2 Yield®, Roundup Ready®, Roundup Transorb®, Roundup WeatherMAX®, Roundup Xtend®, SmartStax®, Transorb®, Trecepta®, TruFlex®, VaporGrip®, VT Double PRO® and XtendiMax® are trademarks of Bayer Group. Monsanto Canada ULC licensee. DuPont® and Lumivia® are trademarks of E.I. du Pont de Nemours and Company or its Affiliates and are used under license by Monsanto. JumpStart® and Optimize® are registered trademarks of Novozymes. Used under license. Agrisure, Fortenza®, Helix®, Vibrance® and Viptera® are trademarks of a Syngenta group company. LibertyLink® and the Water Droplet Design, Poncho® and NOTIVO® are trademarks of BASF. Used under license. Herculex® is a registered trademark of Dow AgroSciences LLC. Used under license. ©2019 Bayer Group. All rights reserved.



Ask about a free trial of our weekly newsletter, Grainwise

1-800-440-8390

market master Ltd.



"Your grain watchdog."

www.grainwatchdog.com

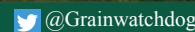
- Target contracts
- Spot pricing
- Forward pricing
- Market updates

We market (feed, gradable, organic and off-spec)

- Barley
- Rye
- Soybeans
- Wheat
- Flax
- Faba beans
- Canola
- Lentils
- Oats
- Peas
- Mustard
- Triticale

Alberta Based Grain Brokers  
Putting Farmers First Since 1995

Photo Credit: Sally Jackson



# SPRING TRITICALE

Variety	Overall Sta- tion Years of Testing	Overall Yield	Yield Category (% Brevis):				Agronomic Characteristics:						Disease Tolerance:			
			Low < 70 (bu/ac)	Medium 70 - 100 (bu/ac)	High 100 - 130 (bu/ac)	V. High > 130 (bu/ac)	Maturity Rating (Days +/- Brevis)	Test Weight (lb/bu)	TKW (g)	Height (cm)	Resistance to:		Ergot	Stripe Rust	Bunt	FHB
											Ldg.	Sprt.				
Previously tested varieties (Yield and agronomic data only directly comparable to Brevis)																
Brevis (bu/ac)		106	60	89	123	156										
Brevis	81	100	100	100	100	100	107	60	46	93	G	F	MR	MR	R	I
AAC Delight ☺	34	97	86	104	97	96	1	58	53	97	G	P	MR	R	R	I
AC Ultima	142	79	89	95	94	92	-1	57	45	96	G	F	MS	MR	R	I
Bunker ☹	49	71	78	88	87	XX	0	57	48	107	F	F	MS	MR	R	I
Pronghorn	120	80	89	96	97	93	0	55	43	98	G	F	I	MR	R	MR
Sunray	48	90	91	90	88	XX	-1	57	45	94	VG	F	MR	MR	R	MS
Taza ☺	48	89	90	91	88	XX	1	57	47	100	G	F	I	MR	R	S
Tyndal ☹	55	80	92	94	92	88	1	57	44	97	G	P	I	MR	R	MS

**Remarks:** Brevis yields about 25% more than Carberry (CWRS wheat) in areas of adaptation. AAC Delight, Bunker, Taza, and Tyndal have heads with reduced-awns which may be beneficial when harvested as forage or silage. New registrations and insufficient data to describe: T256, T267 and T270. XX - Insufficient data to describe.

## OATS - MILLING

### ORE3542M

**BI: Oat Advantage, DIST: SeCan Members**

LS Land & Cattle / Didsbury / (403) 335-3694  
Miller, Brian / Barrhead / (780) 674-5001  
Ohrn, Norman / Thorsby / (780) 985-2263  
Sekulic, John Jr. / Rycroft / (780) 765-2280  
Selte, Donald / Vermilion / (780) 853-2484  
Shaw, Tom / Country Of Grande Prairie No.1 / (780) 814-4046  
Haralie Seed Farms / Beaver County / (780) 662-2617  
Webber, Curtis / Parkland County / (780) 963-6897

## TRITICALE - SPRING

### AAC DELIGHT ☺

**BI: AAFC (Lethbridge), DIST: Fabian Seeds Ltd.**

Alect Seeds / Oyen / (403) 664-9617  
Brummelhuis, Mitchell & Mack / Vauxhall / (403) 654-7515  
Corns, Whitney / Grassy Lake / (403) 360-0833  
Fabian, Patrick V. / Tilley / (403) 377-2000  
Klassen, Ken / Rosemary / (403) 378-4408

### BREVIS

**BI: CIMMYT, DIST: Wagon Wheel Seed Corp**

Sim, Darwin & Derek / Ponoka / (780) 372-2111  
Webber, Curtis / Parkland County / (780) 963-6897

### BUNKER ☹

**BI: FCDC (Lacombe), DIST: FP Genetics**

Airth, Jock & Linda / Brooks / (403) 362-4372  
Solick Seeds Ltd. / Halkirk / (403) 884-2358

### CIRCUIT

**BI: N/A, DIST: Seed-Link Inc.**

Kerschbaumer, John A., Heather & Trevor / Fairview / (780) 835-4508

### PRONGHORN

**BI: FCDC (Lacombe), DIST: Progressive Seeds**

Mans, John / Nobleford / (403) 824-3585

### SUNRAY

**BI: AAFC (Lethbridge), DIST: SeedNet Inc.**

Benci, Dennis / Carmangay / (403) 643-2294  
Stamp Seeds / Enchant / (403) 739-2233

### TAZA ☺

**BI: FCDC (Lacombe), DIST: Solick Seeds Ltd.**

Rix, Graham / Wetaskiwin / (780) 360-9234  
Solick Seeds Ltd. / Halkirk / (403) 884-2358

### TYNDAL ☹

**BI: FCDC (Lacombe), DIST: SeCan Members**

Card, Gordon B. & Rhett / Magrath / (403) 758-3444  
Corns, Whitney / Grassy Lake / (403) 360-0833



Varieties: AAC Brandon, CDC Go,  
AAC Spitfire, CDC Austenson, AAC Delight

[www.brummelhuisseeds.com](http://www.brummelhuisseeds.com)

**Mack Brummelhuis**

403-654-0262

[mack.brummelhuis@gmail.com](mailto:mack.brummelhuis@gmail.com)

**Mitch Brummelhuis**

403-654-7515

[mitch.brummelhuis@gmail.com](mailto:mitch.brummelhuis@gmail.com)

**Jay Maloney**

403-654-6788

[sales.brummelhuis@gmail.com](mailto:sales.brummelhuis@gmail.com)



Brummelhuis Seeds is located 6km north of  
Vauxhall, Alberta on highway 36

## Derwin and Kirby Massey

Box 534  
Stettler, AB T0C 2L0  
Tel: (403) 883-2503  
Fax: (403) 883-2800  
Kirby's Cell: (403) 741-5641  
Derwin's Cell: (403) 741-6464  
E-mail: [kirby.massey@gmail.com](mailto:kirby.massey@gmail.com)  
[echoridgeseeds.com](http://echoridgeseeds.com)

**VARIETIES**  
**Peas:**  
CDC Meadow, AAC Carver  
**Barley:**  
CDC Austenson, CDC Copeland  
**Wheat:**  
AAC Brandon, AAC Viewfield Wheat

## FLAX

Variety	Overall Station Years of Testing	Yield Category (% CDC Bethune):					Agronomic Characteristics:					Disease Tolerance:		Quality:		
		Overall Yield	Low < 20 (bu/ ac)	Medium 20-30 (bu/ac)	High 30-37 (bu/ ac)	V. High > 37 (bu/ ac)	Maturity Rating (Days +/- CDC Bethune)	Seed Colour	Seed Size	Height (cm)	Resistance to Lodging	Fusarium Wilt	Powdery Mildew	Oil Content (%)	ALA Content (%)	Iodine Value
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to CDC Bethune)																
CDC Bethune (bu/ac)		32	14	26	33	48										
CDC Bethune 🌾	133	100	100	100	100	100	107	brown	M	58	G	MR	MR	46	55	189
AAC Bright ☺	14	97	XX	XX	XX	XX	2	yellow	S	65	VG	MR	XX	48	55	191
AAC Marvelous ☺	24	107	XX	107	XX	104	2	brown	M	62	G	MR	MR	47	56	192
AAC Prairie Sunshine ☺	21	99	XX	XX	XX	96	2	brown	M	63	VG	MR	MR	48	57	193
CDC Dorado ☺	14	95	XX	XX	XX	XX	-1	yellow	L	58	G	MR	MR	45	64	204
CDC Glas 🌾	37	108	XX	XX	108	106	1	brown	M	63	G	MR	MR	46	57	192
CDC Rowland ☺	24	113	XX	XX	XX	109	3	brown	L	62	G	MR	MR	45	59	195
Previously tested varieties																
CDC Bethune 🌾		100	100	100	100	100	0	brown	M	58	G	MR	MR	46	55	189
AAC Bravo 🌾	23	104	XX	XX	XX	105	1	brown	L	64	G	MR	MR	45	60	194
CDC Buryu ☺	26	100	97	104	99	97	1	brown	L	57	G	MR	MR	46	56	193
CDC Neela ☺	24	109	108	116	108	XX	1	brown	M	55	G	MR	MR	46	59	194
CDC Plava ☺	34	101	98	109	101	93	-2	brown	M	53	G	MR	XX	47	57	196
CDC Sanctuary + 🌾	27	106	112	99	XX	104	3	brown	M	64	G	MR	MR	46	57	191
CDC Sorrel 🌾	32	104	112	104	100	99	1	brown	L	61	F	MR	MR	45	58	193
Prairie Sapphire 🌾	23	96	XX	XX	XX	100	2	brown	M	64	G	MR	MR	48	57	193
Topaz ☺	26	101	104	100	97	105	0	brown	M	55	G	MR	MR	47	55	189
VT50 🌾	24	103	XX	109	104	97	4	yellow	S	51	VG	MR	XX	47	68	209
WestLin 60 + ☺	24	100	100	105	XX	98	-1	brown	M	50	G	MR	XX	46	60	198
WestLin 71 + ☺	25	95	99	91	XX	94	2	brown	M	56	G	MR	MS	48	61	198
WestLin 72 ☺	26	100	96	106	103	94	3	brown	S	53	VG	MR	MR	47	57	193

**Remarks:** For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. All varieties are immune to flax rust. XX - Insufficient data to describe. + Flagged for possible removal in 2021.

## FLAX

## AAC BRAVO 🌾

**BI: AAFC (Morden), DIST: FP Genetics**

King's Seed Farm / Three Hills / (403) 443-3333

Wheatcrest Farms / Lomond / (403) 792-3696

## AAC BRIGHT 🌾

**BI: AAFC (Morden), DIST: SeCan Members**

Stamp Seeds / Enchant / (403) 739-2233

## AAC MARVELOUS

**BI: AAFC (Morden), DIST: FP Genetics**

Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036

Mercer Seeds Ltd. / Lethbridge / (403) 327-9736

Stamp Seeds / Enchant / (403) 739-2233

## AAC PRAIRIE SUNSHINE 🌾

**BI: AAFC (Morden), DIST: SeCan Members**

Stamp Seeds / Enchant / (403) 739-2233

Willms, Timothy H. / Grassy Lake / (403) 655-2434

## CDC DORADO

**BI: CDC, DIST: SeedNet Inc.**

Chin Ridge Seeds Ltd. / Taber / (403) 223-3900

Markert Seeds Ltd. / Vulcan / (403) 485-6708

Mercer Seeds Ltd. / Lethbridge / (403) 327-9736

Willms, Timothy H. / Grassy Lake / (403) 655-2434

Witdcock, Dale / Iron Springs / (403) 738-4395

## CDC NEELA

**BI: CDC, DIST: Canterra Seeds**

Benci, Dennis / Carmangay / (403) 643-2294

Huvenaars, Carl / Hays / (403) 725-2213

## CDC PLAVA 🌾

**BI: CDC, DIST: SeCan Members**

Foster, Norman R. / Beaverlodge / (780) 354-2107

Lefsrud Seed / Viking / (780) 336-2500

Lehmann, Frederick / Cecil Lake / (250) 785-8177

Skaley, Wayne / Rycroft / (780) 765-2175

Svean, Alan Carl & Scott / Rivercourse / (780) 745-2578

Webber, Curtis / Parkland County / (780) 963-6897

## CDC ROWLAND 🌾

**BI: CDC, DIST: SeCan Members**

SeCan Association / Kanata / (613) 592-8600

## TOPAZ

**BI: Nutrien Ag Solutions., DIST: Alliance Seed**

Stamp Seeds / Enchant / (403) 739-2233

## VT50

**BI: Nutrien Ag Solutions, DIST: Nutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / High River / (403) 603-6011

## WESTLIN 71 🌾

**BI: Nutrien Ag Solutions, DIST: Nutrien Ag Solutions/Proven Seed**

Mercer Seeds Ltd. / Lethbridge / (403) 327-9736

## WESTLIN 72 🌾

**BI: Nutrien Ag Solutions, DIST: Nutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / High River / (403) 603-6011

Willms, Timothy H. / Grassy Lake / (403) 655-2434

## FLAX - RECONSTITUED

## CDC GLAS 🌾

**BI: CDC, DIST: SeCan Members**

Alect Seeds / Three Hills / (403) 443-9599

Catherwood, James / Calgary / (403) 836-9699

Croymans, John, Joseph & Andrew / Bow Island / (403) 545-6333

Dyck, Heinz W., Colin, Alan & Kelton / Rosemary / (403) 378-3321

Feenstra, Lloyd / Barons / (403) 757-3737

Hoff, Peter Edward / Gleichen / (403) 734-2140

Kopjar, Gerald M. / Rowley / (403) 368-2409

Mueller, Darcy / Three Hills / (403) 820-4115

## CDC SORREL 🌾

**BI: CDC, DIST: SeCan Members**

Degenhardt, Keith, Terry Lee & Kerry / Hughenden / (780) 856-2383

King's Seed Farm / Three Hills / (403) 443-3333

Zwack, Thomas / Daysland / (780) 374-2450

# WINTER WHEAT

## CANADA WESTERN RED WINTER

Variety	Overall Station Years of Testing	Overall Yield (bu/ac)	Yield Category (% Radiant)					Agronomic Characteristics:						Disease Tolerance:					
			Low < 45 (bu/ ac)	Medium 45 - 75 (bu/ac)	High 75 - 105 (bu/ac)	V. High > 105 (bu/ac)	Winter Sur- vival	Mat. Rating	Protein %	Test Weight (lb/bu)	TKW (g)	Height (cm)	Resist- ance to Lodg- ing	Stripe Rust	Leaf Rust	Stem Rust	Bunt	FHB	
Yield, significant differences and agronomic data only directly comparable to Radiant																			
Radiant (bu/ac)		76	37	63	87	112													
Radiant		100	100	100	100	100	VG	220	12.0	63	36	90	VG	S	S	S	S	S	
AAC Elevate		106	106	104	107	107	G	-1	+0.3	63	39	84	VG	MS	I	MR	MR	I	
AAC Gateway		86	100	XX	98	102	101	F	-2	+0.9	63	33	77	VG	MR	I	MR	S	I
AAC Goldrush		40	102	XX	99	104	XX	VG	-1	+0.5	63	34	86	G	I	R	MR	S	I
AAC Wildfire		54	113	XX	116	113	111	VG	+2	+0.3	64	38	86	G	R	I	S	MR	MR
AC Tempest <sup>+</sup>		117	97	96	97	96	99	P	+2	+1.5	63	37	91	VG	MR	S	S	MS	I
CDC Buteo <sup>+</sup>		220	96	94	97	96	101	VG	-2	+0.3	65	34	91	F	S	I	I	S	MR
Emerson		103	98	103	95	99	92	G	-1	+0.7	64	30	86	G	MR	I	R	S	R
Moats		107	105	99	102	107	104	G	-1	+0.7	64	33	91	F	MR	MR	R	MS	S

### CANADA WESTERN EXPERIMENTAL

Yield, significant differences and agronomic data only directly comparable to Radiant																		
AAC Icefield	50	103	XX	100	107	XX	F	-1	-0.6	63	32	82	VG	MR	MR	R	S	I

### CANADA WESTERN SPECIAL PURPOSE

Yield, significant differences and agronomic data only directly comparable to Radiant																		
Pintail	79	108	XX	109	109	XX	VG	-1	-1.4	61	29	88	F	MR	MS	MS	S	S

**REMARKS:** Winter wheat can be grown successfully in all areas of Alberta if seeded into standing stubble within the optimal seeding date period (generally before September 15) and if there is adequate snowfall. Varieties with poor (P) winter survival are generally not suitable outside of southern Alberta. The long term average maturity for Radiant is 220 days after January 1 (August 9) and is considered to be late maturing. Fusarium head blight infection may be reduced if varieties with Intermediate (I) resistance or better are used and when recommended seeding dates are followed. Radiant and AAC Elevate have tolerance to the wheat curl mite, the vector for Wheat Streak Mosaic Virus. To preserve the effectiveness of the wheat curl mite tolerance gene, agronomic practices that eliminate the "green bridge" of plant material that serves as a reservoir for mites should be followed whenever possible. Fields in southern Alberta should be inspected in the fall for infestation by Russian wheat aphid, as it may reduce winter survival. AAC Wildfire expresses tolerance to some biotypes of Russian wheat aphid. Radiant, AAC Wildfire and AC Tempest express bronze chaff at maturity. AAC Icefield, a hard white winter wheat now fully registered, is eligible for experimental grades to facilitate market research under an Identity Preserved system. AAC Icefield expresses high milling yield of very white flour and good gluten strength at lower protein concentrations that may be of interest in some niche markets. For more information contact FP Genetics. Pintail has an awnless head which may improve palatability when harvested for forage or silage. New registrations: W569 (CWRW). Insufficient data to describe: W569. <sup>+</sup> Flagged for possible removal in 2021.



**livingspring FARMs Ltd.**

**PETER & CYNTHIA Hoff**  
Box 518, Gleichen, Ab. T0J 1N0  
Ph (403) 734-2140 Fax (403) 734-3938



Canada's Seed Partner



Canadian Seed Growers' Association






**CORA KRYWKO**  
MANAGER  
www.morinvilleseed.ca  
mscp@xplornet.com





9407-100 Street  
Morinville, AB T8R 1R2  
Ph. (780) 939-4021  
Ph. (855) 939-4021  
Fax (780) 939-2605



**kseeds.ca**

Wheat: AAC Elie, AAC Brandon, AAC Redberry  
Barley: CDC Copeland  
Peas: AAC Barrhead, CDC Amarillo

**Scott or Greg Konieczny**  
Mannville, Alberta  
Scott cell: 780-581-5693  
Greg cell: 780-787-1246  
Email: scokon@gmail.com






**HRS: Viewfield**  
**CPS: Alderon, Goodwin**  
**Yellow Peas: Lacombe**  
**Barley: Copeland**

Justin Nanninga: 780-307-4343  
Dawna Nanninga: 780-674-3822  
E: forwardseedfarm@gmail.com  
2505 TWP RD 620, County of Barrhead, AB T0G 1R2



# FALL RYE

Variety	Hybrid or OP Variety	Overall Station Years of Testing	Overall Yield	Yield Category (% Hazlet)				Agronomic Characteristics:						
				Low < 48 (bu/ac)	Medium 48 - 80 (bu/ac)	High 80 - 112 (bu/ac)	V. High > 112 (bu/ac)	Winter Survival	Test Weight (lb/bu)	TKW (g)	Falling Number (sec)	Height (cm)	Resistance to Lodging	
				Yield, significant differences and agronomic data only directly comparable to Hazlet										
Hazlet (bu/ac)			100	45	63	92	135							
Hazlet	OP	61	100	100	100	100	100	EX	59	39	147	107	G	
Brasetto	Hybrid	20	123	XX	XX	XX	120	EX	59	36	246	104	VG	
Guttino	Hybrid	20	120	XX	XX	XX	120	EX	60	36	279	101	VG	
KWS Bono	Hybrid	31	136	XX	XX	132	132	EX	58	33	260	98	VG	
KWS Daniello	Hybrid	18	125	XX	XX	XX	127	VG	59	34	266	100	G	
KWS Gatano	Hybrid	21	130	XX	XX	126	124	VG	58	32	252	97	F	
Prima	OP	52	93	91	88	97	92	EX	58	33	192	119	F	

**REMARKS:** For explanations on data summarization methods, abbreviations and other pertinent information, please see the comments at the beginning of this publication. Hazlet has lower viscosity which improves feed performance in monogastric livestock. Fall rye is much more cold tolerant than winter wheat or winter triticale. The long term average heading date and maturity for Hazlet is June 1 and August 6, respectively. All fall rye varieties are similar for heading and maturity and are considered early. A major factor in marketing rye grain into the milling market is sprouting. This is generally measured using the Hagberg falling number test and is measured in seconds. Typically, a falling number of 180 seconds or greater is preferred by the rye milling market. Falling number is heavily influenced by moisture around harvest time and producers must make sure rye is harvested in a timely manner, similar to wheat crops. There is considerable variation in fall rye varieties for falling number and this must be considered if the milling market is the targeted end-user for rye grain. All fall rye is susceptible to ergot, however KWS Daniello and KWS Gatano have reduced susceptibility. AFSC crop insurance deadlines for seeding fall rye is September 20, north of the Bow River and September 30, south of the Bow River. New registration: KWS Trebiano (RT240). XX - Insufficient data to describe.

## RYE

### BRASSETTO

FP Genetics / Regina / (306) 791-1045

### GUTTINO

Mercer Seeds Ltd. / Lethbridge / (403) 327-9736

Specialty Seeds / Bow Island / (403) 545-6018

### HAZLET

Benci, Dennis / Carmangay / (403) 643-2294

Degenhardt, Keith, Terry Lee & Kerry / Hughenden / (780) 856-2383

### KWS BONO

FP Genetics / Regina / (306) 791-1045

### KWS DANIELLO

Benci, Dennis / Carmangay / (403) 643-2294

Specialty Seeds / Bow Island / (403) 545-6018

Stamp Seeds / Enchant / (403) 739-2233

### KWS GATANO

FP Genetics / Regina / (306) 791-1045

### KWS PROGAS

FP Genetics / Regina / (306) 791-1045

### KWS PROPOWER

Benci, Dennis / Carmangay / (403) 643-2294

Stamp Seeds / Enchant / (403) 739-2233

Witdouch, Dale / Iron Springs / (403) 738-4395

### MUSKETEE

Degenhardt, Keith, Terry Lee & Kerry / Hughenden / (780) 856-2383

### PRIMA

Stamp Seeds / Enchant / (403) 739-2233

## TRITICALE - WINTER

### BOBCAT

Corns, Whitney / Grassy Lake / (403) 360-0833

Fabian, Patrick V. / Tilley / (403) 377-2000

### LUOMA

Corns, Whitney / Grassy Lake / (403) 360-0833

### METZGER

Corns, Whitney / Grassy Lake / (403) 360-0833

### PIKA

Airth, Jock & Linda / Brooks / (403) 362-4372

## WHEAT - CWRW

### AAC ELEVATE

BI: AAFC (Lethbridge), DIST: SeCan Members

Mercer Seeds Ltd. / Lethbridge / (403) 327-9736

### AAC GATEWAY

Stamp Seeds / Enchant / (403) 739-2233

### AAC WILDFIRE

Chin Ridge Seeds Ltd. / Taber / (403) 223-3900

Huvenaars, Carl / Hays / (403) 725-2213

Penwest Seeds / Three Hills / (403) 443-2577

Sleepy Hollow Seeds Ltd. / Milk River / (403) 647-2228

Stamp Seeds / Enchant / (403) 739-2233

Willms, Timothy H. / Grassy Lake / (403) 655-2434

Witdouch, Dale / Iron Springs / (403) 738-4395

### AC EMERSON

BI: AAFC (Lethbridge), DIST: Canterra Seeds

Penwest Seeds / Three Hills / (403) 443-2577

## WHEAT - CWSPWW

### PINTAIL

Mastin, Robert B. / Sundre / (403) 556-2609



Lougheed Co-op Seed Cleaning Plant

P.O. Box 123, Lougheed, AB, T0B 2V0

Manager: Jeremy Simpson, 780-386-3771,

lscp@xplornet.com, lougheedprocessing.ca

### RETAILERS FOR:



403-443-2577



780-777-5885



Inland Plastics

### PEDIGREED SEED FOR SALE

#### Wheat:

-AAC Brandon  
-AAC Redberry  
-AAC Viewfield

#### Barley:

-AAC Synergy

#### Oats:

-CS Camden



Seed Treating Available



# 2019 Complete CPT SMALL PLOT DATA (Standard and Straight Cut)

**THIS ISSUE CONTAINS** the 2019 small plot data. Once the 2019 field scale dataset is finalized, it will be posted on [canolaperformancetrials.ca](http://canolaperformancetrials.ca), along with this complete 2019 CPT small plot dataset.

- For all CPT information, visit [www.canolaperformancetrials.ca](http://www.canolaperformancetrials.ca)
- For a brief explanation on how to interpret the statistics, see the 2018 CPT booklet.
- To view the 2019 CPT standard and straight cut protocols, see [canolaperformancetrials.ca/trial-protocol](http://canolaperformancetrials.ca/trial-protocol)

## Introduction

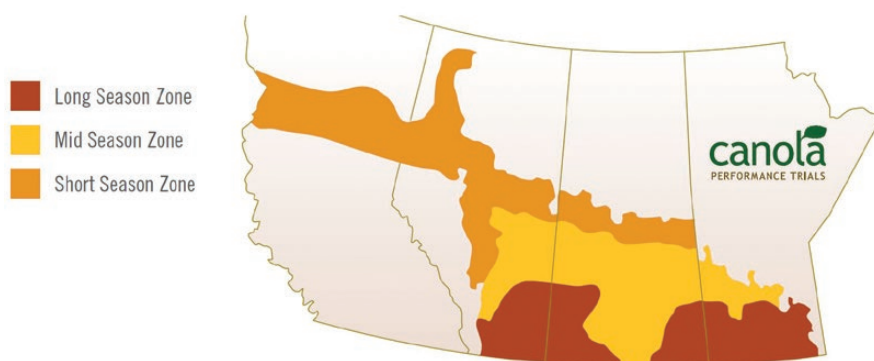
The CPT results in this report are based on 19 standard and 12 straight cut small plot trials across the Prairies. Site distribution is based on seeded acres in Manitoba, Saskatchewan, Alberta and British Columbia.

The small plot system ensures that:

- All varieties are treated with appropriate commercially associated herbicides and seed treatments.
- An independent third-party representative inspects all trials.

The CPT Technical Committee established protocols and developed research plot designs to ensure that the data is representative. Performance objectives were established to provide guidelines on timely field operations and data collection. All sites are inspected to verify these guidelines were followed to allow a fair comparison among the varieties tested.

## Small plot locations throughout Western Canada



The 2019 program was funded by Alberta Canola Producers Commission (Alberta Canola), Saskatchewan Canola Development Commission (SaskCanola) and the Manitoba Canola Growers Association, with contributions from the B.C. Grain Producers Association (BCGPA). The 2019 trials were again coordinated by HaploTech with the direction from the CPT Governance and Technical Committees. The Canola Council of Canada supported on the delivery of the program.

Commercial canola varieties tested in the 2019 small plot trials had seed provided by BASF – InVigor, BrettYoung, Brevant, CANTERRA SEEDS, DEKALB, DL Seeds, Pioneer and Proven/Nutrien Ag Solutions and Winfield United Canada.

Results are organized by short, medium and long season zones. CPT uses the Western Canada Canola/

Rapeseed Recommending Committee season zones, which are based on typical frost free days, growing degree days and soil type. See the map on page 12 for reference.

The results tables include yield, days to maturity, height and lodging scores for each variety. Lodging scores are between 1 and 5, with 1 being no lodging and 5 being completely lodged.

Gross revenue is based on yield multiplied by \$10.75/bu. This is based on \$474.00 per tonne, the March 2020 futures based on opening price on November 20, 2019 and standard (50-pound) bushel weight.

This report is one of several sources of information to consider in making the best decisions for your farm.

For further information on the CPT Program and data from 2011 through 2018, see [canolaperformancetrials.ca](http://canolaperformancetrials.ca).

# AIM HIGHER

On your mission to increase yields and maximize profits, it's time to add a strategic partner to your operation.



**RISE ABOVE  
COMMODITY  
CANOLA WITH  
VICTORY V14-1**

VICTORY V14-1 delivers high gross returns and industry-leading clubroot\* and polygenic blackleg resistance. Set your sights on victory with the Cargill Specialty Canola Program.

**Talk to your Cargill or Independent Retail today to secure your acres**

**VICTORYCANOLA.COM**



\*Clubroot resistance to pathotypes 2,3,5,6, & 8

©The Cargill Logo, ®VICTORY and ®VICTORY Hybrid Canola logo are registered trademarks of Cargill Incorporated, used under license. © 2019 Cargill, Incorporated.

Season Zone Averages (Straight Cut Trials)																		
			Long Season Zone (5 locations)				Mid Season Zone (5 locations)				Short Season Zone (2 locations)				Overall Average (12 locations)			
Distributor	Variety	Disease Tolerance	Yield (bu/ac)	Yield (% L233P)	Days to maturity	Height (in.)	Yield (bu/ac)	Yield (% L233P)	Days to maturity	Height (in.)	Yield (bu/ac)	Yield (% L233P)	Days to maturity	Height (in.)	Yield (bu/ac)	Yield (% L233P)	Days to maturity	Height (in.)
LibertyLink																		
BASF - InVigor	L233P	BL	55	100	93	48	73	100	105	50	75	100	117	54	66	100	102	50
BASF - InVigor	L234PC	BL/CR	54	98	93	48	68	93	105	48	72	96	117	53	63	96	102	49
BASF - InVigor	L255PC	BL/CR	56	103	94	48	73	99	107	48	74	99	118	52	66	100	104	49
	LSD		6	11			6	7			7	9			6	9		
Roundup Ready																		
DEKALB	75-65 RR	BL	53	96	92	48	66	91	105	48	73	98	117	53	62	94	102	49
Proven Seed/Nutrien Ag Solutions	PV 540 G	BL	53	96	96	50	69	95	109	48	71	95	119	52	63	95	105	50
Pioneer	45CM39	BL/CR	57	103	96	49	67	94	107	47	73	98	118	52	64	98	104	49
Pioneer	45M35		57	102	95	50	73	100	107	49	76	101	118	53	67	101	104	50
	LSD		5	9			6	8			7	10			6	8		
TruFlex																		
CANTERRA SEEDS	CS2600 CR-T	BL/CR	55	100	93	47	66	92	107	48	68	91	118	51	62	96	103	48
	LSD																	

<sup>1</sup> Indicates genetic disease resistance with an "R" or resistant rating to BL = Blackleg, CR = Clubroot and improved tolerance to sclerotinia "S", as based on variety descriptions submitted to CFIA. Note that variety 45M35 has an "MR" rating for blackleg.

## Canola Seed Distributors

For additional canola varieties available for purchase and detailed variety information please contact these canola seed distributors.

BASF / 1-877-371-2273 / [www.agsolutions.ca](http://www.agsolutions.ca)  
 BrettYoung / 1-800-665-5015 / [www.brettyoung.ca](http://www.brettyoung.ca)  
 CANTERRA SEEDS Ltd. / (204) 988-9750 / [www.canterra.com](http://www.canterra.com)  
 Cibus Canada / 1-844-372-4287 / [www.cibuscanola.ca](http://www.cibuscanola.ca)  
 Corteva Agriscience, Agriculture Division of DowDuPont / 1-800-667-3852 / [www.brevant.ca](http://www.brevant.ca) & [ca.pioneer.com/west/en](http://ca.pioneer.com/west/en)  
 DEKALB / Bayer Canada / 1-800-667-4944 / [www.DEKALB.ca](http://www.DEKALB.ca)  
 DL Seeds / (204) 331-2361 / [www.dlseeds.ca](http://www.dlseeds.ca)  
 Lefsrud Seed Ltd / 6King Genetics / (780) 336-6700 Ed or (780) 336-5700 Kevin  
 Mastin Seeds / (403) 556-2609 / [www.mastinseeds.com](http://www.mastinseeds.com)  
 Nutrien Ag Solutions/Proven Seed / 1-855-569-9444 / [www.nutrienagsolutions.ca](http://www.nutrienagsolutions.ca) & [www.provenseed.ca](http://www.provenseed.ca)  
 Rotam North America / (431) 335-9471 / [rotamnorthamerica.com](http://rotamnorthamerica.com)  
 SeCan / 1-800-665-7333 / [www.secan.com](http://www.secan.com)  
 Syngenta Canada Inc. / 1-877-964-3682 / [www.syngenta.ca](http://www.syngenta.ca)  
 Victory Hybrid Canola / Cargill / [www.victorycanola.com](http://www.victorycanola.com)  
**ADDITIONAL RESOURCES:**  
 Canola Council of Canada / 1-866-834-4378 / [www.canolacouncil.org](http://www.canolacouncil.org)  
 Alberta Agriculture and Rural Development / 310-FARM (3276) / [www.agriculture.alberta.ca](http://www.agriculture.alberta.ca)  
 Alberta Canola Producers Commission / 1-800-551-6652 / [www.canola.ab.ca](http://www.canola.ab.ca)

## CANOLA - HEAR

### EVOLVE

**BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed**  
 Nutrien Ag Solutions (Canada) / Lethbridge / (403) 715-4514

## CANOLA - NAPUS

### 1026 RR

**BI: N/A, DIST: Corteva Agriscience**  
 Corteva Agriscience / Lethbridge County / (403) 327-6135

### 1028 RR

**BI: N/A, DIST: Corteva Agriscience**  
 Corteva Agriscience / Lethbridge County / (403) 327-6135

### 2028 CL

**BI: N/A, DIST: Corteva Agriscience/ Brevant Seeds**  
 Corteva Agriscience / Lethbridge County / (403) 327-6135

### 45CM39

**BI: N/A, DIST: Corteva Agriscience/Pioneer**  
 Corteva Agriscience / Lethbridge County / (403) 327-6135

### 45CS40

**BI: N/A, DIST: Corteva Agriscience/Pioneer**  
 Corteva Agriscience / Lethbridge County / (403) 327-6135

### 45H33

**BI: N/A, DIST: Corteva Agriscience/Pioneer**  
 Corteva Agriscience / Lethbridge County / (403) 327-6135

### 45H76

**BI: N/A, DIST: Corteva Agriscience/Pioneer**  
 Corteva Agriscience / Lethbridge County / (403) 327-6135

### 45M35

**BI: N/A, DIST: Corteva Agriscience/Pioneer**  
 Corteva Agriscience / Lethbridge County / (403) 327-6135

### 46H75

**BI: N/A, DIST: Corteva Agriscience/Pioneer**  
 Corteva Agriscience / Lethbridge County / (403) 327-6135

### 6076 CR

**BI: N/A, DIST: BrettYoung Seeds Ltd**  
 BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932

### 6090 RR

**BI: N/A, DIST: BrettYoung Seeds Ltd**  
 BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932

### B3010M

**BI: N/A, DIST: Corteva Agriscience**  
 Corteva Agriscience / Lethbridge County / (403) 327-6135

### B3011

**BI: N/A, DIST: Corteva Agriscience/ Brevant Seeds**  
 Corteva Agriscience / Lethbridge County / (403) 327-6135

### BY 5105CL

**BI: N/A, DIST: BrettYoung Seeds Ltd**  
 BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932

### CS2000, CS2001, CS2300, CS2400, CS2500CL, CS2600 CR-T

CANTERRA SEEDS Ltd. / Winnipeg / (204) 988-9750

### DKLL 82 SC

**BI: N/A, DIST: Bayer/Dekalb**  
 Bayer Crop Science / Lethbridge County / (403) 360-8043

### DKTF 92 SC

**BI: N/A, DIST: Bayer/Dekalb**  
 Bayer Crop Science / Lethbridge County / (403) 360-8043

### DKTF 94 CR

**BI: N/A, DIST: Bayer/Dekalb**  
 Bayer Crop Science / Lethbridge County / (403) 360-8043

### DKTF 96 SC

**BI: N/A, DIST: Bayer/Dekalb**  
 Bayer Crop Science / Lethbridge County / (403) 360-8043

### DKTFLL 21 SC

**BI: N/A, DIST: Bayer/Dekalb**  
 Bayer Crop Science / Lethbridge County / (403) 360-8043

	Season Zone Averages (Standard Trials)																	
			Long Season Zone (6 locations)				Mid Season Zone (8 locations)				Short Season Zone (5 locations)				Overall Average (19 locations)			
Distributor	Variety	Disease Tolerance <sup>1</sup>	Yield (bu/ac)	Yield (% L252)	Days to maturity	Height (in.)	Yield (bu/ac)	Yield (% L252)	Days to maturity	Height (in.)	Yield (bu/ac)	Yield (% L252)	Days to maturity	Height (in.)	Yield (bu/ac)	Yield (% L252)	Days to maturity	Height (in.)
LibertyLink																		
BASF - InVigor	L230	BL	48	90	91	47	64	94	104	52	65	92	109	47	59	92	101	49
BASF - InVigor	L241C	BL/CR	48	91	94	49	64	94	106	52	73	103	112	49	61	95	103	50
BASF - InVigor	L252	BL	53	100	95	48	68	100	106	53	70	100	112	48	64	100	104	50
Pioneer	P501L	BL/CR	48	92	93	48	62	92	105	53	72	101	110	48	60	94	102	50
	LSD		6	11			8	12			7	11			7	12		
Roundup Ready																		
BrettYoung	6076 CR	BL/CR/S	50	95	94	50	61	90	107	56	69	98	114	50	59	93	105	52
BrettYoung	6090 RR	BL/CR	52	98	95	51	60	87	107	57	69	98	114	51	60	94	105	53
Brevant	D3155C	BL/CR	50	95	94	50	60	88	106	56	71	100	112	50	60	93	104	53
CANTERRA SEEDS	CS2300	BL	52	99	97	51	59	87	109	57	68	96	115	51	59	93	106	53
DEKALB	74-44 BL	BL	46	89	91	43	53	78	104	50	64	90	111	43	54	85	102	46
DEKALB	75-42 CR	BL/CR	48	93	92	46	53	80	104	51	64	91	110	62	55	87	102	48
DEKALB	75-65 RR	BL	47	91	92	46	57	85	104	51	64	89	110	46	56	88	102	48
Winfield United Canada	CP20R3C	BL/CR	50	95	99	51	60	89	109	57	68	97	116	51	59	93	107	54
Proven Seed/Nutrien Ag Solutions	PV 540 G	BL	53	100	95	49	59	88	107	54	69	98	113	49	60	94	105	51
Nutrien Ag Solutions	PV 581 GC	BL/CR	51	98	95	49	60	88	107	56	71	100	114	49	60	94	105	52
Pioneer	45CM39	BL/CR	53	102	93	47	61	90	106	51	71	101	112	47	61	97	103	49
Pioneer	45H33	BL/CR	47	89	94	49	59	86	106	55	69	97	113	49	57	90	104	51
Pioneer	45M35		52	100	94	48	62	92	106	53	71	100	111	48	61	97	103	50
	LSD		6	11			7	11			8	11			7	11		
TruFlex																		
CANTERRA SEEDS	CS2600 CR-T	BL/CR	51	97	91	46	60	88	105	51	70	98	112	46	59	94	102	48
BrettYoung	BY 6207TF	BL/CR	49	93	100	51	63	92	111	58	68	97	116	51	60	94	109	54
	LSD		7	13			14	20			15	23			12	18		
Clearfield																		
Pioneer	46H75	BL	50	96	93	49												
CANTERRA SEEDS	CS2500CL	BL	46	88	90	48												
	LSD		7	14														

<sup>1</sup> Indicates genetic disease resistance with an "R" or resistant rating to BL = Blackleg, CR = Clubroot and improved tolerance to sclerotinia "S", as based on variety descriptions submitted to CFIA  
Note that variety 45M35 has an "MR" rating for blackleg.

## L233P

BI: BASF Canada Inc., DIST: BASF Canada Inc.

BASF Canada Inc. / Lethbridge / (403) 320-4565

## L234PC

BI: BASF Canada Inc., DIST: BASF Canada Inc.

BASF Canada Inc. / Lethbridge / (403) 320-4565

## L241C

BI: BASF Canada Inc., DIST: BASF Canada Inc.

BASF Canada Inc. / Lethbridge / (403) 320-4565

## L252

BI: BASF Canada Inc., DIST: BASF Canada Inc.

BASF Canada Inc. / Lethbridge / (403) 320-4565

## L255PC

BI: BASF Canada Inc., DIST: BASF Canada Inc.

BASF Canada Inc. / Lethbridge / (403) 320-4565

## L258HPC

BI: BASF Canada Inc., DIST: BASF Canada Inc.

BASF Canada Inc. / Lethbridge / (403) 320-4565

## L345PC

BI: BASF Canada Inc., DIST: BASF Canada Inc.

BASF Canada Inc. / Lethbridge / (403) 320-4565

## L352C

BI: BASF Canada Inc., DIST: BASF Canada Inc.

BASF Canada Inc. / Lethbridge / (403) 320-4565

## P501L

BI: N/A, DIST: Corteva Agriscience/Pioneer

Corteva Agriscience / Lethbridge County / (403) 327-6135

## P502CL

BI: N/A, DIST: Corteva Agriscience/Pioneer

Corteva Agriscience / Lethbridge County / (403) 327-6135

## PV 200 CL

BI: Corteva Agriscience, DIST: Nutrien Ag Solutions/Proven Seed

Corteva Agriscience / Lethbridge County / (403) 327-6135

## PV 533 G

BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed

Nutrien Ag Solutions (Canada) / Lethbridge / (403) 715-4514

## PV 560 GM

BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed

Nutrien Ag Solutions (Canada) / Lethbridge / (403) 715-4511

## PV 680 LG

BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed

Nutrien Ag Solutions (Canada) / Lethbridge / (403) 715-4512

## PV 681 LC

BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed

Nutrien Ag Solutions (Canada) / Lethbridge / (403) 715-4513

## PV 760 TM

BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed

Nutrien Ag Solutions (Canada) / Lethbridge / (403) 715-4514

## PV 780 TC

BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed

Nutrien Ag Solutions (Canada) / Lethbridge / (403) 715-4514

## UA ALFAGOLD

BI: U of Alberta, DIST: 6 King Genetics

Lefsrud Seed / Viking / (780) 336-2500

## UA BOUNTYGOLD

BI: U of Alberta, DIST: 6 King Genetics

Lefsrud Seed / Viking / (780) 336-2500

# CANOLA - RAPA

S F R C

## EARLY ONE

BI: N/A, DIST: Mastin Seeds

Mastin, Robert B. / Sundre / (403) 556-2609

# Hay and Pasture Crops

## DISTRIBUTOR INFORMATION:

Corteva Agriscience .....	1-800-667-3852 / www.brevant.ca & ca.pioneer.com/west/en
BrettYoung.....	1-800-665-5015 / www.brettyoung.ca
FP Genetics.....	1-866-791-4522 / www.fpgenetics.ca
Foster's Seed & Feed Ltd. ....	1-800-379-4804 / doug.thiessen@fosterseed.com / www.fosterseed.com
Hannas Seeds Ltd. ....	403-782-6671 / patricia@hannasseeds.com / www.hannasseeds.com
Peace Country Seeds / Interlake Forage Seeds .....	780-338-2934 / plundgard@telus.net / www.interlakeforageseeds.com
Johnson Seeds.....	1-800-363-9442 / info@johnsonseeds.com / www.johnsonseeds.com
Sunshine Seeds Ltd. / Ken Long Forage Seed .....	403-758-3444 / www.sunshinseeds.ca/
Northstar Seed Ltd. ....	1-800-805-0765 / info@northstarseed.com / www.northstarseed.com
DLF Pickseed Canada Ltd. ....	1-800-265-3925 / www.dlfpickseed.com
Proven Seed/Nutrien Ag Solutions .....	1-888-569-9444 / provenseed.ca
SeCan .....	1-800-665-7333 / seed@secan.com / www.secan.com
Seed-Link Inc.....	705-324-0544 / sloffice@seed-link.ca / www.seed-link.ca

**Forage Helpline – Alberta Ag-Info Centre: 310-FARM (3276) in Alberta and 403-742-7901 outside Alberta.**

## Forage references:

How to Purchase High Quality Forage Seed – FS120 / 45-1

Establishing Perennial Hay and Pasture Crops – FS120 / 22-2

These publications can be obtained from the Alberta Agriculture Publications Office. Call the toll-free line at 1-800-292-5697.

Other forage species and new varieties not listed in this publication are sometimes seeded by producers in Alberta.

**Alberta Agriculture and Forestry**  
Visit us at [www.agriculture.alberta.ca](http://www.agriculture.alberta.ca)

## GLD AGVentures

*Certified cereals and pulses, on farm scale.*

Pedigree Seed Sales | Box 270 Andrew, AB T0B 0C0 | lkapitski@mcsnet.ca  
Phone: (780) 365-3536 | Cell: (780) 945-6107 | Lawrence Kapitski (780) 365-2134

### PEAS:

CDC Meadows  
CDC Amarillo  
CDC Raezer  
AAC Carver

### WHEAT:

Stettler  
CDC NRG 003  
CDC Plentiful  
AAC Brandon  
AAC Viewfield

### BARLEY:

AC Metcalfe

### OATS:

CS Camden  
ORe 3542M

## DeWINDT FARMS LTD

### PEDIGREED SEED



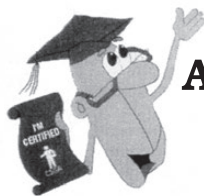
**GREEN PEAS**  
CDC Forest  
CDC Spruce

**YELLOW PEAS**  
CDC Inca  
AAC Lacombe

**CPS WHEAT**  
AAC Penhold



Harry DeWindt 780-699-6789  
Renee Hoyme 780-554-5945  
Email: [renee.foyme@gmail.com](mailto:renee.foyme@gmail.com)  
Box 522, Thorhild, AB, T0A 3J0



## AIRTH FARMS LTD.

PEDIGREED SEED • SINCE 1971

*Jock & Linda Airth*

**Phone (403) 362-4372**

Fax (403) 362-8110

Box 807 • Brooks, Alberta • T1R 1B7

## HOLMSTROM SEED FARM

SINCE 1984

### PEDIGREED SEED

AAC Redberry  
AAC Elie  
AB Cadillac  
CDC Greenwater Peas  
Fraser Barley (SECAN)

Darrell Holmstrom  
Ph: 780-385-5330

Box 539  
Killam, AB T0B 2L0

## ALFALFA

	S	F	R	C
<b>2010</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b> BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
<b>4030</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b> BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
Giesbrecht, Peter W. / Rolling Hills / (403) 622-2297				C
Quattro Ventures / Bow Island / (403) 545-2222				C
<b>4010BR</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b> BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
<b>4020MF</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b> BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
<b>54Q14</b>				
<b>BI: N/A, DIST: Corteva Agrosience</b> Alforex Seeds / Homedale / (208) 337-4693				C
Brummelhuis, Mitchell & Mack / Vauxhall / (403) 654-7515				C
<b>55Q27</b>				
<b>BI: N/A, DIST: Corteva Agrosience</b> Alforex Seeds / Homedale / (208) 337-4693				C
Cailliau, John / Enchant / (403) 739-3785				C
Vanderstoel, Jeroen / Enchant / (403) 654-2653				C
<b>AC BRADOR</b>				
<b>BI: AAFC, DIST: Northstar Seed Ltd.</b> Northstar Seed Ltd. / Neepawa / (204) 476-5241				C
<b>AC GRAZELAND BR</b> ☼				
<b>BI: AAFC, DIST: DLF Pickseed</b> DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088				C
<b>AC YELLOWHEAD</b> ☼				
<b>BI: AAFC, DIST: SeCan Members</b> Kerschbaumer, John A., Heather & Trevor / Fairview / (780) 835-4508				C
<b>ACTIS (USA = PILLAR)</b>				
<b>BI: N/A, DIST: La Coop Federee</b> Alforex Seeds / Homedale / (208) 337-4693				C

<b>ADRENALIN</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b> BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
<b>AKORI</b>				
<b>BI: AAFC, DIST: DLF Pickseed</b> DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088				C
<b>ALGONQUIN</b>				
<b>BI: N/A, DIST: Pask Farms Ltd.</b> Cailliau, Sebastien, Danielle / Enchant / (403) 331-0451				C
<b>ALTHEA</b>				
<b>BI: N/A, DIST: La Coop Federee</b> Klassen, Josh / Bow Island / (403) 952-1030				C
Skrove, Chad / Rolling Hills / (403) 964-2135				C
<b>AMINA</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b> Skrove, Chad / Rolling Hills / (403) 964-2135				C
Vanden Dungen, Marcel / Vauxhall / (403) 654-2964				C
<b>ASSALT ST</b>				
<b>BI: N/A, DIST: DLF Pickseed</b> DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088				C
<b>BARRICADE SLT</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b> BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
<b>BEAVER</b>				
<b>BI: N/A, DIST: DLF Pickseed</b> Kerschbaumer, John A., Heather & Trevor / Fairview / (780) 835-4508			F	C
<b>BOOST HG (HI-GEST 360 FOR USA)</b>				
<b>BI: N/A, DIST: Quality Seeds Ltd</b> Alforex Seeds / Homedale / (208) 337-4693				C
<b>COMPASS</b>				
<b>BI: N/A, DIST: Gold Medal Seed Ltd.</b> Gold Medal Seeds Limited / Brooks / (403) 362-3444				C
<b>DAKOTA</b>				
<b>BI: N/A, DIST: Northstar Seed Ltd.</b> Northstar Seed Ltd. / Neepawa / (204) 476-5241				C
<b>EVERMOST</b>				
<b>BI: N/A, DIST: DLF Pickseed</b> DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088				C



### ST. PAUL MUNICIPAL SEED CLEANING ASSOC. LTD.

#### LOCALLY GROWN PEDIGREE SEED AVAILABLE

Oats:	CS Camden	Wheat:	AAC Brandon Wheat CWRS
	AC Morgan		AAC Tisdale
	ORE 3542M		AAC Redberry
Barley:	CDC Austenson		AAC Goodwin
	AB Cattlelac 6R Smooth		AAC Penhold
	CDC Maverick		Wheat CPSR
	Smoothawn 2R	Peas:	CDC Spruce Green
			AAC Carver Yellow

Authorized dealers of Pioneer Hi-Bred, Masterfeeds, Westway Feeds, Alfa-Tec Alfalfa Products. We are an AWSA accredited custom seed treatment application facility.  
We are proud supporters of:



"WHERE QUALITY SEED IS OUR FIRST PRIORITY"

P.O. Box 1101 St. Paul, Alberta T0A 3A0  
Phone: 645-3939  
ron.wirsta@stpaulseedcleaning.com  
www.stpaulseedcleaning.com



### South Peace Grain

Traditional Values. Modern Approach.

#### Certified Seed Products

##### Peas:

CDC Carver  
AAC Peace River  
Barrhead

##### Oats:

CDC Haymaker  
AC Morgan

##### Barley:

CDC Austenson  
CDC Maverick  
AAC Connect

##### Wheat:

Thorsby CWRS  
AAC Brandon  
Go Early CWRS AAC  
Penhold CPS  
AAC Connery  
Pintail Winter  
Parata CWRS

Full service seed conditioning facility

Multiple bagging options available

Licensed grader on-site



### South Peace Grain

Traditional Values. Modern Approach.



250-782-7820

www.spgrain.ca

info@spgrain.ca

#### FG 59W205

**BI: N/A, DIST: BrettYoung Seeds Ltd.**

BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932

#### FORTUNE

**BI: N/A, DIST: DLF Pickseed**

DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088

#### GALAXY

**BI: N/A, DIST: N/A**

DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088

#### GEMSTONE

**BI: N/A, DIST: DLF Pickseed**

Nikkel, Ed & Darren / Lethbridge / (403) 312-4070

#### HALO 2

**BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / Carrot River / (306) 768-3335

#### HAYGRAZER

**BI: N/A, DIST: Northstar Seed Ltd.**

Northstar Seed Ltd. / Neepawa / (204) 476-5241

#### HYBRIFORCE-3400

**BI: N/A, DIST: BrettYoung Seeds Ltd.**

Alforex Seeds / Homedale / (208) 337-4693

#### INSTINCT

**BI: N/A, DIST: DLF Pickseed**

Knelsen, Abe / Bow Island / (403) 866-5187

DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088

#### ISABELLA

**BI: N/A, DIST: Corteva Agriscience**

DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088

#### LEGENDAIRY XHD

**BI: N/A, DIST: Gold Medal Seed Ltd.**

Gold Medal Seeds Limited / Brooks / (403) 362-3444

#### MAGNUM 7

**BI: N/A, DIST: BrettYoung Seeds Ltd.**

Alforex Seeds / Homedale / (208) 337-4693

Skrove, Chad / Rolling Hills / (403) 964-2135

#### MAGNUM 7-WET

**BI: N/A, DIST: Seed-Link Inc.**

Alforex Seeds / Homedale / (208) 337-4693

#### MASKA

**BI: N/A, DIST: Semican**

Vanderstoel, Jeroen / Enchant / (403) 654-2653

#### MEGAGRAZE (MAGNA551 = USA)

**BI: N/A, DIST: Quality Seeds Ltd**

Alforex Seeds / Homedale / (208) 337-4693

#### OPTIMUS

**BI: N/A, DIST: BrettYoung Seeds Ltd.**

Giesbrecht, Pedro / Vauxhall / (403) 634-4298

#### PEGASE

**BI: N/A, DIST: N/A**

Nikkel, Ed & Darren / Lethbridge / (403) 312-4070

#### PERFECTION

**BI: N/A, DIST: Northstar Seed Ltd.**

Northstar Seed Ltd. / Neepawa / (204) 476-5241

#### PERFORMER

**BI: N/A, DIST: Northstar Seed Ltd.**

Northstar Seed Ltd. / Neepawa / (204) 476-5241

#### PHABULOUS

**BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / Carrot River / (306) 768-3335

#### PICKSEED 2065MF

**BI: N/A, DIST: DLF Pickseed**

DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088

#### PV PARLOUR HG

**BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / Carrot River / (306) 768-3335

#### PV ULTIMA

**BI: N/A, DIST: Gold Medal Seed Ltd.**

Gold Medal Seeds Limited / Brooks / (403) 362-3444

#### RAMBLER

**BI: N/A, DIST: DLF Pickseed**

Kerschbaumer, John A., Heather & Trevor / Fairview / (780) 835-4508

#### REVOLUTION MD

**BI: N/A, DIST: Northstar Seed Ltd.**

Northstar Seed Ltd. / Neepawa / (204) 476-5241

#### ROBUST

**BI: N/A, DIST: Northstar Seed Ltd.**

Kerschbaumer, John A., Heather & Trevor / Fairview / (780) 835-4508

Northstar Seed Ltd. / Neepawa / (204) 476-5241



**SERVING THE COMMUNITY SINCE 1959**

**Processors of Pedigreed Seed for:**

Simco Seeds

Knight's Seed Farm

Echo Ridge Seeds

Jones Magic Seed Farm



**Bill Sinclair**

Office/Plant Manager

Box 418, Bashaw, Alberta T0B 0H0

Phone: (780) 372-3868 Fax: (780) 372-3068

*Custom Treating | On-Site Seed Sales | Optical Sorting*

## Pedigreed and Commercial Seed Cleaning and Seed Sales.

Tom Measures **Manager**

### Barrhead District Seed Cleaning Co-op Ltd.

Email [barrseed@telus.net](mailto:barrseed@telus.net)

Phone **(780) 674-2569**

Fax **(780) 674-3701**

Box 4408

Barrhead, Alberta T7N 1A3



*Growing Pedigreed Seed since 1983*

#### WHEAT

CPS Red: AAC Penhold

CWRS: AAC Redwater,  
AAC Connery, CS Jake,  
Ellerslie

#### PEAS

Green: CDC Limerick,  
CDC Forest

Yellow: AAC Lacombe

*Custom forage blends, scale on site, treating available*

#### BARLEY

Feed/Forage:

CDC Austenson,  
CDC Maverick, Sundre,  
AB Advantage

Malt: CDC Copeland

#### OATS

Mustang



**SeCan**  
Canada's Seed Partner

Richard Hallett (403) 586-3769 | Dale Hallett (403) 899-4166 | Office (403) 337-2469 | E-mail: [office@hallettshayandseed.com](mailto:office@hallettshayandseed.com) | Carstairs, Alberta

## RUGGED ST

**BI: N/A, DIST: Northstar Seed Ltd.**

Alforex Seeds / Homedale / (208) 337-4693

Northstar Seed Ltd. / Neepawa / (204) 476-5241

## RUNNER

**BI: N/A, DIST: Northstar Seed Ltd.**

Northstar Seed Ltd. / Neepawa / (204) 476-5241

## SHOCKWAVE-BR

**BI: N/A, DIST: BrettYoung Seeds Ltd.**

BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932

## SIDEWINDER

**BI: N/A, DIST: Northstar Seed Ltd.**

Northstar Seed Ltd. / Neepawa / (204) 476-5241

## SPREDOR 5

**BI: N/A, DIST: Gold Medal Seed Ltd.**

Gold Medal Seeds Limited / Brooks / (403) 362-3444

## SPYDER

**BI: N/A, DIST: BrettYoung Seeds Ltd.**

Giesbrecht, John / Rolling Hill / (403) 593-9623

## STELLAR II

**BI: N/A, DIST: Quality Seeds Ltd**

Alforex Seeds / Homedale / (208) 337-4693

## STRONGHOLD

**BI: N/A, DIST: Gold Medal Seed Ltd.**

Gold Medal Seeds Limited / Brooks / (403) 362-3444

## SURESHOT

**BI: N/A, DIST: BrettYoung Seeds Ltd.**

Ostrop, Alex / Grassy Lake / (403) 655-2485

## SURGE HG

**BI: N/A, DIST: BrettYoung Seeds Ltd.**

BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932

Jonker, Jan / Rolling Hill / (403) 363-9208

## SW4107

**BI: N/A, DIST: S&W Seed Co.**

Cailliau, Cecile Dana & Dave / Enchant / (587) 813-0312

S&W Seed Company / Nampa / (208) 467-3314

## TH2

**BI: N/A, DIST: Northstar Seed Ltd.**

Northstar Seed Ltd. / Neepawa / (204) 476-5241

## VISION

**BI: N/A, DIST: DLF Pickseed**

DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088

## VR TOTAL

**BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / Carrot River / (306) 768-3335

Stiekema, Lauran / Vauxhall / (403) 635-1497

## WL 319HQ

**BI: N/A, DIST: Gold Medal Seed Ltd.**

Gold Medal Seeds Limited / Brooks / (403) 362-3444

## WL 366HQ

**BI: N/A, DIST: Gold Medal Seed Ltd.**

Gold Medal Seeds Limited / Brooks / (403) 362-3444

## WL354HQ

**BI: N/A, DIST: Gold Medal Seed Ltd.**

Gold Medal Seeds Limited / Brooks / (403) 362-3444

# BROMEGRASS

S F R C

## AC KNOWLES

**BI: AFFC (Saskatoon), DIST: Nutrien Ag Solutions/Proven Seed**

Northstar Seed Ltd. / Neepawa / (204) 476-5241

Nutrien Ag Solutions (Canada) / Carrot River / (306) 768-3335

Rewerts, Ken / Fairview / (780) 834-8326

## AC ROCKET

**BI: AAFC, DIST: NNutrien Ag Solutions/Proven Seed**

Nutrien Ag Solutions (Canada) / Carrot River / (306) 768-3335

## AC SUCCESS

**BI: AFFC (Saskatoon), DIST: Nutrien Ag Solutions/Proven Seed**

DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088

## ADMIRAL

**BI: AFFC (Saskatoon), DIST: Nutrien Ag Solutions/Proven Seed**

Card, Gordon B. & Rhett / Magrath / (403) 758-3444

## CARLTON

**BI: AAFC (Saskatoon), DIST: Phillips' Seeds Ltd**

BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932

Enns, Walter / Clayhurst / (250) 781-3357

Froese, Cornelius H. / La Crete / (780) 927-4645

Gagnon, Ken / Falher / (780) 837-8028



**YOUR PEDIGREED SEED AND  
CUSTOM CLEANING DEALER!**



# 40 YEARS PEDIGREED SEED PRODUCTION

**We continually strive to produce the  
highest quality seed possible by focusing  
on plant nutrition and exceptional quality  
control standards.**



Seed Varieties:

[www.limogesseedfarms.com](http://www.limogesseedfarms.com)

AAC Brandon (CWRS)

AC Metcalfe (malt)

CDC Go (CWRS)

CDC Austenson (feed)

AAC Wheatland VB (CWRS)

CDC Amarillo (yellow)

AAC Penhold (CPS red)

CDC Meadow (yellow)



Marcel Limoges 780-837-1199 • Richard Limoges 780-837-6992

Hadland, Edward / Baldonnel / (250) 793-9746				C
Hanson, Troy / Valhalla Centre / (587) 343-2286				C
Hegland, David Olaf / Wembley / (780) 766-2450				C
Kerschbaumer, John A., Heather & Trevor / Fairview / (780) 835-4508				C
Milkovich, Nicholas / Rycroft / (780) 765-3968				C
<b>FLEET</b>				
<b>BI: AAFC (Saskatoon), DIST: SeCan Members</b>				
BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
Froese, Cornelius H. / La Crete / (780) 927-4645				C
Hadland, Edward / Baldonnel / (250) 793-9746			F	C
Hanson, Troy / Valhalla Centre / (587) 343-2286				C
Hostettler, Fritz / Bluesky / (780) 835-4761				C
Van Garderen, Kees / Picture Butte / (403) 738-4203				C
<b>MBA</b>				
<b>BI: N/A, DIST: DLF Pickseed</b>				
DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088				C
<b>CICER MILKVETCH</b>	S	F	R	C
<b>AC OXLEY II</b>				
<b>BI: AAFC (Lethbridge), DIST: N/A</b>				
DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088				C
<b>VELDT</b>				
<b>BI: AAFC (Lethbridge), DIST: N/A</b>				
Nutrien Ag Solutions (Canada) / Carrot River / (306) 768-3335				C
<b>CLOVER</b>	S	F	R	C
<b>AURORA</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b>				
BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932			F	C
Limoges, Daniel / Girouxville / (780) 833-1287				C
<b>FRIDA</b>				
<b>BI: N/A, DIST: N/A</b>				
BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
<b>NORGOLD</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b>				
BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
Chaibos, Terry & Melissa / Guy / (780) 837-8111			F	C

<b>FESCUE</b>	S	F	R	C
<b>BOREAL</b>				
<b>BI: AAFC (Beaverlodge), DIST: Nutrien Ag Solutions/Proven Seed</b>				
Carlstad, Tyler / Bear Canyon / (780) 835-0505				C
DLF Moore Seed Inc / Debolt / (780) 957-3964				C
Jones, Danny / Beaverlodge / (780) 354-8089				C
Richard, Gerald / Spirit River / (780) 864-2339				C
Richard, Michel / Spirit River / (780) 864-4220				C
<b>BRINN</b>				
<b>BI: N/A, DIST: N/A</b>				
Foster, Norman R. / Beaverlodge / (780) 354-2107			F	
Wuthrich, David / Cecil Lake / (250) 781-3527			F	
<b>ORACLE</b>				
<b>BI: AAFC (Beaverlodge), DIST: Nutrien Ag Solutions/Proven Seed</b>				
Foster, Norman R. / Beaverlodge / (780) 354-2107				C
Foster'S Seed & Feed Limited / Beaverlodge / (780) 354-2107				C
Hill, Brian / Taylor / (250) 789-3581				C
<b>ORCHARDGRASS</b>	S	F	R	C
<b>EARLY ARCTIC</b>				
<b>BI: AAFC, DIST: N/A</b>				
Northstar Seed Ltd. / Neepawa / (204) 476-5241				C
<b>KILLARNEY</b>				
<b>BI: N/A, DIST: Northstar Seed Ltd.</b>				
Card, Gordon B. & Rhett / Magrath / (403) 758-3444				C
<b>RYEGRASS</b>	S	F	R	C
<b>SWIFT</b>				
<b>BI: N/A, DIST: N/A</b>				
Whitney, David / Fairview / (780) 835-4897				C
<b>SAINFOIN</b>	S	F	R	C
<b>AAC GLENVIEW</b>				
<b>BI: AAFC (Lethbridge), DIST: N/A</b>				
McNaughton, Brian (Ab) / Lethbridge / (403) 308-9914			F	



# Stamp Seeds



**OFFICE: 403-739-2233**  
**9 Centre Street, Box 3030, Enchant, AB, T0K 0V0**  
**Greg Stamp CCA: 403-634-1586 • greg@stampseeds.com**  
**Select Status Plot Production • Gentle Cleaning Facility**  
**High Quality Year-Round Treating Facility • Certified Crop Advisors**  
**www.stampseeds.com • Twitter: @stampseeds**



## OUR VARIETIES INCLUDE:

- WHEAT**  
**HRSW:**
  - AAC LeRoy VB – **NEW!**
  - RedNet – **NEW!**
  - AAC Wheatland VB – **NEW!**
  - AAC Redberry – **NEW!**
  - AAC Viewfield – **NEW!**
  - CDC Landmark VB – **NEW!**
  - AAC Elie
  - AAC Brandon
  - CDC Go**HWSW:**
  - AAC Cirrus – **NEW!**
  - AAC Iceberg**Spring Triticale:**
  - Sunray**SPELT:**
  - CDC Evolve**CPS:**
  - SY Rowyn
  - CDC Terrain – **NEW!**
  - Penhold**GP WHEAT:**
  - KWS Alderon – **NEW!****SOFT WHEAT:**
  - AAC Paramount VB – **NEW!**
  - AAC Awesome – **NEW!**
  - AAC Sadash**DURUM**
  - CDC Alloy – **NEW!**
  - CDC Precision
  - AAC Succeed – **NEW!**
  - AAC Spitfire
  - AAC Transcend
  - AAC GoldNet – **NEW!**
- BARLEY:**
  - Bill Coors 100 (2 Row Malt) – **NEW!**
  - AC Metcalfe (Malt)
  - AB Cattlelad (6 Row Feed) – **NEW!**
  - CDC Austenson (Feed)**OAT:**
  - CDC Arborg – **NEW!****FABA BEAN:**
  - Fabelle
  - CDC 219-16 – **NEW!**
  - Vertigo
  - FB 9-4
  - Snowbird
  - DL Rico – **NEW!****MAPLE PEA:**
  - AAC Liscard – **NEW!****FORAGE PEA:**
  - DL Lacross – **NEW!****YELLOW PEA:**
  - CDC Chrome – **NEW!**
  - Abarth - Jumbo
  - AAC Delhi - Jumbo – **NEW!****GREEN PEA:**
  - Blueman – **NEW!**
  - CDC Greenwater – **NEW!****LENTIL:** CDC Proclaim CL
- FLAX:**
  - AAC Marvellous – **NEW!**
  - Topaz – **NEW!**
  - AAC Prairie Sunshine – **NEW!**
  - Prairie Sapphire
  - CDC Plava – Short Season
  - AAC Bright - Yellow – **NEW!**
  - CDC Dorado - Yellow – **NEW!**
- HYBRID FALL RYE:**
  - KWS Daniello – **NEW!**
  - KWS Propower – **NEW!** (Forage Variety)
  - Guttino**FALL RYE:**
  - Prima**WINTER BARLEY:**
  - KWS Higgins – **NEW!****WINTER WHEAT:**
  - AAC Wildfire
  - AAC Gateway
  - AAC Elevate
  - AAC Network – **NEW!****ALSO OFFERING:**
  - Corn: Thunder Seed & BrettYoung Elite – Grain, silage & grazing
  - Canola: BrettYoung
  - Soybean: Thunder Seed & BrettYoung
  - Inoculants
  - Cover Crops & Grazing Blends:
    - Bullseye Radish
    - Hairy Vetch
    - Crimson Clover
    - Ryegrass
    - Hybrid Brassica
    - Millet
    - Sorghum
    - Turnip

## TIMOTHY

	S	F	R	C
<b>ALMA</b>				
<b>BI: N/A, DIST: Moore Seed Processors Inc.</b>				
DLF Moore Seed Inc / Debolt / (780) 957-3964				C
<b>CATAPULT</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b>				
BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
Collins, Michael / Spirit River / (780) 864-3407				C
<b>CLIMAX</b>				
<b>BI: N/A, DIST: DLF Pickseed</b>				
General Feed & Grain Inc. / Bonners Ferry / (208) 267-3185				C
<b>COMER</b>				
<b>BI: N/A, DIST: DLF Pickseed</b>				
DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088				C
Wirth, Jason / Valleyview / (780) 524-4736				C
<b>COMTAL</b>				
<b>BI: N/A, DIST: N/A</b>				
DLF Pickseed Canada Inc. / Winnipeg / (204) 633-0088				C
<b>CONQUEST</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b>				
BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932			R	C
<b>CREST</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b>				
BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
<b>DERBY</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b>				
BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
Wuthrich, David / Cecil Lake / (250) 781-3527		F		
<b>PROMESSE</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b>				
BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
<b>SUMMERGRAZE</b>				
<b>BI: N/A, DIST: BrettYoung Seeds Ltd.</b>				
BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
<b>TENHO</b>				
<b>BI: N/A, DIST: Moore Seed Processors Inc.</b>				
DLF Moore Seed Inc / Debolt / (780) 957-3964				C

## TITAN

<b>BI: N/A, DIST: Northstar Seed Ltd.</b>				
BrettYoung Seeds Ltd / St. Norbert / (204) 261-7932				C
<b>TUUKKA</b>				
<b>BI: N/A, DIST: Moore Seed Processors Inc.</b>				
DLF Moore Seed Inc / Debolt / (780) 957-3964				C

## WHEATGRASS

	S	F	R	C
<b>AC GOLIATH</b>				
<b>BI: AAFC, DIST: N/A</b>				
Laliberté, Adam & Vos, Henry & Siegle, Cole / Fairview / (780) 835-5286				C
<b>AC SALTLANDER</b>				
<b>BI: AAFC (Swift Current), DIST: SeCan Members</b>				
Miller, Kenneth F. / Milk River / (403) 647-2127		F		C
<b>ELBEE</b>				
<b>BI: AAFC (Lethbridge), DIST: SeCan Members</b>				
Card, Gordon B. & Rhett / Magrath / (403) 758-3444				C
Limoges, Daniel / Girouxville / (780) 833-1287				C
<b>FAIRWAY</b>				
<b>BI: N/A, DIST: N/A</b>				
Whitney, David / Fairview / (780) 835-4897				C
<b>GREENLEAF</b>				
<b>BI: N/A, DIST: SeCan Members</b>				
Card, Gordon B. & Rhett / Magrath / (403) 758-3444				C
Kerschbaumer, John A., Heather & Trevor / Fairview / (780) 835-4508		F		C
Limoges, Daniel / Girouxville / (780) 833-1287				C
Meiers, Mark / Charlie Lake / (250) 827-3843				C
<b>NEWKIRK</b>				
<b>BI: AAFC, DIST: N/A</b>				
Limoges, Daniel / Girouxville / (780) 833-1287				C
<b>REVENUE</b>				
<b>BI: N/A, DIST: SeCan Members</b>				
Nutrien Ag Solutions (Canada) / Carrot River / (306) 768-3335				C

## Central Peace Seed Cleaning Association Ltd.



Box 369, RYCROFT, AB T0H 3A0  
Email: cpsca@abnorth.com

**Curtis Boychuk**  
Manager  
Res: 780-774-2119

**Bus: 780-765-3821**  
**Fax: 780-765-2032**

## Bar 3 Farms Ltd.

HRS Wheat – AAC Brandon, Parata  
CPS Wheat – AAC Penhold  
Green Peas – CDC Spruce, CDC Forest  
Fababeans – Snowbird



**Bill & Dean Baier**  
Box 105 Clyde, AB T0G 0P0  
(780) 348-5791



**WILL and JEAN VAN ROESSEL**  
BOW ISLAND, AB  
Phone (403) 545-6018  
Cell (403) 952-0913  
will@specialtyseeds.ca  
www.specialtyseeds.ca

WHEAT	DURUM	PEAS	FALL CROPS	HEMP
Bolles	AAC Spitfire	CDC Inca	Guttino hybrid rye	Picolo
AAC Elie	CDC Precision	AAC Carver	KWS Daniello	Katani
AAC Brandon		AAC Delhi	AAC Gateway	
RedNet			winter wheat	



Pedigreed Seed – Thorsby, Alberta

**Wheat:**  
**CPSR:** CS Accelerate, AAC Crossfield, AAC Penhold  
**HRS:** Ellerslie, AAC Connery, AAC Brandon  
**Barley:**  
**Feed/Silage:** Canmore  
**Malt/Silage:** AAC Connect, CDC Clear  
**Hullless:** CDC Hilose, CDC Clear  
**Oats:** CDC Seabiscuit, CDC Camden  
**Peas:** AAC Carver, CDC Amarillo, CDC Limerick  
**Canterra Canolas**



RR2 Thorsby, AB T0C 2P0  
Phone: 780-434-1322  
Cell: 780-940-7566 • 780-690-6974  
Email: sendseed@telusplanet.net  
stephensendziak@gmail.com

**Don & Krystyna,**  
**Stephen & Tasha Sendziak**

# 2019 Regional Silage Variety Trials

**AN IMPORTANT COMPONENT** of the annual feed supply for Alberta's cattle producers comes in the form of silage, green feed and swath grazing. The selection of annual crop varieties that produce high forage yield and/or nutritional quality can be a significant factor influencing profitability.

## Participating Organizations

- Battle River Research Group, Forestburg, Alta. (780) 582-7308
- Chinook Applied Research Association, Oyen, Alta. (403) 664-3777
- Farming Smarter, Lethbridge, Alta. (403) 317-0022
- Gateway Research Organization, Westlock, Alta. (780) 349-4546
- Lakeland Agricultural Research Association, Bonnyville, Alta. (780) 826-7260
- Mackenzie Applied Research Association, Fort Vermilion, Alta. (780) 927-3776
- North Peace Applied Research Association, Manning, Alta. (780) 836-3354
- Peace Country Beef and Forage, Fairview, Alta. (780) 835-6799

- Smoky Applied Research and Demonstration Association, Falher, Alta. (780) 837-2900
- West Central Forage Association, Entwistle, Alta. (780) 727-4447

## Major Sponsors

- Alberta Agriculture and Forestry, AOF Program and CDC North
- A & L Canada Laboratories Inc.
- Alliance Seeds, CANTERRA, Davidson Seeds, Degenhardt Farms, Dyck Seed Farm, Elmy's Friendly Acres Seed Farm, Fabian Seeds, Lindholm Seed Farm, Mastin Seeds, Proven Seeds, SeCan, Solick Seeds, Luc Tellier, H. Warkentin

## Trial Information

Yield and feed quality evaluations on varieties of barley, oat and triticale commonly used for silage, green feed and swath grazing have been conducted by several applied research associations at sites across Alberta.

Several pea/cereal mixes have been included in the trials. Growing season conditions in 2019 ranged from below average to excessive moisture at the trial sites reporting data.



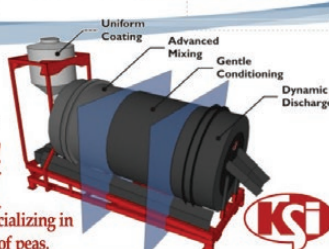
**LS Land & Cattle Ltd.**  
is now **DIDSBURY SEEDS!**

**LS Land & Cattle**  
BRAND NEW NAME  
SAME GREAT SEED!

PEDIGREE SEED SALES

CANTERRA SEEDS <b>SeCan</b> <small>Canada's Seed Partner</small>	<b>BARLEY:</b>	<b>WHEAT:</b>	<b>PEAS:</b>
	AMISK	AC SADASH VB	CDC RAEZER
	CDC AUSTENSON	AAC CROSSFIELD	CDC SAFFRON
	CDC COPELAND	AAC REDWATER	
	CANMORE	AAC BRANDON	
	CDC BOW	AAC PENHOLD	<b>OATS:</b>
<b>*COMING IN 2021*</b>	SY SIRISH (new)	TRACKER (new)	ORE3542M (new)
<b>AB ADVANTAGE BARLEY</b>	AAC CONNECT	AAC GOODWIN (new)	CDC SO-1

**DIDSBURY**  
**403-335-3694**  
**Custom Seed Treating!!!**  
**NEW KSI SYSTEM**  
Fast uniform coating for all seed varieties, specializing in applying inoculants and controlled handling of peas.



YOUR ONE-STOP-SHOP

Canada's Most Comprehensive Seed Testing Services








WE ARE NOW ISTA ACCREDITED!

- Seed Analysis
- ISTA Certificates
- SICA and APHIS
- Event Detection
- Pathology Identification
- Trait Confirmation

**CONTACT US**

PHONE : 1 (800) 952-5407

TEXT : 1 (587) 801-1313

E-MAIL : [biovision.sherwoodpark@sgs.com](mailto:biovision.sherwoodpark@sgs.com)

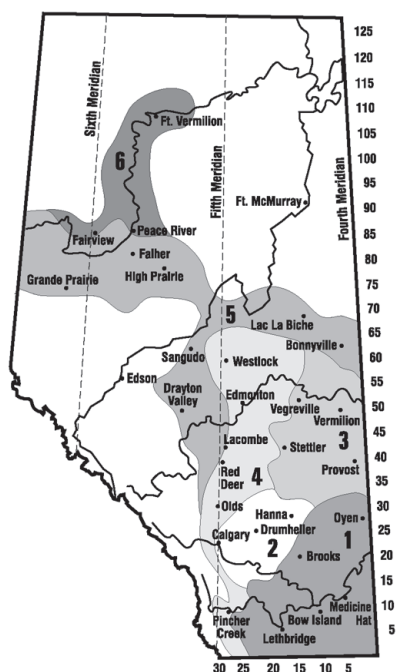
Follow us on  [/seed\\_testing](https://twitter.com/seed_testing)

[www.sgs.ca](http://www.sgs.ca) | [www.biovision.ca](http://www.biovision.ca)



The cereal trials, (barley, oats and triticale), were planted at recommended seeding density rates with recommended fertility. The pea/cereal mixture trials were conducted with the intent of increasing the nutritional value of the silage while potentially reducing future nitrogen requirements. These pea/cereal plots were seeded with 55 kg/ha (50 lbs/ac) of 11-52-0-0. The pea and cereal varieties were seeded at 75 and 50 percent of their recommended seeding rates, respectively. These mixes were harvested when the cereal was at the soft dough stage.

Data submitted in 2019 was summarized by crop or crop mixture. Information collected since 2012 has been included in a separate summary below each table. The information is



presented as compared to the check variety (in bold). Yield of the test varieties/mixtures are expressed as wet tons/acre (ie. 65 per cent moisture which is typical of silage production). Data sets which did not meet minimum quality and experimental standards were excluded.

### Test Yield Categories

Low, Medium and High Test Yield Categories (tons per acre) have been defined for each variety and mix. This allows for comparison with the check when growing conditions, management regimes and/or target yields are anticipated to be of low, medium or high productivity. Caution is advised when interpreting the data with respect to new varieties that have not been fully tested. It should also be noted that the indicated yield levels are those from small plot trials, which can be 15 to 20 per cent higher than yields expected under commercial production. When considering a variety for use alone or in a mixed silage blend, be sure to consider the disease resistance and other agronomic attributes that may also affect productivity.

### Nutritional Analysis

Nutrition information was assessed using NIRS for macro-nutrient assessments and wet chemistry for the micro-nutrients.

AAC Synergy Barley	AAC Redberry CWRS—NEW	AAC Penhold CPSR
Sirish Barley—NEW	AAC Elie CWRS	AAC Lacombe Yellow Peas
AAC Connect Barley—NEW	AAC Brandon CWRS	AAC Carver Yellow Peas—NEW
CDC Copeland Barley	AAC Crossfield CPSR—NEW	CDC Amarillo Yellow Peas
Canterra Canola Seed	AAC Goodwin CPSR—NEW	CDC Limerick Green Peas

Office: 403-556-2890

Cell: 403-994-0290

**OLDS, ALBERTA**

[brianellisseed@gmail.com](mailto:brianellisseed@gmail.com)

Twitter: @BrianEllisSeed

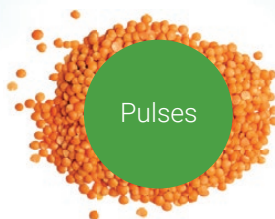
# BARLEY

Variety	Overall Station Years of Testing	Overall Average Yield	Area:					Yield Category:			Nutritional Data:						
								Low < 9.0 (t/ac)	Medium 9.1 12.0 (t/ac)	High > 12.1 (t/ ac)	CP (%)	TDN (%)	Ca (%)	P (%)	K (%)	Mg (%)	
			2	3	4	5	6										
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to CDC Austenson)																	
CDC Austenson (t/ac)		10.6	9.6	12.1	12.9	11.1	8.2	7	11.2	15.6	10.2	67	0.3	0.2	1.5	0.2	
CDC Austenson	54	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
AB Advantage	9	104	103	XX	96	99	111	106	102	101	98	101	104	114	102	110	
AB Cattlelac	13	100	94	XX	90	99	105	101	103	94	104	100	138	101	117	123	
Altorado	35	102	101	92	99	102	107	106	98	101	101	100	105	105	103	98	
Amisk	42	93	99	92	96	90	95	93	94	92	104	102	133	105	106	110	
Canmore	35	100	104	99	92	101	100	102	98	99	101	99	118	104	99	104	
CDC Bow	9	103	103	XX	100	101	107	105	103	98	105	100	129	112	100	117	
CDC Coalition	46	95	98	93	94	92	102	99	92	94	102	101	101	111	104	101	
CDC Cowboy	42	100	101	103	102	101	99	100	99	102	97	99	115	113	109	115	
CDC Maverick	44	102	104	96	96	103	106	105	101	100	97	99	117	112	95	115	
Claymore	35	101	105	102	98	103	98	102	97	103	96	97	124	100	100	107	
SR17515	9	103	106	XX	96	94	114	102	107	97	101	101	114	139	108	121	
SR17519	9	96	97	XX	94	88	103	92	101	95	103	100	121	123	115	122	
Sundre	46	94	99	93	89	91	99	93	96	94	102	99	133	105	112	113	
TR17639	9	103	102	XX	106	100	109	101	108	101	102	100	110	112	97	106	
Previously tested varieties																	
Busby	19	93	91	98	71	96	88	86	95	97	105	99	128	100	100	103	
Gadsby	33	99	95	106	94	99	100	101	101	98	96	100	127	100	96	101	
CDC Meredith	22	100	108	106	93	98	103	101	102	100	95	98	99	101	102	94	
Champion	26	102	103	97	100	103	102	106	99	101	99	101	105	99	104	99	
Chigwell	23	92	80	95	87	91	96	94	91	88	102	100	158	99	105	118	
Conlon	31	87	83	95	86	85	89	84	88	90	98	102	129	112	99	104	
Muskwa	13	90	101	93	XX	86	91	86	91	91	114	100	167	107	121	127	
Ponoka	19	96	90	100	100	96	95	96	94	97	101	99	148	103	104	115	
Ranger	23	94	101	99	XX	94	88	93	96	87	100	99	157	104	121	126	
Seebe	19	96	95	103	92	95	95	95	96	97	109	96	136	109	113	103	
Trochu	18	88	XX	91	73	91	85	82	89	92	103	101	139	107	109	119	
Vivar	19	93	95	99	78	92	93	90	98	93	108	100	144	99	104	123	
Xena	19	95	87	101	84	92	101	96	90	95	106	99	111	105	102	106	

**Remarks:** For explanations on data summarization methods and other information, please see the comments at the beginning of this publication. The yield comparison is expressed in several ways. First, overall actual yield of the standard check in t/ac along with the number of station years of testing. Second, actual yield of the standard check in each growing area. Third, average yield of each variety is expressed in % relative to the standard check. And finally, yield performance is also expressed on the basis of environmental productivity (Yield Test Categories of Low, Medium and High). Consistent performance over all Yield Test Categories indicates that a variety may have good yield stability over a wide range of environments. XX - Insufficient data to describe.

## Homegrown Seed Expertise

With our extensive network of seed growers we handpick the best varieties to deliver to our farmer customers.



Farmers Growing for Farmers

403.715.9771

Contact us today to learn more about the full line of seed and seed services your local independent SeedNet growers have to offer.

office@seednet.ca www.seednet.ca

# OAT

Variety	Overall Station Years of Testing	Overall Average Yield	Area:					Yield Category:			Nutritional Data:					
								Low < 8.0 (t/ac)	Medium 8.1 10.0 (t/ac)	High > 10.1 ( t/ac)	CP (%)	TDN (%)	Ca (%)	P (%)	K (%)	Mg (%)
			2	3	4	5	6									
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to CDC Baler)																
CDC Baler (t/ac)		10.4	8.7	10.2	14.4	11.1	7.3	5.7	9.7	13.9	9.6	61.4	0.3	0.2	1.9	0.2
CDC Baler	49	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
AC Juniper	39	96	99	100	94	88	105	107	85	92	101	102	95	106	101	103
AC Morgan	48	100	105	100	94	97	107	104	95	99	100	102	102	113	99	97
CDC Haymaker	44	99	107	94	99	98	98	101	92	99	100	101	100	103	101	100
CDC Nasser	7	101	112	XX	XX	99	95	104	XX	98	94	102	96	89	100	105
CDC Seabiscuit	22	98	95	99	107	98	97	95	96	101	101	102	93	101	95	97
CDC SO1	49	96	88	101	90	95	100	99	89	96	101	102	96	100	97	103
Murphy	43	103	108	102	101	101	104	106	103	101	94	97	97	98	101	100
ORe3542M	11	100	98	97	96	96	110	101	XX	99	107	105	87	111	93	96
Previously tested varieties																
AC Mustang	39	98	99	97	95	99	99	96	99	99	101	99	99	103	101	99
Derby	6	96	100	XX	106	89	94	89	93	101	89	100	98	99	100	110
Everleaf	5	94	XX	113	106	72	XX	108	76	67	96	98	105	97	110	92
Foothills	21	99	103	95	101	99	103	99	96	102	99	98	103	103	102	100
Jordan	20	100	107	92	88	100	121	102	102	96	97	100	96	105	97	112
Waldern	36	102	98	104	98	100	110	104	106	99	95	99	107	101	95	99

**Remarks:** For explanations on data summarization methods and other information, please see the comments at the beginning of this publication. The yield comparison is expressed in several ways. First, overall actual yield of the standard check in t/ac along with the number of station years of testing. Second, actual yield of the standard check in each growing area. Third, average yield of each variety is expressed in % relative to the standard check. And finally, yield performance is also expressed on the basis of environmental productivity (Yield Test Categories of Low, Medium and High). Consistent performance over all Yield Test Categories indicates that a variety may have good yield stability over a wide range of environments. XX - Insufficient data to describe.



Wheat • Oats • Barley • Canola • Peas • Faba Beans

TF (800) 444-8961  
P (780) 352-3240  
F (780) 352-6943

22252 TWP452  
RR#1 New Norway,  
Alberta, T0B 3L0  
Lindholtseed@gmail.com

Yellow Peas  
- LN4228  
- CDC Amarillo

Green Peas  
- CDC Limerick  
- AAC Comfort

Faba Beans  
- Snowbird

HRS Wheat  
- AAC Viewfield  
- AAC Brandon  
- AAC Connery

CPS Wheat  
- AAC Penhold  
- CS Accelerate

Oats  
- CS Camden

Malt Barley  
- AAC Synergy  
- CDC Copeland

Feed Barley  
- CDC Coalition  
- Canmore  
- Sirish

## Fabian Seed Farms Inc.

### Seed Available for 2020

AAC Brandon HRSW\*  
CDC Austenson Barley\*  
CDC Glas Flax\*  
AAC Delight Beardless  
Spring Triticale\*  
Bobcat Fall Triticale\*  
Thunder Seed Corn  
CDC Saffron Peas\*

\*Denotes Nutrient Densified Seed Production



4-Star Program  
for best results:

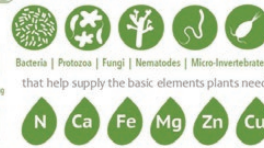


Prograin

These Ecologically  
Functional Groups:



EcoTea contains...



OMEX  
PLANT NUTRITION

SeCan  
Canada's Seed Partner

AGSOL  
AGRICULTURE SOLUTIONS INC.

Patrick - 403-633-9999 • Andrew - 403-633-2237 • Stephen - 403-633-7777  
W: fabianseedfarms.com E: fabian@eidnet.org P: 403-633-9999

## Planting the Seeds of Success®

"Planting the Seeds of Success" is a Registered Trademark of Fabian Seed Farms Inc.

# PULSE MIXTURES

Variety	Overall Station Years of Testing	Overall Average Yield	Area:			Yield Category:			Nutritional Data:					
			2	5	6	Low < 8.0 (t/ac)	Medium 8.1 10.0 (t/ac)	High > 10.1 (t/ac)	CP (%)	TDN (%)	Ca (%)	P (%)	K (%)	Mg (%)
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to CDC Austenson)														
CDC Austenson (t/ac)		9	5.4	9.2	8.2	6.7	8.8	11.8	10	65.8	0.3	0.2	1.6	0.2
CDC Austenson	17	100	100	100	100	100	100	100	100	100	100	100	100	100
CDC Baler	17	103	99	101	108	93	113	99	99	96	107	108	121	114
Taza	17	102	104	95	113	100	106	92	96	96	77	115	98	82
CDC Austenson/CDC Jasper	5	96	100	94	95	90	114	97	119	96	174	109	104	123
CDC Austenson/CDC Meadow	17	100	100	98	103	98	104	96	113	91	184	105	110	139
CDC Baler/CDC Jasper	5	90	81	89	83	78	107	107	123	94	173	114	130	139
CDC Baler/CDC Meadow	17	100	97	99	103	88	113	93	111	97	170	111	116	136
Taza/CDC Jasper	5	95	93	107	77	85	119	90	115	94	145	121	102	104
Taza/CDC Meadow	17	99	98	96	104	93	110	81	112	96	176	114	100	123
Previously tested varieties														
CDC Austenson/CDC Horizon	5	105	109	100	107	108	102	XX	101	97	156	102	111	133
CDC Austenson/CDC LeRoy	7	88	XX	88	89	104	87	82	124	98	186	119	114	129
CDC Baler/CDC Horizon	5	101	111	102	96	113	94	XX	109	94	173	101	123	145
CDC Baler/CDC LeRoy	7	97	XX	97	98	75	107	90	105	96	136	108	121	111
Taza/CDC Horizon	5	108	96	105	119	104	111	XX	116	96	179	106	106	137
Taza/CDC LeRoy	7	96	XX	89	106	96	104	80	114	96	171	112	98	118

**Remarks:** For explanations on data summarization methods and other information, please see the comments at the beginning of this publication. The yield comparison is expressed in several ways. First, overall actual yield of the standard check in t/ac along with the number of station years of testing. Second, actual yield of the standard check in each growing area. Third, average yield of each variety is expressed in % relative to the standard check. And finally, yield performance is also expressed on the basis of environmental productivity (Yield Test Categories of Low, Medium and High). Consistent performance over all Yield Test Categories indicates that a variety may have good yield stability over a wide range of environments. XX - Insufficient data to describe.

## ALECT SEEDS

### Varieties available for 2019:

**AAC Redberry CWRS**  
**AAC Brandon CWRS**  
**AAC Paramount CWSWS**  
**Hazlet Fall Rye**  
**CDC Glas Flax**  
**Snowbird Fababeans**

**CDC Bow Barley**  
**CDC Copeland Barley**  
**CDC Austenson Barley**  
**AAC Lacombe Peas**  
**CDC Amarillo Peas**  
**Garde Peas**

Call Sarah at 403-443-9599 or email [sarahweigum@gmail.com](mailto:sarahweigum@gmail.com) to book your seed today!

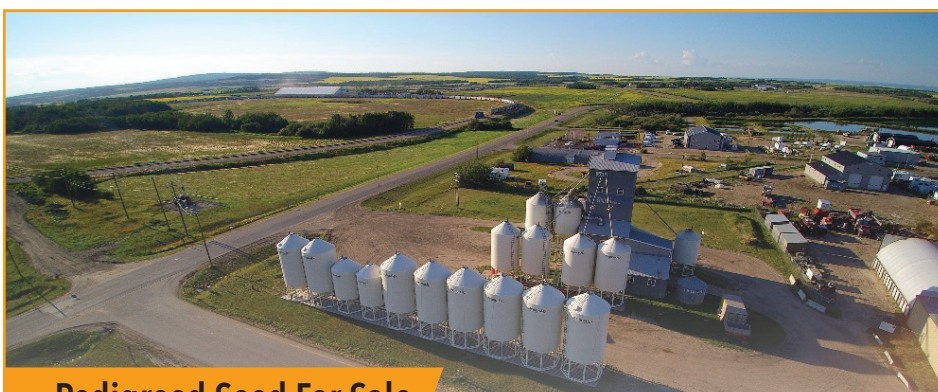
Visit [www.AlectSeeds.ca](http://www.AlectSeeds.ca) or follow on Twitter: @sweigum

Custom treating available. 1 mile south of Three Hills on Highway 21.

# TRITICALE

Variety	Overall Station Years of Testing	Overall Average Yield	Area:					Yield Category:			Nutritional Data:					
								Low < 10.0 (t/ac)	Medium 10.1 12.5 (t/ac)	High > 12.6 (t/ac)	CP (%)	TDN (%)	Ca (%)	P (%)	K (%)	Mg (%)
			2	3	4	5	6									
Varieties tested in the 2019 trials (Yield and agronomic data only directly comparable to Taza)																
Taza (t/ac)		10.7	10.4	11.7	13.2	10.6	9.1	7	11.3	15.3	9.1	63	0.2	0.2	1.4	0.1
Taza	56	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
AAC Awesome	7	99	93	XX	XX	100	88	90	99	123	105	102	96	104	104	118
AAC Delight	7	103	92	XX	XX	98	106	96	103	127	109	102	87	117	83	105
AC Andrew	7	96	79	XX	XX	92	97	87	95	121	103	99	96	94	122	113
Bunker	48	100	96	91	107	101	100	100	98	100	103	99	107	96	97	115
Sadash	15	99	102	102	109	91	102	94	103	100	102	99	91	96	113	106
Sunray	49	101	98	99	103	101	102	100	102	102	105	103	106	103	104	109
T256	12	101	92	98	96	101	101	101	98	104	101	101	101	104	93	122
Previously tested varieties																
AAC Chiffon	15	104	119	111	118	92	107	108	103	103	107	100	87	94	109	111
AAC Innova	8	104	121	119	123	83	102	95	107	107	108	100	87	106	109	107
AAC Ryley	8	97	108	104	87	87	110	86	100	101	103	100	95	106	89	117
AC Ultima	7	103	104	98	120	100	XX	109	100	104	110	100	101	93	97	122
Pasteur	8	94	110	96	97	84	103	91	99	91	107	103	96	99	107	117
Pronghorn	21	102	107	103	114	99	101	108	99	103	103	100	102	99	109	106
Tyndal	48	100	101	102	107	99	98	102	99	100	103	100	101	103	96	106

**Remarks:** For explanations on data summarization methods and other information, please see the comments at the beginning of this publication. The yield comparison is expressed in several ways. First, overall actual yield of the standard check in t/ac along with the number of station years of testing. Second, actual yield of the standard check in each growing area. Third, average yield of each variety is expressed in % relative to the standard check. And finally, yield performance is also expressed on the basis of environmental productivity (Yield Test Categories of Low, Medium and High). Consistent performance over all Yield Test Categories indicates that a variety may have good yield stability over a wide range of environments. XX - Insufficient data to describe.



## Pedigreed Seed For Sale

### Barley

CDC Copeland 1,5  
CDC Austenson 3  
AAC Connect 5  
Gadsby 1  
CDC Maverick 2,4

### Wheat

AAC Connery 5  
Thorsby 5  
Parata 1,4  
Stettler 4  
AAC Brandon 6  
AAC Redberry 4  
AAC Penhold 2,4

### Peas

CDC Amarillo 1,2,4  
CDC Horizon 3  
CDC Limerick 4  
AAC Carver 5

## Processors For The Following Growers:

1 Harris Select Seed Farms  
780-933-3074/780-830-8113

2 Tom Shaw  
780-814-4046

3 Fosters Seed and Feed Ltd.  
800-379-4804/780-354-2107

4 Ger-Den Seed Farm Ltd  
780-518-1505

5 Scenic Heights Farms  
780-876-1750

6 Coal Creek Farms  
250-782-0220

7 Leo Meyer Grain Production Ltd.  
780-814-1957

Please Phone Grower Directly  
for Pricing and Availability

**Wembley**  
CO-OPERATIVE SEED CLEANING  
ASSOCIATION LTD.

- Producer Car Loading Site
- Colour Sorting
- 2 CFIA Accredited Graders

**P: (780)766-2630 F: (780)766-2154**  
**E: wembleyseed@telus.net**  
10103 97st Wembley, AB T0H 3S0  
Manager: Wade Perrin

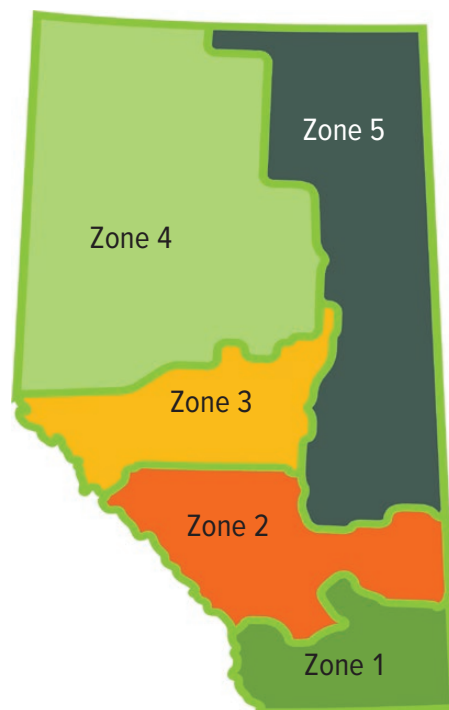
# Pulse Regional Variety Trials for the 2019 Growing Season

**ONE OF THE PILLARS** of best management practices for every crop is selecting a variety that is suited to your growing environment. The Alberta Pulse Growers (APG) has funded regional variety trials (RVTs) across the province to ensure that our growers have current yield, standability and disease resistance information relevant to their own farms. This remains a high priority of our organization. Significant changes have occurred in the last two years, and the management of the regional trials have transitioned to management by the farmers, led by APG, in cooperation with Alberta Agriculture and Forestry, several Applied Research Associations, as well as Lakeland College and Olds College. All the stakeholders are firmly committed to providing high quality data to empower decision making.

Each year protocols for seeding, weed, insect and disease management, pre-harvest and harvest management are reviewed and standardized to ensure consistency of results. In 2019, 16 seed companies submitted entries to be planted at a potential 20 locations across Alberta and northern British Columbia. APG is pleased to provide the variety trials in partnership with these companies which empowers farmers to select varieties best suited for their region and needs.

The tables in this publication depict the yield data by pulse growing zone. Yield is reported as a percentage of the check variety indicated in bold except for soybean and dry bean yields which are reported in bushels/acre. All data has been statistically analyzed to allow for comparisons between varieties as well as to the check.

Provincial averages as well as specific information on yield, standability, detailed management and site information for each location can be found on the Alberta Pulse Growers website



[www.albertapulse.com/rvt](http://www.albertapulse.com/rvt) or on the APG app available at no cost in both Android and Apple formats. We encourage you to check out these media to find the RVT location closest to you!

Questions about these charts or general pulse agronomy? Email Nevin Rosaasen ([nrosaasen@albertapulse.com](mailto:nrosaasen@albertapulse.com)) or Jenn Walker ([jwalker@albertapulse.com](mailto:jwalker@albertapulse.com)) or talk to us on Twitter @APGResearch and @APGExtension.



**ASSURE SEEDS LTD.**  
PEDIGREED SEED GROWER

**Paul & Julie Wiebe**

On Site Treating      On Site Scale

2 Miles North of Beiseker on HWY 806

Ph: 403-510-9260

 **You're Planting Success!** 



**SEED CLEANING, TREATING, CANOLA SEED TO COLOSTRUM.  
CROP TO COWS EVERYTHING YOU NEED!!!!**

NEW for 2019-2020 – Locally grown pedigreed Oats seed  
Ph: 780-879-3927    MANAGER: Peggy Erion  
[allianc@syban.net](mailto:allianc@syban.net)  
[www.allianceseedfeed.com](http://www.allianceseedfeed.com)

 **ALBERTA  
SEED  
PROCESSORS**

## CANARYGRASS

### CDC CIBO

BI: CDC, DIST: Canterra Seeds  
Jonk, Nicholas / Westlock / (780) 349-5458

## CHICKPEA

### CDC EBONY

BI: CDC, DIST: N/A  
Willms, Timothy H. / Grassy Lake / (403) 655-2434

### CDC LEADER

BI: CDC, DIST: N/A  
Penwest Seeds / Three Hills / (403) 443-2577  
Willms, Timothy H. / Grassy Lake / (403) 655-2434

### CDC ORION

BI: CDC, DIST: N/A  
Kiffiak, Nathan John & Anderson, Tim / Foremost / (403) 867-2338

### CDC PALMER

BI: CDC, DIST: SeedNet Inc.  
Willms, Timothy H. / Grassy Lake / (403) 655-2434

## FABA BEAN

### 219-16

BI: CDC, DIST: N/A  
Stamp Seeds / Enchant / (403) 739-2233  
Willms, Timothy H. / Grassy Lake / (403) 655-2434

### CDC SNOWDROP

BI: CDC, DIST: N/A  
Haralie Seed Farms / Beaver County / (780) 662-2617  
Klempnauer, Joerg / Vauxhall / (403) 330-5480  
Sim, Darwin & Derek / Ponoka / (780) 372-2111

## DRY BEAN

	Type	Yield (bu/acre)
AC Island	Pinto	37.0
AAC Explorer	Pinto	30.9
AAC Expedition	Pino	33.3
CDC WM-2	Pinto	34.9
CDC WM-3 (NN11-2)	Pinto	40.9
Resolute	Great Northern	30.7
AAC Tundra	Great Northern	38.7
AAC Whitehorse	Great Northern	35.0
AAC Whitestar	Great Northern	34.2
AC Black Diamond	Black Shiny	33.8
AAC Black Diamond 2	Black Shiny	33.1
CDC Blackstrap	Black Matte	30.8
AAC Y012	Yellow	33.9
AAC Y015	Yellow	29.9
L14YL073	Yellow	28.8
AAC Cranford	Cranberry	28.8
LSD		3.4
CV		12.4

## CANSEED CANADA LTD

Features AAC Barrhead peas,  
an early maturing, medium size,  
human consumption yellow pea.

Your **CANSEED CANADA LTD** dealers are:

<b>Hadland Seed Farm Ltd.</b>	<b>Baldonnel, BC</b>	<b>250-793-9746</b>
<b>Galloway Seeds</b>	<b>Fort Saskatchewan, AB</b>	<b>780-998-3036</b>
<b>Rick's Pedigreed Seed</b>	<b>Barrhead, AB</b>	<b>780-674-6713</b>
<b>Konieczny Seeds</b>	<b>Mannville, AB</b>	<b>780-581-5693</b>

Dealer inquiries can be made by calling **780-674-6713**

## CANSEED CANADA LTD

Barrhead, Alberta **780-674-6713**



**Growers & Processors of Quality Pedigree Seed**  
**Harvest More Bushels with Certified Seed**

Call Dennis at 403.634.6142  
email: drbenci@yahoo.ca web: benciseeds.com


## Seed Varieties



\* New variety

Oats — Morgan	Hybrid Fall Rye — Daniello / *KWS Propower
Hard Red Wheat — *AAC Warman VB /	Fall Rye — Hazlet
*AAC Starbuck VB / Viewfield /	Lentils — Proclaim
AAC Brandon / Stettler	Peas — * AAC Carver / *AAC Chrome /
Soft White Wheat — *AAC Paramount VB /	* CDC Inca / CDC Meadow / AAC Lacombe
Sadash VB	Barley — Canmore / Copeland /
Winter Wheat — Wildfire	Austenson / Amisk / CDC Bow
CPS Wheat — *AAC Goodwin	Triticale — Sunray
Durum — * Stronghold / CDC Alloy /	Flax — *CDC Neela / Sanctuary / Glas
Spitfire / Transcend	Forages — Alfalfa / Grass Seed
Canola — Roundup Ready /	
Clearfield varieties	



# FABA BEANS

	ZONE (Yield as a % of CDC Snowbird)					Agronomic Characteristics:				
	1	2	3	4	5	Standability	Maturity <sup>1</sup>	TKW	Plant Height (cm)	Flower Color <sup>2</sup>
CDC Snowbird (bu/acre)	56.1			80.9	116.9	1				
CDC Snowbird 	100.0			100.0	100.0		E	478	91	W
Malik NR*	111.8			91.1	105.7	1	M	632	85	C
CDC219-16	109.6			93.1	92.3	1	E	358	97	W
DL Tesoro	115.5			109.0	94.1	1	M	571	106	W
Fabelle	116.2			106.4	100.8	1	M	534	106	C
LG Cartouche	118.0			112.5	101.2	1	M	527		
LSD	7.9			10.7	13.2					
CV	12.5			12.8	7.3					

**Remarks:** All colored flower types have seed coats that contain tannins and may be suitable for export food markets if seed size and quality match customer demand. Varieties tested for a minimum three years are considered fully tested.  = Protected by Plant Breeders' Rights (PBR);  = Applied for PBR protection. NR = Variety not registered with CFIA. \* Contract Varieties.  
1Maturity: E = early, M = medium, ML = medium late, L = late; 2Flower Colour: W = white flower, zero tannin; C = colored flower, tannin.

## DL RICO

**BI: DL Seeds, DIST: Prairie Fava**

Stamp Seeds / Enchant / (403) 739-2233

## DL TESORO

**BI: DL Seeds, DIST: Riddell Seed Co.**

Sim, Darwin & Derek / Ponoka / (780) 372-2111

## FABELLE

**BI: DL Seeds, DIST: SeedNet Inc.**

Stamp Seeds / Enchant / (403) 739-2233

## SNOWBIRD

**BI: Innoseeds, DIST: Limagrain Cereals Research Canada**

Alect Seeds / Three Hills / (403) 443-9599

Baier, Bill & Dean / Clyde / (780) 348-5791

Cyre, Clifford & Greg / Barrhead / (780) 307-4332

Dallas, Bradley C. / Bowden / (403) 224-2162

Foster, Norman R. / Beaverlodge / (780) 354-2107

Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036

Harbin, Clifford T. & Bruce Clifford / Rivercourse / (780) 745-2268

Koester, Gordon & Munro, Daniel / Rockyford / (403) 533-2248

Lindholm Seed Farm / New Norway / (780) 352-3240

Prestville Farms Ltd. / Rycroft / (780) 814-2849

Stamp Seeds / Enchant / (403) 739-2233

# HEMP

## ALTAIR

**BI: N/A, DIST: UniSeeds Inc.**

Cailliau, Cecile Dana & Dave / Enchant / (587) 813-0312

## CANMA

**BI: N/A, DIST: Natural Emphasis**

Fresh Hemp Foods Ltd. (FHF) / Ste. Agathe / (204) 882-2480

## CFX-2

**BI: N/A, DIST: Hemp Geneteics International Inc.**

Hemp Genetics International Inc. / Saskatoon / (604) 882-4936

## FINOLA

**BI: N/A, DIST: Hemp Oil Canada**

Fresh Hemp Foods Ltd. (FHF) / Ste. Agathe / (204) 882-2480

## GRANMA

**BI: N/A, DIST: N/A**

Fresh Hemp Foods Ltd. (FHF) / Ste. Agathe / (204) 882-2480

## GRANDI

**BI: N/A, DIST: Hemp Geneteics International Inc.**

Mercer Seeds Ltd. / Lethbridge / (403) 327-9736

# LENTIL

## CDC IMPULSE

**BI: CDC, DIST: SeCan Members**

Quattro Ventures / Bow Island / (403) 545-2222

## CDC LIMA

**BI: CDC, DIST: SeCan Members**

Chin Ridge Seeds Ltd. / Taber / (403) 223-3900

Mercer Seeds Ltd. / Lethbridge / (403) 327-9736

Wills, Timothy H. / Grassy Lake / (403) 655-2434

## CDC NIMBLE

**BI: CDC, DIST: Sask. Pulse Growers**

Chin Ridge Seeds Ltd. / Taber / (403) 223-3900

Geldreich, Dave / Bow Island / (403) 545-2222

## CDC PROCLAIM

**BI: CDC, DIST: SeedNet Inc.**

Benci, Dennis / Carmangay / (403) 643-2294

Mercer Seeds Ltd. / Lethbridge / (403) 327-9736

Penwest Seeds / Three Hills / (403) 443-2577

Sleepy Hollow Seeds Ltd. / Milk River / (403) 647-2228

Witdouch, Dale / Iron Springs / (403) 738-4395

## CDC REDMOON

**BI: CDC, DIST: SeCan Members**

Chin Ridge Seeds Ltd. / Taber / (403) 223-3900



**CORNS SEEDS**  
ROOTED IN TRADITIONS

**OUR SEEDS ARE TRIED & TESTED  
ON OUR OWN CORNS FAMILY FARM**

**PRODUCT LINE**




- Tyndal Spring Triticale
- AAC Delight Spring Triticale
- AC Morgan Oats
- ORE 3542M Oats
- Austenson Barley
- Luoma Winter Triticale
- Metzger Winter Triticale
- Bobcat Winter triticale
- Integra Haygrazer Sorghum
- BMR Silage Sorghum
- Manta Millet
- Red Siberian Millet
- Fall Rye
- 4010 Forage Peas
- Austrian Winter Peas
- Blending options available

**DEPENDABLE SUPPLY | TRITICALE SPECIALISTS | NO-HASSLE SALES**

**SALES@CORNSSEEDS.COM**  
GRASSY LAKE, ALBERTA  
**CORNSSEEDS.COM**

**CALL TO BOOK**  
YOUR SPRING FORAGE SEEDS  
BRYAN CORNS | 403-380-9586  
WHITNEY CORNS | 403-360-0833

# LENTILS

	ZONE (Yield as a % of CDC Maxim CL)					Agronomic Characteristics:				
						Standability Erect = 1 Flat = 9	Relative Maturity Early = 1 Late = 5		Plant Height (cm)	TSW (g)
	1	2	3	4	5					
CDC Maxim CL	37.4				48.9	4			34	40
CDC Maxim CL	100.0				100.0		2	E/M	34	40
CDC Impulse 	101.3				80.8	4	2	E/M	37	46
CDC Lima CL 	105.3				64.6	5	4	M/L	35	74
CDC Proclaim 	89.3				89.4	4	2	E/M	35	38
LSD	8.5				7.8					
CV	22.2				18.6					

Protected by the 1991 Act of the UPOV Convention.

# GREEN PEAS

	ZONE (Yield as a % of CDC Limerick)					Agronomic Characteristics:				
	1	2	3	4	5	Standability 1 = erect 9 = flat	Relative Maturity Early = 1 Late = 5	Vine Length (cm)	TSW <sup>2</sup> (g)	Bleaching
CDC Limerick	41.6	70.4	51.0	57.4	48.9	5.0	3	77	210	G
CDC Limerick	100.0	100.0	100.0	100.0	100.0	5.0	3	77	210	G
12CP3032	97.4	121.7	129.2	107.8	103.9	5	3			
AAC Comfort	103.8	114.3	92.7	101.0	95.3	5	4	77	244	G
Bluelman	107.2	117.9	123.1	127.4	109.4	5	3	81	228	G
CDC Forest	105.0	121.6	105.3	116.7	101.4	5	3	81	228	G
CDC Spruce	100.7	113.8	132.4	109.9	107.2	5	3	82	243	G
N13073-17	99.5	114.5	147.3	107.0	116.0	5	2			
N13073-19	97.8	112.9	135.7	108.7	106.3	5	2			
LSD	6.3	6.4	7.5	7.2	5.6					
CV	18.4	9.6	14.2	14.1	15.5					

# MUSTARD

	S	F	R	C
<b>AAC ADAGIO</b>				
BI: AAFC (Saskatoon), DIST: N/A				
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736				C
<b>AC VULCAN</b>				
BI: AAFC (Saskatoon), DIST: N/A				
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736				C*
<b>ANDANTE</b>				
BI: AAFC (Saskatoon), DIST: N/A				
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736				C
<b>CENTENNIAL</b>				
BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed				
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736		F		C
<b>CUTLASS</b>				
BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed				
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736		F		C
<b>FORGE</b>				
BI: N/A, DIST: Nutrien Ag Solutions/Proven Seed				
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736				C*

# PEAS - FORAGE

	S	F	R	C
<b>CDC HORIZON</b>				
BI: CDC, DIST: Mastin Seeds				
Foster, Norman R. / Beaverlodge / (780) 354-2107				R
Froese, Cornelius H. / La Crete / (780) 927-4645				R










est. 1989

- Accredited Seed Treating Facility -

- CDC Saffron Peas
- AAC Brandon HRSW
- AAC Spitfire Durum
- CDC Austenson Barley
- Early maturing Soybeans
- Grain and Silage Corn

-Custom cover crop and grass blends

Ask about our new IP Soybean Program with price premiums!

Contact Ethan today to book! Cell #: 403-892-7048  
www.bhklassenfarms.com

Hadland, Edward / Baldonnel / (250) 793-9746	S	F		C
Jonk, Nicholas / Westlock / (780) 349-5458			R	
Mastin, Robert B. / Sundre / (403) 556-2609	S			
<b>CDC LEROY</b>				
<b>BI: CDC, DIST: N/A</b>				
Chin Ridge Seeds Ltd. / Taber / (403) 223-3900	S	F		
<b>DL DELICIOUS</b> ☺				
<b>BI: DL Seeds, DIST: FP Genetics</b>				
Quattro Ventures / Bow Island / (403) 545-2222			R	
<b>DL GOLDEYE</b> ☺				
<b>BI: DL Seeds, Dist: Riddell Seed Co.</b>				
Sim, Darwin & Derek / Ponoka / (780) 372-2111	S		R	
<b>DL LACROSS</b> ☺				
<b>BI: DL Seeds, DIST: SeedNet Inc.</b>				
Chin Ridge Seeds Ltd. / Taber / (403) 223-3900	S			
Stamp Seeds / Enchant / (403) 739-2233	S			

## PEAS - GREEN

	S	F	R	C
<b>AAC COMFORT</b> ☺				
<b>BI: AAFC, DIST: Canterra Seeds</b>				
Huvenaars, Carl / Hays / (403) 725-2213			R	
Lindholm Seed Farm / New Norway / (780) 352-3240				C
Prestville Farms Ltd. / Rycroft / (780) 814-2849			R	
<b>BLUEMAN</b>				
<b>BI: DL Seeds, DIST: SeedNet Inc.</b>				
Stamp Seeds / Enchant / (403) 739-2233		F		
Wheatcrest Farms / Lomond / (403) 792-3696	S	F		
<b>CDC DAKOTA</b>				
<b>BI: CDC, DIST: N/A</b>				
Klempnauer, Joerg / Vauxhall / (403) 330-5480	S			C
Stamp Seeds / Enchant / (403) 739-2233	S			
<b>CDC FOREST</b> ☺				
<b>BI: CDC, DIST: SeCan Members</b>				
Baier, Bill & Dean / Clyde / (780) 348-5791			R	
Dewindt, Harry & Hoyme, Renee / Thorhild / (780) 398-2377			R	
Hallett's Hay & Seed / Carstairs / (403) 337-3072			R	
Hoff, Peter Edward / Gleichen / (403) 734-2140	S	F		
Penwest Seeds / Three Hills / (403) 443-2577			R	
Thompson, M. Ellwood & Kelly / Red Deer County / (403) 728-3535		F		

<b>CDC GREENWATER</b>				
<b>BI: CDC, DIST: Saskatchewan Pulse Growers</b>				
Holmstrom, Darrell / Killam / (780) 385-3574			R	C
Willms, Timothy H. / Grassy Lake / (403) 655-2434		F	R	
<b>CDC LIMERICK</b>				
<b>BI: CDC, DIST: Saskatchewan Pulse Growers</b>				
Ellis, Brian / Olds / (403) 556-2890				C
Haralie Seed Farms / Beaver County / (780) 662-2617		S*	F*	
Howard, Fred / Wanham / (780) 694-2427				C
Lindholm Seed Farm / New Norway / (780) 352-3240			R	C
McDonald, Gerald / Co. Of Grande Prairie #1 / (780) 538-3868				C
Sendziak Seed Farm / Edmonton / (780) 434-1322				C
<b>CDC RAEZER</b>				
<b>BI: CDC, DIST: N/A</b>				
Kapitski, Lawrence / Andrew / (780) 365-2134				C
Krywko, Ronald / Sturgeon County / (780) 939-1719				C
LS Land & Cattle / Didsbury / (403) 335-3694				C
Plante, Jacques / St. Paul / (780) 645-4604				C
<b>CDC SPRUCE</b> ☺				
<b>BI: CDC, DIST: SeCan Members</b>				
Archer, Nathan / Didsbury / (403) 556-0693				C
Baier, Bill & Dean / Clyde / (780) 348-5791				C
Dewindt, Harry & Hoyme, Renee / Thorhild / (780) 398-2377				C
Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036				C
Lampron, Claude / St-Vincent / (780) 614-1413				C
<b>CDC STRIKER</b>				
<b>BI: CDC, DIST: N/A</b>				
Sim, Darwin & Derek / Ponoka / (780) 372-2111				C
<b>CDC TETRIS</b>				
<b>BI: CDC, DIST: N/A</b>				
Richard, Gerald / Spirit River / (780) 864-2339				C
<b>COOPER</b> ☺				
<b>BI: Innoseeds, DIST: Canterra Seeds</b>				
Cyre, Clifford & Greg / Barrhead / (780) 307-4332				C
<b>GARDE</b>				
<b>BI: N/A, DIST: Bob Park</b>				
Alect Seeds / Three Hills / (403) 443-9599				C
Hegland, David Olaf / Wembley / (780) 766-2450			R	C
Lohner, Kevin / Daysland / (780) 679-6309				C
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736				C



### Pedigreed Seed Varieties

<b>Winter Wheat</b>	<b>Industrial Hemp</b>	<b>Yellow Peas</b>
- AAC Goldrush	- Finola	- Abarth
- AAC Icefield	- Katani	- AAC Chrome
	- Picolo	
<b>HRSW</b>	- CFX-2	<b>Hybrid Fall Rye</b>
- AAC Viewfield	- Canma	- KWS Gatano
- CDC Adamant VB		- KWS Bono
	<b>Durum</b>	- KWS Brasetto
<b>Small Red Lentils</b>	- AC Transcend	- KWS Progas
- CDC Impulse CL	- AC Strongfield	
- CDC Proclaim CL	- CDC Alloy	



☎ 403-545-2222  
 ✉ office@quattrofarms.com  
 🐦 @quattroseeds  
 🌐 www.quattroventures.com  
 📍 Bow Island, AB



## MS Markert Seeds Ltd.

CDC Austenson Barley	AAC Foray VB Wheat
CDC Copeland Barley	CDC Precision Durum
AAC Synergy Barley	AAC Chrome Peas *
AAC Awesome VB Wheat	CDC Inca Peas
AAC Connery Wheat	CDC Meadow Peas
CDC Landmark VB Wheat	CDC Dorado Flax
RedNet Wheat *	AC Morgan Oats
AAC Viewfield Wheat	*DENOTES NEW VARIETY

**Ron & Lee Markert**  
 Box 1150 • Vulcan, Alberta T0L 2B0  
 403-485-6708 • www.markertseeds.com  
 info@markertseeds.com

# YELLOW PEAS

	ZONE (Yield as a % of CDC Amarillo)					Standability	Vine	Relative	TSW (g)
	1	2	3	4	5	1=erect 9=flat	Length (cm)	Maturity	
CDC Amarillo (bu./acre)	40.6	76.9	50.8	77.3	55.9	5	80	3	226
CDC Amarillo	100.0	100.0	100.0	100.0	100.0	5	80	3	226
CDC Meadow	114.0	101.0	120.7	108.2	102.0	6	81	3	203
AAC Aberdeen	124.1	102.6	95.1	119.9	90.3	5	89	4	243
AAC Barrhead	101.0	108.2	96.1	107.5	91.2	5	84	1	232
AAC Chrome	119.7	106.4	89.4	115.9	99.3	5	71	4	234
AAC Delhi	102.7	103.5	114.2	104.4	100.7	6	71	2	288
AAC Lacombe	112.6	105.3	92.7	120.6	84.6	5	75	3	256
AAC Ardill	112.8	106.2	140.7	112.4	110.4	5	85	3	230
CDC Canary	103.2	104.4	113.0	113.3	96.4	6	80	1	239
CDC Inca	106.9	104.4	118.5	125.7	99.1	5	85	3	230
CDC Lewochko	112.3	105.5	102.0	99.5	86.2	5	90	3	230
CDC Spectrum	110.6	108.1	105.1	108.2	101.1	6	78	3	235
LN4228	100.2	96.7	110.8	106.2	100.0	5	80	3	246
N13022-7	113.8	107.7	127.0	111.6	99.5	5	63	3	266
N13029-10	114.3	104.7	120.1	114.6	104.5	6	70	3	274
N13057-4	106.4	97.7	111.0	100.1	88.2	6	66	3	224
N13057-5	109.6	104.0	111.0	104.9	87.3	6		3	
N13068-1	99.0	103.0	132.5	114.0	100.9	6	65	3	283
LSD	7.4	9.1	8.1	10.8	6.5				
CV	20.5	14.1	17.8	12.8	14.8				



## RADKE PEDIGREED SEED LTD.

QUALITY PEDIGREED SEED AVAILABLE FOR 2020

AAC PENHOLD CPS WHEAT  
Certified, Registered, Foundation

AC FOREMOST CPS WHEAT  
Certified, Registered, Foundation

CDC MEADOW YELLOW PEAS  
Certified, Registered, Foundation

### BRYAN RADKE

R.R. 1, SITE 1, BOX 2  
BARRHEAD, ALBERTA  
T7N 1N2  
PHONE (780) 674-5715  
CELL (780) 674-0866  
EMAIL moosecreek@xplornet.com



### Fairview Co-operative Seed Cleaning Plant

Box 1510 Fairview, Alberta T0H 1L0  
Phone: 780-835-2478 email: fcseedplant@gmail.com  
Manager: Ernie Newman  
fcseedplant.com

Seed Cleaning • Color Sorting • Ergot Cleaning  
Feed Sales • Bagging • Grain Testing  
Certified Organic Facility

### Pedigreed Seed Available

#### OUR VARIETIES:

**Barley** • CDC Cowboy

**Wheat** • HRS Varieties, Thorsby, CDC Go, AAC Connery, AAC Brandon

**Oats** • CDC Ruffian, CS Camden

**Peas** • AAC Carver Yellow, CDC Meadows

**Winter Wheat** • Pintail

**Canola** • CS2000, CS2200 CL, Canterra 1918, CS2400, Polish

We pride ourselves on Service



## PEAS - MAPLE

### AAC LISCARD

BI: AAFC (Lacombe), DIST: N/A  
Stamp Seeds / Enchant / (403) 739-2233

### CDC BLAZER

BI: CDC, DIST: SeCan Members  
Chin Ridge Seeds Ltd. / Taber / (403) 223-3900

## PEAS - YELLOW

### AAC ARDILL

BI: AAFC (Lacombe), DIST: N/A  
Hartzler, Leonard / Carstairs / (403) 337-2416  
Penwest Seeds / Three Hills / (403) 443-2577  
Sand, Ron W. & David R. / McLaughlin / (780) 745-2251

### AAC BARRHEAD

BI: AAFC (Lacombe), DIST: N/A  
Hadland, Edward / Balldonnel / (250) 793-9746

Jackson, Thomas / Killam / (780) 385-2332  
Konieczny, Scott / Mannville / (780) 581-5693  
Mueller, Richard J. & R. R. & Rosemary / Barrhead / (780) 674-6713

### AAC CARVER

#### BI: AAFC, DIST: Canterra Seeds

Assure Seeds Ltd. / Acme / (403) 510-9260  
Beaulieu, Emery / Fairview / (780) 835-8525  
Benci, Dennis / Carmangay / (403) 643-2294  
Boisvert, Marc / Girouxville / (780) 618-4724  
Eliason, Bruce W. / Wrentham / (403) 222-2258  
Ellis, Brian / Olds / (403) 556-2890  
Felstad, Colin / Dapp / (780) 349-9505  
Goode, Tim / Lacombe / (403) 506-9424  
Harbin, Clifford T. & Bruce Clifford / Rivercourse / (780) 745-2268  
Huvenaars, Carl / Hays / (403) 725-2213  
Jonk, Nicholas / Westlock / (780) 349-5458  
K3 Seeds / Picture Butte / (403) 715-7989  
Kapitski, Lawrence / Andrew / (780) 365-2134  
King's Seed Farm / Three Hills / (403) 443-3333  
Massey, Derwin & Kirby / Stettler / (403) 883-2503  
Meinczinger, Matthew Jr. / Busby / (780) 349-2456  
Penwest Seeds / Three Hills / (403) 443-2577  
Plante, Jacques / St. Paul / (780) 645-4604  
Prestville Farms Ltd. / Rycroft / (780) 814-2849  
Richards, Dan / Sexsmith / (780) 766-2266  
Rix, Graham / Wetaskiwin / (780) 360-9234  
Sendziak Seed Farm / Edmonton / (780) 434-1322  
Solick Seeds Ltd. / Halkirk / (403) 884-2358  
Specialty Seeds / Bow Island / (403) 545-6018  
True Seeds / Redwater / (780) 777-5885  
Unrau, George / La Crete / (780) 926-1133  
Wuthrich, David / Cecil Lake / (250) 781-3527

### AAC CHROME

#### BI: AAFC (Lacombe), DIST: FP Genetics

Benci, Dennis / Carmangay / (403) 643-2294  
Chin Ridge Seeds Ltd. / Taber / (403) 223-3900  
Danielson, Lionel & Bonnie / Okotoks / (306) 594-7417  
Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036  
Geldreich, Dave / Bow Island / (403) 545-2222  
Harbin, Clifford T. & Bruce Clifford / Rivercourse / (780) 745-2268  
King's Seed Farm / Three Hills / (403) 443-3333  
Markert Seeds Ltd. / Vulcan / (403) 485-6708  
Mercer Seeds Ltd. / Lethbridge / (403) 327-9736  
Prestville Farms Ltd. / Rycroft / (780) 814-2849  
Quattro Ventures / Bow Island / (403) 545-2222  
Sim, Darwin & Derek / Ponoka / (780) 372-2111  
Solick Seeds Ltd. / Halkirk / (403) 884-2358  
Stamp Seeds / Enchant / (403) 739-2233

### AAC DELHI

#### BI: AAFC (Lacombe), DIST: SeedNet Inc.

Specialty Seeds / Bow Island / (403) 545-6018  
Stamp Seeds / Enchant / (403) 739-2233  
Wheatcrest Farms / Lomond / (403) 792-3696

### AAC LACOMBE

#### BI: AAFC, DIST: SeedNet Inc.

Alect Seeds / Three Hills / (403) 443-9599  
Benci, Dennis / Carmangay / (403) 643-2294  
Dewindt, Harry & Hoyme, Renee / Thorhild / (780) 398-2377  
Ellis, Brian / Olds / (403) 556-2890  
Forward Seed Farm / County Of Barrhead / (780) 674-3822  
Moffitt, Kenneth & Raymond / Radway / (780) 818-6550



**Pedigreed Seed Varieties Available:**  
AAC Synergy Barley  
CDC Copeland Barley  
AAC Brandon Wheat

**Services Provided:**  
Seed Cleaning  
Seed Treatment  
Export/Domestic Transloading  
Intertek Lab Onsite



CEO: Blair Peregryn

Email: ceo@strathmoreseed.ca

Orders: operations@strathmoreseed.ca

Phone: 403-934-3421

www.StrathmoreSeed.ca



**Greg & Clifford Cyre**  
Cell (780) 307-4332  
gcyre@xplornet.com

**Wheat**  
AAC Brandon  
AAC Crossfield  
AAC Goodwin - NEW

**Peas**  
Cooper (Green)  
**Faba Beans**  
Snowbird

**SeCan**  
Canada's Seed Partner

**CSGA**  
Canadian Seed Growers' Association

**CANTERRA SEEDS**

## special crops – performance trials and grower directory

Sich, Ivan & Martin & Livia / Three Hills / (403) 443-8402

#### CDC SAFFRON

BI: CDC, DIST: N/A

Fabian, Patrick V. / Tilley / (403) 377-2000  
Fletcher, Tyler / Smoky Lake / (780) 656-0507  
Haralie Seed Farms / Beaver County / (780) 662-2617  
Klassen, Ethan / Coaldale / (403) 345-3770  
Kopjar, Gerald M. / Rowley / (403) 368-2409  
Lefsrud Seed / Viking / (780) 336-2500  
LS Land & Cattle / Didsbury / (403) 335-3694  
Solick Seeds Ltd. / Halkirk / (403) 884-2358

#### CDC SPECTRUM

BI: CDC, DIST: SeCan Members

Dyck, Ernie / La Crete / (780) 821-9445  
Hoff, Peter Edward / Gleichen / (403) 734-2140  
Huvenaars, Carl / Hays / (403) 725-2213  
Jonk, Nicholas / Westlock / (780) 349-5458  
Kopjar, Gerald M. / Rowley / (403) 368-2409  
Nikkel, Ed & Darren / Lethbridge / (403) 312-4070  
Sand, Ron W. & David R. / McLaughlin / (780) 745-2251  
Sekulic, John Jr. / Rycroft / (780) 765-2280  
True Seeds / Redwater / (780) 777-5885  
Wildeman, Russell / Clive / (403) 784-3695  
Willms, Timothy H. / Grassy Lake / (403) 655-2434

#### LN4228

BI: Limagrain, DIST: Lindholm Seed Farm

Lindholm Seed Farm / New Norway / (780) 352-3240

## SOYBEANS

#### NSC LEROY

BI: N/A, DIST: Northstar Genetics Canada

Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036

#### NSC WATSON RR2Y

BI: N/A, DIST: Northstar Genetics Canada

Galloway Seeds Ltd. / Fort Saskatchewan / (780) 998-3036

## Soybean Seed Distributors

For additional soybean varieties available for purchase and detailed variety information please contact these soybean seed distributors.

BASF / 1-877-371-2273 / [www.agsolutions.ca](http://www.agsolutions.ca)

Bayer / 1-888-283-6847 / [www.cropsolutions.bayer.ca](http://www.cropsolutions.bayer.ca)

BrettYoung / 1-800-665-5015 / [www.brettyoung.ca](http://www.brettyoung.ca)

CANTERRA SEEDS / 1-877-744-4321 / [www.canterra.com](http://www.canterra.com)

Corteva Agriscience / 1-800-667-3852 / [www.corteva.ca](http://www.corteva.ca)

MAIZEX / 1-519-682-1720 / [www.maizex.com](http://www.maizex.com)

NorthStar Genetics / 1-204-262-2425 / [www.northstargenetics.com/ca/](http://www.northstargenetics.com/ca/)

Nutrien Ag Solutions / 1-855-569-9444 / [www.nutrien.com/](http://www.nutrien.com/)

PRIDE Seeds / 1-800-265-5280 / [www.prideseed.com](http://www.prideseed.com)

SeCan / 1-800-665-7333 / [www.secan.com](http://www.secan.com)

Syngenta Canada Inc / 1-877-964-3682 / [www.syngenta.ca](http://www.syngenta.ca)

Thunder Seeds Canada / 1-306 213 8888 / [www.thunderseeds.com](http://www.thunderseeds.com)

## SOYBEAN

	ZONE (Yield reported in bu/acre)					Relative Maturity	
						Early = 1	
	1	2	3	4	5	Late = 5	
McLeod (bu/acre)	33.82			2.41	7.3	5	L
Akras R2	34.85			2.19	1.74	5	L
Amirani R2	31.85			15.09	21.7	1	E
Devo R2X	30.78			2.52	14.4	4	M/L
Dinero R2X	33.3			1.84	9.8	4	M/L
DKB0005 - 44	29.83			2.22	11.3	3	M/L
DKB0009-89	28.61			2.34	9.7	2	E/M
Dugaldo R2X	31.91			1.74	8.2	5	L
Karpo R2	32.6			5.13	13.6	2	E/M
Maxus	33.51			1.75		5	L
Nocoma R2	31.3			6.51	9.7	3	M
NSC EXP 0005RR2X	27.62			6.67	20.6	1	E
NSC Leroy RR2Y	28.68			7.09	18.8	1	E
NSC Watson RR2Y	29			7.27	22.8	1	E
PR110187Z017	27.56			1.83		5	L
PR110212Z046	26.73			1.74		5	L
PV 15s0009R2X	28.51			2.75	9.8	1	E
S0007-B7X	24.27			8.82	16.2	1	E
S0009 - M2	30.33			14.76		1	E
S003-Z4X	30.76			16.08	18.9	2	E/M
Siberia	32.17			2.16		5	L
Sunna R2	31.84			2.16	10.5	2	E/M
Torro R2	27.84			7.33	7.9	4	M/L
V EXP 19-S1	29.31			8.13	26.8	1	E
Varuna R2	34.24			15.75	24.9	1	E

**SeCan**  
Canada's Seed Partner

# Genes on-line.

For genes that fit your farm®, visit [secan.com](http://secan.com)

**Certified Seed**  
YOU'RE PLANTING SUCCESS

Genes that fit your farm® is a registered trademark of SeCan.



**INTRODUCING:**  
**The first-ever GrainBelt designed specifically for oilseed.**

## ONE BELT FITS ALL.

**LEAD  
THE  
FIELD.**

Farming is a competitive business. You need cutting-edge solutions like Brandt's Oilseed-Certified™ GrainBelts if you want to climb to the top. As the first-ever conveyor designed specifically for oilseed, these revolutionary units utilize industry-exclusive oil-resistant belts to gently move your crop while protecting your equipment. And, its self-cleaning system clears out any build-up of product, so you can confidently load *all* of your crops — even canola.

The result? You get the most innovative belt in the industry and enjoy years of worry-free productivity from Brandt. **That's Powerful Value. Delivered.**

**1** YEAR STANDARD WARRANTY + **1** YEAR EXTENDED WARRANTY

brandt.ca | 1-866-427-2638

**Brandt**



## Grain Bagging System



## Think outside the bin™

In a class of its own, the Neeralta Grain Bagging System is the pinnacle of efficiency, durability and ease of use. With many industry-firsts in grain bagging, Neeralta continues to lead the industry in innovation and reliability.

Neeralta is committed to promoting the responsible use and recycling of agricultural plastics. Fast and simple handling of the grain bag has been integrated into every aspect of the system. The advanced hydraulic system on the Loader, allows for a quick and efficient bag-loading process. The Unloader features the patented Bag Baler that eliminates end-of-bag cleanup by winding the bag into a recycle-ready bale. When the extraction process is complete, hydraulically unload the bale and it's ready to go. Bag handling and recycling couldn't be easier or more reliable.

*Call today or visit us online to learn more about how Neeralta can help you farm faster.*



**neeralta.com**

**1.866.497.5338**





# MAXIMIZE YOUR SEED STORAGE & HANDLING

WITH **MERIDIAN MANUFACTURING**

Take your seed storage and handling to the next level with Meridian. Visit [meridianmfg.com](http://meridianmfg.com) to see our full line of bins, conveyors, augers and more!  
(800) 665-7259 | [seed@meridianmfg.com](mailto:seed@meridianmfg.com) | [meridianmfg.com](http://meridianmfg.com)



**DURABLE. FUNCTIONAL. RELIABLE.**

At every step, Convey-All's seed tenders, conveyors, and bulk systems deliver. To learn more, visit [convey-all.com](http://convey-all.com)

**CONVEY-ALL**<sup>TM</sup>  
[convey-all.com](http://convey-all.com) | (800) 418-9461

© 2020 Meridian Manufacturing Inc. Registered Trademarks Used Under License. (01/2020)



# NOZZLENINJA.COM

Nozzles • Pumps • Booms • Plumbing • Technology

Your Canadian Online Source For Discounted Sprayer Parts



**HYPRO DUO-REACT**  
Simple, Effective, Affordable  
Nozzle Control

## SPRAY BETTER PAY LESS

NOZZLES, COMPONENTS, PUMPS, LIQUID HANDLING, TENDERING, & PERFORMANCE

Nozzleninja.com Easy to Use Online Store For Everything Spraying

Fast Free Shipping Available From Stettler, Alberta Canada

Large In Stock Inventory From Leading Brands Specializing in Hypro and ASJ Spray Jet

Shop online, by phone, or in Person with Free Shipping or local pick up at our Stettler Warehouse

Independently owned and Operated 21 Years Experience When You Need Assistance to Get Things Right

**Nozzle Ninja Assassinating Sprayer Parts Frustration**



@NozzleNinja

www.nozzleninja.com

Toll Free: 1-877-387-2636

sales@nozzleninja.com

19453 Highway 12 East Bays 2&3- P.O. Box 130 Stettler AB Canada T0C 2I0



HYPRO • SHURFLO



PLUS MANY MORE QUALITY BRANDS

**GARRATT SEED AND GRAIN  
PROCESSING EQUIPMENT**

Airscreens  
Gravity Tables  
Destoners  
Vibratory Conveyors  
Bucket Elevators  
Indents  
Conveyors

*Your supplier for all your  
cleaning plant needs.*



306-436-2178 | office@garrattindustries.com  
Box 475, Milestone SK Canada S0G 3L0

**GARRATT  
INDUSTRIES LTD.**

**WESTCO**  
Construction

**BUILDING STRUCTURES  
& RELATIONSHIPS**



**Commercial - Industrial - Agricultural**

Building Design, Drafting, Rendering, Project Management,  
General Contracting, Structural Steel

**PROUD TO SUPPORT OUR COMMUNITY  
FOR THE LAST 29 YEARS**

westcoconstruction.ca

# Maximize Profit with Consistent Seed Depth



WHEAT SOWN WITHOUT SCRAPERS



WHEAT SOWN WITH SCRAPERS

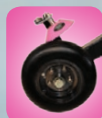


PACKER WHEELS WITHOUT SCRAPERS

PACKER WHEELS WITH SCRAPERS

**There is a visible improvement in seed placement and germination when using  
Devloo Roto Mud Scrapers at seeding time.  
OVER 55,000 SCRAPERS NOW IN USE WORLD WIDE**

We are donating \$5 to Breast  
Cancer research for every  
"PINK" mud scraper sold.



Call today and  
get ready for Spring!  
**1-888-323-8089**  
rotomudscrapers@live.ca

PATENT PENDING

**WWW.ROTOMUDSCRAPERS.COM**

For Marketplace advertising inquiries, please contact marketing@issuesink.com



New Installations or Retrofits with Local  
Manufacturing, Installation and Support

**No Loss of Headroom, No Maintenance**  
**We Always Install**

**403-732-4475**

Picture Butte, AB

**780-351-2278**

Spirit River, AB

**PowerLiftDoors.ca**

# PIVOT TRACK CLOSER **BY PATRIOT**

Patriot's Pivot Tracker Closer is the only closer that uses the packer wheel for depth control, virtually eliminating a closed track that has too much or too little dirt. Each blade is independently adjustable up, down, inward and outward.

## KEY FEATURES:

- Hydraulic down pressure on packer wheel
- Category II and III three point hitch
- 30" x 24" fully enclosed packer wheel
- Scraper for packer wheel
- Rugged 7" x 5" x 3/8" Frame
- Six disc blade - 3 per side
- Vee formation funnels soil toward the track
- 22" Blades

**PATRIOT**

MANUFACTURED BY: MINDEN MACHINE SHOP INC.  
MINDEN, NE [WWW.PATRIOTEQUIP.COM](http://WWW.PATRIOTEQUIP.COM)



**FOR MORE INFORMATION CONTACT MIKE SMITH: 403-892-3303**  
**[mike.b.smith@gmail.com](mailto:mike.b.smith@gmail.com)**

## CHANGE YOUR SPRAYER TIRES IN UNDER AN HOUR! **ATLAS HEAVY DUTY WHEEL DOLLY**

- The perfect tool for **SAFELY** moving or changing large wheels/tires
- Hydraulic lifting action: easily lifts the wheel/tire off the ground
- Heavy-duty swivel casters: simple transport of wheel/tire from one location to another
- Heavy-duty rollers: no more bars and blocks; one worker can easily turn the wheel/tire by hand
- Overhead restraining arm: keep wheel/tire secure during transport
- Lifting Capacity: 1,200 kg (2,640 lb.)
- Accommodates Tire Diameters: 991 mm - 2,108 mm (39" - 83")
- Max. Tire Width: 800mm (31.5")
- Shipping Weight: 150 kg (330 lbs.)

**ONLY \$1,499 +GST\***

\*Price is FOB Carmangay, AB or Lethbridge, AB. Alternative shipping arrangements are available.

**OVER 350  
UNITS SOLD  
IN AB & SK**



**FOR MORE INFORMATION CONTACT MIKE SMITH: 403-892-3303**  
**[www.HDWheelDolly.com](http://www.HDWheelDolly.com)**

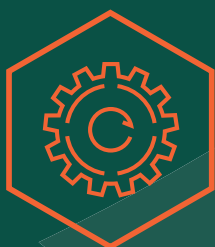
# Quality & Know How for All Your Seed Processing Needs

Your Local Cimbria Dealer.

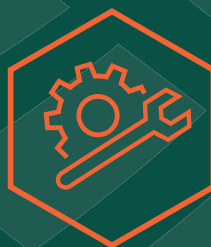
Equipment sales, color sorters, spare parts, training,  
or plant design contact Nexeed to learn more.



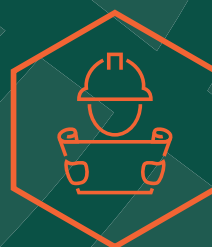
Planning &  
Consultation



Equipment



Support



Contracting



204 982 3531  
NEXEED.CA





## Let Our People Help Your People!

“We have many people asking us about increasing quality or increasing efficiency, or most importantly asking about increasing profitability... if you have ever wondered about any of these questions, give us a call and see how we can help.”

-Ian Ely  
Director of South  
American Operations

# Oliver

Processing for a more productive planet.

USA : 888-254-7813  
INTERNATIONAL : +1.719.254.7813  
[www.olivermanufacturing.com](http://www.olivermanufacturing.com)

## ALBERTA SEED GROWERS ADVERTISING IN THIS ISSUE OF ALBERTA SEED GUIDE.

### Acme

**Assure Seeds Ltd.** / 403.510.9260 / 108

### Andrew

**GLD AgVentures** / 780.365.3536 /  
lkapitski@mcsnet.ca / 96

### Barrhead

**Canseed Canada Ltd.** / 780.674.6713 /  
smueller@mcsnet.ca / 16, 109  
**Forward Seed Farm** / 780.674.3822 /  
forwardseedfarm@gmail.com / 90  
**Radke Pedigreed Seed Ltd.** / 780.674.5715 /  
moosecreek@xplornet.com / 113  
**Rick's Pedigreed Seed** / 780.305.9517 /  
smueller@mcsnet.ca / 76  
**Cyre Seed Farms** / 780.307.4332 /  
gcyre@xplornet.com / 114

### Bow Island

**Quattro Ventures** / 403.545.2222 /  
office@quattrofarms.com / 112  
**Specialty Seeds Ltd.** / 403.545.6018 /  
will@specialtyseeds.ca / 101  
**Tony Croymans & Sons** / 403.545.2151 /  
johncroymans@gmail.com / 67

### Brooks

**Airth Farms Ltd** / 403.362.4372 /  
airthfarms@xplornet.com / 96

### Busby

**Meinczinger Seed Farm** / 780.349.9515 /  
meinczingerseedfarm@gmail.com / 66

### Carmangay

**Benci Seed Farms Inc.** / 403.643.2294 /  
drbenci@yahoo.com / 109

### Clive

**Oatway Farms** / 403.784.3418 /  
oatwaysseedfarm@yahoo.ca / 73  
**Wildeman Seed Farms** / 403.470.8528 / 37

### Clyde

**Bar 3 Farms** / 780.348.5791 / 101

### Coaldale

**B&H Klassen Farms Ltd.** / 403.892.7048 / 111

### Didsbury

**LS Land & Cattle** / 403.335.3694 /  
stshultz@xplornet.com / 102  
**Westway Farms Ltd.** / 403.335.4929 /  
westway@airenet.com / 76

### Enchant

**Diamond Dust Acres** / 587.813.0312 /  
admin@DDacres.ca / 77  
**Stamp Seeds** / 403.739.2233 /  
office@stampseeds.com / 76

### Fort Saskatchewan

**Galloway Seeds Ltd.** / 780.998.3036 /  
erin@gallowayseeds.com / 37

### Gleichen

**Livingspring Farms Ltd.** / 403.734.2140 /  
p-hoff@hotmail.com / 90

### Grassy Lake

**Willms Seeds** / 403.634.4155 /  
tim@willmsseeds.com / 66

### Halkirk

**Solick Seeds** / 403.884.2358 /  
solickseeds@syban.net / 62

### Iron Springs

**Witdouch Farms** / 403.738.4395 /  
info@witdouchfarms.com / 86

### Killam

**Holmstrom Seed** / 780.385.3574 /  
holmstromdarrell@gmail.com / 96

### Lethbridge

**Mercer Seeds** / 403.308.2297 /  
office@mercerseeds.ca / 71

### Madden

**Hallett's Hay and Seed** / 403.337.2469 /  
richard@hallettshayandseed.com / 98

### Manville

**Konieczny Seeds** / 780.581.5693 /  
scokon@gmail.com / 90

### McLennan

**Limoges Seed Farm** / 780.324.3024 /  
marcel.limoges@hotmail.com / 99

### New Norway

**Lindholm Seed Farm** / 780.352.3240 /  
lindholmseed@xplornet.com / 105

### Nobleford

**Phoenix Farms** / 403.824.3585 /  
john@phoenixfarms.ca / 62

### Olds

**Ellis Seeds** / 403.556.2890 /  
brianellisseed@gmail.com / 103

### Picture Butte

**K3 Seeds** / 403.738.4517 /  
info@k3seeds.com / 99

### Red Deer County

**Kemp Farms** / 403.318.1793 /  
kempfarmsltd@gmail.com / 62

### Redwater

**True Seeds** / 780.777.5885 / sales@  
trueseeds.ca / 85

### Rivercourse

**Harbin Seed Farm Ltd.** / 780.745.2268 /  
harbin@telusplanet.net / 67

### Rycroft

**Prestville Farms Ltd.** / 780.814.2849 /  
seed@prestville.com / 38

### Stettler

**Echo Ridge Farm Inc.** / 403.883.2503 /  
djmassey1@gmail.com / 88

### Sturgeon County

**Victoor Seed Farm Inc.** / 780.914.6027 /  
victoorseedfarm@gmail.com / 76

### Taber

**Chin Ridge Seeds** / 403.223.3900 /  
kelly@chinridge.com / 55  
**Corns Brothers Farm** / 403.380.9586 /  
bryan@cornsbrosbrothers.ca / 110

### Tees

**Knight's Seed** / 403.784.3633 /  
bgknight@platinum.ca / 66

### Thorsby

**Sendziak Seed** / 780.434.1322 /  
sendseed@telusplanet.net / 101

### Three Hills

**Penwest Seeds** / 403.443.2577 /  
tanya@penwestcanada.ca / 35

### Tilley

**Fabian Seed Farms Inc.** / 403.633.9999 /  
fabian@eidnet.org / 105

### Thorhild

**DeWindt Farms Ltd.** / 780.554.5945 /  
renee.hoyme@gmail.com / 96

### Three Hills

**Alect Seeds** / 403.443.9599 /  
sarahweigum@gmail.com / 106  
**King's Seed Farm Ltd.** / 403.443.7330 /  
kingsseedfarm@gmail.com / 67

### Vauxall

**Brummelhuis Seeds** / 403.654.7515 / mitch.  
brummelhuis@gmail.com / 88

### Viking

**Kittle Farms Ltd.** / 780.336.2583 /  
andrewkittle@hotmail.com / 78  
**Lefsrud Farms** / 780.336.2500 /  
lefsrud@telusplanet.net / 73, 75

### Vulcan

**Markert Seeds Ltd.** / 403.485.6708 /  
rmarkert@markertseeds.com / 112  
**Wheatcrest Farms** / 403.792.2336 / seed@  
wheatcrest.com / 62

### Wrentham

**Eliason Farms** / 403.222.2258 /  
eliasonfarms@gmail.com / 78

## SEED CLEANING PLANTS AND TREATING SERVICES IN YOUR COMMUNITY.



### ALBERTA

#### Alliance

Alliance Seed Cleaning Association Ltd. /  
780.879.3927 / [alliac@wildroseinternet.ca](mailto:alliac@wildroseinternet.ca) /  
[www.allianceseedfeed.com](http://www.allianceseedfeed.com) / 108

#### Barrhead

Barrhead District Seed Cleaning Co-op Ltd.  
/ 780.674.2569 / [barrseed@telus.net](mailto:barrseed@telus.net) / 98

#### Bashaw

Bashaw Seed Cleaning Co-op Association Ltd.  
/ 780.372.3868 / [bashawscp@xplornet.com](mailto:bashawscp@xplornet.com) /  
[www.bashawseeds.com](http://www.bashawseeds.com) / 98

#### Carmangay

Carmangay Seed Cleaning Plant  
Association Ltd. / 403.643.3656 /  
[carmangay@seedcleaningplant.com](mailto:carmangay@seedcleaningplant.com) /  
[carmangayseedplant.com](http://carmangayseedplant.com) / 84

#### Carstairs

Mountain View Seed Cleaning Plant Ltd. /  
403.337.3155 / [mvcpl@hotmail.com](mailto:mvcpl@hotmail.com) /  
[www.seed.ab.ca/plants/MountainView](http://www.seed.ab.ca/plants/MountainView) / 82

#### Clive

Clive Seed Cleaning Co-op Ltd. /  
403.784.3777 / [cliveseed@platinum.ca](mailto:cliveseed@platinum.ca) / 55

#### Fairview

Fairview Co-op Seed Cleaning Plant Ltd.  
/ 780.835.2478 / [fcseedplant@gmail.com](mailto:fcseedplant@gmail.com) /  
113

#### Lougheed

Lougheed Coop Seed Cleaning /  
780.386.3771 / [lscp@xplornet.com](mailto:lscp@xplornet.com) / 71, 91

#### Mountain View County

Graham Seed Treating Systems /  
403.556.2846 / [gseed@telusplanet.net](mailto:gseed@telusplanet.net) /  
[seedtreating.com](http://seedtreating.com) / 47, 115

#### Morinville

Morinville Municipal Seed Cleaning Co-op  
Ltd. / 780.939.4021 / [mscp@telusplanet.net](mailto:mscp@telusplanet.net) /  
[www.seed.ab.ca/plants/Morinville](http://www.seed.ab.ca/plants/Morinville) / 90

#### Rycroft

Central Peace Seed Cleaning Association /  
780.765.3821 / [cpsca@abnorth.com](mailto:cpsca@abnorth.com) /  
[www.seed.ab.ca/plants/Rycroft](http://www.seed.ab.ca/plants/Rycroft) / 101

#### Sexsmith

Sexsmith Co-op Seed Cleaning Association  
Ltd. / 780.568.3970 / [sscp@telus.net](mailto:sscp@telus.net) / 82

The Alberta Seed Processors is a group of locally operated co-operatives that offer valuable cleaning services for communities throughout Alberta and British Columbia. They were established through the joint efforts of the Province of Alberta and local municipal governments.

Farmers can get seed cleaned and treated at facilities across the province. Additional services available at several facilities include pulse processing, value processing, pedigreed seed processing, specialty processing, and seed inoculating, as well as seed and chemical sales.

#### St. Paul

St. Paul Municipal Seed Cleaning /  
780.645.3939 / 97

#### Strathmore

Strathmore Seed Cleaning Plant /  
403.934.3421 / [cleanseed@cciwireless.ca](mailto:cleanseed@cciwireless.ca) /  
114

#### Taber

Taber Seed / 403.223.4141 / [joe.hansontsc@yahoo.ca](mailto:joe.hansontsc@yahoo.ca) /  
26, 27

#### Three Hills

Three Hills & District Seed Cleaning Plant  
/ 403.443.5464 / [thscp@telusplanet.net](mailto:thscp@telusplanet.net) /  
[thscp.ca](http://thscp.ca) / 66

#### Warburg

Warburg Seed Cleaning Co-op Ltd. /  
780.848.2365 / [warscp@gmail.com](mailto:warscp@gmail.com) /  
[warburgseed.com](http://warburgseed.com) / 68

#### Wembley

Wembley Co-op Seed Cleaning /  
780.766.2630 / 107

#### Westlock

Westlock Seed Cleaning Co-op Ltd. /  
780.349.3944 / [wscp@telus.net](mailto:wscp@telus.net) / 53

#### Wetaskiwin

Wetaskiwin Co-op Agro / 780.352.3359 /  
[rgerrard@wetaskiwincoop.com](mailto:rgerrard@wetaskiwincoop.com) / 75

Wetaskiwin Seed & Grain Co-operative Ltd.  
/ 780.352.6212 / [seedclean@incentre.net](mailto:seedclean@incentre.net) /  
[www.seed.ab.ca/plants/Wetaskiwin](http://www.seed.ab.ca/plants/Wetaskiwin) / 76

#### BC

#### Dawson Creek

South Peace Grain Cleaning Co-op /  
250.782.7829 / [info@spgrain.ca](mailto:info@spgrain.ca) / 97



### First “Lab in a Field” Experiment Reveals a Sunnier Side of Climate Change

Pioneering experiments using heated field plots to test the responses of crops to temperature have revealed an unexpected plus side of climate change for farmers. The field trial experiment — the first of its kind — was set up to investigate the link between warmer Octobers in the United Kingdom and higher yields of oilseed rape.

The crop, planted in autumn and harvested early the following summer, is particularly sensitive to temperature at certain times of the year, with annual yields varying by up to 30 per cent as a result. It is known that warmer temperatures in October are correlated with higher oilseed rape yields, but the reason for this trend was unclear.

The results of this study by the John Innes Centre reveal that the temperature in October is surprisingly important for the timing of flowering, and warmer Octobers result in a delay to flowering the following spring.

Temperature is critical for oilseed rape lifecycle because it determines at what point the plant goes through the transition from vegetative state to flowering, with delays in flowering being associated with higher yields.

This process, called vernalization, is well understood in the lab as a requirement of a prolonged exposure to cold temperature. However, an increasing body of research suggests vernalization might work differently under more variable conditions experienced by a plant in the field.

In this study, the team used soil surface warming cables to raise the temperature of field plots by between four and eight degrees Celsius, simulating warmer October temperatures. Two varieties of oilseed rape with differing vernalization requirements were trialled. Lab tests on dissected plants showed that warming in October conditions delayed floral transition by between three and four weeks for both varieties. Genetic tests showed genes associated with vernalization in cold conditions were also highly expressed in the warm conditions.

The study shows that vernalization in oilseed rape takes place predominantly in October, during which time the mean temperature is between 10 to 12 C. The technology used in the study has been used before in natural grasslands to simulate winter warming, but the trials conducted by the John Innes Centre research team are the first time it's been used on a crop in the field. *Source: John Innes Centre*

### Brewing Beer that Tastes Fresh Longer

Unlike wine, which generally improves with time, beer does not age well. Usually, within a year of bottling, the beverage starts to develop an unpleasant papery or cardboard-like flavour that drinkers describe as “stale.” Now, researchers reporting in ACS Publications’ *Journal of Agricultural and Food Chemistry* have engineered lager yeast to make more molecules that protect beer against staling, resulting in improved flavour stability.

Scientists have linked stale beer flavours to aldehyde compounds, such as (E)-2-nonenal and acetaldehyde. Many of these compounds are produced by yeast during fermentation, and chemical reactions during beer storage can increase their levels. Brewers have tried different approaches to reduce levels of these compounds, such as controlling the fermentation conditions or adding antioxidants, but staling remains a problem for the beer industry. That’s why Qi Li and colleagues wanted to genetically modify lager yeast to produce more of a molecule called NADH. Extra NADH could boost the activities of natural yeast enzymes that change aldehydes into other types of compounds that don’t contribute to a stale flavour, the researchers reasoned.

The researchers used a genetic technique called “overexpression,” in which they artificially increased the levels of various genes related to NADH production. With this method, they identified four genes that, when overexpressed, increased NADH levels. The team found that beer from the overexpressing yeast contained 26.3 to 47.3 per cent less acetaldehyde than control beer, as well as decreased levels of other aldehydes.

In addition, the modified strains produced more sulfur dioxide, a natural antioxidant that also helps reduce staling. Other flavour components were marginally changed. This approach could be useful for improving the flavour stability and prolonging the shelf life of beer, the researchers say.

*Source: American Chemical Society*



# MAXIMIZE YOUR YIELD WITH PIONEER PROTECTOR TRAITS

Pioneer Protector® brand canola is the leader in harvest flexibility and built-in disease resistance, including clubroot. It all adds up to yield, performance and profitability you can count on.

**The proof is in the yield. Get the #YieldHero data at [yieldhero.pioneer.com](http://yieldhero.pioneer.com)**



**NEVER STOP GROWING.**



# PROVEN BY DESIGN

The way we see it, the Proven® Seed lineup is state of the art. Proven Seed offers leading edge technology you can count on in canola, cereals, corn, soybeans and forages. You get choice in herbicide systems, disease management, high yields and performance from every seed, across all your acres. **No matter how you look at it, there's a Proven Seed that fits your farm. Only available at Nutrien Ag Solutions™.** Learn more at [ProvenSeed.ca](http://ProvenSeed.ca)



**Proven**®  
SEED

**Nutrien**  
Ag Solutions™