

# FARMING SMARTER

Fall 2022 Edition



**The value  
of crazy » 12**

**Water in southern  
Alberta » 14**

**A new voice  
for unbiased  
advice » 27**





# SELL YOUR PROPERTY, YOUR WAY

**YOU HAVE OPTIONS WHEN YOU LIST WITH US!**

Take advantage of exclusive, gold standard marketing package with **FarmRealEstate.com**, designed to reach the agricultural community.

Licensed in Alberta, Saskatchewan and British Columbia, call us today for your **free initial property consultation**.

Buy and sell with confidence using your choice of our many marketing avenues and options!

**We're a 2023 Farming Smarter Program Partner!**

Ask about Real Estate Centre's rebate offer on listings and sales.



**Ria Braaksma**  
780.446.3006  
AB & SK License



**Jeroen Jacobsen**  
403.593.4282  
AB & SK License



**Frans VandeStroet**  
403.380.7633  
AB License



**Hank Van Hierden**  
403.308.1737  
AB & BC\* License  
\*Licensed with Fair Realty



**Ben Van Dyk**  
403.393.4040  
AB License



**Chris Veenendaal**  
403.849.8211  
AB & SK License



interfarms®

**SPORTS  
AFIELD**  
ESTABLISHED 1987  
TROPHY PROPERTIES®

**FARM.CA**

**FarmRealEstate**

**FarmFinders**

**FarmAuction.com**

**FARMREALESTATE.COM • FARMFINDERS.COM**  
**1.866.345.3414 • FARMAUCTION.COM • FARM.CA**



# Contents

Fall 2022  
EDITION



Pg. 8



Pg. 14



Pg. 24

**President’s Message:** Advocating for agriculture . . . . . 4

**Executive Director Report:** International study shines light on home . . . . . 6

Collaboration among leaders . . . . . 8

Farming Smarter commits time to partner relationships . . . . . 10

The value of crazy . . . . . 12

Water in southern Alberta . . . . . 14

Accessing land in today’s pricey reality . . . . . 16

Alberta rice without the paddy . . . . . 18

Seeding window just got a lot wider . . . . . 21

Technology isn’t automatically better . . . . . 24

Alternate crops for precision planters . . . . . 26

A new voice for unbiased advice . . . . . 27

Rethinking non-profit boards . . . . . 28

Is globalization a failed experiment? . . . . . 30

Visit us online for innovative agronomic and technical research information:  
[www.farmingsmarter.com](http://www.farmingsmarter.com)

GLACIER farmmedia



Farming Smarter is published bi-annually by Glacier FarmMedia LP for Farming Smarter, 211034 Hwy 512, Lethbridge County, AB, T1J 5N9

Editorial Board: Ken Coles, Jamie Puchinger  
Editor: C. Lacombe



**COVER PHOTO:**  
Farming Smarter celebrates 10 years in 2022. There is a Harvest Gala Nov. 4 and staff had cake to mark a decade of serving southern Alberta farmers.  
PHOTO: MORTON MOLYNEUX

# Advocating for agriculture



You already know that Farming Smarter has your back when it comes to novel crops, researched agronomy practices and analyzing new technologies.

You've probably seen our work on cover crops, winter crops, nutrient use efficiency and practices that think outside the box such as ultra early seeding (article in this issue).

What doesn't get enough press perhaps is our advocacy on behalf of southern Alberta agriculture. Advocacy is one of those tasks that requires constant attention across diverse platforms. Elected officials, government bureaucrats and the public need reminding that farmers are as educated, technologically advanced and on top of issues as anyone.

Farming Smarter fosters partnerships with other research organizations, post secondary institutions, industry and urban public. We consider it part of our job to interface where we can and be part of the active community moving agriculture forward. We want to be a stellar example of intelligent southern Alberta farming.

We have an open invitation to all media representatives and elected officials, provincial and federal, to our plot hops and Field School. We work at our relationships with them and make sure they know that farmers in our region are innovative, socially conscious and environmentally aware.

The public also wants to hear this and, while we don't consider public relations a primary role, we like to do what we can to get a positive message out. Admittedly, these can be fun team activities. To celebrate our tenth birthday this year, we took part in the Whoop-Up Days parade and we have seven Alberta Open Farm Day events under our belt now. These are activities that can include our extended family and we become an exceptionally large cohort when the kids show up!

Speaking of youth, Farming Smarter has an active program to attract post secondary, high school and foreign students to work with us every summer. We consistently have post secondary students learning while working on our research projects. Some of them come from farms, but often they are young people that never considered agriculture as a career path ... until they spend a summer or four



PHOTO: FARMING SMARTER

Open Farm Day gives the public a chance interact with ag in a festive atmosphere.

working with our team. Whether they choose an ag career or not, these students gain a broad agriculture perspective they can share with their peers.

In France, the university agriculture program has as a requirement that students work in a foreign country as a practicum. Farming Smarter hosts French students often and Executive Director Ken Coles, who speaks French, visits them in France doubling the learning that comes from these exchanges.

Farming Smarter is foremost an agriculture innovation hub but making sure everyone knows innovators live on southern Alberta farms adds some spice to our life!

**Ryan Mercer**  
*Farming Smarter President*



Farming Smarter Whoop Up Days float.



# CHALLENGING THE STATUS QUO IS NOT FOR THE FAINT OF HEART.

You face new challenges every day. But they don't knock you down – they give you a chance to stand taller than ever before. At DEKALB®, we're with you through the challenges. Whether you grow canola, corn or soybeans, count on advanced genetics and innovative trait technologies to help you start stronger, control better and yield bigger.

**DEKALB. WE'RE WITH YOU EVERY STEP OF THE WAY.**

DEKALB.ca | 1 888-283-6847 | @DEKALB\_Canada | @Bayer4CropsCA | #AskBayerCrop

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Bayer, Bayer Cross, DEKALB and Design® and DEKALB® are trademarks of Bayer Group. Bayer CropScience Inc. is a member of CropLife Canada. ©2022 Bayer Group. All rights reserved.

# International study shines light on home



It was sure nice to get back to a more normal year. We were unsuccessful with our bid to the Federal Government's Agriculture Climate Solutions to run a living lab, but still managed to secure our largest field program to date. We had a crew of 28 people including 15 summer students managing over 160 trials on over 3000 acres including field scale trials. Our custom research program grew significantly as it seemed agriculture companies were all eager to get back in the field. It was a cool and very dry spring but when it finally rained, we were off to the races.

Our business units are running smoothly, but I'll have to admit I miss more direct involvement in all the projects. I imagine many farmers experience this too as they transition to Farm Managers with growing operations. Nevertheless, I try to stay involved as much as possible and help where I can.

My Nuffield adventure included a contemporary scholars conference in Norfolk England, a quick stop in Scotland followed by a week each in Ireland and France. It was an eye-opening experience and reinvigorated my passion for what we do. I visited several research and extension organizations and when I explained what we do, they were envious.

I was appalled by the horrible ag policies in the U.K. and the European Union where it seems environmental policies seem to have trampled common sense. Some of those policies required hasty backpedaling



PHOTO: FARMING SMARTER

While on his inaugural Nuffield Scholar trip to the British Isles, Ken Coles met his cousin Alan Carr.

with policy makers scrambling to adjust due to the impacts from covid and the Ukraine invasion. They had policies that literally paid farmers to grow less, which backfired quickly when food supply shortages and tremendous inflation changed the game. The sad thing is, we're now following policy suit.

If you mentioned ag policy to me a while ago, I would have run away. Now I encourage everyone to get involved and make sure our ag policies are science based and common sense not just political objectives.

On a happier note, it is Farming Smarter's

10-year anniversary of the amalgamation between SARA and SACA. A lot has changed in 10 years, and we're excited to celebrate with you at our Gala on November 4.

Have a great winter and I look forward to seeing you at our February conference.

**Ken Coles**  
*Farming Smarter Executive Director*

## FARMING SMARTER STAFF

### 2022 | Left to right:

Back row: Grant Nelson, Isabel Degner, Gurbir Dhillon, Ken Coles, Melanie Zumbuehl, Mike Gretzinger & Trevor Deering. **Middle row:** Ryan Cervo, Michaela Gateman, Lewis Baarda, Carloe Van Herk, Alexi Kubeczek, Sean Kjos, Toby Mandel, Liam McKay. **Front row:** Sara Gateman, Jamie Puchinger, Austin Dennis, Kyrsten French, Morgan Hetesy, Emma Vissers, Tal Ibanez, Shelly Barclay, Claudette Lacombe





Foremost, AB  
403-867-2463



Dunmore, AB  
403-487-2906



Lethbridge, AB  
403-327-7070

# AgroPlus

Locally Owned. Locally Operated.

Working Together To Provide You With  
Agronomic Solutions.

Be among the first 10 customers at each location to mention this ad  
and receive \$10 off 1 jug of Interlock.

# Collaboration among leaders

Dr. Jan Slaski and Farming Smarter Association revive hemp

BY ISAAC MILKO

Being the leader in your field can be an intimidating task but having partners that you can depend on can make all the difference. Dr. Jan Slaski, Expert Researcher at InnoTech Alberta, leads the world in hemp research since 2002 and began a partnership with Farming Smarter in 2012. Together, this progressive collaboration works to prove the immense potential of hemp in the battle for a more environmentally sustainable future.

Dr. Slaski spends his time conducting research and travelling the globe to educate others about hemp and the potential to change agriculture for the better. Although Slaski spends much of his time abroad, he dares to claim that Alberta is the world leader in hemp research and that he has the knowledge to prove it.

In his project, From Seed to Final Product, Dr. Slaski investigates the genetics, breeding, and processing of hemp. This requires a significant amount of land to grow and test hemp crops and is where Farming Smarter contributes. The team and resources at Farming Smarter are an essential ally in Slaski's research and he is "a big proponent of collaboration, but collaboration must make sense ... and this collaboration with Farming Smarter made perfect sense.

"It was a game changer." For the past 10 years, the collaborative work of Dr. Slaski and Farming Smarter led to the cultivation and testing of many different varieties of hemp, leading the charge in hemp research and education around the world.

Alongside Farming Smarter, Dr. Slaski spreads the word to farmers everywhere about the benefits of growing hemp and tackles the stigma around "the wonder crop." Although there are over 50,000 known uses of hemp, a common misconception around the plant still exists as Slaski explained that "(hemp) is not cannabis!"

Hemp is a multipurpose crop, and all parts of the plant can produce goods that range from bio-composites and textiles to food and insulation and so much more. Over the past 15 years, the stigmatization around hemp began to decline and may even vanish entirely through the pivotal roles that Dr. Slaski's lectures and Farming Smarter's field days play in educating the public on the vast benefits hemp has to



PHOTOS SUBMITTED

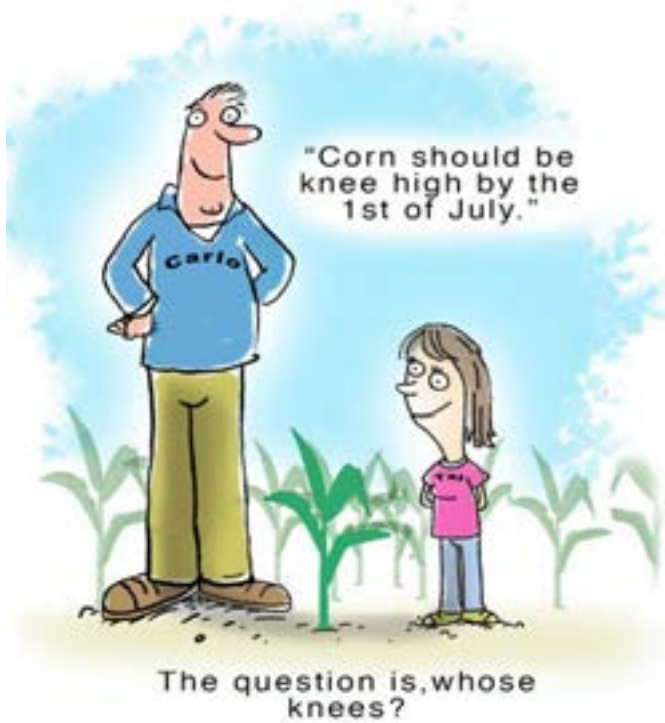
Top: Dr. Jan Slaski in hemp trials. Above: Dr. Slaski inspects Silesia hemp in the field

offer. The researcher said that it has been Ken Coles progressive attitude towards agriculture that paved the way for all the successful research endeavours throughout a decades-long partnership.

The mutually beneficial relationship between Farming Smarter and Dr. Slaski shares an "understanding of agronomy and agriculture" and persists due to their collective passion for innovation. Despite the significant impact the researcher has had in the field over the past twenty-years, Dr. Slaski is still eager to learn as he believes that each "new crop ... is a new opportunity" and recognizes that "there is a need for research to come that will (bring) hemp ... to the mainstream."

Fortunately for both the agricultural industry and for the good of the planet, it seems this partnership will continue as a leading force for many years as Slaski stated that "the future of our collaboration ... I don't see it is ever going to end. Even when I eventually retire someday, I will continue to work with Farming Smarter." To be at the forefront of this research would not have been possible if not for the work of Dr. Jan Slaski, whose lead the team at Farming Smarter enthusiastically follow to discover all that the world of hemp offers. —





# FERTILIZER FOR THE MODERN FARMER

**KEY BENEFITS**

- Builds Soil Health
- Improve on Farm Efficiencies
- No Leaching
- Leaves Behind Carbon, Not Salt

**CONTACT US**  
 (403)230.3607  
 bit.ly/RNFarmSmart  
 info@replenishnutrients.com

## KNOW YOUR HARVEST LOSSES QUICKLY!



**BushelPlus** has a harvest loss monitoring system that helps you minimize harvest losses from your combine. Quick easy system that can be placed on any combine in seconds and get readings in minutes. It can be moved between multiple combines as well and can be placed on multiple locations on the combine for fine tuning of your losses. Each kit includes a wide and narrow pan, pan holder that attaches to the combine, an air separator to clean the sample, scale to measure the sample and the app to accurately rate your losses as well as track your losses and settings. I carry 40" and 60" models in stock.

**Call for demo and for prices.**



We're available when you need us. — [adrian@ajmseeds.com](mailto:adrian@ajmseeds.com)

[www.ajmseeds.com](http://www.ajmseeds.com) 403-308-6685

**AJM SEEDS**



# Farming Smarter commits time to partner relationships

Partnership Manager Alexi Kubeczek joined the Farming Smarter family!

BY LISA KOPOCHINSKI



PHOTO: FARMING SMARTER

Mike Gretzinger and Alexi Kubeczek check the grain corn as it matures.

**F**arming Smarter works hard to bring relevant, useful practices and innovation to southern Alberta farms. To achieve this it has partnerships with researchers from Agriculture Canada, prairie universities, agri-businesses, other non-profit associations and southern Alberta farmers.

The workload of managing partner needs became a fulltime job in 2022 prompting Farming Smarter to create a Partnership Manager position.

The Farming Smarter family welcomed Alexi Kubeczek with open arms in April. His role is to foster healthy partnerships and happy partners.

“As a non-profit organization, we intentionally went out and switched the culture to be client centered,” says Farming Smarter Executive Director Ken Coles. “Instead of primarily thinking about the projects, we are more focused about what this will entail with respect to the client.”

Since agriculture is such a dynamic and diverse industry where things are continually changing, he says it was important to hire a partnership manager that was not

only passionate about agriculture, but who can also cultivate relationships.

“This is why it is super exciting to have someone like Alexi onboard who can bring people together to develop new relationships. He brings us a different skill set and expertise and continually scans the environment looking for opportunities and ways to satisfy both the client and us.”

As Partnership Manager, Alexi supports the Farming Smarter team with marketing and communications strategies, and expressed an added interest and expertise in relationship management.

“I liken Farming Smarter to a very large family that ‘exploded’ with numerous siblings, cousins and extended family twice, third, and fourth removed,” Kubeczek says. “And, they all have unique needs and opportunities that we help them achieve.”

Coles says with the huge and continuous turnover in staff in the agriculture industry over the past number of years, it has been extremely challenging to maintain outside relationships. This caused Farming Smarter to rethink its strategy.

“One of the things I was looking for was having a partnership manager that — first of all — has this approach to help us deal with an array of clients. Secondly, we’re dealing with a fairly complex business that is quite diverse and continually changing. This is why it is super exciting to have someone like Alexi onboard who can bring people together to develop stronger relationships.”

## EXTENSIVE PORTFOLIO

Kubeczek has an extensive portfolio that includes existing stakeholder relationships ranging from industry enterprises, post-secondary, and government. He is always scanning the agriculture industry for new opportunities amid the constantly evolving environment. With a special interest in the emerging ag start-up and corporate landscape, he believes Farming Smarter is western Canada’s crucial link to validating new products and services on the path to industry adoption because growers trust its research and rigorous testing.

“It has been an absolute joy since the start!” he says. “I am so delighted that my career

brought me to this team as they've welcomed my radical ideas to explore new opportunities and partnerships. I'm constantly working on new projects but I'm a sucker for an occasional field day — even if it's rouging weeds, or plot prep ahead of industry tours.”

Kubeczek wanted to join Farming Smarter family for several reasons — one of which is that it actively manages more than 160 projects annually on just over 3,000 acres.

“This results in a 40:1 return on investment and nearly \$130 million in economic impact across all facets of our organization,” he explains. “We accomplish this by cultivating partnerships with over 60 industry organizations and 31 research institutions globally. Also, our custom research program grew five times since 2020. Those stats — paired with the loveable and quirky team — who wouldn't want to be part of that? I quickly became part of the family!”

#### FROM EAST TO WEST

Growing up, Kubeczek and his family moved numerous times between eastern Canada and Alberta. He is very thankful for this as it provided many cultural discoveries and perspectives.

“Along that path, I completed my Bachelor of Management degree at the University of Lethbridge, and it's where I reinvigorated my interests for the agriculture industry. Agriculture 1000 with Dr. Danny Le Roy, and other agriculture science electives, were the start of a renewed dawn for me. Ag was a foundational part of my early upbringing and remains alive and well for my extended family. Seeing the people behind food production and the innovation that farmers integrate into their operations captivated me and steered my career toward agriculture.”

Prior to joining Farming Smarter, Kubeczek worked in the AgTech start-up world, where he became recognized as a thought leader and mentor in Lethbridge College's AgENT program — an incubator focused on human-centered design and lean start-up methodologies to solve industry challenges facing southern Alberta. Subsequently, he became facilitator for this program that saw an expansion into supporting the United Nations' sustainable development goals.

“This was incredibly validating to see students hone their creativity and realize

their potential for innovative thinking,” he recalls. “I even saw a select few of my students through regional and provincial competitions. While I had previously come to know the Farming Smarter team through my start-up journey, my curiosity grew as they too, were AgENT mentors.”

This allowed him to connect with team members often where he marvelled at their ability to rapidly adapt to what the industry needed as a unique and trusted source of information supporting farmers directly.

#### NEW ADDITION AT HOME

Outside of work, Kubeczek loves spending time with his new baby daughter, Lucie, and his wife, Whitney, whom he says the Farming Smarter family adopted wholeheartedly.

“After that, it's whatever I can do within 30 to 90 minutes weekly,” he adds. “Football (soccer), mountain biking and cooking are mainstays. I suspect that as a family, we will get back to outdoor activities like hiking and skiing. I'm also obsessively planning a garage workshop, so perhaps one could assume DIY home repairs, woodworking, and landscaping a luscious yard like a commoner dad in the near future!”

We make it easy!



Scan here to see our top picks for 2023



TABER, AB

- ✓ Seed Treat & inoculant
- ✓ Full length Truck Scale
- ✓ Bulk Bags & small bags
- ✓ Credit Card & Interac

## QUALITY YOU CAN SEED

### BARLEY

AB Prime, Esma, AB Wrangler, AB Advantage, CDC Maverick, CDC Austenson, AAC Connect, CDC Copeland

### PEAS

AAC Carver, AAC Chrome, CDC Forest, CDC Blazer, DL Lacross, CDC Leroy

### FLAX

CDC DORADO

### LENTILS

CDC Lima CL, CDC Greenstar, CDC Simmie CL, CDC Nimble CL, CDC Impulse CL

### OATS

AAC Arborg, AC Morgan,

### HYBRID RYE

KWS SERAFINO

*Also alfalfa, and cover crops!*

### DURUM

AAC Goldnet, CDC Defy, AAC Stronghold, AC Transcend, AAC Congress

### HRSW

AAC Hockley, AAC Wheatland VB, CDC Adamant VB, AAC Viewfield, AAC Brandon

[www.chinridge.com](http://www.chinridge.com)  
1-800-563-7333

# The value of crazy

BY MADELEINE BAERG

**B**ack in the 1960s, Canadian ag researchers took a fresh look at a low-value crop: a high-glucosinolate, strong-tasting oilseed that, until then, had mostly been appreciated as a lubricant for steam engines on naval and merchant ships. We all know the ultimate Canadian agriculture success story that followed: the development of the Canadian prairie's most lucrative and important crop, 'Canadian Oil' (canola).

While we might wish that all ag research culminated in such success, the noteworthy, big ticket, canola-style wins are few and far between. Much more common are incremental improvements, targeted findings, and — yes — abject failures. While it's easy to say research with big potential is worth funding, do the unconventional, the 'crazy' or the likely-to-fail justify public dollars too?

In two words, heck yes, says Farming Smarter's executive director, Ken Coles.

"To make strides forward in research, you have to think outside the box. You also must be okay with the possibility of things not working. If you're scared of failure, there's no room for success."

Over the last few years, Alberta has seen a big change in how public research dollars are managed and distributed. Research programs themselves used to be funded, which allowed researchers some leeway in pursuing novel ideas, changing directions, and building knowledge: all the preliminary work that serves as the background or scaffolding to achieve strides forward in innovation. Now, however, funding is project-based and entirely results-focused: if there's not good potential in and of the project itself to achieve a direct step forward, it won't capture funding.

While spending research dollars prudently is important, focusing exclusively on dollar-earning success can carry hidden costs, says Coles. "Sometimes too much focus on results doesn't allow for creative change."

He points out that companies and organizations that focus on innovation as a core value envision creativity in and of itself as a strategy. "They want to make



Camelina in bloom at Farming Smarter

PHOTOS: FARMING SMARTER



Quinoa seems an exotic plant, but research proves it may do well here.

sure that people involved aren't afraid to fail because then they'll take the chances that might lead to something interesting."

While Coles doesn't advocate for all research funds to go towards creative avenues, he suggests that allocating 20 to 30 per cent of public research dollars in that direction would be money well spent.

"Venture capitalism is based on the strategy that you invest in 10 companies knowing that nine will fail. If it's a business strategy at the highest level of corporate investment, why wouldn't we do the same thing in agriculture? That's how you achieve transformational change."

Over the years and alongside more mainstream efforts, Farming Smarter invested in certain projects that were initially considered bizarre. In many cases, those projects have paid for themselves and then some, but often in ways one might not first have anticipated.

Farming Smarter's night spraying trial, done when GPS first became popular, seemed nutty: Coles remembers people laughing at their middle-of-the-night and ultra-early morning efforts.

"Yet, we ended up learning something we totally didn't expect: that spraying first

## "Venture capitalism is based on the strategy that you invest in 10 companies knowing that nine will fail ... why wouldn't we do the same thing in agriculture?"

thing in the morning was the worst thing we could do. It impacted efficacy by over 20 per cent," says Coles. "It wasn't a project seeking results; it was more of a 'hey, let's just check this' project, but what we learned from it was really important."

Investment in unconventional crops' earliest days also raised eyebrows at times. Today, 'who would grow it camelina' is facing a bump in interest and 'it'll never work hemp' may soon prove one of the next big wins for Canadian agriculture.

"Not all of the (new crops) will succeed, but the goal is to learn something along the way that sets the industry up better for the future," says Coles.

Even total project failures — the new crops that can't survive Alberta's conditions, the innovation that falls entirely flat, the costly input that generates no benefit — need to be seen by industry as critical wins, says Vance Yaremko, SARDA Ag Research executive director and Farming Smarter's research partner.

"Sometimes failures are actually just as valuable as the as the successes. A lot of our research is adaptable research: trying to adapt things that might be successful elsewhere to see if we can make them work (in our region). But sometimes things don't work. It's much cheaper for us to find that out than for farmers to plant a whole lot of acres because they heard it worked somewhere else and, suddenly, they're losing tens of thousands of dollars."

Ultimately, ag research is the critical investment between 'what is' and 'what could be.' To see the full return on that investment, we need to fund opportunities for imagination. —

**UNMATCHED DURABILITY,  
GREAT VALUE**

**Farm Faster®**

**Faster setup**      **Faster transport**

**Faster cleanup**      **Faster maintenance**

Come see us at  
Agri-Trade  
Nov. 9 - Nov. 11



   
neeralta.com 1-866-497-5338

**Neeralta**  
Grain Handling Equipment

# Water in southern Alberta

BY KRISTI COX

In southern Alberta, climate change and activities on the Rocky Mountain eastern slopes seriously challenge the downstream water supply in all our rivers.

Southern Alberta's Irrigation Districts supply water to farmland for food production and they also supply water to municipalities, industrial clients, large livestock operations and others.

Irrigators can face variation in supply due to weather events like the drought-like conditions in 2021 and the late snowpack melt in 2022 mitigated by rains in May and June. While ups and downs aren't unusual, irrigation districts are keeping an eye on the trends.

"We're watching climate change very closely, as is everybody else who is dependent on weather for operations," St. Mary River Irrigation District's (SMRID) general manager, David Westwood explained. "We're trying to mitigate those challenges with the Alberta Irrigation Modernization Program."

Most of the modernization projects consist of converting open canals to underground pressurized pipeline. This decreases water loss to evaporation and seepage. With these water savings, the SMRID hopes to expand.

"We have lots of demand for irrigation for both on farm use and for agri-food processing in our area," explained Westwood.

This plan for expansion has some concerned.

"There's planned irrigation expansion in Alberta and Saskatchewan, using the same waters, at the same time as we've got rapid climate change hitting the region and extreme weather events such as droughts and floods," said Dr. John Pomeroy, Canada Research Chair in Water Resources and Climate Change at University of Saskatchewan. "That is certainly something that we have to consider to ensure that there's sufficient water supply for all the various needs as well as for the environment."

Pomeroy's concerns stem from climate modeling and on current changes to the Rocky Mountains eastern slopes, which affect the amount of water available in our rivers' headwaters. These models predict that the Canadian Rockies aren't going to



PHOTO: KEVIN VAN TIGHEM

Groundwater escaping from one of many road cuts in the upper Oldman River basin

dry out, in contrast with what is happening in the southern U.S. mountains. In fact, precipitation will go up over time. However, it isn't exactly good news.

"A lot of this increase in precipitation will be in the winter, but it will be with more rainfall," said Pomeroy, explaining that predictions say snowfall will stay the same or drop. "The timing of stream flows could shift a month earlier in the year, and we'll see some high stream flows even in wintertime."

This shift in timing won't necessarily be compatible with irrigation schedules. Increasing summer heat seen in the models adds to the challenge.

"For the prairies, the whole region becomes warmer by six to eight degrees," said Pomeroy. "That means some terrifying heat in the summer, and we are starting to see that already. There will be years where precipitation is adequate, but there will be many years where the precipitation is not enough to get over the longer summer."

Regulations are in place to ensure districts consider the future when approving expansion.

"A specific process must be followed before a district can increase its expansion limit," explained Margo Jarvis Redelback, Executive Director at the Alberta Irrigation

Districts Association. "That process includes determining how the proposed expansion will affect water availability, including changes to the frequency and magnitude of water shortages."

This information is publicly available and district irrigators vote to approve or disallow expansion.

"Irrigators will not risk increased water shortage and will only vote in favor of expansion if efficiency gains achieved through infrastructure rehabilitation demonstrate there is water available for expansion," said Redelback.

Almost all the water in southern Alberta rivers comes from the eastern slopes of the Rocky Mountains. Kevin Van Tighem, conservationist and retired national parks landscape ecologist. He explains that snow-melt and rainwater either soak in to become groundwater or run off overland.

"The water that becomes groundwater is the gold," said Van Tighem. "It seeps down the downslope slowly underground, it's purified, it's kept cold, and it emerges in springs or in the streams."

That groundwater is the primary source of our rivers. The water that runs off overland is the primary source of our spring floods. We always have spring floods because the

ground cannot absorb all the snowmelt and rainfall in spring, but extreme floods now happen every 10 or 15 years.

“The reason is that we’ve degraded the headwaters landscapes,” said Van Tighem. “We treat these eastern slopes as a source of resources, and we exploit those resources in ways that increase the runoff.”

We can build dams to store those spring floods and use them in the summer, but Van Tighem explains it’s treating a symptom rather than dealing with the actual problem itself.

“There’s no way to get more water out of a river by engineering,” said Van Tighem. “The only way you get more water is by protecting, restoring and taking care of its headwaters, because that’s where the water comes from.”

Forestry management is an important key to protecting headwaters.

“When you have larger clearcuts you get more stream flow but then you get more soil erosion and flood problems,” said Pomeroy. When you have a mix of forests, small clearings and diverse canopy density, the stream flows will be higher, the water quality is much better, and it’s also less prone to large wildfires. There’s still room for forestry activities if it’s managed in a sensible way moving forward.”

In the 1880’s, the provincial government put policies in place to protect these headwaters including establishing parks and forest reserves.

“Even back then they knew that (water) was going to be the biggest limitation to our economic ambition on the prairies and to the ability for people to settle and farm them,” said Van Tighem.

Activities like forestry and road development picked away at the integrity of the headwaters, but coal strip mining takes it to the next level.

“You strip the vegetation, you strip the soil, you expose crushed rock which has stored salt that dissolves and becomes toxic to the water,” said Van Tighem. “You destroy the whole system.”

Pomeroy pointed to the Elk River selenium toxicity on the western slopes of the Rockies as a strong caution to proceeding with coal strip mining on the eastern slopes.

While a public outcry caused the UCP’s decision to open the eastern slopes to coal development to pause, a pause isn’t a full stop.

“I think the big problem is that we take water for granted until we run out of it,” said Van Tighem. “And even when we run out,



PHOTO: CLAUDETTE LACOMBE

This type of small, degraded lateral would be hard to find today as the Irrigation Rehabilitation Program moved them into pipe long ago.

we don’t really understand how we got there. We have many places in the world where we can get thermal coal, and many places where we can get wood, and there are many ways to enjoy and experience nature, but there’s only one place where our water originates. The eastern slopes of the Rockies. Water is the key strategic resource in Alberta. You can’t go anywhere else to get it.” —

# BE READY TO GROW AN AG CAREER

“ALBERTA’S AGRI-FOOD INDUSTRY IS A GENTLE GIANT THAT’S ABOUT TO AWAKEN.”

- The Simpson Centre for Agriculture and Food Innovation and Public Education, University of Calgary School of Public Policy Pre-Publication Series, July 2021

At Lethbridge College, in just four years, you can get an Agriculture Sciences diploma, a Bachelor of Agriculture Science degree and the knowledge, skills and confidence to be ready to enter Alberta’s thriving, diverse ag sector.

[lethbridgecollege.ca/agsciences](http://lethbridgecollege.ca/agsciences)



**BE READY.**

# Accessing land in today's pricey reality

BY KRISTI COX

Alberta's farmers increasingly divide into two camps: those who have land, and those who wish they did. For those who own their acres, land appreciation now typically contributes more to the farm business' overall value than any commodity that farm can produce. For farmers who would like to enter agriculture or expand farm businesses, however, the often out-of-reach price of land has become a major stumbling block.

"Prime land is a hot commodity. There is simply not enough available," says realtor Ben van Dyk, who specializes in farmland real estate in southern Alberta.

He says that, where land used to be perceived as an asset that supported someone to make a living, land is now an investment vehicle and asset generator for becoming wealthy.

"If you purchased five years ago, a quarter section went for about a million and a half. That land is today worth \$2.7 to \$3 million. So, somebody accumulated — and by not working — about a million and a half (dollars) in net value without paying any taxes. That has brought many, many buyers into the market."

According to Farm Credit Canada, the cost of agricultural land in Alberta more than doubled between 2010 and 2021, rising from an average of just over \$1,500/acre to nearly \$3,200/acre across the province. In southern Alberta, the numbers are more daunting: in 2021 alone, non-irrigated land increased 6.2 per cent to an average of \$4,400/acre; irrigated land rose 10.7 per cent to an average of \$11,500/acre. That price makes irrigated farmland in southern Alberta more than twice the cost of irrigated acres in Saskatchewan's priciest west-central and south-western regions.

While the price of land is a growing hurdle, there remain opportunities for farmers to buy into agriculture or expand their land access if they're open to a slightly different mindset.

"It all comes down to challenging yourself. What do you want to do? How do you see yourself involved in the industry and adding value? Things change so rapidly. For anyone who wants to get into agriculture, get skills and be adaptable to change," says van Dyk.

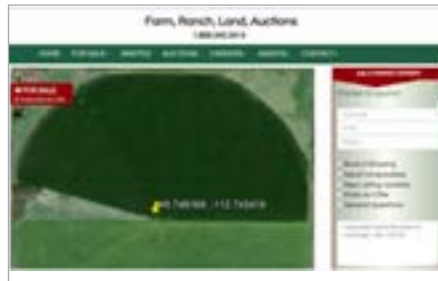


IMAGE: REAL ESTATE CENTRE

Van Dyk sees new entrant farmers now pursuing two land access strategies:

Option one: collaboration, either with retiring farmers that want to hold onto their land but can't farm it any longer, or with investors who acquire land but haven't the ability or interest to operate it. Rental, crop sharing, and partnership land is available via both formalized land matching programs and independent connections.

Option two: intensification As van Dyk says, "You don't need a lot of acres to achieve a profitability level if you can become market savvy in developing products and marketing directly to consumers, either through the internet or through farmers markets."

Fresh corn, he says, can bring in \$15,000/acre. Organic garlic can hit \$30,000/acre.

"If you're doing 10 or 20 acres, you could already make a living if you've got good marketing skills. You're only limited by your own imagination and how you want to achieve your goals. There are different ways of setting out for success."

While it's up to young farmers to be creative, it's also up to the industry to support them, says Farming Smarter's executive director, Ken Coles.

"The cost of land and the costs of inputs mean farming today carries very substantial financial risk, and that's without even getting into the challenges of weather and market volatility. That's why it's critical that organizations like Farming Smarter remove some of the risk by researching new crop varieties, new agronomic techniques and new technologies so farmers don't have to themselves. They can take what's already proven to work in the region and apply it to their acres."

It's also up to industry to consider and respond to the new realities that high land prices bring. One major example is that, as

more land is run by tenant farmers, industry needs to encourage healthy land management.

Early this summer, the University of Alberta's Parkland Institute published a new report that argues investors' interest in Albertan farmland is negatively impacting rural Alberta and fundamentally changing how farmers farm. The report's author Katherine Aske says the high cost of land is resulting in much more rented farmland and consequently, shorter-term, less sustainable farming practices.

As the report says, "Tenant farming ... leaves farmers in precarious economic positions, disconnects them from the long-term health of the land, limits their autonomy, and inhibits them from transitioning to regenerative practice."

Coles says farmers have mentioned concerns about the same issue to him.

"(We've heard) reports from local farmers who have noticed that often land erosion issues occur on fields owned by people or companies that don't live on the land."

He says he's happy to see at least a little more appetite among investment companies of late to add sustainability metrics to their rental expectations.

"Abuse of the land does look bad for whatever investor owns it, so now in some cases they'll only rent to farmers who can prove they'll take care of the land. A conservation minded farmer who can prove to the landowner that they operate in a good way might have an edge in getting the land."

This spring, Athabasca-Barrhead-Westlock MLA Glenn van Dijken put forth a private member's bill advocating for Alberta to follow Saskatchewan's lead in tracking and potentially regulating farmland purchases by investors.

Whether government oversight or intervention is necessary is debatable, but government certainly has a role to play.

"Farming is fundamental to Alberta and farmers are the original stewards of the land," says Coles. "Farmers — all farmers, whether they're renters or landowners, new to farming or experienced — need access to adequate education, extension and resources that support both economic and agronomic sustainability." —





# GREAT TOOLS FOR GREAT RESULTS



For over 40 years, Great Plains has innovated tillage, seeding and nutrient application equipment to give customers the right tools to achieve great results. You can now find Great Plains implements, parts, and service exclusively at your local Kubota Dealer. Contact us today.

## YOU NEED Agronomy Smarts

### SUBSCRIBE AND GET

- **FREE** live and digital events
- **FREE** first access to new research
- **\$12,000 +** program partner discounts
- Subscriber **video library**
- **Continuing education** credits
- An organization that **works hard for you!**



[www.farmingsmarter.com](http://www.farmingsmarter.com)

# Alberta rice without the paddy

BY CRAIG LESTER

Southern Alberta is no stranger to novel crops, but the latest to see research trials in the Lethbridge area is causing quite a stir. With over 60 crop types that range from hemp to sugar beets, it's a diverse collection that covers the landscape.

A proof-of-concept research trial to grow rice made headlines across not only agriculture publications but mainstream news too.

Dr. Michele Konschuh, an irrigated crop scientist with the University of Lethbridge, says she wasn't confident when a Calgary-based import-export company, Galaxy Ag Ventures, first approached the university to carry out the study. Galaxy Ag Ventures introduced several crops into the commercial mix in Alberta.

Konschuh says it was the technology, seed film cultivation (SFC), that Galaxy brought from Korea that made it intriguing.

"It's essentially a biodegradable plastic layer that they attach to the seed and lay over moist soil."

The SFC helps warm the soil and prevent moisture loss, as well as prevent weeds from taking root.

Farming Smarter provides the land and technician support needed to get the project off the ground as its partnership in the research trial.

They set up two research plots, one at Farming Smarter headquarter on Hwy. 512 east of Lethbridge, and the other in a Coal-dale farmer's field, with an additional trial going on in a greenhouse under controlled environmental conditions.

This past year they tested two varieties of rice, one commonly grown in the U.S. The other brought in from South Korea by Galaxy Ag Ventures.

## NO STANDING WATER REQUIRED

When we think of growing rice, we commonly think of it growing in large fields with plenty of standing water.

However, this research breaks that stereotype, showing that it can be grown like a cereal crop.

Konschuh says you don't need a lot of standing water, as seen in other parts of the world.



PHOTO: FARMING SMARTER

Rice seed film cultivation as a seeding method for the upland rice project at Farming Smarter.

"It grows a lot like a cereal crop."

The biggest challenge Konschuh uncovered in the first year of trials is that rice is photoperiod sensitive in that it needs shorter days to flower, which is not ideal for southern Alberta, where summer days are long.

Konschuh says this is one area where they will have to do their homework.

"We will need to find photoperiod insensitive varieties or ones we can manipulate with a plant-growth regulator (PGR) to start flowering earlier so they can get seed production and speed up the growth period."

## ENVIRONMENT BENEFITS

Konschuh says there are environmental benefits to growing it on land, like a cereal crop, as it will require less nitrogen than if grown in standing water.

She says if you put a lot of nitrogen on the ground followed by a lot of standing water, you create conditions where microbes convert to methane and/or nitrous oxide.

Konschuh adds that this is why rice production in many parts of the world is responsible for a significant portion of greenhouse gas emissions in the agriculture space.

"It likes a lot of nitrogen in flood or anaerobic conditions."

Konschuh says a good weed control program or a very clean field will be vital to growing the crop, as rice does not compete well with southern Alberta weeds.

## NEXT STEPS

Konschuh says the first year was a bit tough, and is not sure if they will see any seed production due to the issue of photoperiod.

However, they gained a lot of knowledge that will help them with further trials.

She says the next step is to look for varieties that are a better fit for Alberta growing conditions and then look at the data and narrow things down.

"We don't want to look at multiple ways of irrigating and multiple types of planters continually. This will help us choose our best strategies."

She adds that another company already approached them to research growing rice in standing water on a much smaller scale.

Needless to say, the level of interest is high for a crop that was thought to be impossible to grow here only a very short time ago. —

# Put your best seed forward with 20/20 Seed Labs

When you test your harvested crops with 20/20 Seed Labs, you are setting yourself up to make data-driven decisions for your seed.

Know what's going into your bins this fall. Contact our team of seed specialists today at 2020seedlabs.ca.



1.877.420.2099  
2020seedlabs.ca/fs

@2020seedlabs



Choice Savings®  
and Credit Union Ltd.

## Find The Right Financial Solution For Your Agriculture Business



Southern Alberta's Credit Union,  
putting people 1<sup>st</sup> for over 80 years!

Visit us at  
[www.1stchoicesavings.ca](http://www.1stchoicesavings.ca)



# COVERING YOUR FIELD IS ONLY THE BEGINNING

**#1** - Systems Dealer  
- Parts Dealer  
- Sprinkler Retrofit Dealer for Reinke Manufacturing!

THAT'S 100% REINKE CERTIFIED. From ReinCloud® precision ag technology to the Reinke Navigator® GPS system to factory-trained service professionals, count on Reinke for innovative solutions to maximize your fields' productivity season after season. All backed by your local Reinke irrigation dealer.



LEARN MORE AT  
[REINKECERTIFIED.COM](http://REINKECERTIFIED.COM)



## R.P.H. Irrigation Services Ltd.

**#1 Systems Dealer, #1 Parts Dealer and #1 Sprinkler Retrofit Dealer for Reinke Manufacturing**

Lethbridge

403-328-0013

Dana Williams - Freeman

Taber

403-223-8622

Barry Kress

Strathmore

403-934-9690

Doug Davies

Your authorized dealer for Reinke pivots and genuine Reinke parts  
For service in the Taber / Lethbridge area,  
call 403-308-8740

# MERCER SEEDS LTD.

"Your mustard seed specialists!"



## 2023 Seed Offering

- #Mustard:** Treated with Helix Vibrance  
— Andante Yellow, Centennial Brown, Forge, Cutlass, AC Vulcan Oriental, AAC Brown 18 Hybrid, AAC Yellow 80 Synthetic
- #Durum:** AAC GoldNet, AAC Donlow, AAC Grainland
- #Spring Wheat:** CDC SK Rush, AAC Wheatland, CDC Silas
- #Barley:** AB Prime, Canmore, CDC Austenson, Torbellino
- #Lentils:** CDC Simmie
- #Peas:** AAC Delhi Yellow, AAC Carver Yellow, Garde Green
- #Flax:** CDC Dorado Yellow, CDC Rowland Brown
- #Winter Wheat:** AAC Network

To serve you better, we now have a state-of-the-art seed treater on-site.



**Ryan Mercer**  
195035 TWP Rd 72  
Lethbridge County, AB T1K 8G9

C: 403-308-2297  
E: rmerc@mercerseeds.ca  
W: mercerseeds.ca



Farming Smarter plots  
are one Carlo wide

## #RealisticRegenAg

Supporting farmers implementing OFCAF funding for nitrogen stabilizers, cover crops, soil testing, and more.



## Scott Gillespie

Regenerative Agriculture Agronomist  
M.Sc. P.Ag. CCA  
403.654.3096 (mobile)  
scott@plantsdigsoil.com



www.plantsdigsoil.com

We are proud to work with some of the best stewards of the land!



## Canadian Farmers and Ranchers

We are looking to better understand the practical solutions farmers need to make their operations economically and environmentally sustainable — and that begins with you!

As part of our Sustainable Cropping Study, we're launching a survey to understand farmer's opinions on:



Scan the QR code or go to:  
<https://forms.gle/BdwgkbdM1L6xFExF7>  
to complete the survey.



Complete the survey and be entered to win one of FIVE prize packages valued at \$250 each.

# Seeding window just got a lot wider

It is one of those paradigm shifts in thinking — seeding the crop in February might be the better approach

BY LEE HART

**D**o you have any plans for Valentine's Day in 2023? Maybe put a hold on chocolates and get ready to seed your cereal crops instead.

That suggestion to start seeding in February may sound a bit radical, but research in Alberta and Saskatchewan by Agriculture and Agri-Food Canada (AAFC) and Farming Smarter in the last few years shows the concept of “ultra early” seeding of hard red spring wheat and durum may not be as off the wall as some might think.

The concept of ultra-early seeding is to seed the crop when soil temperatures have reached between 0 C to 2 C — regardless of the calendar date. Field conditions have to be such that you can travel with equipment, but as long as fields are clear and soil temp is at least 0 C, go ahead and seed. In research trials that meant the drill was in the field as early as February 8 to 14 on several occasions.

Brian Beres an AAFC research scientist specializing in agronomy conducted a four year study that involved ultra early seeding dates with hard red wheat in several locations across Western Canada — Dawson Creek, B.C., Edmonton and Lethbridge, Alta., as well as Scott, Indian Head and Swift Current, Sask., with an overall conclusion that ultra-early seeding produced as good as and in several cases higher yields than crops seeded on the more traditional April/May seeding dates.

In 2022, Mike Gretzinger research co-ordinator with Farming Smarter did a research trial that involved ultra-early seeding dates for durum wheat under irrigation. Although yield figures weren't available by this late September deadline, Gretzinger says by all visual accounts the durum seeded in February looks as good if not better than the late April/May seeded plots.

The take-home message from all this — if conditions appear right on your western Canadian farm this coming winter, be ready to give ultra-early seeding a try.

“Really the standard practice of seeding



PHOTO: FBRIAN BERES

Seeding according to soil temperature can look unrealistic, but may be worth considering.

crops in late April or early May was just an arbitrary seeding date often determined by crop insurance deadlines,” says Beres. There really wasn't any science saying a crop couldn't be seeded before the soil warmed to 10 C.

So about six years ago Beres designed the first “proof of concept” research project to see if there was any reason hard red spring wheat crops couldn't be seeded much earlier. In different locations from the B.C. Peace River Region to southern Saskatchewan conventional spring wheat varieties were seeded at different soil temperatures ranging from 0 C up to 10 C.

Beres says crops produced by the ultra early seeding temperature dates — 0 C to 2 C — yielded just as well if not better. Also, following an economic analysis it showed that if growers waited for the conventional 10C seeding temp they could see a \$200 per acre loss.

Beres says similar to winter wheat, the early seeded spring wheat was able to make use of early spring moisture, got a head start in producing leaf bio-mass for vigorous growth, developed a canopy that choked

out weeds, flowered early ahead of the mid-summer heat which can often affect yield, and reached harvest maturity in August often under more ideal harvest weather.

“And it can be done with conventional spring wheat varieties,” says Beres. “We don't need to come up with anything special, the wheat and durum varieties developed in Western Canada are already adapted for cold tolerance. Ultra early seeding isn't something that can be done only in southern Alberta. If field conditions are right, it can be done in any part of Western Canada.”

Beres says there are a few big caveats that come with the concept of ultra early seeding — it's not going to work everywhere and for every farm, it may not be a suitable practice every year, and certainly a lot will depend on a producer's comfort level.

“But we found that seeding these cereals into cold soils is much less problematic than many people thought,” he says. “There is no problem seeding into cold soils under direct seeding or zero till farming practices, the seed isn't going to just sit there and rot.”

*Continues on next page »*



PHOTO: BRIAN BERES

May 18, 2021 pics of ultra-early wheat planted March 15 of 2021

Beres had a few pointers on preparing for ultra early seeding. Since February is too early for a pre-seeding burnoff with a glyphosate for example farmers may need to apply some soil-residual herbicide products in the fall.

#### SEED AT HIGHER SEEDING RATES

Beres recommends starting at 40 seeds per square foot for spring wheat and 45 seeds per square foot for durum. Also make sure seed is treated with a dual action fungicide/insecticide seed treatment. “Have your seed lined up and equipment ready and as soon as the soil hits that 0 C to 2 C range, start seeding,” he says.

Mike Gretzinger says they followed similar thinking in the Farming Smarter trial with durum wheat. They used several different durum varieties and seeded them at different soil temperatures ranging from 0 C, 2 C, 4 C, 6 C, 8 C and 10 C.

“The earliest date we seeded was February 14 at a soil temp of 0 C,” says Gretzinger. “We found that the soil doesn’t warm up gradually in a linear fashion. In our trials we found it would be 0 C one day and then get cold again, then warm up for a few days, and then get cold again.”

By the time of this September interview, Gretzinger says the durum crop had been harvested but the yield data had not been analyzed. “But visually it was much like what Brian Beres described in his work with hard red spring wheat, the ultra early seeded durum looked as good as if not better than crop seeded on the later seeding dates.”

Both Beres and Gretzinger say the next step in ultra early seeding research is to see how well the practice works with other crops such as barley, corn and even hemp. —

**LETHBRIDGE**  
**2023 CONFERENCE**  
**& TRADE SHOW** **FEBRUARY 15 & 16**  
SANDMAN SIGNATURE LETHBRIDGE LODGE

Bringing the brightest minds and innovative thinkers of southern Alberta’s agriculture community together for two days of engaging presentations and deep conversation.

Come hear Farming Smarter report on its projects with kochia, planters, hemp, rice and much more.

A great opportunity for southern Alberta’s agriculture community to come together and share knowledge, brainstorm ideas, and make connections.

To register visit [farmingsmarter.com](http://farmingsmarter.com)

**FARMING SMARTER**



**FARMING SMARTER SNAPSHOT** | Sometimes, we all have to improvise! Tal Ibanez documenting the specifics of soil moisture sensor installation on her arm.



## ALPINE's Newest Innovation To Increase Yields On All Crops

ALPINE® Bio-K® products are uniquely formulated to maximize the uptake of potassium

- The organic based carrier in Bio-K® is a natural plant metabolite.
- Rapidly absorbed by plant leaves when foliar applied.
- Acts as a bio stimulant with positive effects on both plant, microbial, and fungi populations when soil applied.
- Increases the nutrient use efficiency of other soil and foliar nutrition by utilizing the “hitch hiker” effect to translocate nutrients in the plant.



**ALPINE®**

Bio-K® powered & companion products:

ALPINE G22®

ALPINE HKW6®

ALPINE K20-S®

ALPINE K19-S®

ALPINE F18 Max™

Rob Suitor • [rsuitor@alpinepfl.com](mailto:rsuitor@alpinepfl.com) • 403-363-8555

© 2022. Nachurs Alpine Solutions. All Rights Reserved. "ALPINE" is a registered trademark of Nachurs Alpine Solutions.

[www.alpinepfl.com](http://www.alpinepfl.com) • 1-844-655-PHOS (7467) • [f](#) [t](#) [v](#) [@](#)



Your Specialized Ag Equipment Dealer

Follow us:



# Technology isn't automatically better

BY SEAN KJOS

Automation holds wonders for ag if it can justify the venture. Since the invention of the first stick plow, or the development of primitive irrigation systems, technological developments pushed agriculture to the next era. But it's not always the flashiest toy that provides the most value.

Automated agriculture equipment stands to add value to the industry. With the possibility of entire field operations manned by one person at a control center, it could entirely reshape agriculture as we know it. But is this advancement meaningful enough to spawn the change?

Meaningful developments require an immense amount of support to establish themselves. In the recent past, multiple instances of a practice or equipment change heralded as the "next big thing" went nowhere.

Roughly two decades ago, southern Alberta saw the rise of zero-tillage systems as well as precision agriculture equipment. While both proved beneficial since introduction, only one of these technologies received the support necessary to become widely adopted across the region.

Zero-tillage solved practical problems like soil erosion and moisture retention. In a semi-arid environment like southern Alberta, conserving soil moisture is priority number one for farmers.

That priority grew into a movement; equipment manufacturers, input suppliers, and various public and government groups committed to the transition towards zero-tillage.

Meanwhile precision agriculture found a niche but didn't provide enough benefit to prompt an adoptions movement. Auto-



PHOTOS: FARMING SMARTER

Carlo Van Herk (front) watches the seeder to ensure nothing goes wrong while Sara Gateman pours seeds through our seeder. Thanks to our tractor's auto-steer, Carlo doesn't need to look where he's going!



mated agriculture may find itself in the same predicament.

We still see processes and equipment changes presented as gamechangers. However, the agriculture game does not change easily. Even though the benefits might seem obvious, the uncertainty of change can turn growers away.

For instance, people initially scoffed at auto-steer tractors deemed a lazy alternative to driving the tractor yourself. It wasn't until their benefits became clear that the technology garnered respect. Auto-steer equipment saved time and reduced overlap in the field; however, its biggest benefit was reduced operator fatigue.

The reduced mental workload allowed farmers to work longer and increased the operation's productivity. Automated agriculture could amplify this development exponentially.

While new equipment is alluring, it is important to know the value and cost you'll add to your operation.

Farming Smarter works to bridge that gap between growers and promising technology. We shoulder the risk, test new techniques and equipment to justify its value. This removes the worry and uncertainty for growers and shows the value upfront.

We've done thorough studies on technology as it's developed and released. From practices like strip till to equipment like our precision planter trials, Farming Smarter tests the effectiveness of technology at a field-scale.

Our Field-Tested team has two prominent studies — spore trapping and soil moisture monitoring studies. The spore trap project evaluates a specific tool to gauge fungicide presence in fields to aid decisions around spraying.

The soil moisture monitoring project tests technology that promises a complete prescription tailored specifically for the field. Producers access the system from cell phones and see a field moisture report and an area weather forecast.

The technology belongs to Ensemble Scientific and LiteFarm. Ensemble Scientific developed the process that transmits data from the sensors and compiles it with background analytics to form the report. LiteFarm created the system that packages the information and formats it for the irrigation system.

The promise is a system that assists with moisture management and provides additional decision support. Growers will see value in a system that helps them optimally manage water.

Drones are another promising technology. Often, we hear rumblings of a swarm of drones to spray, seed, and scout. However, basic drones continue to provide the most value through personalized aerial imaging. A farmer can scout a field from 400 feet above and map out every bare spot and patch of weeds without a step into the field. That's not to say it completely replaces in-person scouting!

Automated agriculture brings much possibility to the industry, but if it wants to have a positive impact it has a lot to prove. —



One of the sensors used in our Monitoring Soil Moisture project. Multiple sensors are placed at one location at various depths.

# GLOBAL CROP PRODUCTION VIRTUAL CONFERENCE

**DECEMBER 14, 2022**  
**8AM - 5PM**

Speakers from around the world highlight  
**advances in agriculture practice,  
technology, and issues.**

We choose speakers from regions that grow the  
same crops under similar growing conditions/climate.  
We believe we can learn and **adapt global knowledge  
to benefit Alberta/Canadian farmers.**

Remember Agronomy Smarts and Digital Learning  
subscribers register at no additional cost.

Attendees can network on the virtual platform!

**SUBSCRIBERS ▶ FREE**  
**NON-SUBSCRIBERS ▶ \$199**

*Join us for a great day at a virtual convention!*



**TO REGISTER VISIT**  
**f a r m i n g s m a r t e r . c o m**

# Alternative crops for precision planters

BY KRISTI COX

If you're going to invest in a new piece of machinery, you want to be certain it will be useful. Precision planters offer seed saving and operational benefits, but the cost can be prohibitive if they can only be used for a few crop types. Farming Smarter (FS) and other forward-thinking producers are putting new crops to the test, and it looks like the possibilities might be limited only by seed size.

"Farming Smarter did small plot trials with several pulses — fababeans, chickpeas, lentils, and field peas," says Lewis Baarda, Farming Smarter Field Tested manager. "We've also done some with hemp and durum wheat and we've seen the potential. I don't think there's a lot in the industry outside of the main three crops at this point."

Scaling up from small plot to field trials is the next step. FS relies on the co-operation of farmers to run these larger trials on their land. This allows the scientists to evaluate how the method works once applied to real world conditions.

Baarda explains that most producers with a planter have two sets of plates, one for canola and one for corn and beans. Precision planters can be adapted for many crops if the seed size is right. It just takes adapting the equipment to have the right plates and right settings.

FS found a producer using his planter for beans, so it was set up well to try chickpeas, and he was willing to help.

"Chickpeas fit on the plate perfectly, and the seed rates lined up," said Baarda. "It was an easy adaptation to go chickpeas from dry beans."

They planted chickpeas with 15-inch rows, which is a width previous FS trials showed works well to realize benefits of using the planter. With wider rows, the plants had to be more densely packed within each row to hit the target seeding rate over the field.

"If you have the rows close together, you're going to get canopy coverage in between those a little quicker so you're not losing moisture, and those plants are going to access nutrients a little quicker," said Baarda. "Plus, there's less competition between plants within the row because you have less plants per row. On the 15-inch



PHOTOS: FARMING SMARTER

rows of chickpeas, you could see a gap between the rows, but not inside the rows, all the seeds within the row filled out well. With the air drill, it's the opposite. You can't see the rows, but you definitely have a lot more variability of maturity and a lot more gaps between plants."

Planters do have their challenges.

"We've run into some issues with the planters with residue management," said Baarda. "In this case, it wasn't an issue because we had a nice location. It wasn't tilled, it was just great planting conditions with low residue, so the planter was able to penetrate the soil just as well as the air drill."

With harvest in full swing, Baarda hasn't officially analyzed the yield results, but he shared his initial impression.

"I would say we did at least a little better with the yield on the planter," Baarda shared. "Even if we can hit the same yield we'd see on an air seeded field, it tells you it's a viable option."

With relatively small adaptations, the precision planter works for a wider range of crops, making it a viable option for more producers. Scott Gillespie, agronomist with Plants Dig Soil Consulting, works with a farmer who uses a precision planter for yellow field peas. When the farmer was first considering investing in a precision planter for seed canola, he was looking for multiple ways to use it.

"Precision peas are not a common thing to do," said Gillespie. "But it's under irrigation and they could cut back on seeding

Top: Precision planting chick pea at a field scale. Above: Lewis takes a moment during planting to go "on record."

rates because it was precisely planted. It's worked very well for three seasons."

Gillespie notes that planters provide even emergence, making every operation easier because the plants are at a similar stage. This makes timing for weed control, fungicide applications and desiccant more effective.

Canola plates could be adapted for small seeds, though sometimes shape matters as well as size.

"Canola is a nice round seed that nests nicely in the holes," said Baarda. "With lentils, if they lay flat they work well, but sometimes they go perpendicular to the hole, and you get two seeds at once. It's a little more complicated, but there are adjustments you can make. It wouldn't be hard. It's just a matter of how confident we are in the value and the benefits of doing that. Whether it's better yields or just more utility out of that machine." —

# A new voice for unbiased advice

BY JENNIFER BLAIR

Every year, it seems like some new product hits the market promising to change the face of agriculture as we know it.

And for some farmers that give these products a shot, they can quickly become an expensive lesson in ‘buyer beware.’

“When it comes to these new products, it is a buyer-beware market,” said Ken Coles, executive director of Farming Smarter. “How does anyone know that new Tide works better than old Tide? You don’t — but the decisions that farmers make are on a magnitude of scale that’s a lot different than whether your whites are whiter than before.

“Just because of the magnitude of those decisions, it’s pretty important for farmers to have access to unbiased information and advice.”

But as federal and provincial funding cuts reduce the number of resources available to farmers, it’s becoming more challenging to find that “unbiased knowledge” in rural Alberta.

“There are no extension specialists with what used to be considered unbiased knowledge,” said Coles. “So there’s a lot less access now to that government support.”

But agricultural retailers are starting to develop research and development programs to produce “unbiased information on the products they’re being asked to sell,” he said.

“In a sense, they’re trying to fill that void of free access to that type of information,” said Coles.

“They want to be a trusted source of advice, even without the sale. To me, it’s encouraging to see that some parts of industry are not completely going after the high margins they make in selling these products. They’re looking to do what’s right

for clients, and I think that’s pretty exciting to see.”

Beyond that, these retailers don’t want to stake their good reputations on products that “don’t always provide a benefit to farmers,” he added.

“You may be able to get away with selling some high-margin products that don’t really deliver on promises for a while, but eventually the farmer is going to catch on,” said Coles.

“These companies are recognizing that they may make high margins selling these products but if the farmers aren’t benefiting from them, eventually they’re going to lose their business and their trust. That could mean the difference between staying in business and failing as a business.”

In some cases, retailers hired research companies or non-profit agencies to prove the products work in the local environment before they commit to selling them.

“It’s more of an ethical approach for supporting their clients, and as part of that, they’re really committed to training their staff and sales agronomists in a way that allows them to maintain integrity with the farmer.”

That’s something Coles experienced earlier this year touring France as part of his Nuffield scholar research.

“I came across a retail that created their own research and demonstration branch for the same purpose — to test products and make sure they worked well for their farm clients,” he said. “I thought it was a really cool idea, and I was pretty excited when I came home to find out that an ag retail had approached us for that same reason.”

As part of that partnership, Farming Smarter tested a number of different prod-

ucts and provided training to the retail sales agronomists — the people who will work directly with farmers purchasing these new products.

“For farmers who want to protect themselves from products that overpromise and underdeliver, the obvious answer is to look for trusted third-party data that’s local to them. Ag retailers are becoming that source of trusted information,” said Coles.

Part of the reason for that is the ongoing commitment agronomists and agrologists make to professional development and training, said Karen Dow, manager of agronomic market development for Federated Co-operatives Limited.

“Agriculture is a science, and every year, there are new innovations, whether it’s products or technology or equipment. And these changes are coming faster and faster,” said Dow. “So our professional development ensures that people like myself — who have been in the industry for 40 years — are updating our knowledge to the current technology that’s out on the market.”

Beyond that, ongoing training ensures farmer clients have access to any technical advice they need for new practices and products hitting the market, added Dow, who leads five senior agronomists across Western Canada responsible for training agronomists at ag retailers.

“Agriculture keeps changing quickly, and farmers can be assured that ag retailers have professional agrologists or certified crop advisers that continue to develop their knowledge of what’s new and what’s coming,” said Dow.

“We want to make sure we know about all the tools a farmer has available to them for whatever their goals may be.” —



PHOTO: FARMING SMARTER

Federated Co-op employees enjoy a break during a research tour at Farming Smarter. Tours provide an excellent PD opportunity to ag industry teams.

# Rethinking non-profit boards

What's really their role?

BY MADELEINE BAERG

**A**cross the country, volunteer boards of directors manage, monitor and support literally thousands of organizations, ag and non-ag alike. Board members generously contribute manhours, effort, and commitment to organizations. However, being a board member today isn't what it used to be. Whereas board positions used to be coveted and board membership was a position of pride and some honour, the competing pressures of modern life have left boards today short-handed and begging for volunteers. Meanwhile, many non-profits today are much bigger businesses than ever before, leaving stretched and often under-qualified boards grappling to manage multi-million-dollar budgets. Given today's realities, is the current structure of boards and the expectations of volunteer board members effective?

"We're blessed to have a board that is effective," says Ken Coles, Farming Smarter's executive director. "But when I look across the landscape of ag boards, I'm seeing a lot of stress, frustration and potential pitfalls. I'm also very worried that, in this era of funding moving to a heavily project-based model, there are fewer and fewer dollars for the necessary administration that keeps organizations successful. That means boards are saddled with more and more operational weight. As an industry, we need to be thinking about how to move agriculture forward, which includes how we run boards and what we're asking them to take on."

While board management might seem a strange one for Farming Smarter's typically agronomy-focused magazine, our goal at Farming Smarter is to open new doors of possibility by pushing past the status quo, always with the ultimate goal to support southern Alberta's farmers. That means we question everything, from agronomy to novel crops to — yes — even board management.

Mandy DeCecco-Kolebaba, one of Farming Smarter's current board members, looks at board leadership from every angle. She's been an executive director for a non-profit, has volunteered on multiple boards, and is by profession a strategic consultant who

specializes in board effectiveness. She agrees with Coles that, first and foremost, boards shouldn't be carrying an operational role.

"So where a big company would maybe have a CFO and an HR manager, we're now expecting those things to fall on volunteer boards. I just don't think it's sustainable and, in fact, I've been part of organizations where (that reliance on volunteers) was the organizations' biggest failures," she says.

The expectation to carry operational weight isn't only foisted onto boards; many boards themselves incorrectly see that as their role.

"The number one thing I hear from executive directors is: Can you make sure that the board knows they're not involved in day-to-day operations?" says DeCecco-Kolebaba. "But then I go to the board meeting and it's all day-to-day operations. It's like: How many people did you serve? Who's using these services? How much money did you raise? What's the buy-in over here? That's when I step in and say, hold-up: that's not the big picture stuff. You're into the

details of the day-to-day which can just be in a report. You should be thinking about growth, accountability, fiduciary responsibility, overall direction — that's your role."

In fact, even that kind of governance model isn't the ideal or most effective option, DeCecco-Kolebaba says. Rather, she advises boards to shift from operational and governance perspectives to seeing themselves as supporters of the organization.

"Board members provide value because they bring different perspectives to the organization through their own life, work and professional experiences. If we can make that advisory component more important than the overarching bylaws and operational components, people on both sides of the organization would have a lot more satisfaction, and it would allow executive directors to have more autonomy in growing the organization," she says.

To successfully transition to an advisory board, the board must release ultimate responsibility for the organization's decision-making, both big and small. Rather



The agronomy team is one of five teams involved in day-to-day operation of Farming Smarter. Our volunteer board members trust and appreciate that management takes care of daily business.

than carrying the overall nuts-and-bolts of the organization — a role many board members feel under-qualified to achieve, anyway — an advisory-focused board relies on proven accountability structures like accountants and auditors, values the professionalism of its staff, and builds a team-focused rather than interrogative relationship with its executive director. This critical shift creates space for the board to focus on overall guidance and for staff to deliver maximum meaningful value, much as a corporate board provides direction but gives autonomy to the corporation’s CEO and team.

“Decision making needs to shift toward the executive director — who, incidentally, should know the organization better than the board members anyway — with the caveat that every decision should be run through the filter of: Is this project our core business? Is this decision aligned with our mission, vision and values? If those are always the focus, then you can be confident good decisions are being made because everyone has already bought into the overall direction,” says DeCecco-Kolebaba.

Respecting board members for what

they know rather than what they can do by definition means the hands-on work of the organization will be carried by staff rather than board members — incidentally, a much healthier and more sustainable operational strategy. That requires adequate dollars for staffing, however.

“There’s no question we need to allot more dollars to the administrative operations of these organizations,” says DeCecco-Kolebaba. “We get into danger when we undervalue the benefits of having a strong admin team and focus only on the service delivery or the project delivery. Strong people on the back-end help with strong service delivery on the front-end. To only look at funding by individual project doesn’t help with sustainability, longevity, good policies and procedures, or good people management.”

The insight and commitment of volunteer boards is more critical than ever to agriculture, given the multiple and intense pressures facing this industry.

“We need to ensure those who step up are valued and given the support they need to make meaningful contributions, both at the staff and board levels,” says Coles. —



Mandy DeCecco-Kolebaba

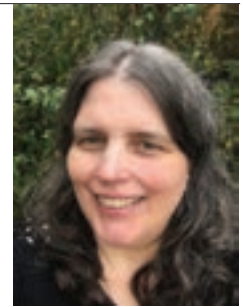


**FARMING SMARTER SNAPSHOT** | Farming Smarter director Will Van Roessel and Board President Ryan Mercer take a few minutes to visit with RDAR representative Samuel Pephrah at the July Plot Hop. Organizational advocacy is a prime role for board members.

PHOTO: FARMING SMARTER

# Is globalization a failed experiment?

BY KRISTI COX



When I called Ken Coles, Farming Smarter Executive Director, to interview him on this topic, he didn't pick up his phone when I called at our set time. He called back shortly after and told me that he had coincidentally been on the phone with an equipment dealer, trying unsuccessfully to acquire some equipment for the upcoming season. Why unsuccessful? "Major supply chain issues," with precursors for all of their equipment. And this is affecting every single equipment dealer.

I'm sure we've all seen examples of supply chain issues since 2020 in our business and personal lives. Global trade has been disrupted by a pandemic, war, natural disasters and ships getting stuck in the Suez Canal — just to name a few.

So what is the solution? Do we need to become more self-reliant as a country? If the parts we need to build or repair agriculture equipment were all made in Canada, there is less chance of something going wrong. But at what cost? Likely a rather high one. Most countries consistently rely on other countries with capacity to manufacture goods at a lower cost than domestically.

Ultimately, in a country like Canada, the chance of becoming completely self-reliant is very slim. And we're not alone. Dr. Ellen Goddard, professor in Agricultural Marketing and Business at the University of Alberta, suspects China is the only country that might be close to being fully self-sufficient.

If we can't do it alone, how do we ensure a constant supply of everything we want the instant we want it? It wasn't that long ago we took that luxury for granted.

Goddard suggests we think about matters of national security. Health, food, and energy might be areas we want to take strides in making sure we are self-sufficient. For example, maybe we should be manufacturing our own vaccines, needed fertilizers,



**Perhaps a new hypothesis in this case would be that we will have a reliable supply of what we need when we need it, along with strong consideration of how to define 'need.'**

but accept that we likely need to import our cell phones.

We need to think about the flip side too. Coles said he's heard that there are only around seven countries that can produce food in surplus to export. Canada is one of the world's top exporters of agriculture and food products. All the remaining countries rely on an external food supply. Can we ethically or financially say we won't export to those in need?

The Ukraine and Russia are significant exporters of food as well. Shortages as a result of the war are driving up food prices. Goddard points out that when food becomes scarce, more political and military instability occurs. This just fans the fires of global conflict.

So, is this a failed experiment? It is if our experiment's hypothesis was that we would have a constant supply of what we want when we want it. If a scientist performs an experiment that fails to prove a hypothesis, they need to examine what happened, consider what might have gone wrong, and possibly rework the hypothesis.

Perhaps a new hypothesis in this case would be that we will have a reliable supply of what we need when we need it, along with strong consideration of how to define 'need.' From there we figure out how to set up our next experiment.

Goddard suggests more multilateral rather than bilateral trade agreements could increase security. It makes sense

to me that we should work toward having our needs met via a combination of self-sufficiency and then preferably more than one source for what we can't provide for ourselves. At the same time, it's in our best interest to ensure other countries have their needs met as well.

It's a tangled web, but it seems we have a better chance in the long run if we expand and strengthen that web than if we build a wall and aim for independence. —

# DA STEELBUILDINGS



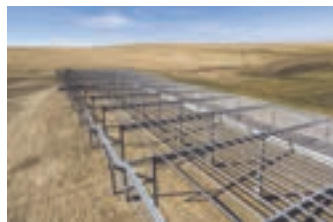
## D.A. Builds Agriculture

D.A. Steel Buildings has been an industry leader for over 40 years! We design, engineer, and manufacture your building in our Lethbridge facility. Our workmanship is evident in every job we do.

We offer flexibility to build to your exact specifications! No more cookie-cutter building packages. Get the building you want, exactly how you want it!

Give us a call today for a free consultation and quote.

**CALL**  
**403-328-4427**



A Division of  
D.A. Building Systems Ltd.

2808 - 2nd Ave North  
Lethbridge AB, T1H 0C2

[WWW.DABUILDING.COM](http://WWW.DABUILDING.COM)



# ALBERTA CANOLA CONFERENCE

January 17 & 18, 2023

SANDMAN SIGNATURE LODGE – LETHBRIDGE

Join us for the new two-day Alberta Canola Conference and 33<sup>rd</sup> Annual General Meeting. Connect with like-minded growers to discuss the issues that impact the success of canola farming in Alberta.

For information visit: [albertacanola.com/conference](http://albertacanola.com/conference)

## GROWER ENGAGEMENT MEETINGS

Take a seat at the table to discuss canola **agronomy**, updates to **business risk management** programs, and get an in-depth look into the **federal governments proposed reduction in fertilizer emissions**.

### GROWER ENGAGEMENT MEETING DATES & LOCATIONS:

**Tuesday, November 29**

OLDS –  
POMEROY HOTEL

**Thursday, December 1**

FORT SASKATCHEWAN –  
DOW CENTENNIAL CENTRE

**Tuesday, December 13**

VIRTUAL

**Thursday, December 15**

GRANDE PRAIRIE –  
POMEROY HOTEL

**REGISTER  
EARLY**



*for a chance to  
win a Milwaukee  
M18 Grease Gun!*

*One winner at each event!*

**REGISTER NOW:**  
[albertacanola.com/GEM](http://albertacanola.com/GEM)