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SPRING 2026 EDITION



2025 ANNUAL REPORT INSIDE



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## COVER PHOTO:

New inter-row cultivator with camera guidance helps maintain the Farming Smarter plots.

*Credit: Farming Smarter*

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RYAN MERCER

FARMING SMARTER BOARD PRESIDENT

## Lead An Agriculture Leader

If you think volunteering as a board member is onerous or boring, you should try sitting on the Farming Smarter Board of Directors.

Every time the Board meets, there's something new and amazing to talk about. For example, there's the world travel.

In 2024, I joined the trip to Brazil where we toured agriculture operations. In 2026, I joined the trip to Australia and New Zealand. The travel is fun for sure, but more to the point, it opens your eyes to agriculture successes and challenges in other regions of the planet.

There's just no denying that it's too easy to focus on our own patch of the earth with its wins and losses. Standing in a field thousands of miles away from home and listening to a farmer talk about their wins and losses really expands your opportunities to try new approaches at home.

Trips are fun and fascinating, but travel partners become collaborators with shared experiences and knowledge. The network that forms while away holds fast long after we land back in Alberta.

Toward the end of 2025, our Board dove into fundraising as a Canadian charity. I'm quite sure all the board members learned something new from this process and now we're ready to go out into the community and share our story.

It turns out fundraising is a nuanced task. It takes deep knowledge of the organization, belief in its goals and conviction that donating to Farming Smarter is a wise and thoughtful thing to do with assets a person can spare. You will hear more from us on that front in 2026.

Also in 2025, Alberta's Minister of Agriculture chose our Field School to announce a big boost in funding for agriculture research organizations. Farming Smarter makes a big effort to communicate with our elected officials. We often see MLAs or MPs at our events and we really appreciate it.

This association keeps growing every year in all ways. We've found new funding sources in foundations that want agriculture to thrive in Canada. They see the value of our research and our ability to foster adoption of new practices and technologies. They appreciate our network that includes professionals



*Ryan Mercer stands with Eric Watson a New Zealand farmer who set his 2nd Guinness World Record for the highest wheat yield in 2020 at 17.398 tonnes per hectare (approx. 258.8 bushels/acre), shattering his own 2017 record of 16.791 tonnes per hectare. Credit: submitted*

and innovators in all aspects of agriculture. From farmers to value-added production, people come to us for answers and we either have them or get them.

That's another great perk of sitting on this board. I am on top of all the things that might impact or improve my own operation. I see the results of research, trials and demonstrations as they happen. I hear about all the improvements, flops and futures taking place in ag at any given time. It's great!

As we move into 2026, I'm excited to see what comes next. Farming Smarter's staff contingent keeps growing with three new employees harvested from a field of students over the past three years. As a farmer and father, it makes me very proud to see Farming Smarter shape future leaders in agriculture.

I've sat on other boards and found the work satisfying, but my role as President of Farming Smarter stands out as a stellar experience I highly recommend to everyone. **FS**

A handwritten signature in blue ink, appearing to read "Ryan Mercer".

# EXECUTIVE DIRECTOR'S REPORT

KEN COLES

FARMING SMARTER EXECUTIVE DIRECTOR



## Crunching Numbers!

We are often asked what keeps us busy in the winter and a lot of it is about crunching numbers. I mean enough numbers to crash Chat GPT. Crews buzz with statistical analysis, building beautiful charts and compiling hearty reports all while getting ready for the next year.

We also need to allocate expenses to projects, create project financial reports and go through our annual audit. Along with calculating completed project expenses, we're building new projects and finding ways to fund them.

All this data matters to clients, funders and farmers. We take the time to share what we've learned but also to listen to their needs. At one point this winter, we had Farming Smarter staff participating in events in three different countries at the same time. Jamie and Trevor lead a tour group to Australia and New Zealand, Lewis attended a Potato Conference in Idaho, but the real winners were Thierry, Sean and I who enjoyed the Irrigated Agronomy Update in beautiful L.A. - Lethbridge, Alberta that is.

Unfortunately, that day, we also learned that Agriculture and Agri-Food Canada announced the closure of seven research centers and farms across Canada. Another massive blow to our innovation capacity. We must acknowledge the gravity of the critically weakened voice of farmers and agriculture scientists in our country and find new ways to act.

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**“ All this data matters to clients, funders and farmers.**

**We take the time to share what we've learned but also to listen to their needs. ”**

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We are very grateful to receive a new PrairiesCan Regional Innovation Ecosystems (RIE) grant that supports four positions and significant

capital purchases that strengthen our capacity to support the value-added sector in southern Alberta. We also received support from a renowned Calgary based foundation for a new project in irrigated pulse production and a new RDAR project studying the impacts of reduced irrigation on wheat. To support all this work, we leased an additional 80 acres adjacent to our new quarter from last year giving us striking visibility along the HWY 3 corridor.

This year Avista Philanthropy will guide us through the world of charitable donation fundraising and a new position will support community engagement and business development. This should give us new numbers to crunch for 2026.

We look forward to another growing season and wish you all great success in 2026! **FS**

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# Shared Philosophy Captures Orville Yanke Award

*Dr. Brian Beres humbly joins leading soil conservation innovators*

by Natalie Noble

Dr. Brian Beres, senior research scientist specializing in agronomy at Agriculture-Agri-Food Canada (AAFC), has a photo from more than a few years ago. It represents a career spent advancing agriculture research, innovation and on-farm practices.

“It was one of my first field days, working on winter wheat, and there’s Orville Yanke standing in the foreground as I’m talking,” said Beres, this year’s Orville Yanke Award winner. “Remembering how I met Orville, I can’t believe my name will

be on a plaque with his name and in his honour amongst all these other innovators and advocates. When I think of the farmers so far ahead of the curve. They didn’t have to share what they were learning on their farms, but guys like them, Orville in particular, were so willing to share it.”

Beres recalls Yanke stepping in during a field tour of a project showing how winter wheat reduces reliance on herbicides. Yanke discussed how to put the research into practice and get results. “It’s so rewarding to validate the work from a farmer’s perspective. That’s that nice peer-to-peer aspect of this work Orville was well known for,” said Beres. “Seeing that continue today is important.”

Oftentimes, Beres said the farmer is the innovator or originator of an idea but requires some science to back it up. That link back from research to the farmer is essential. “There has to be an appreciation for the farmer as a client,” Beres said. “The farmer is actually paying for a lot of this research. Something I have always held close to my heart is, ‘am I doing relevant work?’”

Growing up near Readymade, a small farming community east of Lethbridge, Beres has a good



*Dr. Brian Beres stands with long time associate Ryan Dyck who presented him with the Orville Yanke award on behalf of Farming Smarter at its 2026 conference Feb. 11. Credit: Farming Smarter*

understanding of that practical necessity. It's served him well as he studied at University of Lethbridge while working as a summer student at Agriculture Canada before stepping into a full-time technical position. "Over time that role evolved into an adaptation program working with breeders trying to figure out adaptation characteristics for wheat in our area, which evolved again into its own research program," said Beres. "Thirty-four years later, here we are."

As his role evolved, so did his thinking, leading to a framework that bridges the gap between research and real-world farming. Beres is appreciated and respected for introducing the Genotype x Environment x Management (G x E x M) framework and its impacts across the Prairies, pulling the key components of crop management together in research and on-farm practices.

"When I started out, one of the impetuses behind establishing an agronomy program at the Lethbridge Research Station was the siloed approach to each discipline," says Beres. "We had breeding over here, focused on the G – genetics – part of the equation, but nothing over here for the M on the management side. It had to be pulled together into a framework to make it relevant, especially to on-farm scenarios."

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**“ In that spirit of service, Beres passes on his knowledge and boots-in-the-field experience to a vastly larger platform through his professional and volunteer work. ”**

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As he worked to establish his program, a retired entomologist requested Beres join him on a road trip to help a farmer experiencing a wheat stem saw-fly problem. "We hop in the truck, head down there, and sure enough, after decades, this insect was rearing its ugly head again," he said. "You can see the damage it creates, cutting wheat stems down at the soil surface and exposing that field to erosion risk and massive yield loss."



*Brian Beres talking a tour through research plots with Ryan Dyck beside him. Credit: submitted*

That experience highlights the problem of focusing on and funding isolated parts of the G, E, and M. It reduces the ability to explore its full potential, including its impact on profitability at the farm gate. "If we don't embrace the entire framework to advance and capture yield potential on the farm, we're doing a real disservice, especially to the farmers paying for the research."

In that spirit of service, Beres passes on his knowledge and boots-in-the-field experience to a vastly larger platform through his professional and volunteer work. "I very much value the publishing piece of everything we are working to innovate," he says. "To me that's non-negotiable – it's the insurance back to the funder that we've done original and innovative work. I've been active in that space as an Editor-In-Chief, but also as an adjunct professor, mentoring and training students in a volunteer role. It's not something I have to do; it's something I feel is important."

It's a philosophy that echoes the legacy of Orville Yanke himself. "Looking at Orville standing there in that photo, especially as I started out my research career, to think that so many years later I would be the recipient of an award that's based on his memory and what he did for the ag sector in southern Alberta, that's pretty humbling." **FS**



Yes, that's me

Gary Stanford

Orville Yanke

Dr. Robert Graf  
Winter Wheat Breeder

Richard Fritzier

*Dr. Brian Beres presenting on winter wheat with Orville Yanke in the audience. Credit: Submitted*

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# Research Into Crop Development Holes

*Why southern Alberta needs its own research for potatoes, sugar beets and other specialty crops*

by Janet Kanters

In southern Alberta, specialty crops such as potatoes and sugar beets underpin entire processing industries, yet much of the agronomic knowledge used to grow them is imported from elsewhere. That reliance on outside research is now being questioned, as growers, processors and applied researchers argue that local conditions demand local answers.

And it's not only reliance on outside knowledge, although that is a limitation. Indeed, there is also the fact that due to southern Alberta's unique context, we may need to be asking different questions than growers in other areas.

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**“ Gaps in regional-specific research leaves growers adapting recommendations developed in places with different soils, climates and production systems. ”**

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Those unanswered questions are what Farming Smarter Association's Lewis Baarda calls “crop development holes” – gaps in region-specific research that leave growers adapting recommendations developed in places with different soils, climates and production systems.



*Local growers inspect potato plants from a Farming Smarter research trial at a McCain field day. Credit: Farming Smarter*

“I think we’re focusing on some of those crop development holes,” said Baarda, field testing manager at Farming Smarter. “We’re working with a few different crops that are grown on pretty limited acres here in southern Alberta – potatoes and sugar beets, fresh vegetables like sweet corn and fresh peas, and even hemp.”

While these crops benefit from significant global research, Baarda said southern Alberta often falls through the cracks. “Potatoes are a really good example. There’s a lot of work done in eastern Canada, and Idaho has more potatoes than all of Canada,” he said. “But when you get to southern Alberta, we’re a pretty small region with small acres. Historically, we’ve pulled in knowledge from other places and applied it here.”

That approach worked when acreage was limited, he added, but the industry has changed. “Potatoes have grown a lot – almost 20, 30, 40 per cent in the last dozen years. Now we’re at the point where there’s enough momentum to start developing our own agronomy knowledge, right here at home.”

### McCain partnership highlights the need

The shift toward local research is evident in a new corporate partnership announced in 2025 between McCain Foods and Farming Smarter. McCain, which operates a major processing plant in Chin, Alta., works with the association to explore the viability of alternative potato varieties under southern Alberta conditions.

Farming Smarter conducts small plot research to run a trial growing four varieties under six different treatments. McCain is one of 30 companies that currently hold research contracts with the association.

The collaboration reflects a broader strategy by McCain to diversify its variety portfolio. For decades, North American research and commercial production focused heavily on Russet Burbank, a variety more than a century old. While Russet Burbank holds the largest share of potatoes grown, it is only one of dozens of potato varieties grown in Alberta.

And for McCain, introducing new varieties is only part

of the equation. “When new varieties launch, they want growers to have full confidence in them,” Baarda said. “That means a detailed agronomic package and best management practices, tailored to this region.”

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**“ Southern Alberta’s irrigated systems, soil types and shorter growing season set it apart from many major potato regions. ”**

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### Why local data matters

Those packages cannot simply be copied from elsewhere, Baarda argued. “A variety might perform a certain way in eastern Canada or the Pacific Northwest, but what does it look like in southern Alberta?” he said. “How much water does it use here? How much fertility does it need? Does it still produce the right quality of potato?”

Southern Alberta’s irrigated systems, soil types and shorter growing season set it apart from many major potato regions. “We have later springs and earlier falls than Idaho,” Baarda noted. “Those things matter.”

The province does have a history of potato research, particularly out of Brooks, now continued at the University of Lethbridge by irrigated crop scientist and potato specialist Michele Konschuh. She sees Farming Smarter’s growing role as complementary rather than competitive.

“When Ken [Ken Coles, Farming Smarter executive director] first talked to me and asked if there was room for them to get into this, I said absolutely,” Konschuh said. “There’s less and less researchers all the time. Government cutbacks go back to 2002, and there’s more work than I could ever do.”

She added that some types of work are better suited to applied research groups. “There’s work that isn’t really

suitable for government and universities, especially confidential trials,” she said. “If you want to do spray trials or test products in that confidential space, Farming Smarter is a really great place for that.”

Baarda adds that Farming Smarter has a long track record of field experiment work. “We plan to use our research expertise to build the body of local agronomic knowledge in potato production as well.”

### Building capacity on the ground

Konschuh also pointed to Farming Smarter’s recent investments in infrastructure as a turning point. With \$800,000 from the province, the association purchased potato-specific equipment, including a hiller, planter, harvester, washer, grader, irrigation system and even a new tractor which is suited to deal with potato equipment.

“They bought a moveable boom, which is the closest thing you’re going to get to pivot irrigation and it’s portable,” Konschuh said. “That has made a real difference.”

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**“ Despite these advances, Konschuh believes the region is still under-researched. ”**

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She stressed that irrigation is non-negotiable for potato research in the region. “If another research group wanted to get into potatoes somewhere else in Alberta, I’d say you’re not in the right space,” she said. “You need irrigation. And southern Alberta is where that needs to happen.”

Despite these advances, Konschuh believes the region is still under-researched. “Not enough,” she said bluntly when asked how much potato research is happening in southern Alberta. “We each have a couple of projects, and that’s kind of how it feels. There’s more questions than we have answers – and maybe more questions than we have dollars.”

### Sugar beets: a different research model

Sugar beets present a contrasting picture. While acreage has declined from a four-year average of 28,000 acres to just over 22,000 acres in 2025, the crop has a tightly integrated research system through Lantic Sugar.

“I run the research program for Lantic,” said Jay Anderson, research agronomist with the company. “We do all the variety testing for commercial production, plus fertility, planting date, harvest timing, storage and hail simulation work.”

Lantic conducts 20 to 25 research projects annually, funded equally by the company and growers through a checkoff. “For a variety to be commercially approved, it has to produce a three-year average that meets or exceeds the average of the currently approved varieties,” Anderson said.

Because sugar beets are grown under contract and quota, outside research is more complicated. “Any group that wants to do sugar beet research needs to go through the Alberta Sugar Beet Growers marketing board and secure quota,” Anderson explained. “Seed is another limitation – Lantic is the only authorized dealer of seed in Canada.

“If Lewis [Baarda] wants to do work, we can put his acres on our research quota,” Anderson adds. “He can use our equipment and seed and take the data. That’s often the only way to make it work.”

Farming Smarter collaborated with Anderson and Lantic previously on some erosion mitigation work in sugar beets. “By working together to address knowledge gaps, we bring our own knowledge, expertise and capacity to the table,” notes Baarda.

### Shared challenges, shared solutions

Even with a robust internal program, Anderson acknowledged there are limits. “I only have myself and one technician,” he said. “There are definitely some gaps, particularly around identifying the best long-term storage strategies with the climate variability we experience during the storage season.”

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**“ Sometimes it’s about trying what others have done and seeing if it works here too. ”**

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Knowledge sharing is another challenge. “We’re fairly closed as a system, and I want to change that,” Anderson said. “Inviting more collaboration, more people to field days – that’s something we’re opening up to.”

Baarda sees sugar beets as emblematic of many specialty crops. “They don’t have the push of a canola or wheat commission,” he said. “They have limited resources and have to do a lot themselves.”

Beyond potatoes and beets, Farming Smarter is expanding into other niche areas, including seed canola, seed alfalfa and dry beans. “Seed canola is very much a southern Alberta thing because you need irrigation to de-risk it,” Baarda said. “We’ve got five-acre variety development trials for some companies. That’s a niche need we’re trying to address.

Dry beans are another focus, supported by nearby processing capacity. “Agronomy for dry beans isn’t something the whole research world focuses on,” Baarda said. “We’re positioned to help support that, and we’ve got a strip-tillage trial rolling out this year.”

### Closing the holes

For Baarda, the goal is not to replace external research, but to test it under local conditions. “There’s nothing wrong with pulling in information from other places,” he said. “But sometimes we have to replicate it here to know if the results hold up.”

Adapting and testing practices and technologies in a local context is only one part of the equation. Another piece is developing homegrown challenges to local challenges. “Our environment, cropping systems, irrigation, etc., presents unique challenges that may not be a consideration elsewhere,” said Baarda. “Similarly, it presents unique opportunities. We need to be able to think outside the box in collaboration with these specialty crop groups and their growers to ask the right questions,

conduct the reliable research, and generate impactful knowledge to support local growers.”

Konschuh agrees. “I long ago thought I don’t need original ideas for everything,” she said. “Sometimes it’s about trying what others have done and seeing if it works here too.”

As southern Alberta’s specialty crop sectors evolve, the case for local research is becoming harder to ignore. “We have unique soils, irrigation, cooler nights and different disease pressures,” Anderson said. “Short answer: yes, you have to test by region.”

In filling those crop development holes, applied research organizations like Farming Smarter carve out a critical role – translating global knowledge into practical, local solutions that growers can trust. **FS**



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# 2025 ANNUAL REPORT

□ Farming Smarter is a not-for-profit & registered Canadian Charity based in Lethbridge, Alberta.

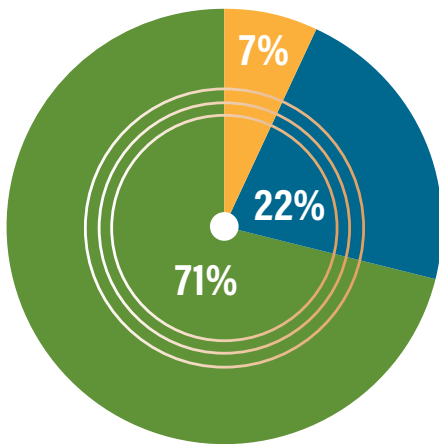
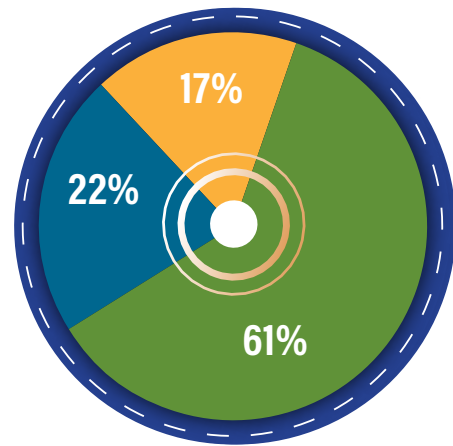
A competency-based board, primarily composed of producers, serve as the membership and guides Farming Smarter through policy and strategic planning. The board hires an Executive Director to lead operations, manage staff and execute the strategic plan. Find our 2025 directors listed on page 18 & 19.

Farming Smarter's mission is to support the people involved in advancing irrigated and dryland crop production. We work closely with farmers, entrepreneurs, businesses, donors, charitable foundations, government, academia, and more to bridge the innovation gap, drive economic growth, improve social impact and environmental sustainability.

## Financials

### 2025 Operating Revenue

Research & Innovation	\$2,293,857
Extension/Knowledge	\$634,511
Other	\$809,436
	<hr/>
	\$3,737,804



### 2025 Expenditures

Program Expenses	\$2,571,265
Operating Expenses	\$260,160
Capital Purchases	\$778,606
	<hr/>
	\$3,610,031

## By the numbers

**30** companies hired us to conduct research for them

**35** crops researched

**172** trials with **7,726** plots

**10** full time employees & **15** summer students

## Staff highlights

Farming Smarter staff set personal goals each year to keep our people and our organization learning all the time. The goal setting season at Farming Smarter often prompts innovation at the personal, team and organization levels. The conversations are fantastic!



### Jamie Puchinger

Looking back on Farming Smarter's 2025 Field School, I feel proud to have been part of something that brought so many people together—133 participants learning side by side in the field. Over two days, we dug into practical

challenges like salinity management and cereal disease identification, while exploring cutting-edge trials in hemp retting, lupin production, and soil-saving cover crop practices. The conversations around soil health and potato agronomy reminded me how interconnected every decision is in building resilient cropping systems. The highlight wasn't just the knowledge shared—it was the sense of community, capped off by Minister Sigurdson's capital announcement, which underscored the importance of investing in agriculture's future. It was more than a field school; it was a reminder of why I care so deeply about building knowledge and community in farming.



### Mike Gretzinger

To have three students return this year was incredibly rewarding and a huge asset to the Agronomy program. We kept momentum on several major projects, including Saving Soils, Hemp Retting and Emergence, and the Canola banded fertilizer in strip till trial. We also initiated fall crops for updated fertilizer response curves and Double Cropping. We continued to grow strong partnerships with Dr. Linda Gorim, FMC, SeedNet, SaskFlax, and many others, and added a wide range of demos for plot tours.

I'm proud of the turnout at our events - Field School, Agronomy Battles, and all the opportunities we had to connect with farmers. I'm equally proud of the progress we made on my wish lists, from yard cleanup and landscaping to painting the life-sized LEGO figures and Mr. Potato Head who helped us take 1st place in the parade.

I'm also really pleased with the improvements in quality control for data collection and the more structured training schedules we developed for summer students. It all added up to a productive, energizing season.



### Thierry Fonville

For me personally and professionally, a major achievement in 2025 was getting my first Farming Smarter research paper published in the Canadian Journal of Plant Science. It quickly had several hundred views. Our paper on strip tillage and precision

planting with canola generated a lot of interest from agronomists and growers in our region, across Canada and even internationally.

One of my main contributions as a researcher is ensuring

that our projects pass critical scientific scrutiny and are relevant for advancing canola production systems. Publishing scientific papers is a validation of the high standard of work we do at Farming Smarter. Look for a research paper in 2026 on rainfed grain corn agronomy.

More recently, I really appreciated everyone that came out to our Agronomy Battles events toward the end of the year. They were great networking sessions where farmers and agronomists could share experiences on strip tillage, cover cropping and herbicide resistant weeds. It also ensured that our research projects remain relevant and helped us identify future research directions. Agriculture is important and its economic resilience and sustainability will have long lasting and far-reaching impacts.



### Lewis Baarda

The advancements we made in potato research this year truly were a standout highlight. We made significant strides in our capacity to conduct highquality potato research. We added specialized irrigation units,

established onsite storage, and completed major upgrades to our potato planter. With another year of experience behind us, our expertise deepened and we continue to draw increasing interest from industry stakeholders.

Another major highlight was the growth and development of both returning and new students. The crew came into the season ready to build on what they learned in 2024. By the end of the 2025 field season, they made unmistakable progress. They not only improved their technical ability to carry out research activities but also strengthened their understanding of the research itself and how each task fits into the broader picture. Their leadership, initiative, and growing skill sets made a meaningful difference in our ability to complete our work to a high standard of excellence.



### Trevor Deering

Overall, 2025 was a very strong year for us. Weather conditions were close to average, with slightly cooler temperatures during the peak summer months compared to recent seasons—something that made a noticeable difference. Although fall

moisture was low, we were able to offset it through emergency irrigation efforts. The combination of favourable weather and strong irrigation capacity allowed us to grow excellent crops, contributing to a 98% trial success rate.

We held 21 client debrief meetings, with overwhelmingly positive feedback that helped us plan effectively for the future. Maintaining strong, trustbased relationships and delivering consistent results—especially in a year marked by global uncertainty—was a major success for both our team and our clients.

And on a lighter note, I had an absolute blast participating in the Whoop Up Days Parade. Juggling, handing out potatoes, and driving the new Fendt tractor while connecting with colleagues and the crowd was a highlight of the season.



### Carlo Van Herk

2025 was one of my favourite years at Farming Smarter. It marked my fifth anniversary as fulltime staff and the growth I've witnessed over that time has been nothing short of exponential. Last year was especially important for capacity building, with roughly \$800,000 invested in capital purchases—including the Fendt tractor and several new fields—that significantly expanded our acreage and visibility.

The year also saw the publication of the Strip Till Canola paper, the project that originally brought me to Farming Smarter. Seeing that work come full circle was incredibly satisfying. Overall, 2025 stands out as a year when the organization's growth felt tangible and deeply rewarding. I'm proud to have contributed to the association's success.



### Claudette Lacombe

Farming Smarter is more than a job for me. It is a tight-knit group of people dedicated to supporting people and industry in southern Alberta that feeds Canadians and more. I've worked with this association for so long I'm now going

backward. I'm past 65 and poking at time to write different things.

I scheduled myself to write actual stories again for our magazine. The kind where you tell other peoples' stories and share that with our magazine readers. I talked to a bunch of people about the impact Farming Smarter made on their lives and heard such wonderful stories. It was fun to find I can still distil a good story based on multiple conversations with people. It's a challenge to take a complex topic, bring several voices to the table and then extract the important bits into an enjoyable read. Read southern Alberta stories come to life in our magazines.



### Evrett Krippel

I feel that 2025 held many successes. One of the most meaningful was the increase in longterm staff at Farming Smarter. With this team expansion, we strengthened both our capacity and our sense of community.

We continued to build

our programs and refine our processes to deliver the highest quality research possible. And, of course, I'm proud to be one of the individuals hired on longterm.

I'm grateful to support the team in ways that not only contribute to Farming Smarter's growth but also benefit the farmers and businesses we work with. Reaching into the agricultural community and building relationships is at the heart of why I love working here. Having the chance to talk with people and see the impact of our work firsthand truly made my year.



### Sean Kjos

It always feels great to do something for your community, especially when you can give families a memorable experience. Providing that for 442 people was truly spectacular. Open Farm Day is the event I look forward to most each year

because it's such a joy to share agriculture with people who aren't normally involved in the industry—but this year exceeded every expectation.

We received incredible support from our partners, and everyone I spoke with was eager to help in any way they could. Those who couldn't attend lent us extra tents or swag, while those who could participate were full of creative ideas to make their booths as engaging as possible. The attendees themselves played a huge role in making the day exceptional. Everyone dove into our "Agriculture Adventure" and stayed to learn as much as they could from each booth.

A steady stream of visitors is usually a sign of success, but this year people stayed so long that staff were busy squeezing every possible inch out of the parking area just to accommodate the crowd. Proud hardly captures how I felt about the day, and I'm deeply grateful to everyone who helped make it outstanding. It's clear from the smiles that people left with that the event spoke for itself.



### Toby Mandel

My highlight for 2025 comes from how much we grew. We had so much field work on the go that our equipment was constantly in use. With so many trials, it was clear that some of that equipment had to be upgraded. This year, I rebuilt our quad

sprayers with thicker, better metal so they could keep up with the field crews' needs.

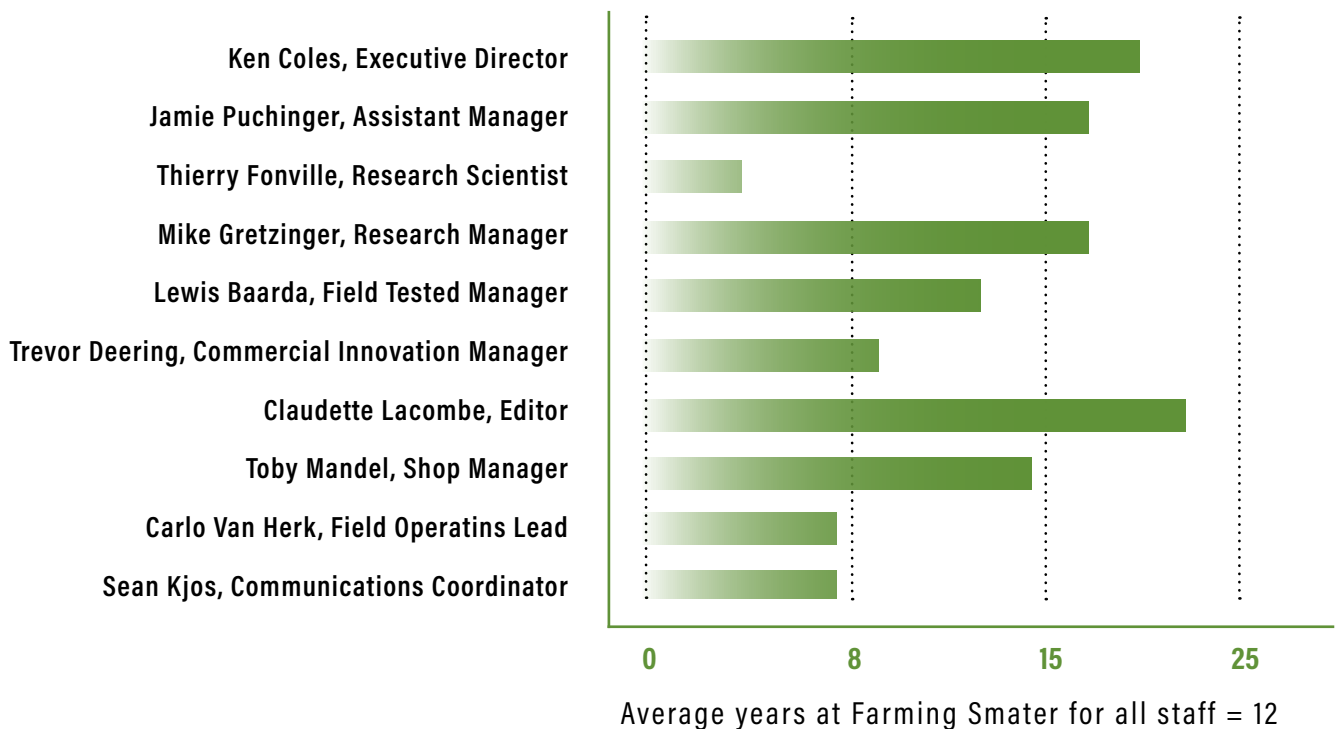


### George Joseph

I graduated college in 2025, returned to Farming Smarter for my second summer, and then stepped into a fulltime role. The transition came with a steep learning curve, but I'm grateful for how much I was able to learn. I really appreciate that Lewis and Carlo were as willing to teach as I was to learn. I gained experience operating equipment and developed a deeper understanding of how realworld challenges influence our research trials.

Lewis trusted me with setting up fall trials for our kochia projects and managing the data side of his trials. That experience taught me just how problematic kochia can be and how much damage alfalfa weevils can cause in a field. I also learned to distinguish between insect and disease damage in potatoes—something I'm proud to have added to my skill set.

I value being part of Farming Smarter's growing team and seeing the impact of our work firsthand. From industry partners using our research to guide their decisions to meeting Alberta's Minister of Agriculture and Irrigation, R.J. Sigurdson, during Field School 2025, the year was full of meaningful moments. Farming Smarter is the kind of place where I can learn quickly, contribute in a real way, and continue building my future in agriculture alongside a supportive team. I'm excited for what I'll learn in 2026 and the impact we'll make together.



### Student involvement at Farming Smarter - 119 summer students trained since 2012.

Innovation is hard and about long-term results. We invite anyone interested in agriculture innovation to work with us and together we can change the way people farm.

# Board of Directors

Direct the organization through careful thought, meaningful discussion, and the establishment of written policies.



## Chairman - Ryan Mercer

Please see the Chairman (or President's) message on page 3 in the magazine

## Vice Chair - Rob Dunn

The Farming Smarter Conference and Tradeshow organized by our staff is always a highlight with the chance to network with staff, farmers, researchers, and industry specialists. I appreciate the chance to catch up on the latest trial results with presentations from our research and extension staff. The event included many great talks from researchers and industry experts and it was a fascinating keynote address by Gary Mar on the policies we might expect from the new American administration. It was also an honour to present Kevin Auch with the Orville Yanke award in recognition of his contribution to soil conservation awareness in southern Alberta over the years.



## Treasurer - Ken Vanden Dungen

It is a pleasure to work with the Farming Smarter staff and be a part of board of directors. 2025 was an exciting year for Farming Smarter as we continued to grow and expand our scope of research. I really appreciate the many things we do to spread knowledge and educate the community in southern Alberta whether it be the annual conference, field days, Open Farm Days, etc. I look forward to seeing what this amazing group of people can do in 2026!

## Adrian Moens

I've served on the board for seven years, after being involved with Farming Smarter for several years beforehand. What first drew me in was the organization's commitment to independent, thirdparty, local data and its genuine care for the land and the people who work it.

In 2025, that commitment truly stood out. We expanded our fieldscale research, strengthened our role as a trusted source of unbiased agronomic information, and showcased our work through exceptional Field Days and Open Farm Day.

These events highlighted our passion for advancing agriculture and deepening the connection between farmers and the broader community.





### John Kolk

Farming Smarter has been exploring and implementing new technology that supports water conservation and predictive irrigation. Being part of this work strengthened my commitment to helping farmers make informed, data-driven decisions in an increasingly water-constrained world. It's exciting to contribute to solutions that not only improve on-farm efficiency but also support long-term sustainability for our agricultural communities.

### Mandy DeCecco-Kolebaba

Whether you are directly involved in agriculture as a producer, or like me, experience its impact as a consumer, Farming Smarter's work is essential. As a Board Member, I am proud to support an organization that advances applied research and practical innovation that benefits producers while strengthening the broader food system we all rely on. In 2025, southern Alberta benefited in many ways from Farming Smarter's initiatives and research, and even as a non-aggie, I can see how important it is to figure out real solutions to challenges like mitigating kochia.



### Nathan Stamp



2025 was a strong year for the continued growth of Farming Smarter as both a team and an organization. Highlights included being a preferred employer for summer students, making meaningful progress in leading-edge agricultural research, and strengthening innovation through collaboration and networking. The field schools offered hands on relevant, practical topics and ideas that producers could take back and try on their own operations. Together, these accomplishments reflect a practical, forward-looking organization focused on real value for agriculture.

### Scott Holtman

I'm proud to be part of an organization that is pushing the boundaries of potato agronomy and leading the Saving Soil project—work that speaks directly to the future of agriculture in southern Alberta. These initiatives aren't just research programs; they represent a long-term commitment to soil health, producer resilience, and the kind of innovation our industry needs to thrive. Farming Smarter continues to demonstrate that practical science, strong partnerships, and a clear vision can shape the future of farming.



### Will Van Roessel



It has been really exciting to see the potato research projects getting underway. The team invested in a significant amount of specialized equipment and staff learned an entirely new production system. It's all brand new and very different from any of our previous projects.

I always enjoy the summer tours and the chance to see what's growing in the fields. This year, the most interesting—and surprising—highlight was a small dryland cover crop trial. In a dry spring, canola actually established better in a field with a growing cover crop than in clean stubble. That result was remarkable, and it's clear this project deserves further research.

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Building and inspiring a culture of innovation in Western Canadian agriculture

## 2025 Staff and Students



*Back L to R: Mike Gretzinger, Toby Mandel, Sean Kjos, Travis Petkar, Thierry Fonville, Carlo Van Herk, Brady Vucurevich, Everett Krippel, Ken Coles, Lewis Baarda, Brayden Oostlander*

*Front L to R: Levi Harasem-Mitchell, Trevor Deering, Kaitlyn Schiestel, Ariana Duerksen, Christian Alloway, Jamie Puchinger, Camryn Wojtowicz, George Joseph, Peyton Smith, Sylvia Matis, Ashley Wagenaar, Tatum Adair, Rori Ryan, Tristan Jacula, Allison Baptista*

2026

FARMING SMARTER EVENTS

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Foremost

**October 28**  
Warner

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# Foundations Fund Agriculture Research

by Amanda Brittain



*Students working in Farming Smarter 2025 research plots. Credit: Farming Smarter*

Many charitable foundations have an interest in improving the environment or sustainable agriculture and Thierry Fonville, Farming Smarter Research Scientist, seek grants as a large portion of his job. Once he finds a grant opportunity, he must design and implement a study that matches the foundation's area of interest to secure funding.

Farming Smarter has a great network of farmers, agronomists, and agriculture industry groups that generate ideas for research – more ideas than time to study. “At our events, we have a constant sounding board of challenges that farmers face,” says Thierry. “Once we narrow down the ideas, we can approach a foundation with similar interests to apply for a grant.”

On a global scale, Canada is a major agricultural producer and the foundations that fund Farming Smarter's research see they can have a global impact on sustainable agriculture. “Most farmers see themselves as stewards of the land,” says Thierry. “However, it is difficult for individual farmers to keep up with the latest knowledge – it can be risky and costly for them.” The foundation-funded research allows Farming Smarter to test new ideas and pass the winning approach on to farmers thus advancing the whole industry.

“Every research organization and every foundation want to make an impact,” says Thierry. “Because the funding from foundations can be more flexible than other forms of funding, we can design our own

research projects in order to have the most impact on local farmers.”

One foundation will rarely fund a project in its entirety. The backing of a major foundation of most of the project cost gives Farming Smarter an opportunity to acquire the remaining funding from other sources, such as provincial, federal or charitable grants.

Since joining Farming Smarter, Thierry has worked on a major project focused on soil erosion that received large donations from the Weston Family Foundation and RBC Tech for Nature. “We're in a region where we get some pretty powerful winds – over 100 kph wind speed is a regular occurrence,” says Thierry. “If a farmer does a lot of tillage right before one of these windstorms, they can lose virtually all their topsoil.” The funding from these charitable donations allowed him to design a multi-year study that looked at ways to anchor the soil. The study looked at factors such as minimizing tillage, implementing cover crops, and seeding earlier in the season before these damaging winds typically take place.

“In 2022, the Foundation launched the Weston Family Soil Health Initiative, with an aim to support the adoption of soil health practices in Canadian agriculture. Soil health is an important mechanism through which we can support Canadian producers who face a range of

challenges affecting day-to-day operations, while delivering on one of the largest and most immediate opportunities to restore biodiversity in Canada,” states the Weston Family Foundation.

The flexibility of foundation funding also means that after the initial small plot research, the Farming Smarter team can expand to look at the impact of mitigating the risk of soil erosion on larger field tests or with high value crops like potatoes.

“It’s not unusual for a foundation to like the research we’ve conducted and to give us a bit more money to expand the research in a different direction,” says Thierry. “The foundations are all interested in how much of an impact the study will have on the environment or on agricultural industry so they are happy to look at funding further research if the results look promising.”

.....

**“ The partnership of two passionate organizations means they make a positive impact on both the individual farmer and agriculture across the globe. ”**

.....

The Weston Family Foundations agrees: “Farming Smarter is building best practices from the ground up, working directly with producers to design and develop strategies that support the practical integration of soil health into farming operations across Alberta. Their evidence-based approach, combined with a commitment to learning and collaboration, has led them to deliver meaningful outcomes that are already having a measurable impact.”

Foundations are passionate about the work they do. They are fully committed to making the world better through their grants. Farming Smarter is passionate about agriculture and research. The partnership of two passionate organizations means they make a positive impact on both the individual farmer and agriculture across the globe. **FS**



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# Ag Industry Set to Lose Generation Of Knowledge

## Legacy leaders retire leaving gaps

by Natalie Noble

Canadian agriculture faces a critical turning point. As seasoned leaders approach retirement, decades of legacy knowledge will leave with them. Meanwhile, too few successors are prepared to step in. “What’s wrong with Canadian agriculture? We have a people problem,” said Ken Coles, Farming Smarter executive director. “The biggest thing missing is people who are passionate about agriculture, but also have the leadership skills, the insight and foresight to see the big picture, put the pieces together, and push things forward.”

Through his Nuffield scholarship, Coles saw the same issue play out globally. “One of the bigger take-homes I found is that the work being done in research and innovation is disconnected from the farmers’ needs,” he said. “Wherever I see success, it’s always because the right people are in place.”

Why is agriculture struggling to attract and retain its next generation of leaders?

According to Byrne Cooke, chair of the School of Agriculture Sciences at Lethbridge Polytechnic, compensation is a major barrier. Over the last two decades, pay has failed to keep up with industry, curbing recruitment efforts. “A lot of

this is driven by the government – our research stations and education – they’re falling behind,” he said.

Perception continues to deter people. Cooke contrasts the stereotypical overalls and grass between the teeth with modern reality. “Look around southern Alberta, and holy cow, any of the major industries are agriculture companies,” he said, noting some institutions have even distanced themselves from the word “agriculture,” rebranding programming under terms like “biosystems” or “food production.”

.....

**“Cooke contrasts the stereotypical overalls and grass between the teeth with modern reality.”**

.....

That shift reflects a growing generational distance from farming. As families move further from primary production, awareness of agricultural career opportunities diminishes. “If you’re three generations removed from agriculture, when we ask students what a career in agriculture looks

like, they have one idea, and that’s farming,” said Luree Williamson, CEO of Ag for Life. “They don’t see the entire food system value chain or its range of roles.”

Post-secondary enrollment often follows market cycles, not long-term career plans. When agriculture is profitable, students stay on the farm; when margins tighten, enrollment spikes. Today, Cooke said, opportunity is abundant, but there are fewer ag families. Even those still connected often encourage their children to look elsewhere.

Compounding the issue, companies facing immediate labour shortages hire students before they complete their education. While short-term perks are attractive, Cooke warned long-term consequences are not. “They’ll be stuck in that same position for decades because they lack foundational and scientific training,” he said. “This lack of educated workforce will cause trouble as experienced people retire.”

The problem extends beyond labour. “It’s systemic. At the government level, too many policy makers don’t understand agriculture well enough to advise appropriately,” said Coles. As fewer leaders with agricultural understanding enter public service, the sector struggles to compete

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*Field Tested manager Lewis Baarda working with summer students in a pea field. Credit: Farming Smarter*

politically with areas like education and healthcare.

Consumer influence is widening that disconnect. With fewer than two percent of Canadians directly involved in agriculture, Cooke stressed public understanding is influenced by elite-backed trends and social media narratives rather than science. “We end up with a distorted view of what consumers want us to believe,” he said. “There’re a lot of fads most of us can’t afford when feeding a family.”

Most Canadians are now two-to-three generations removed from agriculture. “The next generation of agriculture leaders are students,” said Williamson. “Whether they work in the industry or not, they’re Albertans consuming food and they play a role. We need to build system-level connections to agriculture.”

Solutions exist, but collaboration is key. “Everyone has an expertise in an area. We need to unite that expertise,” said Williamson, calling for reducing duplication and keeping agriculture visible across education, policy, and public discourse.

Organizations like Farming Smarter and Ag for Life gain traction by meeting people where they are. Farming Smarter hires 15-to-20 students each summer, although Coles must search outside agriculture programs, including environmental science or biology. “Two years ago, three of them switched their degrees into agriculture because they fell in love with it working here,” he said, adding that programs like Ag for Life also make a difference. “They funded a project for us around building better organizational HR systems. It takes years to train people to do what we do here and that grant helped me hire expert consultants to establish a stronger retention policy.”

Cautiously optimistic, Cooke challenges outdated thinking through awareness, telling students, “Whatever you like to do, someone in agriculture will pay you to do it – communications, law, any of the sciences, agriculture needs it,” he said. “And we have strong people and corporations in the industry. I just hope they recognize the growing void, get involved with policymaking and represent their producer groups. That’s where we need leadership to come from – people with the backstory on policy and insight into what’s going on right now.” **FS**

# Farming Smarter Helps Fine Tune Vegetable Production

by Lee Hart

Kevin Wind says any agronomic information that can help improve yield and quality of crops produced on his southern Alberta farm is a good investment of research dollars.

Wind owns Windland Farms northeast of Taber and says fine tuning agronomics that lead to selection of an improved variety, better scheduling of seeding dates, or refinement of seeding rates for example, are measures that can all contribute to higher yield and/or improved crop quality.

Any of the specialty crops and cereals he produces can benefit from improved agronomics, but he is specifically thinking about some relatively new research by Farming Smarter in Lethbridge, that's geared toward learning the best production practices for green peas and sweet corn processed and packaged for consumer products.

“Any information that can help me increase pea yields, for example, contributes to improved profitability,” says Wind, who is the current chair of the Alberta Vegetable Growers (Processing) Board. “The more that growers can maximize returns contributes to the sustainability of our farming operations.”

For the past 10 years, Wind grows



*Christian Alloway (left) and Camryn Wojtowicz tend a 2025 pea plot at Farming Smarter. Credit: Farming Smarter*

peas under contract for Nortera Foods along with potatoes, grass seed and durum.

Nortera bought a long-established vegetable processing plant in Lethbridge in 2015. The company is a North American supplier of frozen and canned vegetables. The company operates 10 processing plants in Canada and the United States, along with other facilities.

For the past five years, the vegetable growers with funding from RDAR, and support from Nortera contracted Farming Smarter to conduct research that includes evaluation of new crop varieties along with fine tuning of agronomic practices.

“We have well established growers producing vegetable crops in Ontario and Quebec, but our production is relatively new in southern Alberta,” says

Dan Oliver Agriculture Technical Programs Specialist with Nortera Foods. “If someone asked how well this certain new variety is going to do under southern Alberta growing conditions, we really don’t know. We are working with pea and corn varieties that work well in other parts of the country, so we felt it was important to see which ones work the best in Alberta.

Farming Smarter has the expertise and equipment to provide proper varietal trials and research into improved agronomic practices. It’s all good information that will help our growers be more efficient and more profitable.”

In the grand scheme of agriculture, Nortera’s facility in Lethbridge might seem a niche operation, but it is not inconsequential. It works with between 20 and 25 growers in the Lethbridge/Taber region (all members of the Vegetable Growers Association) who produce about 4,500 acres of green peas and about 2,400 acres of sweet corn all harvested at peak freshness, processed and packaged in Lethbridge with most of it going into frozen vegetable products for consumers. In general terms, that corn and pea production has a farm gate value of \$9 to \$10 million.

Nortera has hundreds of agricultural partners across its operation. The company itself owns several brands including Arctic Gardens and Del Monte in Canada. Following a recent acquisition agreement, will add the Green Giant brand to the company portfolio once regulatory approval is in place.



2025 pea plots at Farming Smarter. Credit: Farming Smarter

Along with its own brands, Nortera supplies packaged, frozen vegetables to other clients as well. For example, Oliver says if a consumer buys any bag of frozen vegetables in Canada, chances are it was supplied and packaged by Nortera.

However, Nortera’s strong domestic market share faced significant headwinds as of late and these bags are increasingly filled with imported vegetables, packed by Nortera’s competitors who are not invested in a field-to-fork production system.

.....  
**“ We are working with pea and corn varieties that work well in other parts of the country, so we felt it was important to see which ones work the best in Alberta. ”**  
.....

Farming Smarter was no stranger to conducting crop variety trials, says Lewis Baarda, Field Tested manager — they have done that for years with many of the conventional field crops, but working with fresh vegetable crops such as sweet corn and green peas has come with a learning curve.

**“ If we produce higher yielding varieties that improves the competitiveness of Canadian growers. ”**

Oliver says Nortera works with up to eight seed companies who produce new pea and corn cultivars the company would like evaluated under southern Alberta growing conditions. “Yield is certainly an important feature to be evaluated,” says Oliver. “It has become a very competitive market out there, and we see vegetables produced in foreign markets that can be delivered in Canada at a lower cost than we can produce. So, if we produce higher yielding varieties that improves the competitiveness of Canadian growers.”

Farming Smarter also evaluates agronomic practices such as changes in seeding dates, seeding rates and recently began some fertility trials.

“One of the challenges of producing these fresh vegetable crops is the timing to maturity and harvest,” says Baarda. “Quality is the key. When peas, for example, reach that stage to be harvested as a fresh product, they have to be harvested not just within a day, but sometimes within a few hours. You can’t just say, they are mature I’ll harvest them in a few days. They need to be harvested now.

“When you look at varieties and time of seeding and seeding rates you certainly don’t want everything ready to harvest on the same day. We are looking at factors that help stagger maturity, so the crop can be harvested at the optimum time with optimum quality. We are looking at agronomic practices that help to identify high yielding varieties as well as how those practices affect crop growth and maturity. We’ve completed a few years of research trials and hopefully we will soon be able to make some value recommendations to growers.” **FS**

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# Bringing Science From The Lab To The Farm

by Amanda Brittain



*Trevor Deering, manager of the commercial innovation program delivers results clients need.  
Credit: Farming Smarter*

Farming Smarter bridges the gap between the release of new herbicides, pesticides, biostimulants, and equipment each year and what works in farmers' fields. The Commercial Innovation program emerged from the desire of both for-profit companies and Farmer Smarter to test various products, techniques and technologies to see how they could benefit farmers in Southern Alberta.

Partnering with agriculture companies means more research gets done and more farmers can trust the results.

“Good quality research isn't cheap,” says Ken Coles, Farming Smarter Executive Director. “It takes lots of resources to conduct research properly and here at Farming Smarter, we only want to conduct good quality research so partnering with the companies that want to bring products to market makes sense.”

Companies have annual goals to get new products to market which requires lots of applied research using new scientific research methods. Companies contract Farming Smarter to do research for several reasons. Many companies don't have the land, equipment, or people to do the research inhouse. Farming Smarter brings all that to the table and does real-world testing.

The Commercial Innovation program began in 2010 and grew to the point that Ken knew he needed someone to manage all the studies. Enter Commercial Innovation manager Trevor Deering. About the same time as Trevor came on board, Farming Smarter realized that the organization needed to be client centric. As a result of this shift in thinking, Trevor not only manages research projects, but he also helps people build businesses.

“Farming Smarter is the link between companies that create new products and the farmers who will eventually use it,” says Trevor. “We embraced the idea that we could help both the company and farmer by being an unbiased third party. We could do the research that would help a company bring a new product to market while improving the farmers’ businesses as well.”

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**“ Farming Smarter is the link between companies that create new products and the farmers who will eventually use them. ”**

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Embracing a customer-centric approach helped Farming Smarter grow the Commercial Innovation program from a few studies a year to around 100 studies in 2025. There

are a variety of products, techniques, and equipment that the organization can research. Some companies look to Farming Smarter to get products registered or certified while others want to see how the product or equipment performs under certain variables present in southern Alberta.

The research projects conducted by Farming Smarter are quite wide ranging. A major portion of trials focus on product testing, everything from biostimulants, soil additives, nutrients, crop varieties, and pesticides. Research studies involving equipment are geared to integrating equipment into established systems, like testing variable rate pesticide application technology with farmers in their fields. Farming Smarter even conducts trials on different agronomic techniques such as seeding rates for certain crops.

“We test the products using practices that farmers use in southern Alberta. We have to see if the products or equipment will work for a farmer in our area,” says Ken. “When we test a product, we make sure it is tested in our environment with the same equipment or with similar practices that farmers use.”

Nufarm recently asked Farming Smarter to conduct a research trial around a new herbicide that targeted problematic weeds in southern Alberta. “NuFarm has worked with Trevor and the team at Farming Smarter for the past four seasons,” says Tyler Gullen, Technical Services Manager for the Western Prairies. “We keep coming back to them because the quality of the results they

get is really high. Plus, they are great to work with.”

Building relationships with the companies in the Commercial Innovation program is important. Sometimes building a strong relationship means telling a client that what they want isn’t possible.

“What I really appreciate about the Farming Smarter team is the fact that they are self-aware of the trials they can and can’t do,” says NuFarm’s Tyler. “They are always open to trying new things, but they are vocal about the potential pitfalls. They will tell us up front if they don’t think they can get the weeds we need targeted or if they run into a problem mid-trial. I appreciate this openness because it gives us a chance to stop and shift direction if needed.”

These open lines of communication led to some long-term relationships. Commercial Innovation clients come back year after year with new products to test thanks to the client-centric focus at Farming Smarter. “It’s great to have a base of solid companies to work with on a regular basis but we are also open to working with schools or companies that are new to us.” Trevor was recently approached by a school based in North Africa so Farming Smarter’s reputation for conducting solid research is expanding well beyond the borders of Alberta.

Because the research is proprietary, Farming Smarter doesn’t share the results with anyone outside of the company that hired them. However, the main objective of doing the

**“ It’s great to have a base of solid companies to work with on a regular basis but we are also open to working with schools or companies that are new to us. ”**

Visit commercial innovation:



the biostimulants from that. The knowledge we gain in working with clients in the Commercial Innovation program can turn into a project that will help grow the entire industry.”

research is to get the products registered with the appropriate body or bring them to market. Knowing that new products have solid research behind them helps on farm. Farming Smarter researchers will also use the knowledge they gain from the Commercial Innovation program to focus their own research efforts. It’s all about learning what will help farmers improve crops and yields. Hypothetically, if Farming Smarter

has worked with various companies to test several biostimulants, but haven’t found consistent results, they can then opt to conduct a multi-year study with five or six of the most popular biostimulants.

“We can fully control the variables of this type of study,” says Ken. “We can conduct a multi-year, fully phased rotational study and will hopefully learn more about

Everyone involved in the Commercial Innovation program wants to improve agriculture. “I got into agriculture because I wanted to help farmers,” says Trevor. “The research we do at Farming Smarter is definitely helping the companies that pay us to do the work; but, more importantly, we are helping to get good products into the hands of farmers who need them.” **FS**

# WHY...

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# Engage A Wicked Problem

By Lewis Baarda

Herbicide resistant kochia is a wicked problem.

Wicked problems are complex, dynamic and lack a definitive solution. Many kochia control measures can introduce more complexity to the problem and create new problems to solve adding to the kochia problem.

Among the handful of problems plaguing the crop industry, herbicide resistant kochia may be the most visceral threat. This troublesome weed persists despite every tactic tried. In fact, the problem appears to be worsening. Herbicide resistance is becoming more prevalent and kochia populations have appeared with a new form of resistance to group 14 chemicals. At this point, herbicide alone is no longer sufficient for controlling kochia.

Alternative strategies such as increased seeding rates or mowing mature plants paired with chemical controls can improve control. Some of these approaches, however, can introduce adverse outcomes of their own. Tillage can be effective for dealing with problematic weed patches but confers adverse and risky outcomes for soil health. Even our best approaches for controlling the weed are yoked to adverse outcomes elsewhere in production. Kochia has become a wicked problem.

Research certainly moves us in the right direction to solve this. Since

2020, Farming Smarter alone spent over \$1 million in kochia research including public initiatives and private investment. Add that to the research investments made by other groups across the prairies and you begin to grasp just how much energy and resources agriculture pours into this. So why, then, does the problem remain so acute?

It is tempting to blame the genetic disposition of the weed for its impact on our cropping system. Certainly, kochia is well-suited for life on the prairies and has a demonstrable capacity to adapt to (or against) our best control efforts. Somehow, though, attributing the proliferation of kochia to the nature of the weed itself feels rather banal. Perhaps we are crediting kochia when we should be discrediting our collective approach to managing it.

.....

**“ Perhaps we are crediting kochia when we should be discrediting our collective approach to managing it. ”**

.....

A wicked problem like kochia is not solved per se. We make meaningful progress through broad, collaborative, and iterative approaches.



*Lewis Baarda inspecting a kochia stand. Credit: Farming Smarter*

Unfortunately, our agricultural research environment is partial to a piecemeal approach that cobbles together individual projects piece by piece. Research projects, even excellent ones, can only do so much on their own. Progress requires us to build upon research outcomes by continuing to adapt, by applying results in new contexts, and by testing new ideas. Loose ends and unanswered questions should roll into new research projects.

Wicked problems like kochia require contributions from everybody. We need funders to envision a path to success even before we fully chart the steps. We need stakeholders to support initiatives that may not fit their precise aims. We need growers to remain engaged and willing to adapt.

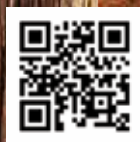
Farming Smarter will continue to work on this wicked problem. We will need your support and collaboration to make sustained progress. Please stay engaged, keep an open mind, and cast your vision upon a solution that is bigger than your need. **FS**

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