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ANNUAL REPORT 2025



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Contact: **Ahsan Rajper, PhD**
manager@battleriverresearch.com
(780) 582-7308



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Battle River Research Group is a producer-led research organization located in East Central Alberta. BRRG owns a Facility in Forestburg that includes a fenced compound, and an over 3000 sq. ft shop and an office building.

We offer small plot research services under supervision of qualified staff. We are research partner in many government and industrial research projects including variety, fertilizers and soil health research. Please check our website battleriverresearch.com for further details about projects



Photos by Kabir Makan



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Photos by Kabir Makan

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**To perform high-quality
producer-driven research
and knowledge transfer
for the advancement of all
agriculture stakeholders.**

VISION

**Improving sustainability
through innovation in
agriculture.**

President Report 2025

BY STAN SCHULMEISTER

As we move into early October it is time to reflect on the past year at Battle River Research Group.

It was a year of many interesting aspects. First, we brought on a new manager Ahsan Rajper and a new battery of summer students to help around the office and in the field work.

Ahsan joins us with many specialties in the research field that are sure to be a benefit to our region which is the most important part of the work that BRRG does. Bring practical, meaningful research information that can be used by the agricultural sector in this region and the rest of the province.

Ahsan covered the management duties as well as working with a very capable team on an ever increasing number of trials. This year 21 trials including 18 small plot and 3 on farm projects that covered over 140 acres were done. More than 1000 plot units across multiple Counties were performed. In Stettler County there were 2 on farm trials and 1 in Paintearth County.

These projects examined soil health, water holding capacity, fertility management in feed barley, corn tillage and fertility, corn and soybean inter cropping, pasture rejuvenation and legume variety trials.

Battle River Research Group has also done many projects in the extension side in 2025.

Battle River Research Group delivered over 30 events. Key events were EFP workshops, Pesticide Certificate course, Low Stress Livestock Handling and our Annual Field Day. Kabir and Alex have been kept very busy both in the field and on extension work and doing a tremendous job on these.

Research capacity will be expanding with the addition of a new small plot seeder with in furrow liquid fertilizer capability which was funded the Government of Alberta.



STAN SCHULMEISTER
BOARD OF DIRECTORS PRESIDENT

This will enable testing of advanced fertilizer and biological amendments in no-till systems. With an extremely capable staff and forward thinking board Battle River Research Group will continue to grow as well as bringing many new innovations to our local farming sector.

MEMBERSHIP

The Battle River Research Association (BRRG) came into existence after the amalgamation of the Battle River Forage Association and the Battle River Applied Research Association in 1993. We are in Forestburg, Alberta, allowing us to efficiently serve the east-central region of Alberta.

We serve the counties of Paintearth, Stettler, Beaver, and Flagstaff. The Battle River Research Group has three programs to help serve the local producer, including the field Crops Program forage program, extension & Environmental Program.

BRRG Free Membership is open to agricultural producers or other agricultural stakeholders outside East Central Alberta interested in the Association's objectives.

Visit battleriverresearch.com to Become a Member.



Photo by Kabir Makan

ACKNOWLEDGEMENT

Battle River Research Group gratefully acknowledges the base funding provided by Results Driven Agriculture Research (RDAR). This foundational support enables BRRG to carry out applied research, knowledge transfer, and producer-focused innovation across East Central Alberta. RDAR's investment is critical to advancing sustainable, science-based agriculture in our region.

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Extension Coordinator

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Eve Fetaz



Kaeden Hartman

RESEARCH 2025

Seasonal precipitation patterns during the 2025 growing season generally influenced crop establishment, nutrient availability, and overall crop performance across the demonstration sites. Rainfall distribution varied throughout the season, with some periods receiving below-normal precipitation while other periods received timely rainfall events that supported crop growth and yield development.

Compared to 2024, June and July received significantly greater rainfall in 2025. In contrast, August received relatively less rainfall than in 2024, while September was considerably drier, with less than 1 mm of precipitation recorded during September 2025. Overall, total precipitation during the 2025 growing season was approximately 23 mm lower than in 2024, due to the extremely dry late-season conditions.

Average Summer Rainfall for Forestburg Trial Sites (mm)						
Year	May	June	July	Aug.	Sept.	Total Season Precip.
2025	64.7	49.4	46	37	0.5	197.6
2024	66.1	28.8	14.5	57	53.8	220.2
2023	10.5	120	57.2	53.3	14.1	255.1
2022	35.8	169	56	26.3	4.9	292
Normal Precip.	41.8	77.1	70.9	50.8	32	272.6

Table 1. Rainfall data from Alberta ACIS website (<https://acis.alberta.ca/acis/weather-data-viewer.jsp>). Rainfall reported in mm and normal precipitation based on data from 1991 to 2020. Unless otherwise specified the above table is the most accurate weather station closest to the sites where our trials were performed.



Photo by Ahsan Rajper

INNOVATIVE USE OF DEEP-ROOTED COVER CROPS TO IMPROVE SOIL INFILTRATION AND WATER HOLDING CAPACITY

INTRODUCTION

Cover crops are well known cultural practice and have recently gained even more notice in the soil health discussion that is very well represented in crop rotation education [1]. Joining this current interest with the universal producer concern with rainfall led to this study on the effect of deep-rooted cover crops (DRCC) on water infiltration and water holding capacity. Using alternating years of cover crops and conventional crops and doing spring infiltration measurements we expect to observe some change over time in the infiltration rate of the soils where deeper rooted cover crops were grown. This study was led by North Peace Applied Research Association (NPARA) and included sites close to Manning, Westlock and Forestburg. Battle River Research Group ran the Forestburg site while Gateway Research organization ran the Westlock one and NPARA ran the Manning site.

MATERIALS AND METHODS

The Forestburg site was canola stubble in 2021. 2022 and 2024 had the cover crops seeded east to west. 2023 and 2025 had conventional crops of peas, wheat, and canola seeded north to south. This trial was designed as a randomized complete block design. The cover crop treatments, as seen in Table 2, were maintained in the same plots in 2024 as in 2022.

Trt. #	Treatment Description
1	Fallow
2	Deep Rooted Cover Crop (DRCC) low seeding rate
3	DRCC medium seeding rate
4	DRCC high seeding rate
5	DRCC low seeding rate + Oat + Millet + Clover
6	DRCC medium seeding rate + Oat + Millet + Clover
7	DRCC high seeding rate + Oat + Millet + Clover
8	DRCC low seeding rate + Pea + Sunflower
9	DRCC medium seeding rate + Pea + Sunflower
10	DRCC high seeding rate + Pea + Sunflower
11	DRCC low seeding rate + Corn + Ryegrass +Vetch
12	DRCC medium seeding rate + Corn + Ryegrass +Vetch
13	DRC high seeding rate + Corn + Ryegrass +Vetch

Table 2. Cover crop treatments seeded in 2022 and 2024. The Deep-Rooted Cover Crops (DRCC) used were daikon radish, forage brassica, and forage turnip.

Deep Rooted Cover Crop Trial

In Forestburg all crops were seeded with a Fabro seeder. The cover crop plots had 12 rows with 23 cm row spacing. Cover crop plots were trimmed to 6 m by 2.74 m. The conventional crops were seeded as a 6-row plot seeded 2.74 m x 1.37 m. Every year before seeding the infiltration was measured in 13 of the plots with the Double Ring Infiltrometer [2] and hydraulic conductivity was measured in every plot with a mini disk infiltrometer [3]. Cover crops were cut as silage and weighed wet and dry to obtain a dry biomass. Conventional plots were combined for yield.

RESULTS AND DISCUSSION

Using the Double ring infiltration setup we could see broad differences in infiltration rate in different years. 2022 and 2024 saw the highest infiltration while 2025 saw the lowest infiltration. This is likely due to rainfall being higher in May in those years than in 2025. More moisture in the soil kept the soil from crusting up and water running off.

Yield was affected differently for different crops (Figure 1-3). In Canola we saw a higher yield in 2023 than in 2025. There could be a result of increased weed pressure or better timing of precipitation events. Overtime there were some seasonal differences in some of the crops. Peas saw a large benefit in 2025 with a larger yield increase as seen in Figure 1. However, canola had a lower yield in 2025 but they were not significant (Figure 3). The infiltration data has been harder to parse. Overall, at the Forestburg site there were no clear trends showing increased or decreased infiltration or water holding capacity.

With a full seasons of 2022 and 2024 given to the cover crop there was no risk of moisture loss from the cash crop to the cover crops. There was no benefit of fallowing over the cover crop as the fallow yields are lower or equal in all three cash crops (Figures 1-3).

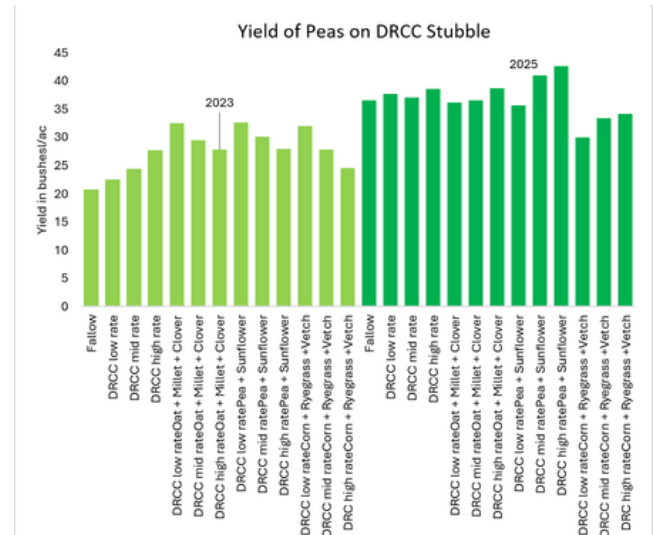


Figure 1. Yield of field peas on cover crop stubble. Yield from 2023 is shown in light green (left) and the 2025 data is shown in dark green (right).

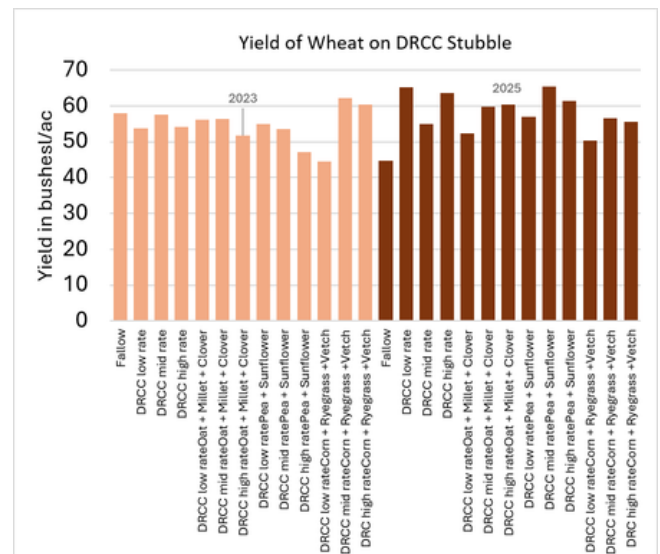


Figure 2. Yield of wheat on cover crop stubble. Yield from 2023 is shown in light (left) and the 2025 data is shown in dark (right).

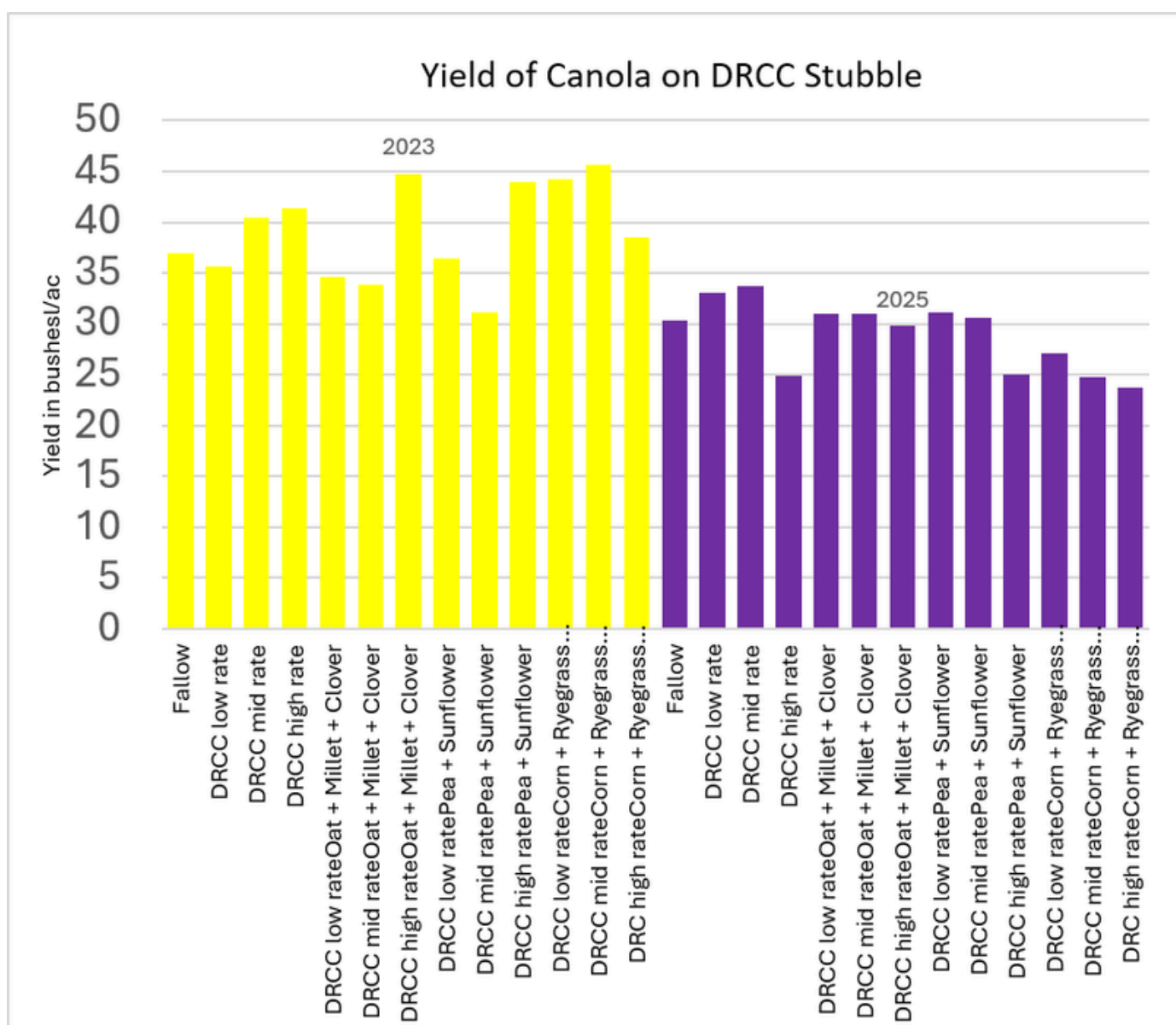


Figure 3. Yield of Canola on cover crop stubble. Yield from 2023 is shown in light yellow (left) and the 2025 data is shown in purple (right).

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[2] Bower, H. (1986). Intake rate: cylinder infiltrometer. *Methods of soil analysis: Part 1 physical and mineralogical methods*, 5, 825-844.

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PULSE CEREAL MIX SILAGE PROVIDES SUFFICIENT PROTEIN WITHOUT NITROGEN FERTILIZER

INTRODUCTION

Silage is a very important way for beef and dairy producers for winter feed or to increase their feedstock when alfalfa fields and pastures are not enough. Some of the main factors influencing the choice of silage types are yield, nutrition, quality of the silage, and ease of logistics. Silages are often a mono cereal crop or a mix of multiple cereals or legumes and cereals. It has been previously observed that oats do not have the highest quality silage in a mixed silage compared to triticale or barley but can have the higher dry matter yield [1]. Battle River Research group has been working on silage trials since 2018. These trials give an indication of expected yields of different cereal silages and mixes in our area. The pulse cereal mix normally shows that without nitrogen fertilizer a mixed pulse cereal silage can produce a crop with as much yield and normally as much protein as a cereal only silage with nitrogen fertilizer.

MATERIALS AND METHODS

Our pulse cereal mix was seeded on May 29th and harvested August 20th 2025. Fertilizer was applied at the recommended rate for a pulse crop so the only additional nitrogen was in the monoammonium phosphate used to boost phosphorus. This was done to show the ability of the mixes to offset the need for nitrogen fertilizer. The treatments are seen in the description column of Table 3. Monocrop cereals are the controls and the same cereals with an intercropped pulse are the silage mix treatments. Seeding was done with a Fabro seeder. Plots were trimmed to 6 by 1.37 m with 23 cm row spacing.

Cereal Pulse Mix									
Description	Yield at 65% Moisture Average ton/ac	Dry Yield Average (ton/ac)	Crude Protein	NDF	TDN	Calcium	Phosphorus	Potassium	Magnesium
CDC Austenson	5.96	2.08	5.3	61.67	55.02	0.37	0.14	0.78	0.17
CDC Baler Oats	7.77	2.72	4.98	60.97	56.51	0.53	0.12	1.49	0.18
Taza Triticale	7.84	2.74	4.77	61.75	55.75	0.34	0.11	0.67	0.17
Austenson/Meadow Peas	5.23	1.83	6.57	57.91	56.62	0.55	0.14	0.9	0.21
Austenson/Lentils	5.45	1.9	5.87	58.47	56.11	0.42	0.14	0.84	0.18
Austenson/Snowbird Faba	5.99	2.09	5.93	56.65	55.67	0.49	0.14	0.97	0.18
Baler/Meadow Peas	6.09	2.13	5.63	59.89	53.07	0.54	0.12	1.45	0.19
Baler/Lentils	6.99	2.44	5.9	59.25	54.42	0.48	0.13	1.28	0.18
Baler/Snowbird Faba	5.71	2	4.85	60.83	51.57	0.59	0.11	1.36	0.18
Taza/Meadow Peas	7.65	2.67	6.01	60.83	55.16	0.5	0.12	0.92	0.2
Taza/Lentils	6.36	2.22	5.26	61.37	55.14	0.45	0.11	0.76	0.18

Table 3. Yield and nutrition of the Pulse Cereal Silage mix. Yields are reported with 65% moisture and as a dry matter yield.

RESULTS AND DISCUSSION

There is no statistical difference in yield and protein between all these treatments. We can say that the pulse cereal mix is keeping up with the monocrop cereal silages but this year they are not surpassing them in protein.

A study conducted in 2019 found that pulse-cereal intercrops had higher protein content than monocrops [2]. We did not see that effect. There was no significant difference in crude protein (CP) between the monocrops and the mixed crops. This could be caused by the overall variation and/or less responsive soils.

There were some differences in yield between different varieties, however, all those differences were non-significant (Table 3). Weed pressure was higher than normal as the trial was seeded in an area where our pre-seed happened too early. Resulting in the weeds having too much time to grow and compete with the silages before they emerged (Figure 4).



Figure 4. Pulse cereal silage Mix trial at planting. The plots behind and to the left of the seeder are the silage pulse plots. Too many weeds are already in the plots which is visible as the plants that are not in ordered rows.

LITERATURE CITED

[1] Jedel P. E. and Helm, J. H. 1993. Forage potential of pulse-cereal mixtures in central Alberta. Canadian Journal of Plant Science. Volume 73, Number 2

[2] Gungaabayar, A. (2019). Forage yield, nutritive value, and nitrogen fixation rate of pea-cereal intercrops for greenfeed production in Saskatchewan (Doctoral dissertation).

LATE-SEEDED WARM-SEASON FORAGES FOR SILAGE PRODUCTION

INTRODUCTION

Flexibility is very important when considering what kind of crops to plant for winter feed. Having flexibility with the types and timings of crops can provide a more consistent supply of feed. Warm season grasses can have larger biomass than cool season cereals or legumes. However, there is a risk that they can be damaged by being seeded too early if there is cold weather.

Common seeding dates for warm season grasses in central Alberta is late May, early June. Some recommended late seeding dates for corn are May 6 - June 7 [1].

Though some regions can have a later corn date than central Alberta; it has found that earlier seeding dates improve corn yield [2]. This late seeding date trial wanted to look at the benefit to a field that had missed all normal seeding times to seeding warm seasons grasses (corn, sorghum, Sudan grass) into warmer soil rather than just seeding something faster maturing like late barley.

MATERIALS AND METHODS

The design was a randomized complete block design with 5 treatments. The treatments were Austenson Barley, brown midrib corn, Sorghum sudangrass, proso millet and Japanese millet. We did the planting very late on July 9th. Seeding was done with a Fabro seeder. Plots were trimmed to 6 by 1.37 m with 23 cm row spacing.

RESULTS AND DISCUSSION

The crop was frozen to death by Sept 8 with the exception of the barley which was just heading (Figure 5-8).



Figure 5. Sorghum sudan grass. This plot does not really come in well. There is a lot barnyard grass in this plot so very little yield overall.



Figure 6. Barley plots were used as a control and survived the cold weather. But late seeding into patchy moisture caused their germination to be a limiting factor.



Figure 7. Corn. There was no flowering or cobbing at all. The plants were damaged by the frost before there was significant stem material.



Figure 8. Japanese Millet seemed to have a thicker stand when planted this late compared to Proso millet.

The plot maturity was not fair enough along to observe good harvest data. The risk of late planting was lower than expected under delayed seeding conditions [3]. However, their seeding date was still earlier than ours giving a longer growing season. Whereas this trial is only giving 60-65 days of growing time. By planting so late we had the potentially expected result. There are often cold nights in September, and an early frost is quite normal. Japanese millet visibly had more leaf material than the Proso Millet (Figure 8). However, it was still not as resistant to the cold as barley and was not able to develop a head in 61 days but there was quite a bit of material. Local producers have reported lower grasshopper pressure in millets than other forages, and better yield in dry conditions. In warmer climates, Pearl millet and sorghum-sudangrass have had comparable yields [4]. This may have been a particularly bad year to attempt this trial with lower average moisture and most of that moisture coming before July.

LITERATURE CITED

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- [4] Lauriault LM, Schmitz LH, Cox SH, Scholljegerdes EJ. 2021. A Comparison of Pearl Millet and Sorghum–Sudangrass Pastures during the Frost-Prone Autumn for Growing Beef Cattle in Semiarid Region. *Agriculture* 2021, 11(6), 541; <https://doi.org/10.3390/agriculture11060541>

CDC BALER AND CDC NASSER HAVE HIGHER TOTAL DIGESTIBLE NUTRIENTS (TDN) IN LOCAL OAT SILAGE COMPARISON

INTRODUCTION

Cereal silages are one of the backbone feed options in winter feeding for beef and dairy operations. Oats, barley, and triticale are all good options with similar value and some distinguishing feature [1]. At Battle River Research Group, we have been growing Oat silage plots at least since 2018 and continue to bring these trials so that producers have local data on different oat silage yields and feed quality.

MATERIALS AND METHODS

The oat silages were seeded on the 11th of June and harvested on August 26th. The varieties tested were Murphy, CDC Haymaker, CDC Baler, AC Morgan, CDC Nasser, and Ore3542M. Oat silages were sprayed with in-crop herbicides as needed. Thistles were a particular nuisance in the oats this year. Fertilizer was applied at the recommended rates for NPK. The oats were seeded into a seedbed prepared by cultivation. Seeding was done with a Fabro seeder. Plots were trimmed to 6 by 1.37 m with 23 cm row spacing. The plots were harvested with our ride-on forage harvester from Lethbridge college (Figure 9).



Figure 9. Updated forage harvester with new fans to reduce plugging. This harvester is used for most of our whole plot silage harvesting.

RESULTS AND DISCUSSION

There was larger than expected variation between the plots within each treatment, so though there are apparent gaps in yield we do not see any statistically significant differences (Figure 10).

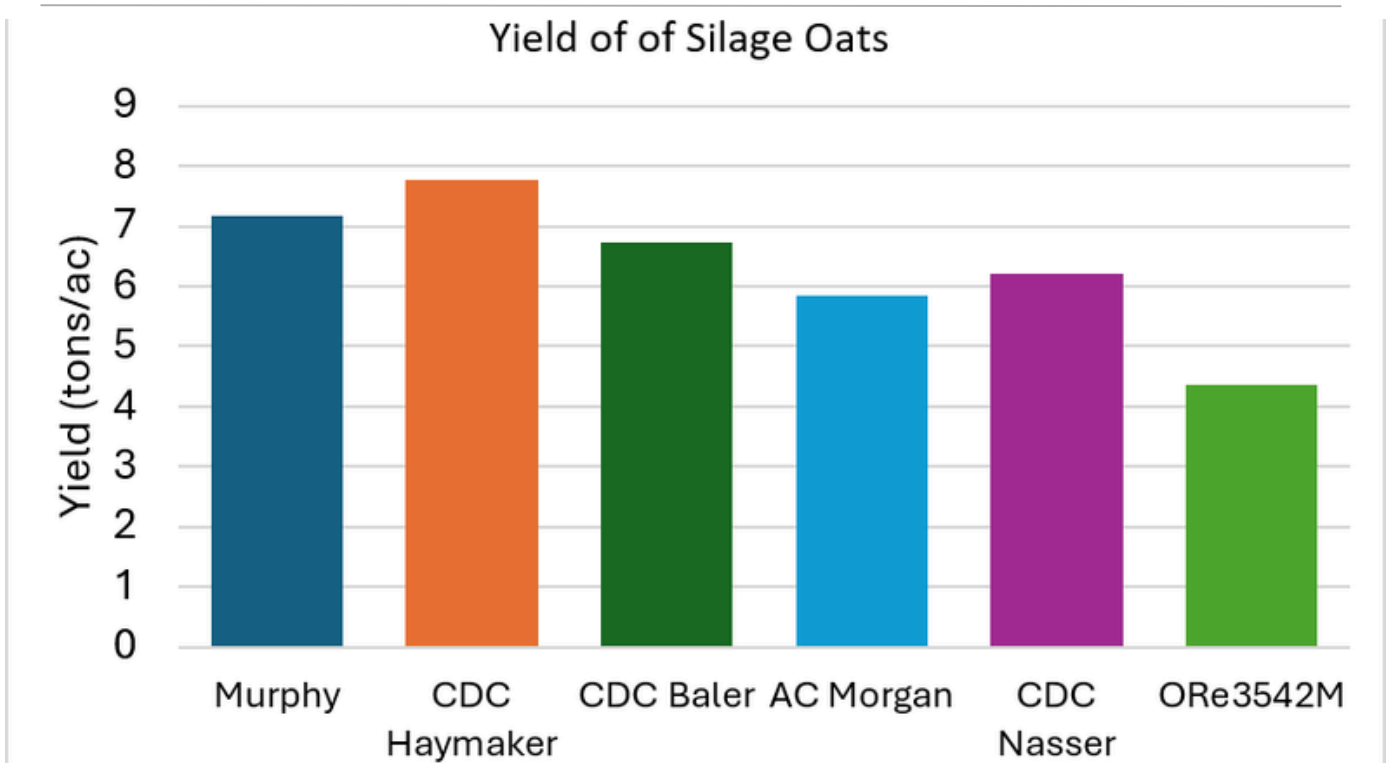


Figure 10. Yield of oat varieties harvested as silage reported in American tons/ac.

However, there were differences in the quality of the forage with some varieties having better Total Digestible Nutrient score (TDN) than others (Figure 11; $P = 0.001$). Specifically, CDC Baler had significantly higher TDN than Murphy, AC Morgan, and Ore3542M. The silage oats had a really good protein yield this year (Table 4) which would supply almost the full protein requirements for a low yielding dairy cow [2].

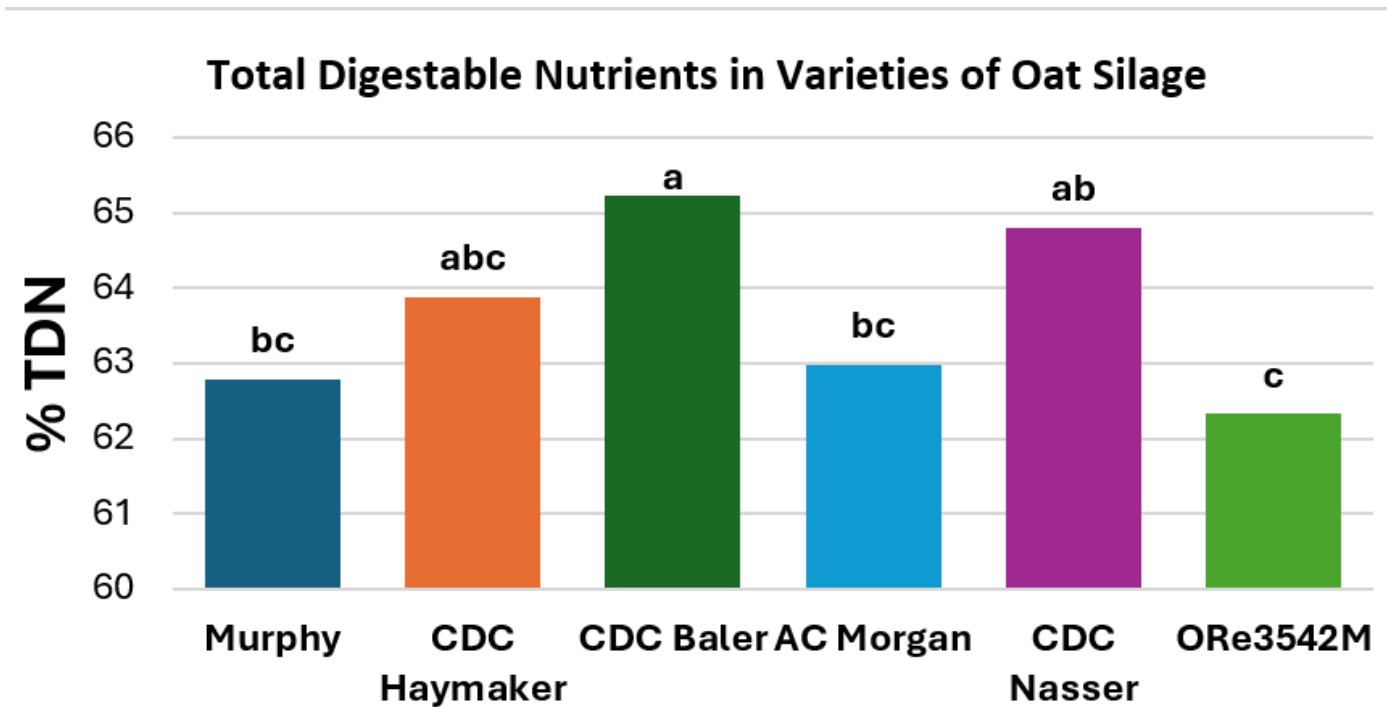


Figure 11. The above figure shows the average TDN from different varieties of oat silage. Any variety sharing a letter with another variety does not have a significantly different percent TDN than that variety. For example, CDC Nasser and AC Morgan both share the letter, so the difference between their average percent TDNs is not statistically significant.

Oat Silage Mix									
Description	Yield at 65% Moisture Average ton/ac	Dry Yield Average (ton/ac)	Crude Protein	NDF	TDN	Calcium	Phosphorus	Potassium	Magnesium
Murphy	6.72	2.35	9.14	56.12	62.78	0.63	0.21	1.45	0.25
CDC Haymaker	6.27	2.19	10.3	54.75	63.88	0.69	0.21	1.34	0.25
CDC Baler	5.01	1.75	9.72	53.02	65.23	0.71	0.2	1.3	0.25
AC Morgan	5.84	2.05	9.31	54.67	62.97	0.69	0.21	1.38	0.25
CDC Nasser	6.95	2.43	8.92	53.25	64.8	0.66	0.2	1.24	0.26
ORe3542M	7.31	2.56	8.15	55.91	62.32	0.64	0.2	1.36	0.23

Table 4. Oat Silage lab results. Yields are in American tons per acre. Other values in the table are averages from samples from 4 plots for each variety of oats.

LITERATURE CITED

[1] Helm, J. H., & Salmon, D. F. (2002). Cereal silage options for western Canada. *Adv. Dairy Technol*, 14, 229-39.

[2] Van Saun, R. J. (2025). Nutritional requirements of dairy cattle. In *Merck Veterinary Manual*. Merck & Co., Inc. <https://www.merckvetmanual.com/management-and-nutrition/nutrition-dairy-cattle/nutritional-requirements-of-dairy-cattle>

CATTLELAC BARLEY HAS THE LOWEST YIELD IN LOCAL BARLEY SILAGE

INTRODUCTION

Barley is one of the highest yielding and best quality cereal silages available to Alberta farmers [1]. At Battle River Research Group, we have been growing barley silage plots at least since 2018 and continue to bring these trials so that producers have local data on different barley silage yields

MATERIALS AND METHODS

The Barley silages were seeded on the 11th of June and harvested on August 26th. The varieties chosen were CDC Austenson, Canmore, CDC Maverick, CDC Cowboy, AB Cattelac, Altorado, CDC Coalition, and AAC Lariat. Barley and silages were sprayed with in-crop herbicides as needed, and had fertilizer applied at the recommended rates for NPK. Barley silages were seeded into standing stubble. Seeding was done with a Fabro seeder. Plots were trimmed to 6 m by 1.37 m with 23 cm row spacing. The plots were harvested with our ride-on forage harvester from Lethbridge college.

RESULTS AND DISCUSSION

Our Barley had fairly equal yields statistically with Cattelac showing lower yields than Austenson or Altorado (Figure 12; P = 0.016). The silage barley trial also experienced some of the problems with weeds that we saw in the pulse cereal mix trial. Crude Protein (CP) was at good levels this year (Table 5), but not at high enough levels to sustain dairy production without supplementation [2].

Barley Silage Mix									
Description	65% Ton/ac	Dry Ton/ac	Crude Protein	NDF	TDN	Calcium	Phosphorus	Potassium	Magnesium
CDC Austenson	8.48	2.97	6.93	61.11	60.96	0.38	0.16	1.35	0.15
Canmore	5.33	1.87	6.93	56.53	60.99	0.37	0.17	1.11	0.15
CDC Maverick	5.39	1.89	6.22	54.99	60.11	0.42	0.16	0.9	0.15
CDC Cowboy	4.47	1.57	6.59	59.44	60.2	0.38	0.16	1.23	0.15
AB Cattelac	3.54	1.24	7.07	54.8	60.94	0.42	0.18	1.05	0.17
Altorado	8.39	2.94	6.44	58.48	63.06	0.37	0.17	1.25	0.15
CDC Coalition	5.02	1.76	7.29	54.37	61.77	0.42	0.18	1.07	0.15
AAC Lariat	5.37	1.88	6.99	57.02	61.28	0.41	0.17	1.25	0.15

Table 5. Barley silage yield and nutritional information from the Forestburg 2025 site year.

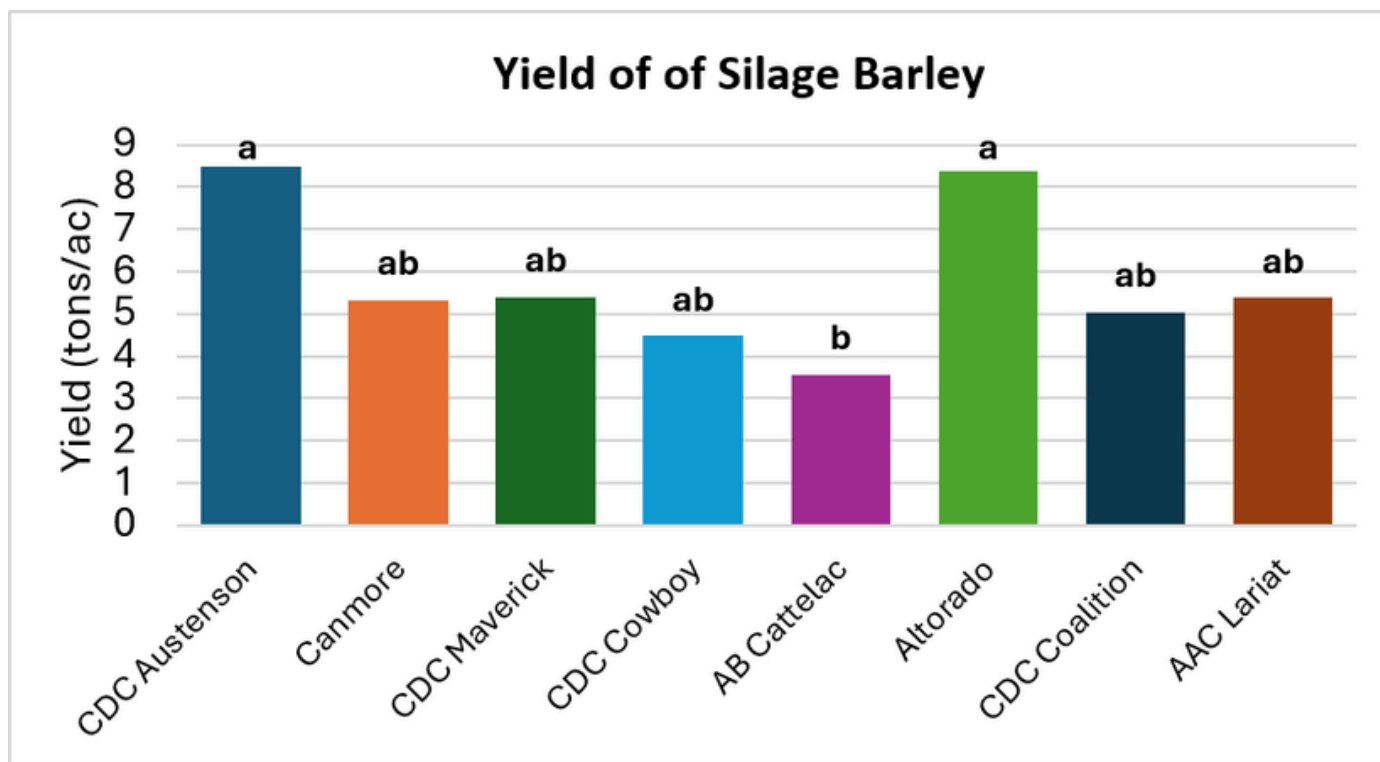


Figure 12. Yield of barley silage in American tons/ac. Bars with different letters indicate significant differences in yield ($P \leq 0.05$)

LITERATURE CITED

[1] Helm, J. H., & Salmon, D. F. (2002). Cereal silage options for western Canada. *Adv. Dairy Technol*, 14, 229-39.

[2] Van Saun, R. J. (2025). Nutritional requirements of dairy cattle. In *Merck Veterinary Manual*. Merck & Co., Inc. <https://www.merckvetmanual.com/management-and-nutrition/nutrition-dairy-cattle/nutritional-requirements-of-dairy-cattle>

LOCAL WHEAT VARIETY PERFORMANCE TRIAL (RVT)

INTRODUCTION

Wheat is one of the most important crops in Alberta and always has one of the highest acreages every year. New varieties and watching local variety performance can be one way to reach the maximum potential yield. New varieties come with improved yield potential as well as other agronomic factors like straw length and awns. Disease and pest resistance are another advantage that new varieties can have over the older ones. While variety is an important choice, management can be the difference between reaching yield potential and falling short. Previous studies have show wheat yield can be lacking as much as 24% due the management [1].

MATERIALS AND METHODS

In 2025 we tested 17 varieties of wheat, 8 of Canadian Western Red Spring (CWRS), 3 of Hard Red Spring Wheat (HRSW) and 6 of Canadian Prairie Spring Red (CPSR; Table 6).

Trt. #	Varieties	Wheat Class
1	AAC BRANDON	CWRS
2	AAC Viewfield	CWRS
3	AAC Redstar	CWRS
4	AAC Wheatland VB	CWRS
5	CDC SKRush	CWRS
6	SY Manness	CWRS
7	AAC Hodge	CWRS
8	AAC Hockley	HRSW

Trt. #	Varieties	Wheat Class
9	CDC Envy	HRSW
10	AAC Penhold	CPSR
11	CDC Reign	CPSR
12	AAC Westlock	CPSR
13	Forefront	HRSW
14	AAC Goodwin	CPSR
15	CS Accelerate	CPSR
16	AAC Rimby VB	CPSR
17	AC Stettler	CWRS

The trial was conducted in a randomized complete block design. Plots were planted with a six row (23 cm) row spacing Fabro air drill with Technotill openers at 4 cm depth on May 9th, 6 miles southeast of Forestburg. Weed pressure was low this year and weeds were managed with hand picking and a herbicide application to all plots. Harvest was done with our Wintersteiger plot combine on September 3rd. Analysis was done with an ANOVA on the average yields adjusted to moisture at 13.5%.

RESULTS AND DISCUSSION

There was higher than desirable variation between the plots this year so there were no statistically significant results among the CWRS and HRSW varieties as seen in Figure 13. With lower than average seasonal precipitation we would hope to see some varieties with drought tolerance appear in the data. There was also no significant difference in the CPSR wheat yields Figure 14 or seed sizes.

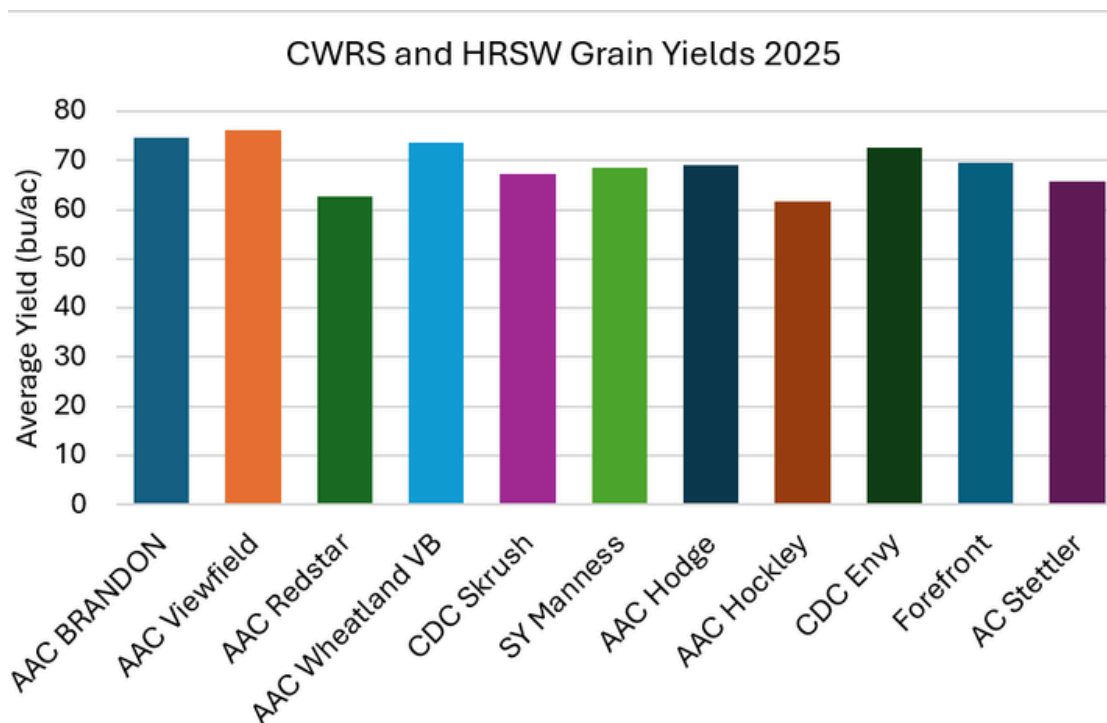


Figure 13. Average yield of CWRS and HRSW grown in summer 2025. Though differences are shown in this figure they are not statistically significant.

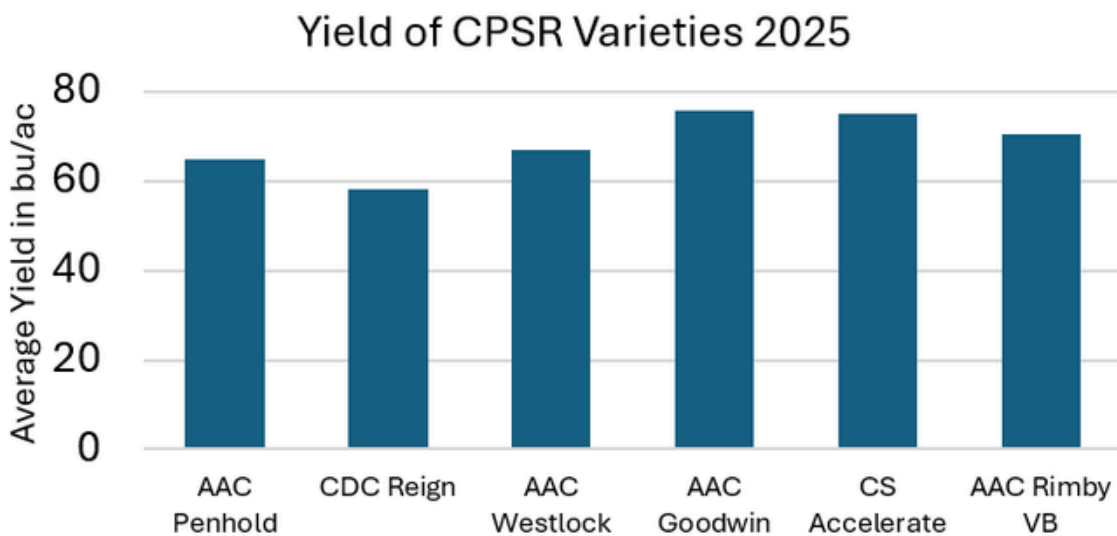


Figure 14. Average yield of CPSR varieties in grown in summer 2025.

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EFFECTIVENESS OF SOIL-APPLIED RESIDUAL HERBICIDES FOR CONTROL OF KOCHIA (BASSIA SCOPARIA) IN FIELD PEA

INTRODUCTION

Weed pressure is one of the most difficult and perennial challenges to producers' attainment of maximum yield in modern cropping systems. Chemical options have become the most common answers to these problems [1]. There are still crop and weed combinations that do not have options that provide the level of control we would like. In the brown and dark brown soil zones there has been an increasing amount of Kochia (*Bassia scoparia*) in recent years. There are currently no in-crop herbicides for kochia in peas. To make the problem even worse kochia has developed resistance to many of the most commonly used pre-seed options like glyphosate. Farmers can use rotations, tillage, and higher seeding rates to combat herbicide resistant weeds like kochia but including these practices with chemical control should be the best chance to save as much yield potential as possible. Chinook Applied Research Association is leading a trial in peas to see what commercially available pre-seed and residual herbicides have efficacy against kochia in pea crops in the early season and if this suppression is enough to provide a benefit through flowering to harvest.

MATERIALS AND METHODS

This trial was formatted as a randomized complete block design with 10 treatments all applied in the fall with a hand boom sprayer. The treatments were as follows; a control with no chemical applied, a control with only a pre-seed burndown applied in the spring, flumioxazin 0.060 L/ac (Valtera EZ), flumioxazin 33.5% and pyroxasulfone 42.5% (Fierce EZ) at 0.178 L/ac, pyroxasulfone (Zidua) at 0.073 L/ac, pyroxasulfone and carfentrazone-ethyl (Focus) at 113 L/ac, sulfentrazone (Authority 480) 0.089 L/ac,

Sulfentrazone and Pyroxasulfone (Authority Supreme) at .202 L/ac, sulfentrazone and carfentrazone-ethyl (Authority Strike) at 0.089 L/ac and ethalfluralin (Edge) at 3.44 kg/ac. All the fall applied residual plots will also have a spring application of glyphosate to remove weeds that are not of interest. In 2025, Carver peas were seeded into standing wheat stubble at a depth of 4 cm. Plots were planted with a six row (23cm) row spacing Fabro air drill with Technotill openers and trimmed to 6 m long.

DATA COLLECTION

At the time of seeding each plot was assessed for kochia already growing in it and this rating was repeated every two weeks. A small subplot 0.25m² was flagged off and every kochia plant in this square counted. The kochia population of the subplot was counted every second week until six weeks post seeding. In addition, the entirety of each plot was assessed for kochia population using a 0-100 scale of infestation 0=no weeds, 100=complete infestation. To determine how much damage was caused by the kochia infestation the total kochia biomass of the subplots was measured at harvest. The kochia was clipped by hand close to the ground and put into mesh bags. The kochia biomass was weighed as a wet weight and taken after drying. The yield of each plot will be a proxy for how the kochia pressure held back the yield potential. Yield was collected with our Wintersteiger plot combine.

RESULTS AND DISCUSSION

In 2024 the BRRG site was planted in a field with a very high load of kochia. This weed pressure was so high that no chemicals seemed to have a sufficient effect. Kochia was able to get through every residual chemical applied and in many plots there were not enough peas to form a measurable yield. (Continue on next page)

Kochia Management in Field Pea

In 2025 it was hard to assess the data since there was so little kochia in the plots that no chemical was obviously more effective than the others. The canola surrounding the trial site had some kochia in the edges but not enough germinated even in the control plots to determine an outcome. Generally, there was lower weed pressure in the herbicide plots than the no chemical control (Figure 15) but even this effect was not significant.

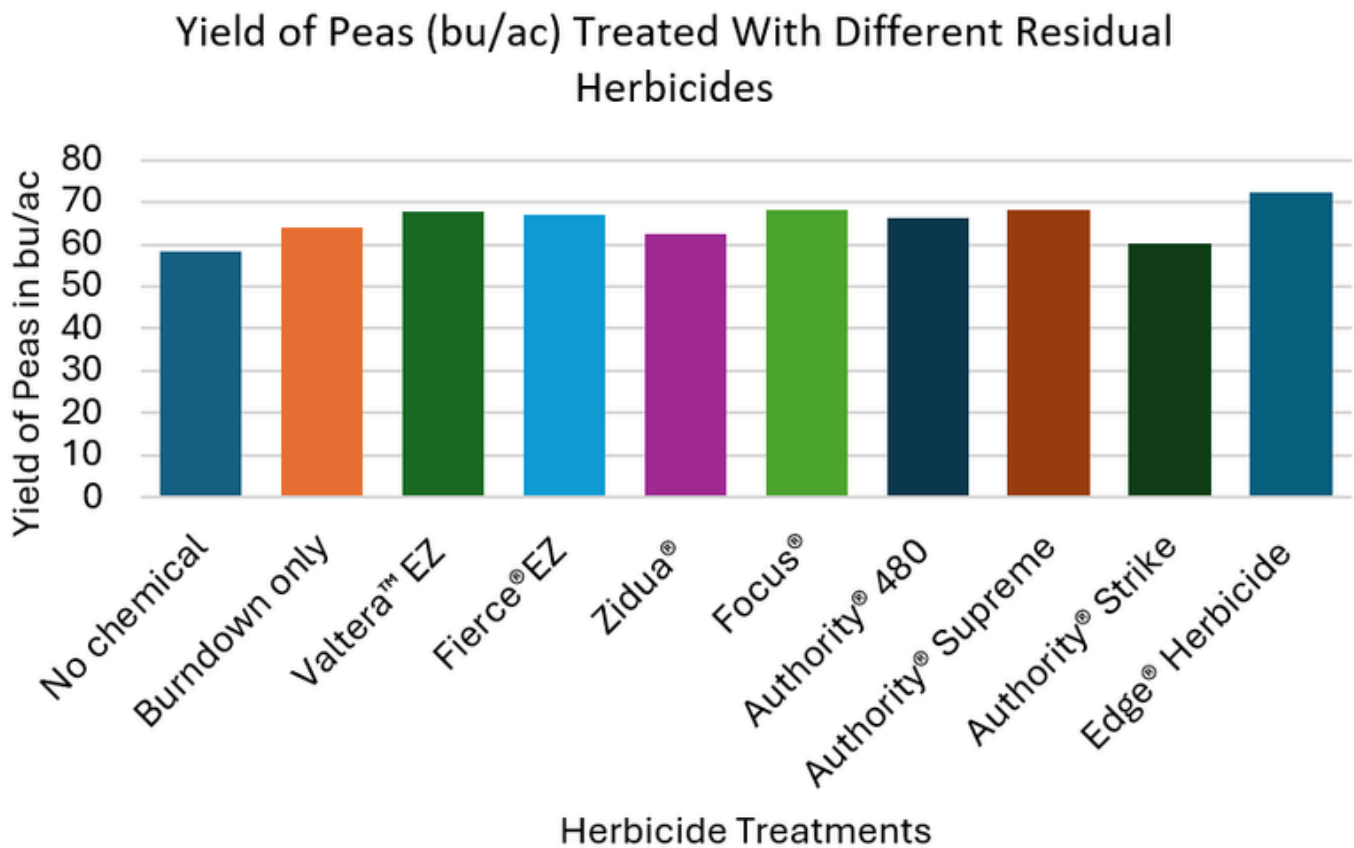


Figure 15. Yield in Carver field peas with various pre-seed herbicides applied in the fall of 2024. No statistical difference was observed in the yield for these treatments.

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EVALUATING MANAGEMENT PRACTICES FOR IMPROVING FORAGE PRODUCTION, SOIL HEALTH AND DROUGHT RESILIENCE OF AGED PERENNIAL STANDS

INTRODUCTION

Pasture is used by the cattle industry as the primary feed source often for as many months as can be supported. As land value and the cash crop value that the land can produce has increased pasture areas are being broken and the area left as pasture is most often the marginal land. Native pastures have some protection and cannot be improved with the most dynamic amendments, so this project is focusing on tame pastures. Tame pastures can lose their productivity through loss of desirable species, poor nutrient cycling, compaction, limited moisture, yield loss due to invasive species. This trial is being led by Chinook Applied Research Association (CARA) and is to discover what kind of benefits can be expected with different pasture improvements over 4 years following work already done [1]. To see how these treatments affect yield, harvesting was done in three ways to mimic continuous grazing, a short rest rotation or a longer rest rotational grazing strategy. Different species have very different value in terms of yield and nutrition so that composition of a pasture is particularly important for how well that pasture is going to do for you. For an improvement to be long term the composition of the pasture must be improved or at least retained. Short-term yield improvements will have some value. However, improvements to the overall composition of the pasture can benefit the yield for years to come.

MATERIALS AND METHODS

This is a four-year trial with one location in the CARA area close to Oyen AB in the Brown soil zone and the other is in Paintearth County near Halkirk AB, in the dark brown soil zone.

This trial is setup as a randomized complete block design which allows for differences between the treatments to be replicated multiple times and observe if they are due to the treatments or only from random difference throughout the pasture. The treatments are an untreated control (Figure 19), spiking soil disturbance (Figure 16), high rate of nitrogen at 90 lbs/ac of actual N and a low rate of 45 lbs/ac of actual N, sod seeded alfalfa, sod seeded sainfoin, Manure broken up by harrowing at 3440 lbs/ac based on a 45 lbs/ac of N from a composition test of the manure, undisturbed manure also at 3440 lbs/ac, alfalfa pellets, Humalite at 400 lbs/ac and compost tea extract. Both high and low nitrogen rates were applied in the form of, environmentally smart nitrogen (ESN), urea ammonium nitrate (UAN), and urea (Figure 18). Meaning that there were 6 nitrogen rate treatments, each N form and both the high and low rate. The list of the treatments in Table 7.

Trt #	Pasture Rejuvenation Treatments
1	Control
2	Spiking/soil disturbance
3	Low N ESN
4	Low N Urea
5	High N ESN
6	High N Urea
7	Low N UAN 28%
8	High N UAN 28%
9	Manure broadcast, heavy harrow

Trt #	Pasture Rejuvenation Treatments
10	Manure broadcast, no heavy harrow
11	Alfalfa by sod seeding
12	Sainfoin by sod seeding
13	Compost tea biological amendment
14	Alfalfa pellets biological amendment
15	Humalite biological amendment

Legumes, alfalfa and sainfoin added by direct seeding into the sod with the BRRG Fabro plot drill and the spiking was done with the same drill to the deepest depth possible. Compost tea was from CARAs compost project and was applied by soaking 2 kg of compost in 11 L of water for 1 hr. After that time the compost solids were strained out, and the liquid inoculant was then applied with a hand sprayer at a rate of 79 L/ac.

DATA COLLECTION

Initial soil samples were collected to observe soil health along with an infiltration test to see how the chosen pasture sites take in water. To attest to any changes in forage type throughout this trial subplots of each treatment area were assessed for the percent of the forage cover made up of any one species. This was done by dividing a 0.5 x 0.5 m into smaller squares and estimating the ground cover provided by each species and the bare ground in that square. Throughout the summer, yield was collected from the small sub plots at monthly intervals (Figure 17). For the long rest rotation there was only one harvest, in August, 87 days after the treatments were applied. The short rest period sub-plots were harvested twice; in June and August, 28 and 87 days after treatment.

Finally the “continuous grazing” subplots were harvested every month for 4 months 28, 59, 87, and 122 days after the treatments. These harvests were weighed wet, dried under shelter on racks at 30 °C with forced air for at least 7 days and then weighed for a dry weight. The dry samples were then sent to the lab to determine forage nutrients. Weather data was taken from the Alberta ACIS website (Table 8) from the Halkirk weather data station. This station is the closest that we have at 21 km from the site. The general amount of moisture should be consistent with what the site received.

RESULTS AND DISCUSSION

There was a statistically small difference in the yields between all the treatments with specifically the artificial nitrogen fertilizers yielding higher than the other treatments (Figure 20; $P < 0.001$). Low ESN and high UAN all achieved yields above what the sainfoin seeded and Humalite plots yielded. The Low Urea application yielded higher than the manure application with disturbance, the alfalfa seeded plots and the compost tea application. We found that the spiking treatment did not have a significantly lower yield in our first year. A study in the 1998 found that spiking had a lower yield than any fertilizer treatment in the first year but recovered in the second [2]. It could be that our higher precipitation than average in May (Table 8) allowed the spiking plots to keep up production in this first year. Low Urea and noticeably nothing else differed greatly from the control. So not sufficient evidence yet that we are “improving” this pasture beyond what some specific patches can do.

Precipitation Halkirk 2025 versus normal						
	May.	Jun.	Jul.	Aug.	Sept.	Total
Normal	46.8	75.7	71.4	49.8	34	277.7
2025	76.5	73.9	41.7	66.3	0	258.4
difference	-29.7	1.8	29.7	-16.5	34	19.3

Table 8. Precipitation data from closest Alberta weather data station [3].

As this is only the first year of this trial these are only preliminary results, and we will have a better idea of how these treatments affect pasture health as more data is collected. In terms of yield, we saw a lot of variability between the plots. There was no significant difference in yield between the different “grazing” rotations. If there was sufficient moisture and the right species present, we would expect to see the pasture be able to adapt to a higher intensity of grazing but due to moisture there was no difference here.



Figure 16. Spiking disturbance applied with our plot seeder. Spiking was done at the deepest possible depth. The sod was dense enough that we did not always achieve the hoped for depth of 3 inches. Photo taken at time of seeding/treatments May 26th.



Figure 17. Harvesting being done June 23rd. Subplots clipped by hand and weight wet and dry.



Figure 18. High rate UAN 28%. The deep green colour shows the grass responding to this N treatment. Photo taken 28 days after treatment



Figure 19. Control shows no visible change, photo taken June 23rd.



Figure 20. Yield taken in kg/0.25 m² from all harvesting timings combined. Any bar that shares a letter with another bar is statistically equal to that bar.

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PRACTICAL DEMONSTRATION OF NITROGEN AND PGR EFFECTS ON FEED BARLEY: YIELD, QUALITY AND STANDABILITY

INTRODUCTION

Optimizing nitrogen (N) management is essential for maximizing both yield and profitability [1]. However, excessive nitrogen applications can increase the risk of lodging, which negatively impacts grain quality and harvest efficiency [2]. Plant Growth Regulators (PGRs) have emerged as a promising solution to this challenge by improving stem strength and reducing lodging, which could ultimately improve yield consistency and overall quality [3].

Research conducted in Alberta has demonstrated that advanced agronomic practices, including supplemental post-emergent nitrogen fertilizer and PGR application, have contributed to higher feed barley yields, with increases of at least 9.3%, particularly when growing season precipitation was not limiting [4]. In addition, higher-yielding barley varieties often require increased nitrogen inputs to maximize their potential. For example, certain varieties in this study have the potential to yield up to 16% higher than common check varieties such as CDC Copeland [5]. This underscores the importance for local producers to understand the nitrogen requirements of various feed barley varieties, as optimizing nitrogen use can improve both yield and nitrogen use efficiency, which is vital for sustainable farming practices.

This demonstration trial focuses on three widely grown feed barley varieties (CDC Austenson, Sirish and Esma, constituting 15.1%, 15.5%, and 8.8% of total barley acres in the risk area of 12 in Alberta) in the Forestburg and surrounding region [6]. By evaluating the interactive effects of nitrogen rates and PGRs, this project aims to provide practical, region-specific recommendations to help local producers enhance their barley production systems.

The goal is to determine whether higher nitrogen rates, when paired with PGRs, can be used effectively to unlock higher yield potential without compromising standability or overall profitability [7]. Furthermore, this study will help identify variety-specific responses to these management practices, offering insight into whether PGRs are required for all barley varieties or if some exhibit superior lodging resistance without the need for additional treatments.

MATERIALS AND METHODS

The demonstration was conducted at a field site near Forestburg using a randomized complete block design (RCBD) with a split-split plot layout. The main plot factor was barley variety, the sub-plot factor was nitrogen (N) rate, and the sub-sub-plot factor was plant growth regulator (PGR) application. Three replications of each treatment were included to ensure robustness of the demonstration and to allow for meaningful visual comparisons, particularly if any plots were affected by unforeseen environmental conditions. Seeding was carried out using a six-row Fabro drill with 23 cm row spacing, following recommended seeding rates and seeding depths to ensure optimal crop establishment. Nitrogen treatments were based on soil test recommendations provided by A&L Canada Laboratories, where the 100% N rate represented the recommended nitrogen rate. Additional treatments were applied at 120% and 140% of the baseline nitrogen recommendation to evaluate the effects of increased nitrogen fertility on barley growth and yield. The commonly used PGR, Moddus (trinexapac-ethyl), was applied at the appropriate crop growth stage according to label recommendations. Standard agronomic practices for weed and pest management were followed throughout the growing season to maintain uniform growing conditions across all treatments. (Continue on next page)

Barley PGR & Nitrogen Demonstration

A total of 18 treatment combinations were evaluated, consisting of three barley varieties (CDC Austenson, Sirish, and Esma), three nitrogen rates (100%, 120%, and 140% of the recommended nitrogen rate), and two PGR levels (with and without PGR application; Table 9).

Trt No.	Variety	N Rate	PGR Applied
1	CDC Austenson	100%	Yes
2	CDC Austenson	120%	Yes
3	CDC Austenson	140%	Yes
4	CDC Austenson	100%	No
5	CDC Austenson	120%	No
6	CDC Austenson	140%	No
7	Sirish	100%	Yes
8	Sirish	120%	Yes
9	Sirish	140%	Yes
10	Sirish	100%	No
11	Sirish	120%	No
12	Sirish	140%	No
13	Esma	100%	Yes
14	Esma	120%	Yes
15	Esma	140%	Yes
16	Esma	100%	No
17	Esma	120%	No
18	Esma	140%	No

Table 9. Treatment combinations for barley PGR demonstration trial near Forestburg AB.

RESULTS AND DISCUSSION

The split-split plot ANOVA showed that block effects were significant ($P = 0.0033$), indicating some spatial variability across the experimental area. However, no significant effects were observed for barley variety, nitrogen rate, PGR application, or any of their interactions on the measured response variable ($P > 0.05$; Table 10).

Source	Df	Sum Sq	Mean Sq	F value	p-value
Block	2	1107.14	553.57	7.98	0.003
Variety	2	28.36	14.18	0.07	0.934
Nitrogen rate	2	85.56	42.78	0.43	0.659
Variety x Nitrogen rate	4	392.01	98	0.99	0.449
PGR	1	2.66	2.66	0.04	0.847
PGR x Variety	2	289.67	144.83	2.09	0.153
PGR x Nitrogen rate	2	88.08	44.04	0.63	0.542
PGR x Nitrogen rate x Variety	4	425.66	106.42	1.53	0.235

Mean response values among barley varieties were similar, with CDC Austenson (104.5 bu/ac), Sirish (103.9 bu/ac), and Esma (102.7 bu/ac) not differing significantly from one another. Likewise, the nitrogen rate treatments (100%, 120%, and 140% of the recommended nitrogen rate) did not significantly affect the yield, although numerically the 140% nitrogen treatment produced the highest mean value (105.2 bu/ac). Application of the plant growth regulator (PGR) did not significantly influence the yield, with nearly identical averages observed between the PGR and no-PGR treatments. (Continue on next page)

Despite the lack of statistically significant treatment differences, overall barley yields at the demonstration site were relatively strong compared to historical regional averages reported for Risk Area 12 in recent years (Figure 21). Several treatment combinations exceeded 100 bu/ac, with the highest yielding plots approaching approximately 138 bu/ac. In comparison, historical dryland yields for the tested varieties in the region have generally ranged from approximately 52 to 100 bu/ac depending on year and variety. For example, 2024 reported regional averages were approximately 66 bu/ac for Sirish, 52 bu/ac for CDC Austenson, and 68 bu/ac for Esma [8]. These results suggest that growing conditions at the demonstration site were generally favorable with high yield potential.

Although statistical differences were not detected among treatments, some numerical trends were observed. The CDC Austenson × 120% N × PGR treatment combination produced the highest yield (115.5 bu/ac), whereas some lower nitrogen treatments tended to produce comparatively lower yields. However, variability within treatments prevented these differences from reaching statistical significance.

Grain protein concentration was not significantly affected by barley variety, nitrogen rate, PGR application, or any of their interactions (data not shown). Mean crude protein concentrations among treatment combinations ranged from 11.60 to 12.75%.

Although no significant treatment effects were detected, several numerical trends were observed. CDC Austenson and Sirish had similar average crude protein concentrations (12.40 and 12.41%, respectively), while Esma averaged slightly lower at 11.95%. Across nitrogen treatments, crude protein concentration increased marginally from approximately 12.15% at the 100% nitrogen rate to 12.42% at the 140% nitrogen rate. However, the magnitude of this increase was small and not statistically significant.

Plant growth regulator (PGR) application had little effect on grain protein concentration. Mean crude protein concentrations were similar between PGR-treated and untreated plots across all varieties and nitrogen rates, indicating that PGR application did not influence grain quality under the conditions of this demonstration.

Overall, crude protein concentrations were relatively uniform across treatments, suggesting that increasing nitrogen rates above the recommended level and applying a PGR provided limited benefit for improving grain protein concentration in this environment.

The lack of a measurable PGR response may have been related to environmental conditions during the growing season. Plant growth regulators are generally most effective under conditions where high nitrogen availability and adequate moisture promote excessive vegetative growth and increase lodging pressure. Although nitrogen rates were increased to 140% of the recommended rate, rainfall and overall environmental conditions may not have been sufficient to induce substantial lodging. As a result, the benefit of PGR application may have been limited under the conditions encountered in this demonstration.

The coefficient of variation decreased from the main plot level (CV_a = 13.8%) to the subplot (CV_b = 9.6%) and sub-subplot level (CV_c = 8.0%), indicating acceptable experimental precision, particularly at the lower plot levels. Overall, results suggest that under the environmental and management conditions of this study, the evaluated barley varieties responded similarly to increased nitrogen rates and PGR application, while overall yield performance remained relatively strong compared to recent regional averages.



Figure 21. Barley demonstration trial near Forestburg, showing overall crop standability and canopy uniformity under varying nitrogen rates and plant growth regulator (PGR) treatments at harvest maturity.

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EFFECTS OF TILLAGE MANAGEMENT AND FERTILIZER DEPTH ON SOILS IN CORN

INTRODUCTION

A corn tillage and fertilizer placement depth trial was conducted during the growing season at a producer field in Stettler County to evaluate the effects of tillage system and fertilizer placement depth on soil nutrient dynamics and selected soil health parameters. The study focused on understanding how different tillage practices and fertilizer placement depths influence nutrient availability and soil properties during the growing season and following harvest. Emphasis was placed on nitrate nitrogen, phosphorus availability, soil pH, potassium, and soil carbon dynamics.

MATERIALS AND METHODS

The trial was conducted at a producer's farm in Stettler County (10 miles south of Botha) using a split-plot design with three replications. The main plot factor consisted of three tillage systems: No Till, Strip Tillage, and Full Tillage. The split-plot factor consisted of three fertilizer placement depths: 10, 15, and 20 cm placement depths. Soil samples at 0-15 cm depth were collected during July (mid-season) and October (post-harvest) to evaluate treatment effects throughout the growing season (Figure 22). Laboratory analysis included nitrate nitrogen (NO₃-N), Bray phosphorus, pH, potassium, sulfur, total and organic carbon, cation exchange capacity (CEC), enhanced nitrogen release (ENR), and organic matter measurements. Statistical analysis was conducted using split-plot ANOVA, and treatment means were separated using LSD mean separation at the 0.05 significance level.



Figure 22. Soil sampling conducted at the corn tillage management on-farm trial site during the 2025 growing season.

RESULTS AND DISCUSSION

Mid-Season Soil Response (July)

Several significant treatment effects were observed during the mid-season soil sampling period in July. Tillage treatment significantly affected nitrate nitrogen (NO₃-N) concentrations, where Strip Tillage resulted in significantly greater nitrate levels (144.8 ppm) compared to No Till (62.3 ppm) and Full Tillage (65.2 ppm; Figure 23). These results indicated greater mid-season nitrate availability under Strip Tillage compared to the other tillage systems.

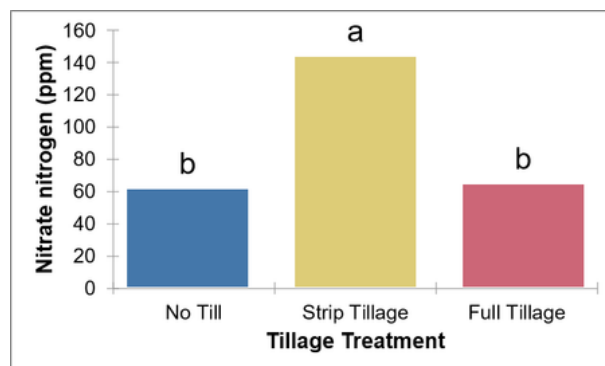


Figure 23. Effects of tillage treatment on nitrate nitrogen (NO₃-N) in mid-season (July). Different letters above bars indicate significant differences.

Corn Tillage Management

Fertilizer placement depth significantly influenced phosphorus concentrations (Bray-P1). The 4-inch fertilizer placement depth resulted in the highest phosphorus availability (158.1 ppm), which was significantly greater than the 15 cm (142.6 ppm) and 20 cm (140.3 ppm; Figure 24) fertilizer placement depths. These findings indicated that shallow fertilizer placement may increase available phosphorus during the growing season.

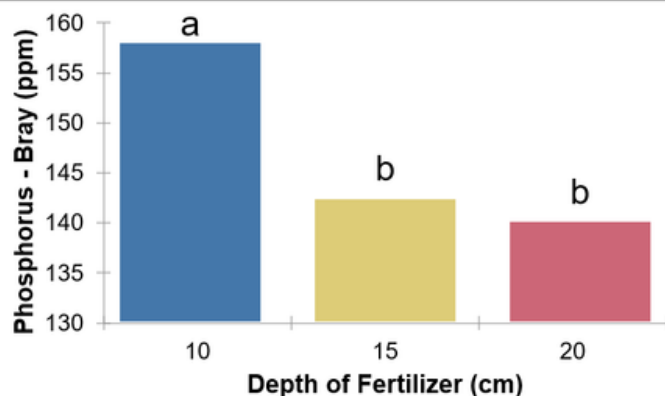


Figure 24. Effects of depth of fertilizer on phosphorus availability in mid-season (July). Different letters above bars indicate significant differences.

A significant tillage × fertilizer depth interaction effect was observed for potassium concentrations (Figure 25). Potassium levels were significantly lower under Full Tillage when fertilizer was applied at the 20 cm depth (321.0 ppm) compared to all other treatment combinations. These results demonstrated that potassium response varied depending on the combination of tillage system and fertilizer placement depth.

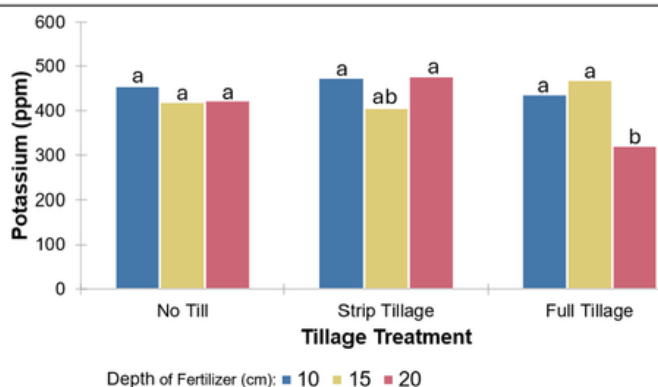


Figure 25. Interaction effects of tillage system and fertilizer placement depth on mid-season soil potassium concentration (ppm) at the 0-15 cm soil depth in the corn demonstration in Stettler County, Alberta. Bars with different letters indicate significant differences among treatment combinations ($P \leq 0.05$)

Similarly, organic carbon showed a significant tillage × fertilizer depth interaction (Figure 26). Organic carbon concentration was highest under Full Tillage with 15 cm fertilizer placement (3.1%), which was significantly greater than most other treatment combinations except Strip Tillage with 20 cm fertilizer placement (3.0%). In contrast, the lowest organic carbon concentrations were observed under No Till with 10, and 20 cm fertilizer placement depths. These findings suggested that soil carbon response varied depending on the interaction between tillage system and fertilizer placement depth

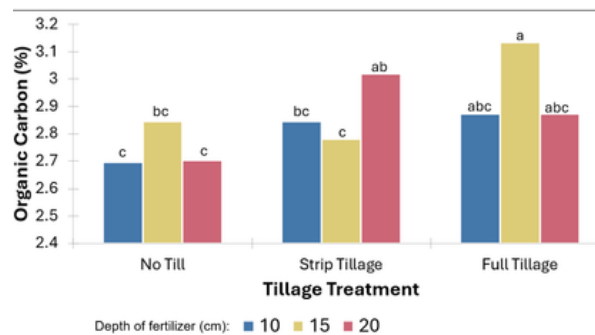


Figure 26. Interaction effects of tillage system and fertilizer placement depth on mid-season soil organic carbon concentration (%) at the 0-15 cm soil depth in a corn demonstration trial in Stettler County, Alberta. Bars with different letters indicate significant differences among treatment combinations ($P \leq 0.05$)

Several additional soil properties, including ENR, CEC, and organic matter, did not show significant treatment differences during the July sampling period.

Post-Harvest Soil Response (October)

By the October post-harvest sampling period, most treatment effects observed during mid-season were no longer significant. Soil pH, nitrate nitrogen, Bray phosphorus, potassium, sulfur, and total/organic carbon values were relatively uniform across treatments. The reduction in treatment differences by post-harvest sampling suggested that nutrient redistribution, crop uptake, and ongoing microbial transformations throughout the growing season reduced detectable differences among treatments over time. Overall, the results indicated that management effects were most evident during periods of active crop growth and peak nutrient demand rather than after harvest.

EVALUATING EFFECTS OF REDUCED NITROGEN FERTILIZER RATES ON CORN-SOYBEAN INTERCROPPING

INTRODUCTION

A corn-soybean intercropping trial was conducted during the 2025 growing season at a producer field in Stettler County to evaluate the effects of nitrogen (N) fertilizer rate on selected soil chemical and soil health parameters. The study compared 70% and 100% of the recommended nitrogen fertilizer rate under an intercropping system to assess how reduced nitrogen application influenced nutrient dynamics and soil properties during the growing season and after harvest.

MATERIALS AND METHODS

The trial was conducted at Stettler County (10 miles south of Botha) using a randomized complete block design (RCBD) with three replications and nitrogen fertilizer rate as the treatment factor (Figure 27). Two nitrogen fertilizer treatments were evaluated, consisting of 70% and 100% of the recommended nitrogen rate.

Soil sampling was conducted during July (mid-season) and October (post-harvest). Laboratory analysis included soluble salts, organic carbon, total carbon, nitrate nitrogen (NO₃-N), Bray phosphorus, organic matter, pH, potassium, cation exchange capacity (CEC), ENR, sulfur, sodium, calcium, magnesium, and additional soil chemical properties. Statistical analysis was performed using RCBD ANOVA, and treatment effects were evaluated at the 0.05 probability level.



Figure 27. Corn-soybean intercropping trial established at the Stettler County on-farm research site during the 2025 growing season

RESULTS AND DISCUSSION

Mid-Season Soil Response (July)

The July mid-season sampling revealed a significant effect of nitrogen fertilizer rate on soluble salts concentration in the soil (Figure 28). Post-hoc pairwise comparison showed that reduced nitrogen application (70% N) resulted in greater soluble salt concentration compared to the 100% nitrogen treatment. Similar observations have been reported under semi-arid conditions where lower crop water uptake and evaporation-driven capillary rise can contribute to salt accumulation near the soil surface [1]. Additionally, reduced plant uptake of other ions such as K⁺, Ca²⁺, and Mg²⁺ under nitrogen-limited conditions may also contribute to increased soluble salts remaining in the soil solution [2]. These observations were further supported by the October post-harvest results where no significant differences in soluble salts were observed between treatments, suggesting stabilization of ions within the soil profile over time.

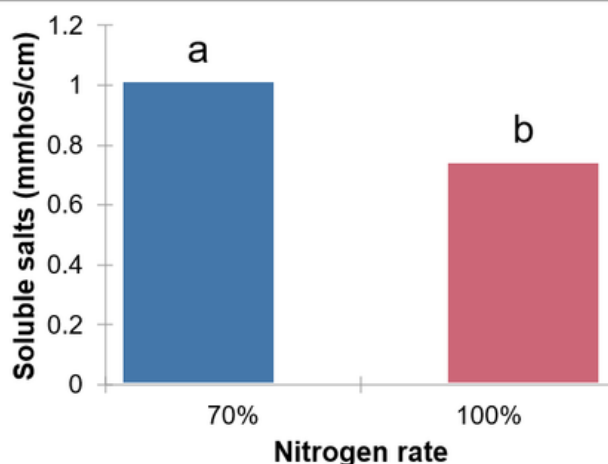


Figure 28. Effect of nitrogen fertilizer rate on mid-season soil soluble salt concentration (mmhos/cm). Bars with different letters indicate significant differences between nitrogen treatments ($P \leq 0.05$).

Corn-soybean Intercropping

Soil organic carbon and total carbon showed a trend toward significance during the mid-season sampling period, where greater organic carbon levels were observed under the reduced nitrogen treatment (70% N). Although these differences were not statistically significant, the trend may indicate reduced soil organic matter decomposition and greater soil carbon retention under lower nitrogen inputs (Figure 29). Previous studies have shown that nitrogen management practices can influence soil carbon dynamics and organic matter turnover [2]. However, this trend was only observed during the mid-season sampling period and was not evident during post-harvest sampling.

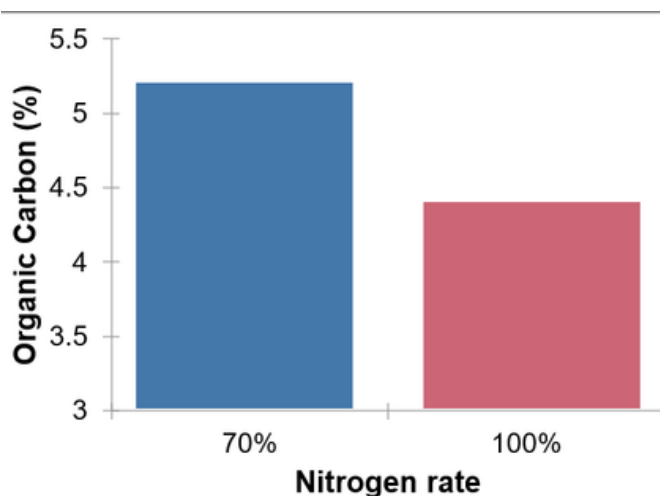


Figure 29. Effect of nitrogen fertilizer rate on mid-season soil organic carbon concentration (%).

Most other soil parameters, including nitrate nitrogen, phosphorus, pH, potassium, cation exchange capacity, sulfur, sodium, calcium, magnesium, and ENR, did not show significant treatment effects during the July sampling period.

Post-Harvest Soil Response (October)

During the October post-harvest sampling period, Bray phosphorus was the only soil parameter significantly affected by nitrogen fertilizer rate (Figure 30). Soil phosphorus concentrations were significantly greater under the 100% nitrogen treatment compared to the 70% nitrogen treatment. This increase may have been associated with the reduction in soil pH observed under the higher nitrogen application rate, where pH decreased from approximately 5.5 under the 70% N treatment to 5.2 under the 100% N treatment. Nitrogen fertilizer application has previously been shown to accelerate phosphorus cycling and increase acid phosphatase activity, which enhances phosphorus availability for plant uptake [4].

In the current study, the higher nitrogen application rate may therefore have contributed to greater phosphorus availability in the soil.

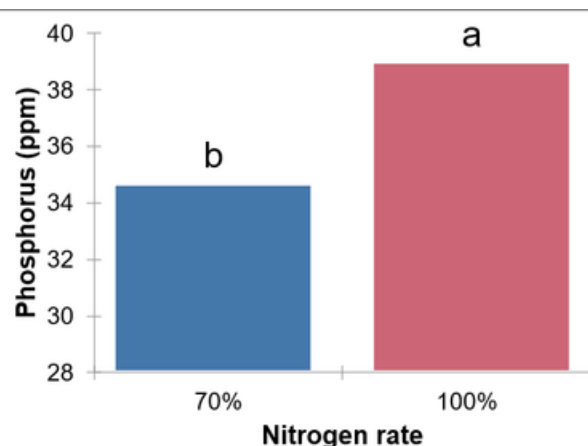


Figure 30. Effect of nitrogen fertilizer rate on post-harvest soil phosphorus concentration (ppm) in the corn-soybean intercropping trial. Bars with different letters indicate significant differences between nitrogen treatments ($P \leq 0.05$)

Although increased phosphorus availability under higher nitrogen application may provide short-term agronomic benefits, prolonged reductions in soil pH could negatively affect long-term soil health, nutrient balance, and microbial activity. These findings suggest that continued multi-year evaluation would be beneficial to determine whether these responses remain consistent over time and to better understand the long-term implications of reduced nitrogen management under corn-soybean intercropping systems.

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EXTENSION EVENTS 2025



Photo's by Kabir Makan

BRRG Extension Events 2025

In 2025, the Battle River Research Group (BRRG) continued to strengthen its role as a trusted source of agricultural education and producer engagement across east-central Alberta. Through a balanced mix of in-person workshops, field events, and virtual webinars, BRRG provided producers with timely, research-based information to support practical decision-making on the farm and ranch.

The year began with a focus on profitable ranching, beef marketing, and Environmental Farm Plan workshops, setting a strong foundation for sustainable and economically sound production practices. February's lineup included discussions on agri-tourism, soil management, and crop production, along with BRRG's active presence at the Stettler Agro Roundup, connecting directly with producers and community partners.

Spring sessions continued to deliver valuable learning opportunities. March featured a Farmer Pesticide Certification Course, a well-attended webinar on biochar use in agriculture, and the organization's Annual General Meeting in Viking. In April and May, producers explored early-seeding systems and dugout management for agricultural and rural use, two topics that drew strong interest given Alberta's changing growing conditions.

Summer programming offered a robust mix of mental health, livestock handling, and crop management themes. June included sessions on stress management, tissue testing, and livestock heat stress, while July featured the popular BRRG Field Day, the largest event of the year, alongside smaller, targeted tailgate sessions on flax and pasture rejuvenation.

As the growing season progressed, BRRG continued its outreach with webinars on insect and disease scouting, spray adjuvants, and grazing decisions during dry conditions. August also included a special workshop with Dr. Don Huber on microbes, minerals, and myths, drawing producers interested in soil-plant-microbe interactions.

Fall events focused on efficiency and long-term planning. Topics included winter grazing strategies, wetland management, and post-harvest storage and soil testing. BRRG also participated in ARECA meetings in November, continuing to collaborate with partner organizations across the province.

In total, BRRG hosted over 30 extension events in 2025, engaging more than 600 producers across webinars, workshops, and field activities. These events reflect our ongoing commitment to producer-led research, practical learning, and community connection.

As we look ahead, BRRG remains dedicated to equipping Alberta's producers with the tools, knowledge, and confidence needed to adapt, innovate, and thrive in an ever-changing agricultural landscape.

January 24 - Profitable Ranching

On January 24, Battle River Research Group hosted a Profitable Ranching webinar with guest speaker Ken Stewart, attended by 25 participants. The session focused on practical strategies to improve profitability and sustainability in ranching operations. Ken emphasized developing strong replacement heifers and managing youngstock to build a productive, resilient herd. He highlighted key management decisions around genetics, nutrition, and culling that can improve herd performance and long term returns. Winter grazing strategies were also discussed, with practical approaches to extend the grazing season and reduce reliance on stored feed, lowering costs and improving pasture use. Ken also shared ideas for low cost supplementation, ensuring cattle receive proper nutrition without overspending. The session concluded with a Q&A, offering valuable, experience based advice.

Battle River Research Group
www.battleriverresearch.com

**ZOOM WEBINAR
PROFITABLE RANCHING**

Ken Stewart

Ken Stewart, alongside his wife Jenny and their family, is a dedicated cattle rancher based in Northern Wyoming. With extensive experience managing both large commercial herds and innovative seed-stock operations, Ken focuses on improving the cattle industry through strategic genetics, science-based practices, and practical management. Passionate about ranching, he has developed expertise in optimizing breed composition, phenotype, and EPD profiles for sustainable, high-value production. The Stewarts raise Sim-Angus cattle and market their bulls through the Big Country Genetics Bull Sale while offering female groups privately. Living and working alongside their customers, they are committed to supporting success across the beef industry.

Topics Covered
 Encompassing overall philosophy
 Replacement Heifer/youngstock development
 Grazing out in the winter
 Proper low-cost cattle supplementation

JANUARY 24 1 PM

REGISTER ONLINE AT www.battleriverresearch.com
 CALL AT (780 582 7308)

AAP, BEAVER COUNTY, FLAGSHIP COUNTY, RDAR

January 28 - Environmental Farm Plan(Castor)

On January 28, Battle River Research Group hosted an Environmental Farm Plan (EFP) workshop at Castor Community Hall, with 15 attendees. Led by Quinton Beaumont and Farrah Fischer, the session guided participants through the EFP application process and helped them create personalized action plans to manage environmental risks. Key topics included soil and water conservation, manure and nutrient management, and sustainable farming practices. Attendees received hands-on support and had the opportunity to ask questions. The workshop included a lunch break with pizzas and pies, allowing producers to network. Overall, the session provided practical tools and knowledge to improve environmental sustainability on their farms.

Alberta EFP
ENVIRONMENTAL FARM PLAN

Battle River Research Group
www.battleriverresearch.com

**ENVIRONMENT FARM
PLAN WORKSHOP**

The Alberta Environmental Farm Plan covers an entire farm using a self-assessment tool to help producers identify their on-farm environmental risks. At the completion of the program, the farmer has an itemized list of adjustments that can be made in their operation. The EFP is a useful tool for analyzing a farming operation and guiding changes as time and resources allow. Having a completed EFP Certificate is a pre-requisite for many grants and funding available to producers.

Before attending the workshop, ensure the following:

- Create an EFP account if you don't have one already at www.albertaefp.com.
- Kindly bring a laptop or tablet to facilitate working on the EFP.

JANUARY 28 10 AM LUNCH PROVIDED
CASTOR COMMUNITY HALL
 (4912 49 AVE, CASTOR, AB T0C 0X0)

REGISTER ONLINE AT www.battleriverresearch.com
 CALL AT (780 582 7308)

ALBERTA EFP, BEAVER COUNTY, RDAR

January 31 - Beef Production & Market

On January 31, Battle River Research Group hosted a Beef Production & Market workshop at Halkirk Community Hall, attended by 24 participants. Kabir Makan served as MC, and the session featured expert speakers covering key aspects of cattle production and market trends. Brenna Grant from Canfax provided an overview of pricing, supply, and demand to help producers make informed decisions. Dr. Susan Markus discussed heifer development, focusing on genetics, nutrition, and management. Rod Wendorff explained ultrasound use for evaluating beef quality, while Dr. Kelly Loree shared calving management best practices. The workshop concluded with a Q&A, giving attendees practical knowledge to improve herd management.

January 12 - Environmental Farm Plan(Daysland)

On February 12, Battle River Research Group hosted an Environmental Farm Plan (EFP) workshop at Daysland Community Hall with 11 attendees. Led by EFP technicians Jonny Culbert, Cameron Schoff, Nick Dunn, Kaitlin Hirsekorn, and Shelby Oracheski, the session provided step-by-step guidance on completing the EFP application. Participants learned how environmental planning helps identify and manage risks on their farms and received personalized support while working through their applications. The workshop also highlighted how an approved EFP can open funding opportunities and support sustainability. A lunch break with beef and chicken burgers and coconut pies offered networking time for attendees.

**February 13 - AgriTourism :
Diversifying Income Through On-Farm Experience**

On February 13, Battle River Research Group hosted a Zoom webinar on Agritourism: Diversifying Income Through On-Farm Experiences, attended by 21 participants. Speakers Tam Andersen from Prairie Gardens & Adventure Farm and Pierre Cormier from ClearThink Group shared insights on integrating agritourism into farm operations. Tam discussed developing her farm as a tourism destination, highlighting visitor engagement, seasonal events, and marketing strategies. Pierre offered practical guidance on planning, investment, and revenue streams, showing how farmers can use existing resources for profitable experiences such as tours, workshops, or accommodations. The session concluded with a Q&A, giving attendees practical ideas to diversify farm income.

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www.battleriverresearch.com

ZOOM WEBINAR
AGRITOURISM: DIVERSIFYING INCOME THROUGH ON-FARM EXPERIENCES

Tam Andersen **Pierre Cormier** **Keleigh Cormier**

Tam Andersen is an award-winning farm entrepreneur from Sturgeon County, Alberta, and a leader in agritourism. As the Owner and Director of Fun at Prairie Gardens & Adventure Farm, Tam has transformed her family farm into a thriving year-round destination for thousands of visitors. Since its establishment in 1986, with 38 years of experience, Tam grows over 120 varieties of fruits, vegetables, herbs, and edible flowers. Her farm offers diverse experiences, including U-pick strawberry and apple orchards, long-table farm dinners, on-farm festivals, educational programs for children, and a CSA produce box program. Prairie Gardens and Adventure Farm is an expert client for making jams, jellies, and farm-to-table meals, creating a truly immersive culinary and agricultural experience. Tam is a passionate advocate for sustainable tourism and rural-urban collaboration, focusing on making that support local food systems and artisans. Her innovative efforts have helped educate Alberta's rural-urban population, positioning Prairie Gardens as a must-visit destination. Tam's work has earned her numerous accolades, including the 2024 Culinary Tourism Award from Foodies Edmonton. She currently serves as the President of the Alberta Farm Fresh Producers Association, continuing her mission to inspire and grow Alberta's agriculture and tourism sectors.

Pierre Cormier is a Certified Management Consultant (CMC) and Certified Agricultural Consultant (CAC) with over 26 years of experience advising businesses to achieve sustainable growth. As a Partner of ClearThink™ Group, Pierre provides expert guidance in business strategy, market development, and coaching, working across sectors like agri-business, tourism, technology, and manufacturing. Pierre's notable initiatives include the award-winning Back to Business and ClearThink™ Coaching Programs, which supported hundreds of food systems and economic revitalization recovery. He has also been instrumental in projects such as Alberta Open Farm Days and the Visitor Friendly Business Program, promoting innovation in agritourism and rural economic development. His consulting, strategy, social and digital marketing expertise has led to reported two-culture retail stores and managed national accounts at Maple Leaf Foods. Pierre is a frequent speaker at industry events, including the Global AgriForum and the Canadian Association of Farm Advisors. His passion for supporting businesses ensures impactful outcomes and lasting success.

Keleigh Cormier is a Fellow Certified Management Consultant (FCMC) and Certified Agricultural Consultant (CAC) with over three decades of experience engineering entrepreneurs and organizations. As a President of ClearThink™ Group, Keleigh specializes in business strategies, market research, feasibility studies, and coaching, with a particular focus on agribusiness, tourism, and technology sectors. Keleigh has led transformative projects such as the Alberta Open Farm Days Coaching Program, Back to Business Coaching Program (disaster relief), and the Industrial Research Assistance Program (IRAP), also co-founding the Council for Food Product, promoting sustainable food systems and economic revitalization in rural Alberta. Her work has earned professional awards, including the International Coach Federation Silver Award for excellence in management consulting. Prior to consulting, Keleigh gained valuable experience at Labov's Breweries and Maple Leaf Foods. She holds a B.Com. from the University of Alberta and continues to see growth opportunities in agri-business. Keleigh actively contributes to the Global AgriForum network, consulting agricultural society in Arkansas (ARAS). Her leadership continues to advance agripreneur and business innovation, creating opportunities for entrepreneurs to diversify and thrive in Alberta's evolving economy.

FEBRUARY 13 10 AM

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CALL AT (780) 582 7308

Logos for Prairie Gardens, Clearthink, Beaver County, Stettler Agricultural Society, and Alberta Pulse Growers.

February 26 - Crop Production & Market

On February 26, 2025, Battle River Research Group hosted a Crop Production and Market Outlook workshop at Stettler Agricultural Society with 25 attendees. Blair Kuefler served as MC, welcoming participants and introducing the agenda. Katelyn Miller opened with a presentation on soil health, emphasizing its role in productivity, nutrient efficiency, and sustainability. A market update followed, outlining recent crop price trends, trade activity, and global demand. Jagroop Kahlon discussed pulse crop production, rotation benefits, and market opportunities, while Neil Blue provided a global crop market overview, including supply, demand, and influencing factors. Kevin Elmy concluded with cover crops, highlighting soil health, moisture retention, and erosion control. The workshop included a lunch break for networking and ended with a Q&A session.

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CROP PRODUCTION & MARKET

Kevin Elmy **Neil Blue** **Katelyn Miller** **Jagroop Kahlon** **Meghan Horosko**

Kevin Elmy started his regenerative agriculture journey in 2000 while farming in eastern Saskatchewan. At that time, he was attempting to farm dirt. By focusing on building soil organic matter, diversifying their cropping rotation, engaging in custom livestock grazing, and then cover cropping, he was able to transform his farming practices. As a result, Kevin could farm without the need for fertilizers, insecticides, and fungicides, and he also minimized herbicide applications while maintaining a positive net margin without incurring additional expenses. To share his knowledge and experiences with others, Kevin authored a book titled "Cover Cropping in Western Canada." His second book, "Not Just Dirt: Regenerative Agriculture Principles," has also been completed and is now in print.

Neil was raised on a grain and cattle farm near Hardisty, Alberta, he has farmed in the Vermilion area since 1981. A University of Alberta Agriculture graduate, he has extensive experience with Farm Credit Canada, Alberta Agriculture, and the Alberta Canada Producers Commission, helping farm families with financial and marketing strategies. Neil is now the Provincial Crop Market Analyst with Alberta Agriculture and Irrigation, providing expertise in market trends and farm management.

Katelyn Miller grew up on a mixed farming operation in Westlock County, where the family still operates a purebred cattle operation and that has led her passion for the industry. Having had many different careers within Agriculture from Customer Service to R&D to sales, have led her to be a very successful and diverse individual in her field. Being a part of the founding team of Soil Synergy last year, she loves getting these opportunities to speak to producers about "The Power of Humics".

Dr. Jagroop Gill Kahlon currently lives and works in Greater Edmonton Area for Alberta Pulse Growers, as their Research Program Manager and Farm Scale Research Lead. She finished her graduate school education from University of Alberta and University of Florida. Her work portfolio encompasses breeding and long-term research programs for the organization via pilot to field (farm scale research program) as well as participating in various federal and provincial calls for research funding. She often delivers guest lectures academically and is currently co-supervising her first PhD student. Dr. Kahlon is also current board member for Canadian Society of Agronomy and a registered professional agronomist with Institute of Agronomy. Her expertise includes crop production, advancements in technology in sustainable cropping systems, omics, and genomics as well as a history of transgenic crops etc.

Meghan Horosko is a Senior Trade Development Officer with Alberta Agriculture and Irrigation. She works in the Export Development Unit, a team that supports Alberta agri-food producers to export their products to international markets, and has geographic responsibility for Mexico, Central and South America. Meghan has been with the Government of Alberta for more than 12 years, primarily in roles related to international projects and market development. She holds a Bachelor's Degree in International Management as well as a Diploma in Asia-Pacific Business Management. Meghan also worked for Canada's Department of Foreign Affairs and International Trade in Ottawa prior to moving back to Alberta.

FEBRUARY 26 10 AM 15\$ FEE LUNCH PROVIDED

STETTLER AGRICULTURAL SOCIETY
(4516 52 ST, STETTLER, AB T0C 2L0)


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CALL AT (780) 582 7308


Logos for Beaver County, Stettler Agricultural Society, Alberta Pulse Growers, and Alberta Imperial Seed.

March 25 - Annual General Meeting 2025


On March 25, 2025, the Battle River Research Group (BRRG) hosted its Annual General Meeting at the Viking Community Hall. The event began at 10:00 AM with 28 attendees and was emceed by board member Terry Magneson, who welcomed attendees and delivered an opening speech emphasizing BRRG's continued commitment to supporting agricultural innovation and producer-led research in East-Central Alberta. The meeting officially opened with a financial review for the year 2024, presented by Michael Ihekuna. Michael provided an overview of BRRG's financial position, highlighting expenditures, funding sources, and financial activities from the past year. Following this, the first call for board member nominations was made, encouraging members to participate in the leadership and direction of the organization. The first speaker of the day was Kimberly Cornish, who shared insights on the Regenerative Alberta Living Lab (RA-LL). Her presentation introduced attendees to the goals of the initiative and outlined how it supports regenerative agricultural practices across the province. After her talk, a second call for board nominations was made, providing members another opportunity to step forward. Next, Carlo Van Herk from Farming Smarter gave a presentation on exploring strip tillage in canola and other row crops. He discussed recent research findings and practical implications for improving soil health and crop yields using this method. Following the morning session, lunch was served, featuring roast beef, potatoes, and salad. The meal provided a break for networking and informal discussions among producers, researchers, and partners.




ANNUAL GENERAL MEETING 2025




Kimberly Cornish
Regenerative Alberta Living Lab (RA-LL)



Hiroshi Kubota
Crop Rotation & Diversification



Carlo Van Herk
Exploring Strip Tillage in Canola and other row crops



Kevin Elmy
Cover Crops

Kimberly Cornish is the Project Manager of the Regenerative Alberta Living Lab and Executive Director of Food Water Wellness Foundation. She manages a collaborative initiative that works with producers, research scientists, and Applied Research Associations across Alberta to explore and implement practices that support soil health and reduce greenhouse gas emissions in cropping and forage systems. The five-year project spans Alberta, from Mackenzie Country to the US Border, and focuses on practical solutions to enhance farm resilience and productivity. Kimberly is committed to advancing sustainable agriculture and fostering partnerships within the agricultural community.


Hiroshi Kubota is a research scientist in sustainable cropping systems at the Lacombe Research and Development Centre of Agriculture and Agri-Food Canada (AAFC). Hiroshi earned his PhD in Plant Science from the University of Alberta in 2018, where he focused his research on enhancing organic and conventional wheat production through the identification of critical nitrogen use efficiency traits. At AAFC, his research program is dedicated to developing agronomic practices that significantly enhance both economic viability and environmental sustainability in conventional and organic cropping systems. He focuses on three key areas of research: Cropping System Diversity - to strengthen the resilience of agricultural fields against biotic and abiotic stresses, Cropping Practice Diversity - to equip producers with innovative tools that enable them to boost and sustain crop yields while mitigating negative environmental impacts, Integrated Crop Management- multi-discipline approach to optimize the utilization of available resources to ensure crop production with environmentally responsible and economically sound.

Carlo Van Herk currently leads the Field Operations team at Farming Smarter, overseeing everything from the early trial stages of preparation to the late stages of harvest and analysis. He works closely with the team leads and the rotating cast of summer students to ensure equipment is well-maintained and trials are cared for. He previously led the Natural Sciences and Engineering Research Council (NSERC) strip till canola project. His education includes a bachelor's in agriculture with a concentration in GIS and a minor in economics, and he is also a CCA and a Certified Pesticide Applicator.

Kevin Elmy started his regenerative agriculture journey in 2000 while farming in eastern Saskatchewan. At that time, he was attempting to farm dirt. By focusing on building soil organic matter, diversifying their cropping rotation, engaging in custom livestock grazing, and then cover cropping, he was able to transform his farming practices. As a result, Kevin could farm without the need for fertilizers, insecticides, and fungicides, and he also minimized herbicide applications while maintaining a positive net margin without incurring additional expenses. To share his knowledge and experiences with others, Kevin authored a book titled "Cover Cropping in Western Canada." His second book, "Not Just Dirt: Regenerative Agriculture Principles," has also been completed and is now in print.

MARCH 25 10 AM LUNCH PROVIDED
VIKING COMMUNITY HALL
(5021 54 AVE, VIKING, AB T0B 0B8)

REGISTER ONLINE AT www.battliverresearch.com
CALL AT (780 582 7308)



The afternoon resumed with a demonstration by Quinton Van Straten from Rangeward, who showcased their line of fencing products. His presentation offered practical insights into modern fencing solutions designed for durability and ease of installation. He was followed by Hiroshi Kubota, who presented on crop rotation and diversification, focusing on strategies that improve soil health, reduce pest pressure, and enhance farm sustainability. The final speaker of the day was Kevin Elmy, who delivered an engaging presentation on the role of cover crops in building resilient farming systems. He discussed the environmental and economic benefits of integrating cover crops into annual rotations, especially under changing weather conditions. The AGM concluded with closing remarks from Terry Magneson, who thanked all speakers, attendees, and BRRG staff for their contributions. The meeting highlighted the importance of collaboration, innovation, and knowledge-sharing in helping local producers adapt and thrive in a changing agricultural landscape.

BRRG Extension Events 2025

April 2 - Ultra-Early Seeding Systems

On April 2, 2025, Battle River Research Group hosted a Zoom webinar on Ultra-Early Seeding Systems, attended by 25 participants. Kabir Makan served as MC, welcoming attendees and introducing Dr. Brian L. Beres from Agriculture and Agri-Food Canada. Dr. Beres presented research on ultra-early seeding, explaining how earlier planting can improve yield potential, resource efficiency, and crop resilience in Western Canada. He highlighted factors such as soil temperature, seed treatment, seeding depth, and variety selection, while offering practical advice on risk management, equipment readiness, and field selection. The webinar concluded with a Q&A, giving producers actionable guidance for adopting early seeding practices.

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ZOOM WEBINAR
ULTRA-EARLY SEEDING SYSTEMS

Dr. Brian L. Beres

Dr. Beres is a senior research scientist at AAFC - Lethbridge and Adjunct Professor at the University of Alberta. Dr. Beres leads several multi-disciplinary projects developing GxEM crop management systems. His impact on academia and industry has been recognized on several occasions including the Alberta Seed Growers Honorary Life Award; Canadian Journal of Plant Science Best Paper; CJPS Outstanding Associate Editor; and Fellow - Canadian Society of Agronomy. Dr. Beres publishes in the areas of agronomy and crop science and has been the author or co-author of 120 peer-reviewed research articles, 2 edited books and 2 book chapters. He serves as Editor-in-Chief for the Canadian Journal of Plant Science and Special Issues Editor for Frontiers in Plant Science. Dr. Beres has several international collaborations and represents Canada on the Research Committee of the Wheat Initiative, where he also developed and Co-Chairs an Expert Working Group for global agronomy wheat research.

APRIL 2 10 AM

REGISTER ONLINE AT www.battliverresearch.com
CALL AT (780) 582 7308

BEAVER COUNTY, SASKATCHEWAN, ALBERTA, CANADA

May 6 - Dugouts for Agriculture and other Rural Uses

On May 6, 2025, Battle River Research Group hosted a webinar on “Dugouts for Agriculture and Other Rural Uses,” attended by 35 participants. Moderated by Kabir Makan, the session featured Shawn Elgert, who shared practical guidance on dugout planning, design, construction, and management. Topics included site selection, optimal dimensions, excavation, erosion control, and maintaining water quality. Shawn also discussed operation and protection strategies, such as fencing, buffers, sediment removal, and algae management. The webinar covered recreational uses, including fish stocking, and regulatory considerations. Attendees gained valuable, actionable insights for sustainable dugout use in agriculture and rural settings.

Battle River Research Group
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Zoom Webinar
Dugouts for Agriculture and other Rural Uses

Shawn Elgert

Shawn Elgert is an Agricultural Water Engineer from the Farm Water Supply Section with Agriculture and Irrigation. He provides technical consultation to rural agricultural operations and other rural land owners giving them advice on design and construction of their water sources and information on the suitability of their water as well as treatment.

Agenda items are:

- Planning considerations
- Dugout design
- Construction
- Dugout operation and protection
- Maintenance
- Water quality issues and treatment solutions
- Dugouts for stocking fish

MAY 6 2 PM

REGISTER ONLINE AT www.battliverresearch.com
CALL AT (780) 582 7308

BEAVER COUNTY, SASKATCHEWAN, ALBERTA, CANADA

June 12 - When The Going Gets Tough Talk Ask Listen

On June 12, 2025, Battle River Research Group hosted a mental health workshop in partnership with The Do More Agriculture Foundation at Holden Community Hall, attended by 16 participants. The event provided a safe space for farmers and rural community members to discuss mental health, share experiences, and learn practical coping strategies. Doreen Blumhagen spoke on recognizing stress, prioritizing self-care, and fostering resilience, while Merle Massie highlighted the Foundation's Talk. Ask. Listen. initiative, emphasizing open, non-judgmental conversations. Attendees enjoyed networking over lunch and left with practical tools to support themselves and others. The workshop was well-received and impactful.

The Do More Agriculture Foundation **TALK•ASK•LISTEN** **Battle River Research Group**

WHEN THE GOING GETS TOUGH: TALK ASK LISTEN

Doreen Blumhagen **Merle Massie**

Doreen is a storyteller who shares her experiences with mental illness in order to help others. Through therapy & education Doreen has found ways to stay happy & healthy and teach others to do the same. She can be found chasing cows, running machinery or volunteering in her local community of Halkirk, Ab

Merle Massie is a farmer, award-winning author and speaker, researcher, and collaborator. She is the Executive Director of The Do More Agriculture Foundation, whose mission is to cultivate a culture of mental well-being in Canadian farming communities.

In this presentation, Doreen will: Share stories of personal struggles as well as the challenges faced on the farm. Detail strategies for taking care of personal health, as well as the health of one's partner. Encourage others to find a new ending to the phrase and reimagine what it means to be "tough." Merle will be giving presentation on Talk Ask Listen

JUNE 12 10 AM LUNCH PROVIDED
HOLDEN COMMUNITY HALL
(4919 49 AVE, HOLDEN, AB T0B 0H8)

REGISTER ONLINE AT www.battleriverresearch.com
 CALL AT (780) 582 7308

Country Road Crafts BEAVER COUNTY FLAXMAN COUNTY SFC

June 19 - Low-Stress Livestock Handling

On June 19, 2025, Battle River Research Group hosted a Low-Stress Livestock Handling workshop at Stettler Agricultural Society, attended by 35 producers and agricultural professionals. MC Kabir Makan welcomed participants and outlined the day's focus on improving animal welfare and producer safety. Lee Sinclair led the morning session, explaining cattle behavior, pressure zones, and strategies for calm, efficient handling to reduce stress and improve herd performance. After a pizza lunch, attendees visited Lance Nelson's farm for a hands-on demonstration, observing low-stress techniques in action. The workshop combined theory and practice, leaving participants with practical skills to enhance livestock handling on their operations.

STETTLER AGRICULTURAL SOCIETY **Battle River Research Group** **MERCK Animal Health**

LOW-STRESS LIVESTOCK HANDLING: INSIGHTS INTO CATTLE BEHAVIOR FOR BETTER OUTCOMES WORKSHOP

Lee Sinclair

Lee grew up in the Lloydminster, Saskatchewan area. Mainly a town kid, he had access to the mixed farms of his family and friends and was there at every opportunity. Working with cattle and horses took precedence over operating farm equipment.

In 1991, he graduated from Lakeland College with a diploma in Herd Health Technology. Lee then received a rodeo scholarship to Montana State University, graduating in 1995 with a Degree in Animal Science. From 1991 to 1997, he worked part-time as a pen rider at a 20,000 head Alberta feedlot, and it was during this time he became interested in the livestock handling concepts of Temple Grandin and Bud Williams.

In the fall of 2015, Lee joined Merck Animal Health as Account Manager covering Southern and Eastern Saskatchewan. The 2016 invitation to the global team training of CreatingConnections rekindled his passion for effective stockmanship. Since the initial CreatingConnections training, Lee has enjoyed presenting the theory and hands-on application, of effective stockmanship, to his veterinary, cow/calf and feedlot customers.

Lee has been a stockmanship mentor in the Canadian Cattle Young Leaders program and presented hands-on sessions at the Saskatchewan Association of Veterinary Technicians Conference, Saskatchewan Verified Beef Plus meetings, Ag in Motion Western Canada's Outdoor Farm Expo, SHE Grows Beef, the Western College of Veterinary Medicine and University of Saskatchewan beef students, along with numerous 4-H clubs and producer events.

JUNE 19 10 AM LUNCH PROVIDED
STETTLER AGRICULTURAL SOCIETY
(4516 52 ST, STETTLER, AB T0C 2L0)

REGISTER ONLINE AT www.battleriverresearch.com
 OR SCAN QR CODE
 CALL AT (780) 582 7308

BEAVER COUNTY FLAXMAN COUNTY NEILSON SIGNATURE BEEF

June 26 - Understanding Tissue Testing

On June 26, 2025, Battle River Research Group hosted a Zoom webinar titled Understanding Tissue Testing: When, How & What to Do With Results, attended by 18 participants. Kabir Makan welcomed attendees and introduced Dr. Jed Donald Grow from AGVISE Laboratories. Dr. Grow explained the full tissue testing process, including when and how to collect samples, interpreting results, and applying findings to improve crop nutrition and management. He addressed common misconceptions, proper sampling techniques, and using tissue testing as both a diagnostic tool and a way to fine-tune fertilization programs. The session concluded with a Q&A, giving producers practical guidance for on-farm implementation.

Battle River Research Group
www.battleriverresearch.com

Zoom Webinar
Understanding Tissue Testing: When, How & What to Do With Results

Dr. Jed Donald Grow

Dr. Grow is a devoted husband, father, and agronomist from North Dakota with a passion for potatoes and helping farmers. After a mission in Peru inspired his work in food security, he studied genetics and earned his PhD at NDSU. He now helps producers make smarter decisions with soil and plant data. He enjoys hockey, curling, family time—and potatoes!

Agenda items are:

- The why's of tissue sampling
- What you can tell with tissue sampling
- What you can't
- Reasons for tissue sampling
- Fine-tuning fertilization
- Diagnostic tool
- Methods of tissue sampling
- Using your tissue data and analyzing reports
- Common misconceptions, half-truths, and marketing tools
- Current and future tech

JUNE 26 10 AM MDT

REGISTER ONLINE AT www.battleriverresearch.com
CALL AT (780 582 7308)

BEAVER COUNTY, SASKATCHEWAN, FLAGSTAFF COUNTY, COUNTY OF PRAIRIE, AGVISE LABORATORIES

June 27 -Heatstress & Livestock Management

On June 27, 2025, Battle River Research Group hosted a Zoom webinar on Heat Stress & Livestock Management Strategies, attended by 25 producers and industry members. Kabir Makan welcomed participants and introduced Dr. Karen Schwartzkopf-Genswein from Agriculture and Agri-Food Canada. Dr. Schwartzkopf-Genswein explained heat stress in cattle, including indicators, physiological impacts, and effects on feed intake, growth, and productivity. She shared research findings and practical mitigation strategies such as improving water access, optimizing feed, and enhancing facilities with shade and ventilation. The session concluded with a Q&A, providing participants with actionable guidance to manage heat stress and support herd welfare.

Battle River Research Group
www.battleriverresearch.com

Zoom Webinar
Heat Stress & Livestock Management Strategies

Dr. Karen Schwartzkopf-Genswein

Raised on a southern Alberta farm with a family-run feedlot, Dr. Schwartzkopf-Genswein earned her PhD in Applied Animal Ethology from the University of Saskatchewan. She is a principal scientist with Agriculture and Agri-Food Canada in Lethbridge, specializing in beef cattle welfare and physiology. Her research focuses on stress and pain management during transport, castration, dehorning, lameness, and BRD detection in feedlot cattle. Dr. Schwartzkopf-Genswein advises national and international groups on cattle welfare and has chaired key committees updating Canada's Beef Cattle Code of Practice. She mentors students globally and has published over 250 scientific works.

Agenda items are:

1. Defining heat stress in beef cattle and how it is measured
2. What current research tells us and where knowledge gaps exist
3. Mitigation strategies including water, feed, and facilities management

JUNE 27 10 AM MDT

REGISTER ONLINE AT www.battleriverresearch.com
CALL AT (780 582 7308)

BEAVER COUNTY, SASKATCHEWAN, FLAGSTAFF COUNTY, COUNTY OF PRAIRIE

July 8 - Pasture Rejuvenation

On July 8, 2025, Battle River Research Group hosted a Pasture Rejuvenation Workshop at Halkirk Community Hall, followed by a field visit to BRRG’s trial site, with 20 participants. Alex Olson welcomed attendees and introduced the agenda. Dianne Westerlund (CARA) presented the Pasture Rejuvenation Trial, highlighting site setup, treatments, and early soil health results. Alex Olson shared BRRG’s research insights, including soil testing and forage establishment. Grant Lastiwka provided practical strategies for pasture recovery, species selection, and grazing management. The afternoon field session allowed hands-on demonstration, discussion, and Q&A. Participants gained research-based knowledge and practical tools to improve pasture productivity and soil health.

RENOVO SEED **Battle River Research Group**

PASTURE REJUVENATION

Grant Lastiwka **Dianne Westerlund** **Alex Olson**

Agenda for the workshop :

1. Overview of the Pasture Rejuvenation Trial by BRRG & CARA
2. Site walk-through: current conditions, treatments being tested
3. Research insights from BRRG & CARA:
 - Soil health
 - Rejuvenation methods being evaluated
4. Pasture Rejuvenation Strategies with Grant Lastiwka:
 - When and why to rejuvenate
 - Species selection and establishment
 - Cost-effective approaches
 - Grazing management to support rejuvenation
 - Interactive Q&A and discussion with producers in the field

JULY 8 10 AM LUNCH PROVIDED
HALKIRK COMMUNITY HALL
 (111 MAIN ST, HALKIRK, AB T0C 1M0)

REGISTER ONLINE AT www.battleriverresearch.com
 CALL AT (780 582 7308)

July 10 - Preventing Burnout

On July 10, Battle River Research Group hosted a Zoom webinar on Preventing Burnout in Agriculture, with 18 participants and Kabir Makan as MC. Kaitlyn Kitzan from The Do More Agriculture Foundation shared practical strategies for maintaining mental wellness, emphasizing that, like farm equipment, individuals need regular care to stay productive. Her presentation, Recharging Your Battery: Prioritizing Mental Wellness in Agriculture, encouraged producers and industry professionals to manage stress, prevent burnout, and prioritize self-care. The session concluded with an open discussion, allowing attendees to share experiences. Participants left with practical tools and a renewed focus on resilience and well-being.

The Do More Agriculture Foundation **Battle River Research Group**

Zoom Webinar
Preventing Burnout

Kaitlyn Kitzan

Kaitlyn grew up on a grain and cattle farm in east-central Saskatchewan. Inspired by personal experiences witnessing loved ones navigate mental health challenges stemming from farm stressors, she is passionate about fostering mental wellness within the agricultural community.

Things discussed in the webinar:

Recharging Your Battery: Prioritizing Mental Wellness in Agriculture
 In the fast-paced world of agriculture, it's easy to put everything—and everyone—before yourself. But just like equipment needs maintenance, so do you. Join Kaitlyn from The Do More Agriculture Foundation for an insightful session on mental wellness and resilience in the ag industry. Learn practical strategies to manage stress, prevent burnout, and “recharge your battery” so you can continue to thrive both on and off the farm. Whether you're a producer, agribusiness professional, or industry advocate, this session will provide valuable tools to help you take care of your most important asset—yourself.

JULY 10 1 PM MDT

REGISTER ONLINE AT www.battleriverresearch.com
 CALL AT (780 582 7308)

July 16 - Flax from the Ground Up

On July 16, Battle River Research Group hosted a tailgate workshop, Flax From The Ground Up, at Blair Kuefler's farm, with 8 participants. Blair led the session, sharing hands-on experience in flax production from seeding to marketing. Topics included field preparation, seeding practices, fertility management, weed, pest, and disease control, and water management to optimize yields. He also discussed crop progress, stand assessment, and marketing considerations. The workshop concluded with a BBQ lunch, offering networking opportunities. Attendees valued the practical, on-farm setting, gaining actionable insights and strategies to successfully grow and manage flax in their own cropping systems.

Battle River Research Group
www.battliverresearch.com

**Tailgate Workshop
Flax From The Ground Up**

Blair Kuefler, a grain farmer in the Galahad/Forestburg Area, holds a Bachelor's degree in Agriculture from the University of Alberta. With a diverse background in cultivating various crops like Peas, Wheat, Barley, and Canola, Blair's expertise is highly regarded in the agricultural community.

Things discussed in the Workshop:

1. Field Background & Crop History
2. Seeding & Establishment
3. Fertility Management
4. Weed, Pest & Disease Management
5. Water Management
6. Crop Progress & Stand Assessment
7. Marketing & Economics

BLAIR KUEFLER

JULY 16 10 AM MDT
52.563410, -111.997734, NE 30 -41-14 W4

REGISTER ONLINE AT www.battliverresearch.com
CALL AT (780) 582 7308

BEAVER COUNTY, RED DEER COUNTY, FLASSTAD COUNTY, COUNTY OF PALMER

June 19 - Insect & Disease Scouting

On August 7, Battle River Research Group hosted a Zoom webinar on Insect & Disease Scouting, with 22 participants and Kabir Makan as host. Keith Gabert, Canola Council Agronomy Specialist, discussed late-season canola scouting and the "Big 4" diseases: Sclerotinia, Blackleg, Clubroot, and Verticillium Stripe, covering symptom recognition and management strategies. Amanda Jorgensen, Alberta Agriculture Insect Management Specialist, highlighted how drought affects insect populations and crop risk, emphasizing integrated insect and disease scouting. The session concluded with a Q&A, giving participants practical, research-based strategies to monitor crop health, make informed management decisions, and protect yields effectively.

Battle River Research Group
www.battliverresearch.com

**Zoom Webinar
Insect & Disease Scouting**

Amanda Jorgensen
Keith Gabert

Amanda Jorgensen is the Insect Management Specialist with Alberta Agriculture and Irrigation. She co-leads the Alberta Insect Monitoring Network and previously spent over 10 years researching insect pest management with Agriculture and Agri-Food Canada. Amanda holds a M.Sc. from the University of Alberta focused on wheat midge forecasting.

Keith Gabert is an Agronomy Specialist with the Canola Council, helping farmers grow better canola. Based in Red Deer County, he has over a decade of experience as the Council's insect lead and holds a BSc in Plant Science from the University of Alberta. Keith is passionate about crops, weeds, insects, and the practices that help manage them.

Topics to be discussed include:

- Late-season canola scouting strategies
- Identification of the "Big 4" diseases: Sclerotinia, Blackleg, Clubroot, and Verticillium Stripe
- Current crop and plant conditions to watch for
- Insect pests and drought: how dry conditions impact insect populations, crop risk, and damage
- How disease and insect scouting complement each other

AUGUST 7 11 AM MDT

REGISTER ONLINE AT www.battliverresearch.com
CALL AT (780) 582 7308

BEAVER COUNTY, RED DEER COUNTY, FLASSTAD COUNTY, COUNTY OF PALMER, canola council OF CANADA

July 23 - BRRG Field Day 2025

On July 23, 2025, Battle River Research Group hosted its annual Field Day near Galahad, Alberta, bringing together 50 producers, researchers, and industry stakeholders for a full day of learning and networking. The event focused on sharing applied research results, agronomic insights, and practical information tailored to local farming conditions.

The day began with opening remarks from BRRG President Stan Schulmeister, who welcomed attendees and thanked sponsors Alberta Pulse Growers, Nutrien, and supporting counties for their valuable contributions. Their support helped make the event accessible and successful. The first presentation was delivered by Maria Champagne from Farm Safety, who emphasized the importance of proactive safety planning and integrating safety into everyday farm operations. She was followed by BRRG Field Coordinator Alex Olson, who presented results from the 2025 Wheat and Silage Regional Variety Trials, offering localized data to support producer decision making.

Steve Cowan from Crop Management Network discussed agronomic strategies for the current growing season, including nutrient planning and managing field variability. A door prize draw added excitement before lunch and gave attendees another opportunity to engage. Lunch was provided by Venture Eats food truck, featuring smashed burgers, pulled pork sandwiches, and fries, creating a relaxed networking environment.

The afternoon session resumed with Dr. Logan Skori, who presented on soil biology and the role of biological products in improving soil activity and yield potential. Dr. Ahsan Rajper then shared results from Barley Plant Growth Regulator trials, highlighting strategies to reduce lodging and maximize yield.



The poster for BRRG Field Day 2025 features a golden wheat field background. At the top left is the Alberta Pulse Growers logo, and at the top right is the Battle River Research Group logo with a QR code. The main title 'BRRG FIELD DAY 2025' is in large, bold, black letters. Below it, the date and time 'JULY 23 10 AM SW 16 - 41 - 14 W4' and location '52.52198, -111.96204' are listed. The poster includes several icons: a 'SAFETY FIRST' sign, a tractor, a plant with roots, and a field with green stripes. The topics 'FARM SAFETY', 'HUMICS', 'INTERCROPPING', and 'FIELD TRIALS 2025' are listed. Below these are 'EXPERT SPEAKERS', 'LIVE PLOT TOURS', and 'FARM NETWORKING'. The slogan 'LEARN.CONNECT.INNOVATE.' is at the bottom. Registration information 'REGISTER ONLINE AT www.battleriverresearch.com' and 'CALL AT (780 582 7308)' is provided, along with another QR code. At the bottom, logos for RDAR, Beaver County, and AgSafe Alberta Nutrien are displayed.

The final speaker, Edwin Liem from Global Humic, discussed the benefits of humic substances and carbon-based inputs for improving soil function and nutrient uptake.

The event concluded with closing remarks thanking participants and sponsors. Overall, the Field Day successfully delivered timely, research-based information and strengthened connections within the agricultural community.

June 12 - Role of Spray Adjuvants & Postemergence Herbicides

On August 8, Battle River Research Group hosted a Zoom webinar on the Role of Spray Adjuvants & Postemergence Herbicides, with 24 participants and Kabir Makan as MC. Dr. Tommy Butts from Purdue University explained how spray adjuvants improve herbicide performance and application efficiency. He discussed types of adjuvants, their interaction with plant surfaces, and the importance of product selection. Key topics included spray water quality, mixture compatibility, nozzle interactions, and proper mixing techniques. The session concluded with a Q&A, where Dr. Butts addressed practical challenges. Participants gained actionable strategies to optimize herbicide applications and improve crop protection outcomes.

Battle River Research Group
www.battliverresearch.com

Zoom Webinar
Role of Spray Adjuvants & Postemergence Herbicides

Dr. Tommy Butts

Dr. Tommy Butts is a Extension Weed Scientist at Purdue University, specializing in site-specific and precision weed management. His work focuses on improving herbicide application effectiveness and safety. Originally from Wisconsin, Tommy brings practical farm experience and a strong academic background in agronomy and weed science.

This webinar will explore the use of adjuvants to optimize our herbicide applications. It will dive into helpful tips, as well as things to watch out for, to effectively use these tools in our application toolbox. Specific topics to be covered by this webinar are:

- Types of adjuvants,
- Spray water quality,
- Spray retention on leaf surfaces,
- Mixture compatibility concerns,
- Nozzle and adjuvant interactions,
- Proper mixing techniques,
- Q & A to address specific concerns.

AUGUST 8 10 AM MDT

REGISTER ONLINE AT www.battliverresearch.com
CALL AT (780) 582 7308

BEAVER COUNTY, SASKATCHEWAN COUNTY, FLAGSTAFF COUNTY, COUNTY OF PARKLAND, PURDUE UNIVERSITY

June 19 - Grazing Decisions in a Dry August

On August 19, 2025, Battle River Research Group hosted a webinar titled Grazing Decisions in a Dry August, attended by 40 producers and industry professionals. Kabir Makan served as MC and introduced guest speaker Dr. H.A. (Bart) Lardner. The presentation focused on practical, science-based strategies for managing grazing during dry conditions. Key topics included pasture management, drought forage strategies, annual forages, and salvage crops to extend grazing capacity. Dr. Lardner emphasized adaptive planning to maintain productivity under limited moisture. The session concluded with discussion and questions, and participants gained valuable, actionable insights to support grazing decisions during challenging dry conditions.

Battle River Research Group
www.battliverresearch.com

Zoom Webinar
Grazing Decisions in a Dry August

Dr HA (Bart) Lardner

Dr. Lardner is a Professor in the Department of Animal and Poultry Science at the University of Saskatchewan where he mentors undergraduate and graduate students and teaches beef cattle nutrition and forage management. For the past 30 years, his research has focused on applied beef and forage management including water quality, summer and winter grazing systems, heifer development, applied genomics and industry impact on the environment. Dr Lardner works closely with producers to ensure applicability of results back to industry.

Topics to be discussed include:

- Pasture management
- Forages – management strategies for drought
- Annual forages
- Salvage crops

AUGUST 19 10 AM MDT

REGISTER ONLINE AT www.battliverresearch.com
CALL AT (780) 582 7308

BEAVER COUNTY, SASKATCHEWAN COUNTY, FLAGSTAFF COUNTY, COUNTY OF PARKLAND

August 14 - Microbes, Minerals & Myths

On August 14, 2024, Battle River Research Group, in partnership with Chinook Applied Research Association, hosted the “Microbes, Minerals and Myths” workshop at Coronation Community Hall, sponsored by Paintearth County. The event attracted 30 participants for a full day focused on soil health and nutrient management. Dr. Don M. Huber delivered presentations on potential soil health threats and using balanced nutrition to manage plant diseases. Dr. Yamily Zavala later shared results from the Alberta Benchmark Verification Project, highlighting management impacts on soil health. The workshop included lunch and networking, and participants valued the practical, research-based insights for improving sustainable farm management.

MICROBES, MINERALS, AND MYTHS
 Thursday, August 14 2025 - Coronation Hall - 9:30am-3pm
 Free To Attend, Courtesy of the County of Paintearth
 Lunch Included!

"IS A HIDDEN KILLER LURKING IN YOUR SOIL?"
"NUTRIENT MANAGEMENT TO CONTROL PLANT DISEASES"

Dr. Don M. Huber
 Emeritus Professor of Plant Pathology
 Purdue University

"ALBERTA BENCHMARK VERIFICATION PROJECT RESULTS: EVALUATING THE EFFECT OF MANAGEMENT ON SOIL HEALTH PARAMETERS"

Dr. Yamily Zavala
 CARA Soil Health Lab Manager

Registration
 (403) 664-3777 or cara-3@telus.net
 Eventbrite: <https://bit.ly/3ZwLLYa>
 or scan the QR to register!

October 2 - Smart Strategies for Winter Grazing

Battle River Research Group hosted a workshop titled Smart Strategies for Winter Grazing on October 2 at Stettler Agricultural Society, with 40 participants. Kabir Makan served as MC and introduced the speakers. Markus Weber discussed using drones for monitoring livestock, checking fences, and managing feed during winter. Dr. Karen Schwartzkopf-Genswein presented on cold stress, covering cattle behaviour, feed management, and environmental considerations. Quinton from Rangeward showcased fencing solutions for winter conditions. After a pizza lunch, Graeme Finn discussed swath grazing, cover crops, and cost-effective winter feeding. The workshop concluded with a Q&A, providing practical strategies to improve winter grazing and livestock management.

SMART STRATEGIES FOR WINTER GRAZING

Dr. Karen Schwartzkopf-Genswein

Graeme Finn

Markus Weber

Agenda for the workshop :

1. Defining cold stress in beef cattle including behavioural and physiological responses
2. Feed management including timing and nutrient density
3. Environmental management including windbreaks, mud and bedding
4. Drones on the Ranch in Fall & Winter
5. The in and outs of swath grazing
6. Cover crops
7. Cattle impact on the soil
8. Keeping winter feed cost manageable
9. Weed control

2 OCTOBER 10 AM LUNCH PROVIDED
STETTLER AGRICULTURAL SOCIETY
(4516 52 ST, STETTLER, AB T0C 2L0)

REGISTER ONLINE AT www.battleriverresearch.com
 CALL AT (780 582 7308)

**October 22 - Water on the Land:
Managing Wetland for Farm &
Community Resilience**

Battle River Research Group hosted a workshop titled Water on the Land: Managing Wetlands for Farm & Community Resilience on October 22 at Holden Community Hall, with 14 participants. Brent Christensen served as MC. Susanna Bruneau from Battle River Watershed Alliance discussed riparian restoration funding and benefits such as improved water quality and erosion control. Nick Caroppi from Ducks Unlimited Canada highlighted the role of wetlands in water storage, flood mitigation, and biodiversity, along with available funding programs. Jonathan Culbert from Beaver County addressed local surface water management strategies. The workshop concluded with discussion and networking, providing practical insights for managing wetlands and building resilient agricultural landscapes.

Battle River Research Group
www.battleriverresearch.com

WATER ON THE LAND: MANAGING WETLANDS FOR FARM & COMMUNITY RESILIENCE

Find sustainabi
Nick Caroppi
Ducks Unlimited

Susanna Bruneau
BRWA

Jonathan Culbert
Agricultural Fieldman

Kyle Lund
Alberta Environment

Agenda for the workshop :
 1. General Overview on Wetlands – Ecological and agricultural importance of wetlands.
 2. Riparian Restoration Funding Program – Current funding opportunities available.
 3. The Water Act & Agriculture – Impact on farmers and funding administered by Alberta Environment.
 4. Surface Water Management – Beaver County’s perspective on local challenges and strategies.

22 OCTOBER 10 AM LUNCH PROVIDED
HOLDEN COMMUNITY HALL
 (4919 49 AVE, HOLDEN, AB T0B 0H8)

REGISTER ONLINE AT www.battleriverresearch.com
 CALL AT (780 582 7308)

BEAVER COUNTY Agriculture
 BATTLE RIVER WATERSHED ALLIANCE
 Alberta Environment and Parks

**November 4 - Gain Aeration
Management for Long Term Storage**

Battle River Research Group hosted a Zoom webinar on Grain Aeration Management for Long Term Storage on November 4 at 11 AM MDT, with 32 participants in attendance. The session featured Dr. Chandra Singh, who shared practical guidance on maintaining grain quality during extended storage. He discussed the importance of aeration, key principles of aeration systems, and how moisture migration affects stored grain. Strategies for long-term storage were highlighted, along with the use of technology and sensors to monitor conditions. Dr. Singh also addressed common storage challenges, solutions, and cost-effective aeration practices. The webinar concluded with questions, providing valuable insights for improving grain storage management.

Battle River Research Group
www.battleriverresearch.com

**ZOOM WEBINAR
GRAIN AERATION MANAGEMENT
FOR LONG TERM STORAGE**

Dr Chandra Singh

Dr. Chandra Singh, RDAR Research Chair and Director of the Advanced Post-harvest Technology Centre at Lethbridge Polytechnic, is advancing Alberta agriculture through innovative technologies that reduce crop losses and improve sustainability. He leads the development of cost-effective, AI-assisted crop testing methods that deliver fast, accurate, and non-destructive quality assessment. His groundbreaking work recently earned him the prestigious John Ogilvie Research Innovation Award, recognizing his national leadership in agricultural research.

Topics to be discussed include:

- Importance of aeration in grain storage
- Key principles of aeration systems
- Moisture migration in bins
- Strategies for long-term storage
- Technology and sensors in aeration
- Common storage challenges & solutions
- Cost-effective aeration practices

NOVEMBER 4 11 AM MDT

REGISTER ONLINE AT www.battleriverresearch.com
 CALL AT (780) 582 7308

Lethbridge College ADVANCED POST-HARVEST BEAVER COUNTY
 ALBERTA COUNTY OF SASKATCHEWAN COUNTY OF PRINCE ALBERT

November 14 - Post Harvest Soil Testing

On November 14 at 11 AM MDT, Battle River Research Group hosted a Zoom webinar on Post Harvest Soil Testing, featuring Greg Patterson. The session attracted strong participation from producers and industry representatives interested in improving fertility management and making informed post-harvest decisions.

Greg Patterson began by discussing soil variability and how differences in soil texture, organic matter, and landscape position can significantly impact nutrient availability and crop performance. He emphasized that understanding this variability is essential for developing effective fertility programs and optimizing input use. The presentation highlighted how proper soil testing allows producers to identify nutrient deficiencies and manage fields more precisely.

The webinar also covered efficient and economical soil testing methods. Greg explained approaches that balance accuracy with cost, ensuring producers can gather meaningful data without excessive expense. Site-specific sampling strategies were discussed in detail, particularly for operations considering or already using variable rate technology. He outlined how grid and zone sampling methods can help capture field variability and improve nutrient placement. Interpreting soil test results was another key focus. Greg walked participants through how to use soil test data to make informed fertilizer decisions, emphasizing the importance of considering crop rotation, yield goals, and long-term soil health. He also provided an overview of A&L's unique soil test features and how their recommendations can support more precise nutrient management.

Battle River Research Group
www.battliverresearch.com

**ZOOM WEBINAR
POST HARVEST SOIL TESTING**

Greg Patterson

Greg Patterson has been working in agriculture and an advocate for best agriculture practices and sustainability for over 35 years. He has strong ties in the Canadian agriculture community as the founder of A&L Canada Laboratories, the largest full-service agriculture, environmental, cannabis and plant disease laboratory in Canada.

Topics Covered:

- Understanding variability in soils and its impact on fertility management
- Efficient and economical soil testing methods to address variability
- Site-specific sampling strategies for variable rate applications
- Interpreting soil test results for informed decision-making
- Overview of A&L's unique soil test features and recommendations

NOVEMBER 14 11 AM MDT

REGISTER ONLINE AT www.battliverresearch.com
CALL AT (780) 582 7308

A & L CANADA LABORATORIES INC. BEAVER COUNTY

The session concluded with a question-and-answer period, where participants discussed sampling timing, depth consistency, and practical implementation. Overall, the webinar provided valuable guidance to help producers use post-harvest soil testing to improve efficiency, reduce costs, and enhance long-term soil productivity.

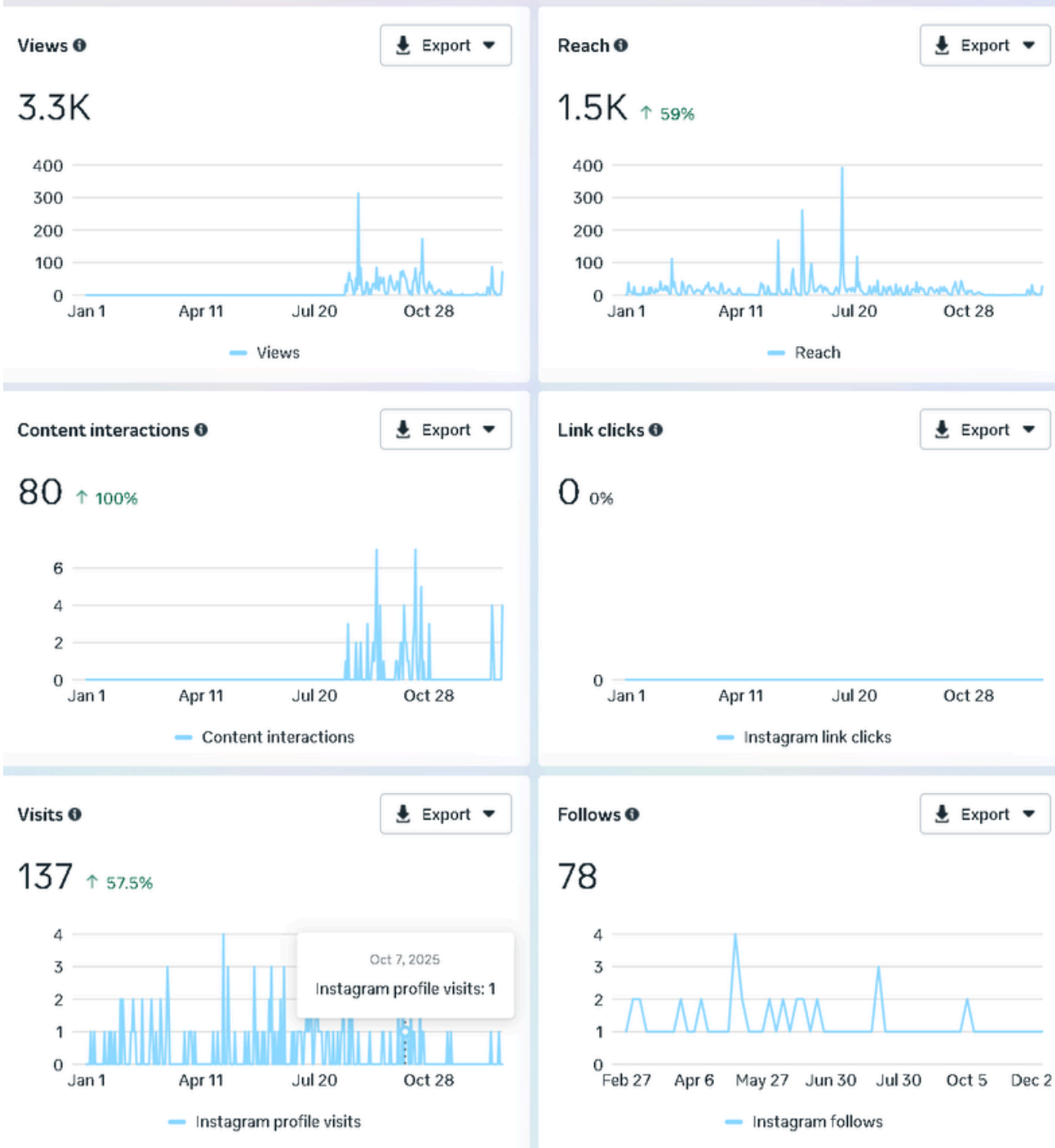
THE YEAR OF TRANSFER OF KNOWLEDGE 2025

BRRG SOCIAL MEDIA AT A GLANCE

<p>ANNUAL REPORT</p> <p>BRRG publish one yearly report to share the organization's performance and the ongoing research project results with our members and subscriber. The reports are available for the public at our website</p>	<p>E-NEWSLETTER</p> <p>BRRG published three newsletters/year. All newsletters are available for the public on our website www.battleriverresearch.com</p>	<p>YOUTUBE</p> <p>BRRG started a YouTube channel in 2020. We always shared our live events and webinars on YouTube</p>
<p>TWITTER</p> <p>1.8K FOLLOWERS</p>	<p>FACEBOOK</p> <p>954 FOLLOWERS</p>	<p>INSTAGRAM</p> <p>329 FOLLOWERS</p>



INSTAGRAM ANALYTICS

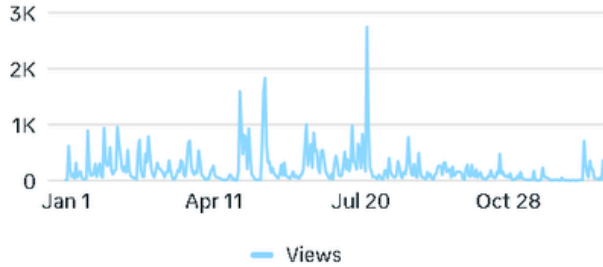


FACEBOOK ANALYTICS

Views ⓘ

Export ▾

74.4K



Viewers ⓘ

Export ▾

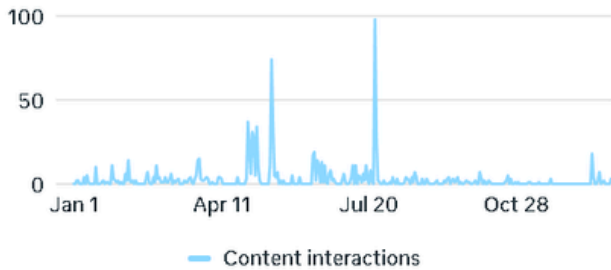
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Content interactions ⓘ

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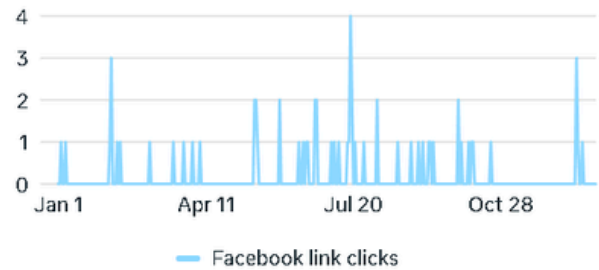
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Link clicks ⓘ

Export ▾

62 ↓ 21.5%



Visits ⓘ

Export ▾

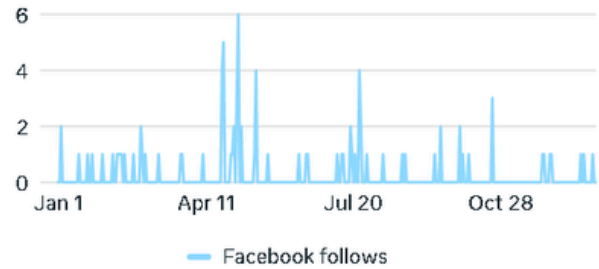
2.6K ↑ 88.4%



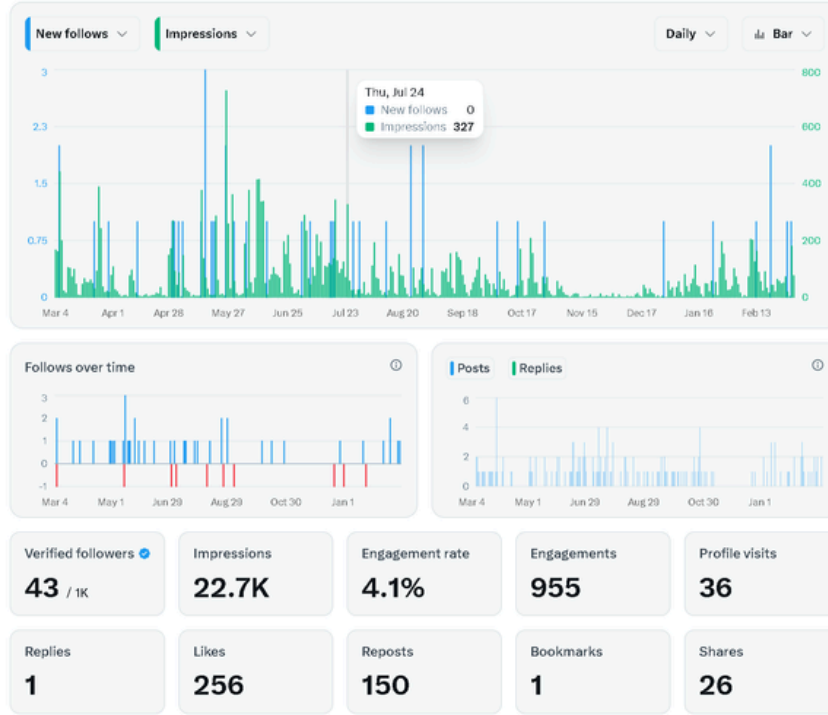
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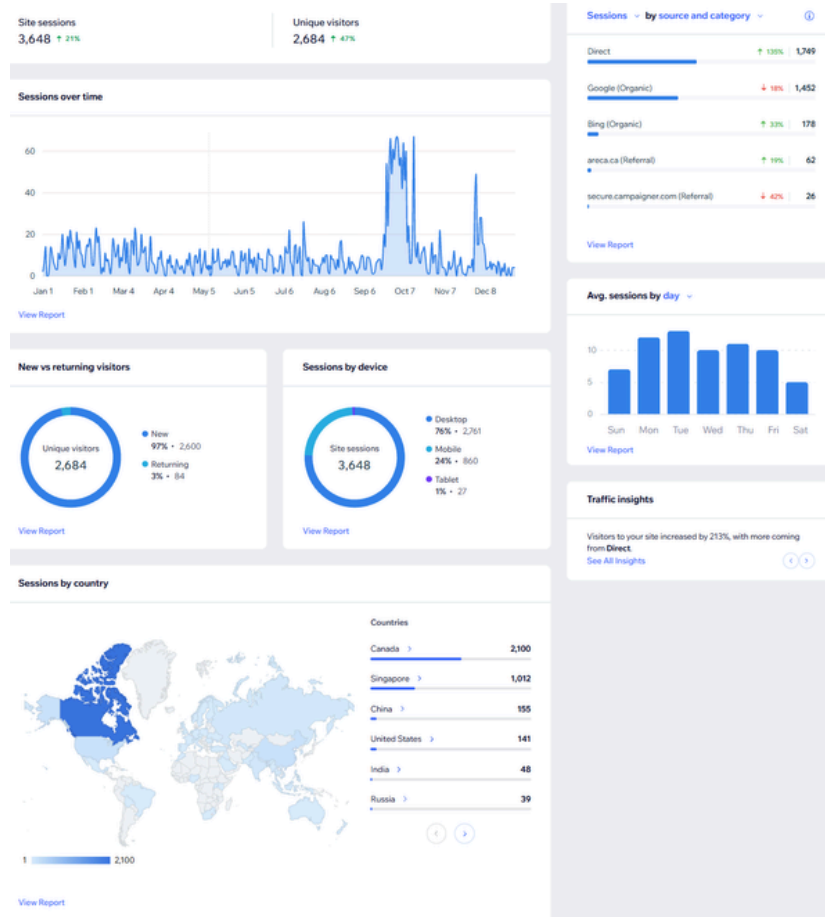
88 ↑ 22.2%



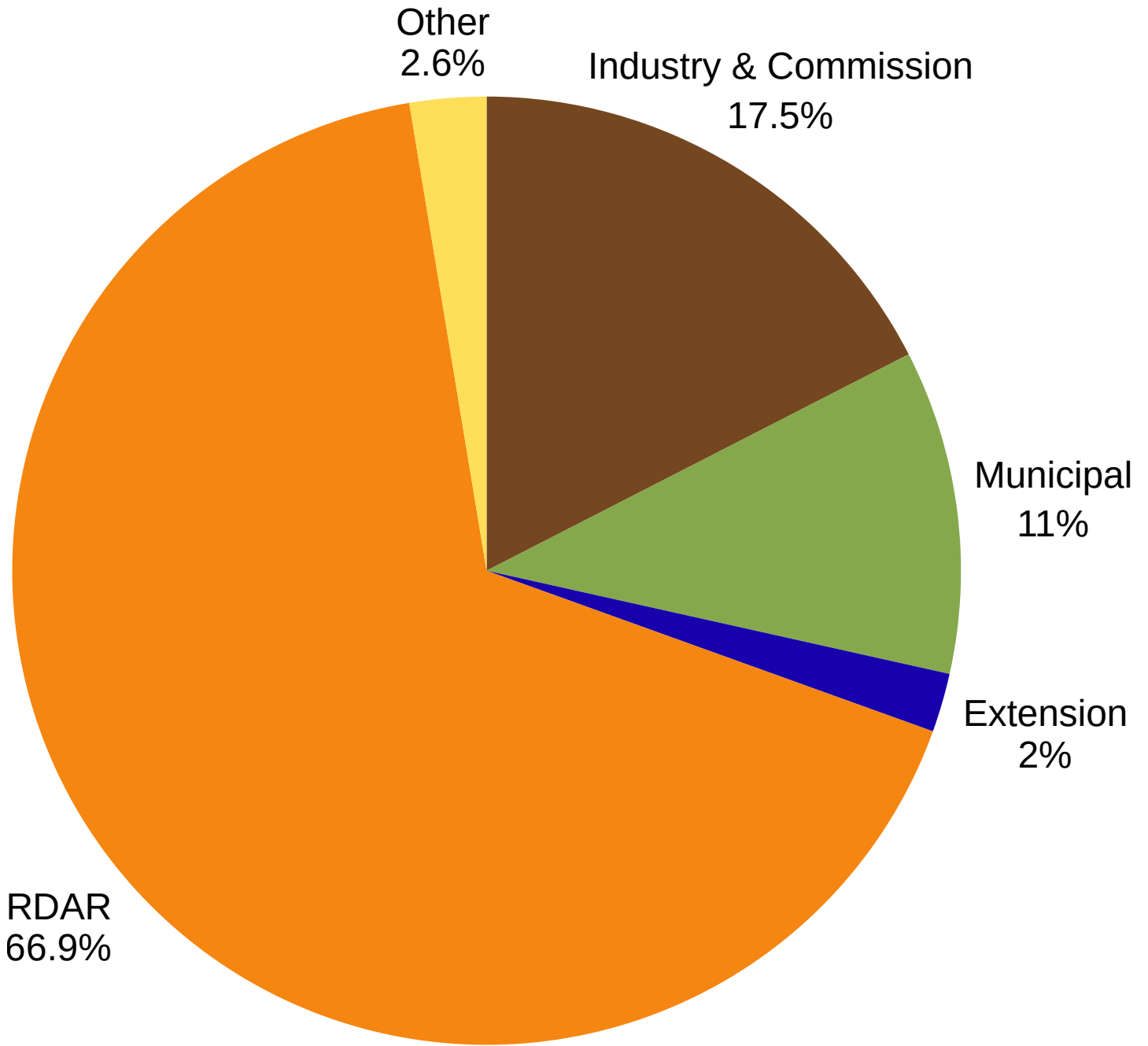
TWITTER ANALYTICS



WEBSITE ANALYTICS



2025 FUNDING



We are Thankful to our Sponsors

