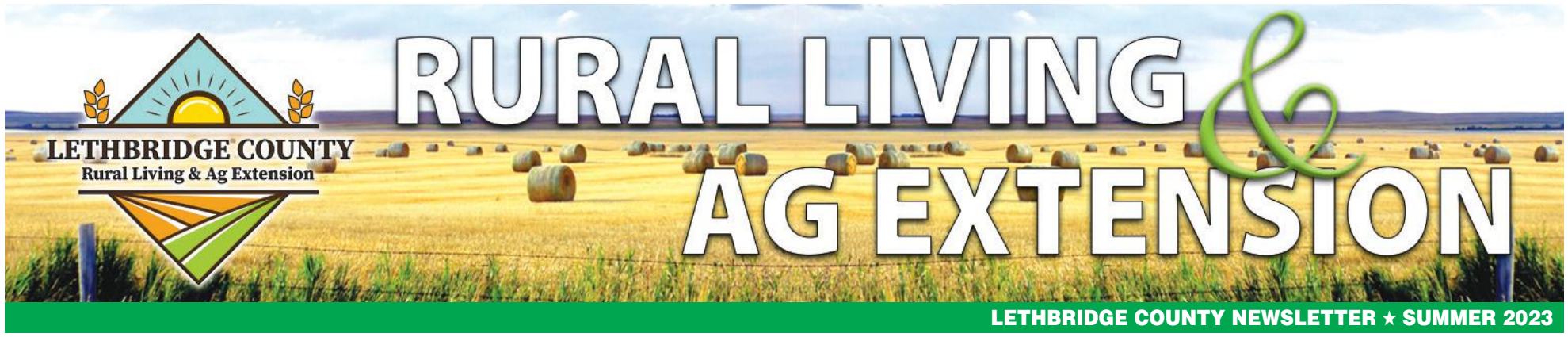


LETHBRIDGE COUNTY NEWSLETTER ★ SUMMER 2023

History of Agricultural Service Boards in Alberta

With information from:
https://agriculturalserviceboards.com/about-us/history-of-asbs/

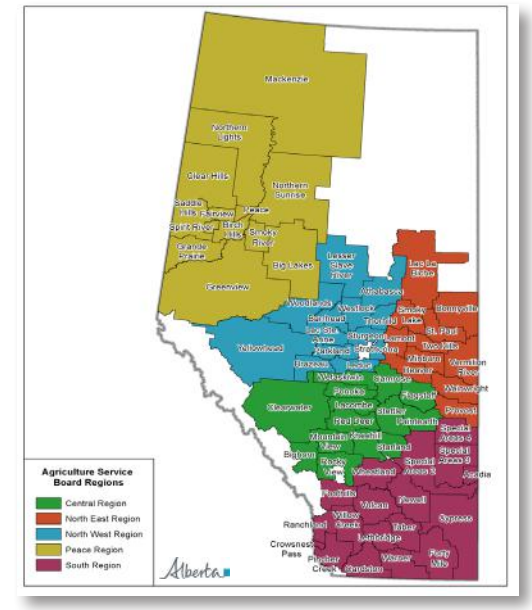
Agricultural Service Boards are unique to Alberta, and have been established in the province for over 50 years. They were originally set up by the Alberta Department of Agriculture to provide local (municipal) authority over the growing problems of weed infestation, and soil degradation from wind and water. Previous efforts to handle these concerns through limited provincial staff had not been effective, and locally based programs with provincial coordination and technical support seemed to be the answer.

In 1945, enabling provincial legislation was passed. The Agricultural Service Board Act allowed rural jurisdictions to set up local "agricultural service boards" to deal with weeds and soil erosion, with a qualified person (the Agricultural Fieldman) hired to carry out the board's programs. Once formed, the board became advisory to the municipal council and the Minister of Agriculture. Early ASBs consisted of a mix of municipal councillors, ratepayers, and the local Alberta Agriculture District Agriculturalist.

ASB programs developed over time, and vary considerably across the province due to regional differences in land use, cropping, climate, and demographics. In general, they include demonstration and enforcement of weed control, resource conservation techniques, roadside seeding and weed control, shelterbelt tree planting, encouragement of crop seed cleaning and treating plants, livestock improvement and specialized equipment rental, agricultural pest management, and coordination of provincial agricultural initiatives. These provincial initiatives include producer education, field crop pest surveys, livestock pest control, and implementation of resource conservation programs.

Provincial grant funding historically made up the bulk of ASB program funding. This is no longer the case in most ASBs, and municipalities have necessarily assumed by far the largest share of funding ASB programs through property taxes, user fees, and other funding sources. As a result, Alberta's 67 ASBs have become more independent from the province in their programming. ASBs core areas of expertise remain weed control, soil and water resource conservation, and pest management. They have now grown into strong advocates for their local agricultural communities, and are viewed as key contacts for soil and water resource sustainability. ASBs now work directly with federal and provincial government departments of Agriculture and Environment, private industry, and various agricultural and environmental organizations from the local to international level.

Since 1967, Agricultural Service Boards from across the South, Central, Northwest, Northeast, and Peace Regions of Alberta have met annually to discuss and take action on common issues of regional, provincial, national, and international concern. The annual Provincial ASB Conference is organized and hosted by the Association of Alberta Agricultural Fieldmen (AAAF).



The Association of Alberta Agricultural Fieldmen (A.A.A.F.)

With information from:
https://agriculturalserviceboards.com/about-us/history-of-asbs/

The Association of Alberta Agricultural Fieldmen have always been central to the success of Agricultural Service Boards. Agricultural Fieldmen develop, implement, and control programs designed to carry out priorities and policies set by their Agricultural Service Board. In addition, they are appointed as inspectors or regulatory officers enforcing the following Alberta statutes:

- Agricultural Service Board Act
- Weed Control Act
- Soil Conservation Act
- Agricultural Pests Act

Agricultural Fieldmen are uniquely qualified to manage the diverse ASB programs across Alberta. Many members have university or college degrees in Agriculture, Biology, Environmental Technology, and/or Business Administration. Several are Professional Agrologists or Certified Crop Advisors. All AAAF members have an extensive applied agricultural or environmental science background. All share a common tie to the diverse world of agriculture, and believe strongly in the importance of the industry to society's well being.

The full AAAF membership meet annually at "In-Service Training" to obtain updated technical training, discuss relevant issues, and conduct Association business.

History of Lethbridge County

With information from:
"AAA Fieldmen The First Forty Years" - Published by the Association of Alberta Agricultural Fieldmen and Agriculture Service Boards, Alberta, 1987

The Agricultural Service Board of Municipal District of Lethbridge No. 25 was officially formed, June 23, 1958. Bernard A. Butterwick was appointed Field Supervisor on June 15, 1958 and the board consisted of Nic Christ, Thomas E. Parker, C.R. Wilmot, A. E. Sherman, D. A., with Frank J. Dawley acting as Secretary-Treasurer of the Agricultural Service Board.

Today, the Lethbridge County Agricultural Service Board Committee Members consist of Klaas VanderVeen (Chair), Lorne Hickey, Dan Chapman, Ken Coles, Logan Miller, John Kuerbis, and Eric Van Essen.

WHAT'S *in this* ISSUE?

Recreational Value of Wetlands

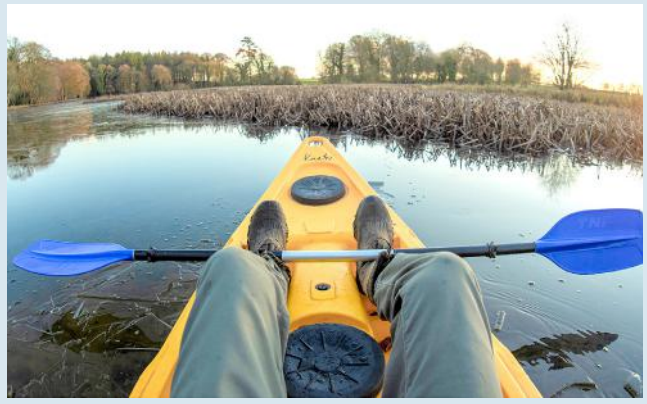
Submitted by:
Mary McIntyre, Ducks Unlimited Canada – Alberta Operations

Did you know that wetlands are like nature's VIP lounges? They're not just incredibly productive habitats, they also offer an abundance of benefits that make them truly one-of-a-kind. When left to their own devices, wetlands work wonders. They provide a cozy home for wildlife, act as superheroes during extreme weather by combating droughts and floods, and even give us cleaner water by filtering out those pesky pollutants. They're like the ultimate multitaskers!

But here's the exciting part: Recent scientific research has shown that wetlands also have a knack for boosting our health and well-being. They're like secret agents of tranquility, offering spaces that nurture our bodies and minds.

Part of the draw is because of their rich biodiversity where you can experience nature's plants and animals by sight, smell, and feel of the soil beneath your feet. These magical ecosystems are like bustling cities, buzzing with life. From mammals to reptiles, and from migrating birds to important nesting spots—it's a true wildlife paradise. Some of these species are born and never leave their home and others visit for only part of a day or part of their life.

Many of us enjoy being on or near wetlands. Picture yourself kayaking through serene waters, observing fascinating bird species, or capturing breathtaking photographs of nature's wonders. Oh, and let's not forget the thrill of ice skating, snowshoeing, or cross-country skiing during winter—wetlands have got it all!



Beyond the health benefits, they offer fun recreational and educational opportunities that cannot be overlooked. Kayaking, canoeing, and boating are just a few ways to explore wetlands and take in the scenery and wildlife.

Wetlands also have increasingly become a focal point for local tourism and the ecotourism industry where visitors want to experience a natural environment. Private and public wetlands can also be a significant source of revenue regionally. Every levy dollar from fishing and hunting licenses contributes to conserving Alberta's natural heritage and future.

By acknowledging and appreciating the wide range of benefits associated with wetlands, we can not only revel in their beauty and tranquility but also become active advocates for their preservation. Together, we can ensure that future generations continue to revel in the wonders of wetlands.

Learn more about how wetlands protect us from flooding, drought, and climate change.
https://www.ducks.ca/our-work/wetlands/

THE BRICK HOUSES of Picture Butte

Submitted by:
Belinda Crowson

What connection do the nine brick houses located in Picture Butte west of the old sugar factory have with agriculture? These houses wouldn't exist if it wasn't for sugar beets, for these brick houses were designed for Rogers Sugar company personnel who worked at the factory. (I briefly mentioned the houses in an article from last year, but will go more deeply into the history and design of the buildings and their gardens in this article.)

One of the houses was originally designed to be a Club House, where company officials would stay when they were in Picture Butte, as the company was headquartered in Vancouver, B.C. That house, like the others, in time became family homes for sugar beet staff.

Mrs. Josephine Rogers, whose husband was Ernest Theodore Rogers, President of Rogers Sugar and the person who ran Canadian Sugar Factories, came from Vancouver and designed the houses. The nine houses were built in three different designs with three of each design constructed. These houses had running water and electricity long before most other homes in Picture Butte and stood out among the small cottages and other homes of the time.

Mrs. Rogers ensured the houses had well designed gardens. Each house had apple, crabapple and plum trees planted near them and caragana bushes between them to separate the yards and help ensure privacy. Poplar trees were planted with a few elm trees interspersed among them. Years after the poplars and elm were planted, the factory superintendent started cutting down the poplar trees. Many people around the town complained about the loss of the trees. However, when the poplars were removed, the elms grew better. It is believed that Mrs. Rogers had purposely designed the planting so that the poplars would come to the end of their lifespan just as the elms were reaching a good size. The factory superintendent was just following the original plan for the plantings on that site.

When employees first moved into the homes, they rented the houses from the Rogers company. Eventually the people living in the homes were given the option of purchasing them. The houses remain in Picture Butte as family homes. The design of the gardens is still visible around some of the homes. These houses remain distinct and well-known homes within the community, a reminder of the factory and its impact on the area. It is also not a surprise that one of the easiest ways to get to the houses is to reach them just off Rogers Avenue.

The houses, and the repurposed sugar factory, remain legacies of the sugar factory that operated in Picture Butte from 1936 to 1977 and highlight the importance of the sugar beet industry in the county and beyond.

Q&A On the County's integrated management plan for weed control

Submitted by: Gary Secrist, Supervisor of Agriculture Services for Lethbridge County,
with information from https://www.alberta.ca/provincially-regulated-weeds.aspx

Why does the County use herbicides in the right-of way?

The County is obligated to control noxious and prohibited noxious weeds to comply with Provincial Weed Control Act regulations. Weeds left to establish in the right-of-way can spread into adjacent farmland, costing farmers yields. Herbicide use is part of our integrated management plan for weed control, which also includes mowing and hand pulling, where appropriate. Spraying is carried out on a three-year rotational basis within the County. However, areas not scheduled for spraying may receive spot treatment where controlled weeds are identified or reported.

What if I don't want a spray application next to my property?

If you can enter into an agreement, the County will post a County supplied "No Spray Zone" sign in the designated area. However, you will be responsible for weed control in that area and are liable under the Weed Control Act where regulated weeds are not controlled.

What if my farm operation is organic?

The County's rights-of-way are not considered a "buffer zone" for organic farming purposes. If a buffer zone is required, it must be on the landowner's property. With most organic operations a no-spray agreement would be the best option.

What are noxious and prohibited noxious weeds?

Noxious weeds can spread rapidly, causing severe crop losses and economic hardship. This regulatory weed designation allows the County to execute established management practices to contain the spread of invasive noxious weeds. Severe measures are employed where there is a demonstrated significant risk of ecological or economic impact.

Prohibited noxious weeds are highly competitive and can spread rapidly. This regulatory weed designation allows a municipality to perform 'Early Detection, Rapid Response' actions to control these prolific weeds. While these weeds are rare in Alberta, they can occur in isolated locations where eradication is considered achievable.

What do I do if I find noxious or prohibited noxious weeds on my property?

County-employed weed inspectors are available to assist with advice to identify and control noxious and prohibited noxious weeds. Another good resource is the Alberta Invasive Plant Identification Guide, which is available by scanning the QR code to the right.

An Environmental Farm Plan

An Environmental Farm Plan (EFP) is a practical way to view your entire farm through a different operational lens. The EFP process helps you to easily think through basic resources on your farm, such as soil and water, and the inputs you use, such as fertilizer, energy and pesticides and the waste products they generate. The EFP process provides a step-by-step guide to produce an operational plan to improve production, conserve resources and manage waste. Furthermore, the EFP can help you and those you work with, such as agricultural professionals, accountants, and lawyers, gain a greater understanding of what you do every day.

Being able to work in and with nature can be a big bonus for farmers. Protecting natural resources and biodiversity is important in maintaining the farming lifestyle, since all farms rely on natural resources and every farm provides habitat. When your expertise is in producing food, it might seem overwhelming to know how to start supporting the natural systems on your farm. The Alberta Environmental Farm Plan provides useful information to help producers understand the different habitat types that may be on their farm and includes choices to improve the viability of these natural areas. Supported with research, the content is developed in partnership with biologists. The goal is to balance the farm production needs with ecosystem necessities to provide a variety of choices that allow the farmer to tailor natural resource management practice opportunities to their operation.

If you have any questions, contact Matthew Wells at 403-732-5333 or mwells@lethcounty.ca to receive additional support.

The dangers of fatigue in the busy seasons on the farm

The consequences of a southern Alberta farm employee falling asleep last fall could have been much worse

By Jeff Melchior (Courtesy of Alberta Farmer Express, albertafarmexpress.ca)

Damaged equipment is bad enough for any farmer in the middle of harvest, but a co-owner of a southern Alberta farm says they could have lost much more.

KCL Cattle Company lost thousands of dollars last fall when an employee crashed into a header after a long day in the field. The header was totalled, as was the truck hauling it. The culprit? Fatigue.

"It had been a long stretch of harvest because we had had no weather delays, which is great, but I think you forget just how much weather delays help with fatigue," said Karleen Clark, business manager with the Lethbridge-area operation.

"We had just finished up a field; I think they finished around midnight. They decided to move the equipment to another field and start in the morning. There were two trucks pulling the headers. The one in the front slowed down to check a pivot. The one behind him had dozed off and so he ran into the one in front."

Luckily, no one — including the driver who had fallen asleep — was hurt.

"Fortunately, we were able to get a header the next day but that was just a stroke of luck, I think. It could have been worse," said Clark.

"I know this feels like a small incident but it was eye-opening to us as to how bad it could have been. If our employee had been hurt, that would really shake us because we're all friends, we're all family. It's important to make sure everyone is staying safe."

With another busy season approaching, KCL Cattle Co. is looking at ways to manage fatigue to prevent any similar (or worse) accidents.

"We've had a lot of conversations about it. I think the biggest thing is to have honest discussions about fatigue," said Clark, who serves on the board of directors of AgSafe Alberta.

"There's a sense of pride — farmers push to finish. I think it's important to remind everyone that there are times when it's not smart to keep going.

"If you're tired, don't be afraid to say 'hey I need to be switched out today. I need some help. I need to get some more rest. Or maybe let's not move this equipment tonight. Let's go rest first.'"

As a farm owner, Clark understands the need to seed and harvest quickly, "but a bad incident is going to cost you a lot more than a weather event or not getting your crop off in time."

More dangerous than alcohol

Although sometimes shrugged off by farmers as part of the job, fatigue is no joke. According to AgSafe Alberta, it's four times more likely to cause worker impairment than drugs or alcohol. A tired employee is three times more likely to be involved in a workplace incident.

Fatigue is also estimated to cause 20 per cent of all vehicle fatalities, while unmanaged fatigue contributes to diabetes, obesity and heart disease.

One of Clark's plans for the upcoming busy season is to encourage the timely use of caffeine — or even water — when the work day runs long.

"Maybe bring out some coffee at 8 p.m., giving the guys a little bit of a break later on in the evening, probably could help."

Employees or operators in general should take notice of things that help keep them awake.

"My one farm manager said being barefoot helps keep him awake. Opening windows can help; warm vehicles make you dozy. I think sometimes getting out of your equipment and just moving around can help. Having someone in the cab … can help too."

On the managerial side, Clark recommends setting up shifts if possible. Not every farm has that luxury, of course.

"But if farmers can make an arrangement with neighbours — whatever they can do to avoid getting into a position of fatigue I think is important."

Managers should pay particular attention to younger or more inexperienced employees, said Clark. The worker who got into the accident was younger, less seasoned and probably hadn't yet found the tools needed to cope with fatigue.

AGSAFE: *Karleen Clark (left) of KCL Cattle receives AgSafe Certification for their commitment to safety.*

"Our farm manager, my husband Jared, knows how to deal with fatigue and knows how to identify when he's too tired because he's been doing this for 10, 20 years.

"With the younger guy, we probably could have done a better job of telling him 'hey, this might be helpful', or "you need to make sure that in your off days, you're getting enough rest.'"

AgSafe Alberta says managers can watch for workers who become inattentive, have difficulty remembering or thinking clearly, struggle to make decisions and show errors in judgment.

AgSafe Alberta has resources to help farmers manage a broad range of farm safety issues. One of its latest is Farmers Care, billed as a free program designed to be "a simple, effective and interactive tool to help you improve farm safety in a practical way."

As its website says, "you don't need any previous safety knowledge or experience; all that it will take is a computer, tablet, or mobile device, an Internet connection, and a little time."

"It touches base on the key hazards on the farm," said Clark.

"The program takes you through each section and does a really good job of overviewing what the hazard is, how you can avoid the hazard, and has quick snippets on people who have had incidents related to those hazards.

"I would say it took me an hour to go through the entire program, which I think is pretty quick."

Farmers Care and other AgSafe programs and information can be found at agsafeab.ca.

Links:

Fatigue management: https://www.grainews.ca/news/fatigue-management-during-busy-times-on-the-farm/

Preventing tractor rollovers: https://www.grainews.ca/columns/wheat-chaff/how-to-prevent-tractor-rollovers-and-runovers/

TEN QUESTIONS *with...Cody Spencer*

Introduction & Interview completed by Brandon Regier

This is an excerpt of the Oldman Watershed Council's interview with local bison rancher Cody Spencer. To view the full interview, visit https://oldmanwatershed.ca/blog-posts/2023/2/21/10-questions-withcodyspencer or scan the QR code:

• How did you get started with bison ranching?

"Well, I grew up on a farm near Milk River which my family sold when I was about 12. I have a bit of a background in agriculture before I was removed from it. I then graduated high school and started working after that. I started spending a lot of time on ranches and farms with my friends, alongside doing a lot of hunting. I kind of became reconnected to it. My mom had a coffee table book called 'Portraits of the Bison'; I picked it up and started reading it, I became fascinated by the animal. I wanted to figure out how to get involved with them. Once I realized that bison ranching was a thing I was dead set on doing it. I got in touch with some local ranches; there was one out near Foremost that was a perfect fit for me. I started working there where I learnt about the animals and ranching, and then got into the meat side of things. From there it snowballed!"

• Can you walk us through a typical day on the ranch?

"A typical day is seasonally based. In the spring time when the grass is growing more, we may be moving animals once a week. Really there is not a whole lot that goes into it once the infrastructure is set up on a ranch (which takes a lot of work). If you are setting up a property for bison or grazing, there are a lot of water developments that need to be done, pasture pipelines, and fencing installations. In the winter time, we may be feeding some hay, checking that the water is working, and that all the fences are electrified. All in all, it is pretty hands off."

• Because you are managing more remotely, do bison make this easier?

"Yeah, I would say so. In some senses. Calving season is a big one. With a lot of cattle producers, if they've been doing it in the so-called traditional sense, they are spending 24/7 for several months on end tending to their cows and pulling calves. If they are foolish enough to be calving in the middle of winter, they are dealing with crazy temperatures and all sorts of problems. Whereas bison, they naturally calve in sync with nature which coincides with the growth of grass. There are no added supplements and cost as far as machinery, bringing feed into the animals, and all the stuff that humans have put in there thinking that we are doing something beneficial. When we have actually taken several steps backwards by taking these actions. With calving season there is zero work, we just move them around every now and again to a fresh pasture and they calve themselves. Bison know what they are doing, they don't need help. This is a really big benefit to having bison versus cattle."

• Your ranch is located in a beautiful area of the watershed. What was the condition of the land when you started working it?

"It was generally overgrazed in some spots. The riparian areas were really beat up, and some areas further from water were under grazed. All in all it wasn't in horrible condition. But there was a lot of room for improvement. Some good, some bad."

Cows on the Planet

Dr. Kim Stanford

Dr. Kim Ominski

Dr. Tim McAllister

Agricultural podcasts are not new. However, many previous broadcasts and podcasts have been directed towards the agricultural community. The "Cows on the Planet" podcast series is different, targeting Canadian consumers to present a balanced, science-based perspective on Canadian beef production practices and review claims that cattle are the leading cause of negative impacts on our world including global warming, water depletion, deforestation, and species extinction. 'Cows on the Planet' blends interviews with scientists and other subject experts through the lens of science and history and features no-holds barred commentary on inaccurate or biased science. Currently there are no other podcasts occupying this niche.

At the start of this project, Drs. Tim McAllister (Principal Research Scientist at the Lethbridge Research and Development Centre, Agriculture and Agri-Food Canada), Kim Stanford (Associate Professor, University of Lethbridge) and Kim Ominski (Professor, University of Manitoba) had no experience with podcast production or promotion. They identified the most controversial aspects of beef cattle production and engaged internationally-renowned scientists to address each topic area. By the time they'd produced 8 episodes, they already had more than 1,100 downloads on the site from listeners all over the world.

Some of the topics covered include: **Are feedlots cruel to cattle? Are grazing cows harming ecosystems? How much do cattle contribute to climate change? Is antimicrobial resistance in cattle harming people? Manure versus chemical fertilizer—which is better for soil? Should cattle be replaced with native species such as bison? Do cattle have a role in regenerative agriculture? Should meat be grown in a lab? How much water does it take to make a burger? Are cattle using too much land? Livestock and global food security. Excessive nitrogen from intensive livestock . Grass-fed beef. Negativity to agriculture in the media. Are there harmful residues in beef? Carbon sequestration and grazing**—and a number of others, 36 podcasts in all.

The podcasts highlighted practices and technologies used by the beef industry and discussed technologies used by competitors of the beef industry such as meat substitutes and lab-grown meat. The premise being that the podcast hosts invite real experts, who are actually working in the area of a particular topic that is being discussed with guests drawn from research institutes, universities or organizations such as the Nature Conservancy of Canada.

Of all topics discussed, the influence of cattle on climate change was the one that generated the most interest. In the episode **"How much do cattle contribute to climate change?"** with guest Dr. Karen Beauchemin of Agriculture and Agri-Food Canada, the discussion evaluated the most realistic methods to reduce methane emissions from cattle. Although greenhouse gases are produced by cattle and agriculture, it is far less than that produced from fossil fuels. Comparing the emissions from cows versus those associated with flying across the country in a jet plane put things into context. The episode discussed some ways to reduce greenhouse gas emissions in livestock, but that there are always trade-offs. For example, if the entire human population switched to vegan diets, more forests and grass-lands would need to be cultivated which would increase emissions as well as remove habitat for wildlife and reduce biodiversity. The goal of the podcast is to make people aware of some of the trade-offs. These are not simple issues, although some media representations oversimplify them, sometimes to better promote an anti-agriculture agenda.

In another episode **"Grass Feed Beef"**, guest Dr. Sarah Klopatek of UC Davis discusses the economics of grass-fed beef and its impact on climate. The episode described how meat quality of grass-fed beef differs from grain-fed beef and compared the environmental impacts of the two beef production systems. The take home message is it doesn't matter what type of production system; there will always be some good and some bad things about each. The overall objective of Cows on the Planet is to gather that information and share it with listeners, so they can make an informed decision.

There has now been more than 15,000 downloads of the podcast and it is among the top 10% of most-listened to podcasts on any subject. Listeners are primarily from Canada and the USA but the podcast has been picked up in Europe and also in South America. Negative media coverage for agriculture was discussed in the episode **"Negativity to agriculture in the media"** with guests Sara Wray and Ben Wilson of the media production company, Story Brokers Media House. Cows on the Planet is now a repository of balanced information that can be accessed by anyone who is interested. Each episode also includes a list of scientific papers and other information that were used in its development. The podcast covered all of the major environmental issues facing the beef industry so its future direction is not immediately obvious. So at least for the time being, podcasters have decided to hang up their mics.

For people interested in listening, *"Cows on the Planet"* is available on both Apple podcasts, Spotify, as well as most other podcast providers.

Download on Apple Podcasts and Listen on Spotify

Don't Let It Loose!

Submitted by: Alberta Invasive Species Council

One fish, two fish, red fish, goldfish?! Often considered a harmless pet, goldfish can easily establish once released and outcompete native species for resources, may present disease transmission and alter an ecosystem's natural balance. In Alberta, this species is commonly released into stormwater retention ponds that direct water run-off into local waterways and to date, there are over 100 locations of goldfish introductions within the province.

Goldfish are a highly adaptable species and can survive in both high- and low-quality habitat conditions, such as temperature fluctuations, pH changes, pollution, and little to no oxygen. When in a fish tank, goldfish rarely grow larger than 2 inches long and are limited by the size of the tank but in outdoor water bodies, they can grow to about 14 inches long or more, especially with abundant resources. Goldfish are opportunistic feeders, meaning that they do not stop eating as long as there is available food. Unfortunately, all these qualities make the goldfish an ideal candidate for being considered an aquatic invasive species.

So, what can you do? Don't let it loose! Releasing aquarium pets and plants into the wild is illegal and 100% preventable. We encourage Albertans to be responsible owners and to C.A.R.E. about their aquarium pets and prevent the intentional release of aquatic invasive species into waterbodies in the province.

- CONTACT someone to adopt your pet or plant, use online ads, research humane societies, science centres or contact the pet store you purchased it from to see if they'll take it back.
- ACT RESPONSIBLY by researching pets and plants before adopting and making sure you're willing to commit to their lifetime of care. Knowing which species are legal to own, native to your region and buying from reputable retailers.
- REPORT any pets or plants that may be of concern to the Aquatic Invasive Species Hotline or the free EDDMapS phone app.
- END OWNERSHIP by rehoming, burying deceased fish instead of flushing them so it can't spread diseases and to freeze plants and dispose in the trash (not the compost).

ALBERTA PULSE GROWERS

Black Bean Burgers

Recipe from Alberta Pulse Growers

This easy-to-make vegetarian burger features delicious black beans! Bake in the oven or grill on the BBQ, either way, this recipe is sure to become a family favourite.

Prep Time: 15 minutes plus at least 1 hour refrigeration
Cook Time: 15 minutes
Makes: 6 large patties or 12 sliders
Ingredients
4 cups (1 L) cooked black beans (2 cans (19 oz/540 mL), drained & rinsed)
1/4 cup (60 mL) onion, finely minced
3 cloves garlic, minced
1 small jalapeno pepper, finely chopped, if desired
2 Tbsp (30 mL) Tex Mex seasoning (see tips)
1/4 cup (60 mL) fine breadcrumbs
1 egg, beaten (optional)
6 Whole wheat buns
Toppings
1/4 cup (60 mL) plain, low-fat yogurt
1/4 cup (60 mL) salsa, heat level as desired
Romaine, butter or leaf lettuce leaves
1 avocado, sliced (optional)
Directions
- Place drained beans in a large mixing bowl. With a potato masher or large heavy fork, mash beans into a rough mixture. Do not use a blender or food processor, mixture should be quite coarse.
- Add onion, garlic, jalapeno and Tex Mex seasoning and stir just until evenly distributed. Add breadcrumbs and beaten egg, if using, and combine into a sticky mixture. Cover and refrigerate for at least 1 hour. This can be prepared up to a day in advance to this stage.
- Preheat oven to 400°F (200°C).
- With slightly damp hands, shape mixture into 6 patties.
- Bake in preheated oven, or grill over a medium flame BBQ on a silicon sheet for 7 minutes.
- Flip burgers just once and continue cooking/grilling for another 7 minutes.
- For a cheeseburger, add cheese during the last 3-4 minutes cooking time after flipping burgers.
- For the toppings, combine salsa and yogurt in a small bowl. Serve burgers with yogurt/salsa sauce, lettuce and avocado (if desired) or other toppings like mayonnaise, pesto, lettuce, sliced tomatoes, pickles, etc.

Tips
- No Tex Mex seasoning? You can use Taco seasoning or make your own seasoning mix by combining 1 tsp (5 mL) each chili powder, cumin, oregano and salt!
- The egg is optional; however, it does create a firmer burger.
- Although this is a firm mixture, we highly recommend using a silicon grilling sheet, cast iron pan or flat top griddle if grilling on the BBQ. If using a cast iron pan or flat top griddle, heat a small amount of canola oil in the pan or on the griddle over medium heat on the BBQ, add patties and cook 7 minutes per side or until lightly browned

Nutrients per serving (1 large burger with bun and egg added to the mix) 361 calories, 4 g fat, 1 g Saturated Fat, 31 mg Cholesterol, 62 g Carbohydrate, 13 g Fibre, 6 g Sugars, 18 g Protein, 507 mg Sodium, 891 mg Potassium, 4 mg Iron

SUMMER FIRE SAFETY

Simple actions can help prevent dangerous wildfires and threats to your property

We have seen the effects of devastating wildfires throughout the province this spring. People evacuated, homes lost, and hundreds of thousands of hectares burned.

Everyone has a role to play in fire safety, and as Lethbridge County enters the height of our fire season, it is essential that we all take wildfire prevention measures. High temperatures, low humidity, and little precipitation in our Southern Alberta summers increase the fire risk exponentially. This risk is further heightened during the planting and harvest seasons as equipment is active in fields.

Removing combustible debris like branches and leaves from the perimeter of your home can protect against damage from wildfire embers.

TIPS FOR PROPERTY OWNERS

Wildfire sparks can easily ignite fuels like dry grass and leaves at distances of up to two kilometres from a source fire. One of the best ways to protect your property this fire season is to FireSmart™ your home.

- Remove combustible debris within a 10-metre radius of your house, shop, outbuildings, etc.
  - These can include dry grass, leaves, and branches, firewood piles, and construction materials.
  - Keep grass mowed as tall grass increases the risk of fire spread.
- When landscaping, avoid planting woody shrubs or trees (cedar, juniper, pine, spruce) or tall grasses, especially in proximity to structures.
  - Instead, incorporate plants with moist leaves and ones that accumulate minimal dead needles and leaves (birch, poplar, alder, maple, etc.).
  - If you already have these, prune them regularly and clean up any dead leaves or needles.
  - Choose gravel or decorative rock over highly combustible wood mulches.
- Keep fire pits and burn barrels as far as possible from structures and ensure they meet the safety requirements of the County's Fire Bylaw
  - For more information visit www.lethcounty.ca or call 403-328-5525).
- Always check the Fire Ban status before using your fire pit, burn barrel, or incinerator.
  - Fire bans may prohibit the use of outdoor fire equipment if the fire danger is high.
  - Fines apply for using these items during a Fire Ban.

View the FireSmart™ Homeowners Manual for more fire prevention tips for your home.

TIPS FOR PRODUCERS

While modern farming equipment improves production efficiency, they also produce large amounts of heat which, paired with dry fuels, can quickly spark a fire. Farmers can protect their property and prevent or lessen the risk and impact of field fires by being prepared this growing and harvest season:

- Thoroughly check equipment for any mechanical issues before using.
  - Clean out any accumulated grease, dust, and debris, especially on combine headers where there are electrical connections.

Call 911 if a fire starts and keep in mind that fire services response times could be several minutes depending on your location, therefore:

- Always have a water truck on hand when working in the field.
- Have a fire extinguisher in the cab of tractors, combines, trucks, and other apparatus to quickly address equipment fires before they spread.

Fires can grow incredibly fast, especially in hot, dry, or windy conditions.

- Catching a fire before it gets out of control is far better than trying to battle it on your own and losing property and equipment, or worse, injuring yourself or an employee.
- Know your exact location so fire crews can easily find you. Give copies of each field location's address to employees so they are easily accessible.
- Always have a working cell phone or radio with you to call for help if needed.
- Check to ensure your insurance policies cover the cost of firefighting expenses.

For more tips on staying safe in the field, visit https://crops.extension.iastate.edu/blog/joshua-michel/fire-prevention-and-management-tips-during-harvest

Having a fire extinguisher in vehicles and equipment can help catch a small fire in the field.

Lethbridge County's Fire Services department can help you implement appropriate fire prevention measures at home or in the field. Call 403-328-5525 or send an e-amil to mailbox@lethcounty.ca if you would like more information on protecting your property this fire season. Staff can also perform an Advanced FireSmart™ Home Assessment upon request, at no charge.

Note: FireSmart™ is a trademark of Canadian Interagency Forest Fire Centre Inc.

Funding Opportunities for Alberta Farmers

SCAP Funding April 1, 2023, to March 31, 2028

Eligible Applicants

• Individual or corporation registered in Alberta that is responsible for day-to-day management and input costs of a crop operation and produce at least $25,000 worth of farm commodities annually.

• Approved Indigenous applicants (First Nation, Métis Nation, Inuit)

• Has current Environmental Farm Plan (EFP) certificate or letter or will receive one before the end of the project term. The name on the EFP does not need to match the name on the grant application but must be for the same farm. (Pertains to Efficient Grain Handling, Farm Technology, and Resilient Agricultural Landscape Program)

Efficient Grain Handling Program

This is an energy efficiency program intended to assist producers with reducing the overall energy use on their operations

• Environmental Farm Plan (EFP) Required

• Eligible expenses will be cost shared at 50% grant and 50% applicant for approved projects and will be funded to:

• minimum grant of $500/applicant

• maximum grant of $100,000/applicant

Email questions to S-CAP.EGHP@gov.ab.ca or call 310-FARM (3276)

Farm Technology Program

This program (2023 to 2024) focuses on sensors and security devices to support innovative technology that minimizes agricultural waste, optimizes farm efficiency, and provides tools that secure business assets.

• EFP Required

• Supported activities fall under two streams:

• **Farm technology** – Digital sensors that contribute to greater precision, more accurate matching of inputs with requirements.

• Eligibility varies by farm type. To be eligible, technology should be innovative and not commonly adopted for the applicant's farm type or sector.

• **Farm security** – Farm security devices to protect business assets and deal with trespassing, theft, vandalism, and biosecurity threats.

• Eligible expenses will be cost shared at 50% grant and 50% applicant for approved projects and will be funded, as follows:

• minimum grant of $500/applicant

• maximum grant of $48,000/applicant for Farm Technology Stream

• maximum grant of $2,000/applicant for Farm Security Stream

Email questions to S-CAP.FTP@gov.ab.ca or call 310-FARM (3276)

Resilient Agricultural Landscape Program

A new program that supports producers to conserve and enhance the environmental resiliency of their agricultural landscapes.

• EFP Required

• Funding is offered on a per-acre payment basis for a term of three years. Per-acre fee calculated as:

• **Implementation Costs + Opportunity Cost** (if applicable) **+ Impact Adjustment**

• Approved projects will be funded to:

• minimum grant of $2,000

• maximum grant of $150,000 for Primary Producers

• maximum grant of $300,000 for Indigenous (First Nations, Inuit, Metis) and groups such as Grazing Reserve Associations and/or Community Pastures

Email questions to RALP@gov.ab.ca or call 310-FARM (3276)

Water Program

This program helps producers adopt agricultural water management practices for continued growth and long-term success of the agriculture industry.

• There is limited funding in the program. Applications, considered on a case-by-case basis, will be assessed against program eligibility criteria and are subject to program funding constraints.

• EFP is NOT required

• Supported activities fall under 2 streams:

• **On-Farm water supply stream – Maximum of $35,000/applicant over program term**

• Standard incentives for New or Expanded Water Source Developments – eligible expenses cost shared at 25% grant and 75% applicant for a maximum of $15,000/applicant over program term.

• Special Incentive Projects – eligible expenses cost shares vary and are project specific. Maximum grant of $20,000/applicant over program term

Email questions to farmwatersupply@gov.ab.ca or call 310-FARM (3276)

• **On-Farm irrigation stream – Maximum of $30,000/applicant per fiscal year of program**

• On-Farm irrigation system purchases – eligible expenses cost shared at 25% grant and 75% applicant for a maximum of $15,000/parcel.

• On-Farm irrigation system upgrades – eligible expenses cost shared at 25% grant and 75% applicant for a maximum of $5,000/parcel.

Email questions to irrigationefficiency@gov.ab.ca or call 403-381-5532

Winner's Circle

Looking to be the next winner? Be sure to participate in upcoming surveys and other various games found in the Rural Living & Ag Extension Newsletter for a chance to win!

PRAIRIE GEMS: Local Supporting Local

Submitted by:
Nevada Alde, Vitalaberry Farms

The new "normal" may not be what most of us pictured – it's been devastating for many and has forced us to reinvent our everyday lives and ideas for the future. But, with the adaptation, a lot of unexpected beauty has surfaced as well. Our own houses became our playgrounds, offices, gyms, and restaurants. Videos surfaced of parents building cardboard slides for their kids, or drive-by birthday celebrations for well-known teachers. Even photos of people hugging through makeshift plastic tarps or kids serving their parents' anniversary dinners populated the internet for months. Whatever the gesture, they all had something in common – they all captured the driving force behind the local community. Communities used this situation as a motivator for kindness and combined ideas for creative socializing. A mutual reliance stemmed from a common hope; a hope for the pandemic to end and things to open again.

This community collaboration also birthed new partnerships – not just between individuals, but between local economic backbones. Farmers teamed with local culinary masters, and local artisans and companies joined to create locally made materials. An emphasis has been placed on local, a collective trend that ends up benefiting everyone. And although these partnerships were created during a challenging time (or had to survive through the worst of it), they prevailed and are stronger for it. A fire for locally driven products and services has taken grip of our areas and has expanded avenues for multiple local growers and creators.

Some restaurants, for example, have taken it upon themselves to find more locally sourced foods to guarantee quality and give back to the community. Including Lethbridge's very own Water Tower Bar & Grill. One of such new partnerships now exists between them and Vitalaberry Farms – a group of haskap farmers that stretch across the plains of western Canada. Founded in 2017, these haskap berry growers have been collectively working with local businesses and have highlighted the importance of bringing their communities food they can trust. Their mission is to provide transparent information about their process, so customers and clients know exactly what they're purchasing and can promise a new culinary experience for everyone to enjoy.

A haskap berry, if you're unfamiliar, is velvety blue and looks like an elongated blueberry. Its taste is tart, with deep flavors enhanced by a number of differentt dish preparations – whether that be for sweet or savory dishes.

Haskap berry plants are native to Canada, though they have been crossbred with varieties from Japan, Poland, and Russia to create a sweeter, hardier, more durable berry.

Thanks to other local partnerships with Vitalaberry Farms, haskap berries are available in a variety of different products and can be purchased throughout western Canada. The farmers not only work with numerous restaurants in Alberta, but also grocery stores, ice cream companies, distilleries, and recently, a Canadian tourism company called Pursuit Collective. Pursuit hosts a unique abundance of travel packages that ensures every visitor is set up to have a thrilling travel experience. Pursuit wished to feature haskap menu items exclusively in their Jasper and Banff locations – available at Terra in Jasper, and Farm & Fire and Brazen in Banff.

So, if you're due for a vacation, you don't have to go far to discover hidden beauties and try new things. And, as another summer approaches, why not take the opportunity to cross some things off your bucket list and enjoy some quality, local food at the same time.

- Local Business Spotlight -

The Crunchy Cow

The Crunchy cow started in February 2023 by Amanda Beijer as an extension onto Crystal Springs Dairy Company near Coalhurst Alberta. Taking their already great quality product and freeze drying it for a convenient snack!

Amanda Beijer is married to the farmer Theo Beijer from Hybred Dairy which supplies Crystal Springs with all their A2 milk and is located just next door to the cheese/yogurt operation, meaning these products are farm to table! Hybred Dairy is a progressive farm that practices regenerative farming in their agriculture and cow herd. The cows are all A2 meaning the milk produced have similar proteins to goat or sheep milk. People who are sensitive or have allergies to cow milk proteins are able to stomach this dairy!

As a mom of 3 little children Amanda is passionate about finding quick and healthy snacks for her kids. Free from artificial colours, preservatives and questionable ingredients but offer real nutritional value. This sparked the idea to take the already natural A2 yogurt and cream to turn it into stable crunchy bite sized snacks for the family.

The Crunchy Cow products so far include yogurt bites, and Ice cream.

The yogurt bites are aimed as a perfect finger food for babies learning to safely eat or toddlers for an on-the-go treat.

The ice cream is more of a guilty pleasure that you don't have to feel guilty about since it only contains a few ingredients that we all know and love.

Whole Milk, cream, organic cane sugar, organic vanilla, sea salt and fruit for flavour of choice.

You can find the Crunchy Cow A2 freeze dried dairy products at the Crystal Springs cheese factory and cafe, Sunshine Market Garden in Coalhurst, Country Creek Market in Fort Macleod and will be available at Lethbridge farmers markets this summer.

Little Gem Winery

Little Gem Winery was established in 2020 with a vision to create exceptional fruit wines and ciders on our family farm near Nobleford. Our journey began in 2016 when we planted our orchard of Haskap berries. We recognized the potential of these berries, as they boast 3-5 times higher antioxidant levels than blueberries and possess a delightfully robust flavor, earning the saying "The berry of long life and good eyesight" by the Japanese. It was from this inspiration that the idea of crafting wines took root.

To bring our vision to life, we enlisted the expertise of a wine master from Nova Scotia. With her guidance, we developed our wines, and the rest, as they say, is history. Today, Little Gem Winery proudly stands as the sole winery and cidery south of Calgary. Our repertoire includes white, rosè, and red wine along with ciders, each crafted with passion and care.

Our products can be tasted at our winery, where a new tasting room awaits your arrival. Starting June 15, you can immerse yourself in a tour of our winemaking process and indulge in a glass of our wine or cider. We firmly believe that you do not need grape vines to make great wines.

Little Gem Winery's dedication to quality extends beyond our premises. Our products can be found in local restaurants and liquor stores throughout Southern Alberta.

Join us in celebrating the art of winemaking, view the orchard, and discover the unique flavors that define Little Gem Winery.

To learn more, visit our website, littlegemwines.ca or find us on Instagram @littlegemwines.

Get a hands-on experience with these upcoming events hosted by Lethbridge College

Lethbridge College continues to forge its reputation in applied research, ranking 16th in the annual Research Infosource ranking of Canada's top 50 research colleges. This summer, the Centre for Applied Research, Innovation and Entrepreneurship (CARIE) team will host several events to engage and share research knowledge with farmers and the wider agriculture and agri-food industry in southern Alberta.

Here are some upcoming events that you will not want to miss.

Lethbridge College's 2023 Farm Field Day – July 11

Registration is open for the second annual Farm Field Day, which will be held at the Lethbridge College Research Farm from 8:30 a.m. to 1 p.m. on Tuesday, July 11. In addition to experts from Lethbridge College's Mueller Irrigation Group and Advanced Post-Harvest Technology Centre, researchers from Olds College, Lakeland College and the University of Lethbridge will also present and share their knowledge with attendees.

Planned sessions will teach wheat drying recommendations, precision irrigation, pollinator research, farm data collection and management, and other timely, relevant topics for crop production in southern Alberta. The event will also feature a fun and interactive activity with the college's Indigenous Services team.

The Field Day event is free to attend, but registration is required. Paid exhibitor tables and sponsorship packages are also available to help keep the event free for attendees. Please visit the event website at https://learn.lc/farm23 for more information.

North American Stream Hydrographers (NASH) Flow Regatta – July 12

Are you "pumped" about measuring water flow? Researchers at Lethbridge College are excited to work with industry partners to host the 2023 North American Stream Hydrographers (NASH) Flow Regatta Training Workshop in southern Alberta.

Representatives from NASH will use the demonstration canal at the Lethbridge College Research Farm to teach hydrometric techniques and instrumentation used in low flow monitoring conditions. This type of workshop was previously hosted by Alberta Agriculture and Irrigation, and Lethbridge College is eager to continue providing this unique hands-on training now that the college manages the demonstration canal and surrounding farmland.

Some of the specific training will include salt dilution, automatic depth measurement and gauging, low-cost alternatives to conventional current meters, non-contact measurements such as image velocimetry and radar, and submersible methods for monitoring flows in canals, culverts, pipes and streams.

Participants are encouraged to bring their own instruments to measure and calculate discharge against the latest technology. Come and see how things measure up!

The Flow Regatta will run from 10 a.m. to 4 p.m. on Wednesday, July 12. Lunch and refreshments will be provided on-site, and an evening networking event will take place in the City of Lethbridge. Registration is required and can be found with more details at the following link: https://learn.lc/FlowRegatta23.

Canadian Society for Bioengineering (CSBE) Conference – July 23 to 26

Lethbridge College will host the annual Canadian Society for Bioengineering (CSBE) Conference this summer. The CSBE is the technical society for professionals who are interested in the scientific development and application of engineering principles

to environmentally sustainable biological systems for the production of food, bio-products and bioenergy. This year marks the first time that a Canadian college has hosted the event, and close to 200 engineering, agriculture, technology, science and bioengineering industry professionals, researchers and students are expected to attend.

The theme of this year's event is "Engineering Solutions for Sustainable Agriculture and Food Production," and the conference will showcase innovations and expertise from across the agriculture production and supply network. Dr. Chandra Singh, Senior Research Chair in Agricultural Engineering and Technology at Lethbridge College, is CSBE/SCGAB Alberta Regional Director and chair of the 2023 AGM organizing committee.

"Much of the college's work in advanced post-harvest technology, irrigation, greenhouse, aquaculture and aquaponics involves researching and developing new ways for sustainable food production and to minimize waste," says Singh. "We're looking forward to showcasing our projects at this year's CSBE/SCGAB AGM, connecting with fellow members to further the discussion around sustainability, and promoting the Lethbridge region – the centre of Canada's Premier Food Corridor."

If you are interested in expanding your knowledge of current technologies in the areas of water, soil, energy, food processing, farm machinery and greenhouse operations, attend this informative event at Lethbridge College. Technical sessions will take place July 24 and 25, with an optional tour of southwestern Alberta available on July 26. Sponsorship opportunities are available for companies in the agri-food and agri-tech industries. For more information and to register, please visit the event website at the following link: https://learn.lc/CSBEconf23.

Agricultural research teams at Lethbridge College, including the Advanced Post-harvest Technology Centre, Aquaculture Centre of Excellence, Centre for Sustainable Food Production, and Mueller Irrigation Group, operate within the **Centre for Applied Research, Innovation and Entrepreneurship (CARIE)**. CARIE connects small- and medium-sized enterprises in the agriculture industry with the technologies and research expertise at Lethbridge College to enhance productivity, competitiveness and innovation.

This year marks Lethbridge College's highest ever appearance in the annual Research Infosource ranking of Canada's top 50 research colleges rankings, and the first time the college has cracked the top 20. In addition, the college ranks fifth in research income growth; the third straight year that Lethbridge College has been recognized as one of the country's fastest growing research colleges.

To stay up to date with what Lethbridge College agriculture research teams are up to, sign up for the CARIE newsletter using the QR code to the right.

Sustainable potato production the focus of new funding for University of Lethbridge researchers

Potatoes are an important economic crop in southern Alberta and, around the world, the humble potato is a key component of global food security.

Researchers from the University of Lethbridge have been awarded nearly $250,000 through the Agriculture Funding Consortium to improve sustainable potato production by looking at ways to reduce disease in the field and in storage and to increase production while minimizing the use of resources.

Dr. Larry Flanagan, a biology professor, has received nearly $50,000 to test six types of potatoes used in fry and chip processing for their water-use efficiency under typical growth and irrigation practices in southern Alberta.

"Our research will benefit the potato industry in southern Alberta by providing new information to producers," says Flanagan. "The efficient use of water in crop production in an arid region like ours is an important goal for increasing sustainable potato production."

Flanagan and partners, Drs. Michele Konschuh and Dmytro Yevtushenko from ULethbridge and Dr. Jonathan Neilson from Agriculture and Agri-Food Canada, will apply stable isotope techniques to identify water-efficient potato varieties for use in crop production under expected future warmer and dryer conditions that will stress our available water resources.

In a separate project, Yevtushenko, a biology professor, was awarded $200,000 to develop and validate protocols to detect potato pests and pathogens.

"Disease incidence in both the field and in storage remains a major limiting factor in sustainable potato production," says Yevtushenko. "The aim of this study is to develop diagnostic molecular protocols for fast and reliable identification of the major existing and emerging potato pests and pathogens in Alberta."

Yevtushenko and partners, Drs. Michele Konschuh and Jie Feng, a research scientist with Alberta Agriculture and Irrigation, will focus on identifying nematodes, which are parasites, and fungal diseases like pink rot, potato stem canker and black scurf, that are known to cause substantial potato losses in Alberta.

The researchers expect the study will generate data and lead to the implementation of new technologies that will maintain Alberta's reputation as a leading Canadian producer of top-quality potatoes and enhance the profitability and sustainability of the potato industry.

University of Lethbridge

FIAT LUX

PUBLIC PROFESSOR SERIES

ULethbridge invites you to learn more about advances in sustainable agriculture.

The 2023-2024 PUBlic Professor Series will resume in the fall. The first lecture of the season takes place on **Thursday, September 28** with ULethbridge's next president and vice-chancellor, **Dr. Digvir Jayas**, an internationally renowned agricultural engineering researcher.

Learn more: go.uleth.ca/pps

LET'S GET CRACKING:
What it takes to keep urban hens

By Cassandra Kirkpatrick, Alberta Farm Animal Care

Every spring here at Alberta Farm Animal Care we go to the birds as our urban hen program becomes very busy providing ongoing resources for new and established chicken keepers. Since we started our urban hen program in 2015, we have seen a huge increase in interest in keeping urban hens, with many communities across Alberta allowing residents to keep a few hens in their backyard. Before you welcome some feathered friends into your backyard, it's important to spend time researching what is involved in keeping chickens.

At AFAC, we offer 101 certification courses where at the end of the workshop you take a quiz and receive a certificate of completion. Chickens can be a long-term commitment, with a lifespan of ~10 years when properly cared for. In terms of time commitment chickens require ongoing daily, weekly, monthly, and seasonal care. Typical daily chores include ensuring they have fresh feed, clean water that is not frozen in winter, opening and closing the coop door, collecting the eggs, and checking each bird over to ensure they are healthy and behaving normally. There is also a financial commitment with several one-time costs (coop, coop supplies), annual costs (licensing fee), and monthly costs (electricity, feed, bedding material) to consider when keeping chickens. It quickly becomes apparent that these will be the most expensive eggs you will ever buy!

According to Lethbridge County bylaws, roosters are not allowed in urban seetings and there are a maximum number you are permitted to have. There are also requirements regarding how waste must be dealt with, and how far from your property line a coop must be placed. Coops over 100ft2 require a development permit. Call 403-328-5525 or e-mail nhill@lethcounty.ca for more information on permits and setbacks. You will also need to obtain a Premises Identification Number which can be done online at www.agriculture.alberta.ca/premises. This number helps track the sale of feed and medications sold in case of potential recalls.

One of the major initial costs you will have when preparing to keep chickens is building a coop. Size, ventilation, location, and having a dry space for the chickens are all important points to consider. It is very important that the chickens have a permanent structure to stay warm and dry in; mobile prefabricated coops do not provide an appropriate shelter. You will need to run some type of electricity source to your coop so the birds have a heated water source to drink out of and to also provide a heat source during winter. When considering a heat source, it's important to look for sources that are safe to use, energy efficient, inexpensive to run, and zero-clearance to minimize the risk of starting a fire. Ventilation is a very important concept to understand if you keep chickens. Ideally, we want the humidity in our coops to be around ~50% and most coops will utilize passive ventilation with vents strategically placed high on the walls so the hot and moist air can exit. We recommend using a weather station in the coop to measure temperature and humidity. A well built coop and outdoor run is your best defense against predators and galvanized steel mesh is a much better alternative to chicken wire to fully enclose the outdoor run and any openings on the coop, such as vents.

When setting up your coop you'll want to make sure that in addition to feeders and waterers, that you also have windows, a light source, roosting bars, enrichments, a dust bath, a bedding source, and nest boxes. A light source is needed if you want your birds to continue laying throughout winter, as they need about 15 hours of light a day to stimulate them to lay. Otherwise, they will take a rest period during winter and resume come spring when the days get long again and they are getting enough natural light.

With over 200 different chicken breeds to pick from you're sure to find one that fits your family best! Many breeds have special features such as small combs and wattles that make them well suited to our winter climate. Most breeds will start laying when they are around 6 months of age and will peak when they are around 3 years old. Some breeds like Lohmann Browns lay 6-7 eggs a week, others like a Silkie may not lay for weeks at a time!

Preventing disease from entering your flock is much cheaper and easier than responding to an outbreak. Simple practices such as washing your hands when handling your chickens, having dedicated footwear for your coop, and an excellent cleaning and disinfecting routine makes a huge difference! We have a list on our website of vets across Alberta who treat chickens. It is so important to have a relationship with a vet who can help you with your chickens if they become ill or in the case where euthanasia is necessary.

There are many good resources available for chicken keepers in Alberta including the Alberta Ag small flock disease investigation program by calling 310-FARM. We also have several resources on our website, virtual workshops, and a free Questions from the Coop session every month: Urban Hen - Alberta Farm Animal Care Association (afac.ab.ca). If keeping urban chickens is in your plans this summer, we wish you all the best on your new chicken keeping adventure!

cleanfarms

recycle bale wrap & silage plastic in Lethbridge County with free on-farm pickup

Scan to learn more.

Agricultural producers in the Lethbridge County area can receive free on-farm pickup of these ag-plastics for recycling through a pilot program.

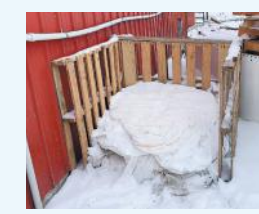
Contact Lethbridge County Agricultural Services to join at 403-732-5333.

Silage plastic
(silo bags, tarps, bunker covers)

1. **Shake** – to remove spoiled silage, mud, ice..
2. **Fold** – into approximate 4' squares.
3. **Store** – place 4' square pieces on a pallet and use a weight to hold them in place until pickup.

Bale wrap
(stretch wrap for silage and haylage bales)

1. **Cut** – the bale wrap into manageable pieces.
2. **Shake** – to remove hay, mud, ice.
3. **Store** – pieces flat on a pallet and use a weight to hold them in place until pickup.



Keep silage plastic and bale wrap in two separate piles.
Pickups typically occur every 4-6 weeks.

Cleanfarms.ca
403.942.6012 | 877.622.4460
info@cleanfarms.ca *@cleanfarms*

Agriculture and Agri-Food Canada | Agriculture et Agroalimentaire Canada

Weather impacts pest and predator populations

Submitted by: Field Heroes

All insects can be influenced by weather conditions during the growing season. When pests and their predators respond to weather changes in a similar way, natural enemies can be effective at controlling pest populations. Unfortunately for farmers, that's not always the case.

Dr. Meghan Vankosky, research scientist in field crop entomology at Agriculture and Agri-Food Canada in Saskatoon, Saskatchewan, says insects have a complex relationship with temperature and rainfall. Understanding how pests and their natural enemies respond to these parameters can help to predict populations and what type of management may be needed.

Grasshoppers, for example, rely on external temperature for development and activity and are more active at higher internal body temperatures. But the fungal pathogens that can reduce grasshopper populations, like Entomophaga grylli, tend to be more prevalent in cooler and wetter conditions.

While it is not clear how high temperatures impact wheat stem sawfly populations, Vankosky says hot and dry conditions negatively influence their natural enemy, a parasitoid called Bracon cephi. Over the course of a few years, this means pest populations can increase because they are escaping natural control.

Conversely, Dr. Jim Tansey, provincial entomologist for the Saskatchewan Ministry of Agriculture, says that the development of pea aphids is restricted at higher temperatures, but the activity of invasive ladybug species increases with heat.

The life cycles of wheat midge and their natural enemy Macroglenes penetrans are closely linked, meaning that weather conditions that positively impact the pest population are likely to have the same effect on the predator.

Lygus bugs tend to prefer warmer temperatures and can be significantly impacted by fungal pathogens under high relative humidity. Rainfall can also control pest populations as rain drops can knock young lygus onto the ground where they can drown or encounter other natural enemies.

Rain can have a similar effect on diamondback moth populations because the larvae are small and can easily be knocked. Since some of the parasitoids that attack these moths overwinter in Canada and some don't, their impact varies depending on where the pest population is located and which species are present.

Check out Episode 13 of the Pest & Predators Podcast to hear Tansey and Vankosky explain how common pests and their predators are influenced by weather conditions and how this could impact scouting practices.

"A really important consideration when making decisions for the application of pest control products is temperature," says Tansey. He encourages applicators to check the label and follow maximum temperature recommendations to ensure efficacy.

TIME TO SAVE SOIL

Submitted by: Sean Kjos, Farming Smarter

Farming Smarter began a five-year soil health initiative to explore cover crops and roller crimping in southern Alberta.

Weston Family Foundation's Saving Soils Program and RBC's Tech for Nature both support this project with funding.

The study will complete two projects and test approaches that successfully establish cover crops. The first study investigates the interaction of cover crops and living mulch with subsequent crops. The second will look at the effectiveness of roller crimping at a variety of growing stages.

Each of these studies takes place on irrigated fields in Lethbridge, Bow Island, Taber, and Brooks giving the research 16 total site years or eight site years for each project.

"We just completed our first fall trial for this project," says Mike Gretzinger, Farming Smarter Agronomy Research Team Lead. "The first year always has a lot to learn. We want to make sure we got everything in place and working how we want it for the rest of the study."

Strip Till Cover Crops

Each year this project will include a fall seeded cover crop (at high and low planting density) followed by a subsequent spring seeded cash crop. It includes fall rye as a cover crop before spring dry beans and fall rye/ winter peas planted as a cover crop before corn and canola. Technicians will terminate the cover crops by either strip tillage or herbicide and discing in the spring The cover crops will grow on wide rows (15").

Technicians will use both high and low density planting for the cover crops. This density influences the competition with the main crop, biomass production and weed suppression. Irrigation will provide the maximum likelihood of success for the inter-row living mulches, thanks to higher availability of water, sunlight, and nutrients.

Additionally, the main crop will benefit from reduced soil erosion and retention of vital nutrients and moisture. This can lead to better crops in subsequent years as the availability of important nutrients increases.

This projects aims to provide practical tools and techniques for southern Alberta farmers to adopt and improve the quality of crops. While fall-seeded crops add a heap of work during an already busy season, we hope the benefits make it worthwhile.

Cover crops emerging at Farming Smarter in 2021

Roller Crimping Cover Crops

The second half of this initiative investigates the efficacy of roller crimping as a termination practice.

This method will reduce the need for inputs like seed pesticide and fertilizer. By eliminating the organic matter in-field, those nutrients are incorporated into the soil and made available to the subsequent crop.

The main priority is to identify the best timing for fall planting and stage for spring termination.

"If you drive over grass, you don't always kill it. To effectively kill the crops, we'll need to time the right stage to run it over," says Gretzinger.

"We hope that roller crimping will help eliminate soil erosion, as the eliminated crops will remain in the field. With this simple layer of biomass, regional data from previous studies indicates a reduction in lost soil."

The rotation for this project will be fall rye and winter oats planted as cover crops in August and September, and terminated to plant barley for silage in the spring. Technicians will terminate the cover crops by roller crimper or herbicide and discing.

Roller crimping done at a Farming Smarter field in December 2022

Participate in Saving Soils

Every fall, technicians will monitor the establishment of cover crops in both trials and measure the above ground biomass throughout the growing season. This measurement will include fresh and dry weights and include tissue sampling to measure the carbon and nitrogen content. Using these measurements, we can track the adaptability of cover crops and the potential soil carbon and nitrogen inputs to promote carbon sequestration.

Over the next five years, Farming Smarter hopes to give southern Alberta farmers a better understanding of how they can save soil. Look for study updates as the work continues on farmingsmarter.com


Kainai Iinnii cultural herd on Mixed Grassland


Beaver Dam Analogue created with Kainai High School students.

Blackfoot land management practices and stewardship aim to improve ecosystem and community health

Submitted by:
Blood Tribe Land Management

Blood Tribe Land Management (BTLM) holistically manages Kainai / Blood Reserve lands using Blackfoot land management practices to improve ecosystem and community health. Niitsitapi or Blackfoot are intrinsically tied to Blackfoot Territory through reciprocal relationships through ceremonies, stories, and songs. Blackfoot science or ecological knowledge (BEK) stems from thousands of years of living with the land and continues to live and adapt as the environment changes. It is based on a holistic perspective of relationality within ecosystems that views humans as equals with more than humans in a complex web of relationships. Our Blackfoot-led ecosystem management programs include rematriating Iinnii (Plains Bison), revitalizing traditional plant and seed knowledge, mimicking Ksisskstakii (Beaver), and implementing cultural burning.


Kainai Ecosystem Protection Association (KEPA) and Naapi's Garden and Katoyiss Seed Bank logo showing Iinnii with Blackfoot plants and the KEPA flag. Artwork by Api'soomaahka, William Singer III.

Iinnii Rematriation

The Iinnii Rematriation Program involves collecting biophysical community-based monitoring research to measure changes resulting from bringing Iinnii home to Kainai grasslands and rekindling the relational memory of the grasslands. Data collected captures the revitalized ancient interrelationships that have been dormant since Iinnii were hunted to near extinction in the late 1800s. Restoring prairie relations is essential for improving the well-being of the Kainai community, culturally significant species, species at risk, migratory species, seed dispersal, soil health and many other interactions that interrelate with Iinnii. The project team has been collecting cultural and ecological data on the Iinnii pastures, including BEK, range health, traditional plants, soil, migratory and breeding birds, water quality, herptiles and arthropod surveys.

The prairie pasture in which the Iinnii are currently grazing has been resting from cattle grazing from 2014-2021 due to a declining range health trajectory from overuse of resources. The Iinnii rangelands are in an essential ecological transition zone between the Mixed and Fescue grassland ecoregions resulting in an area high in cultural biodiversity.

Iinnii is an ecological successional driver and keystone species for the prairie grasslands. They can fulfill this eco-cultural keystone role to restore ecosystem health by bringing them back. The field team has documented the return of other ungulate species to the area, such as elk and antelope, before the arrival that has yet to be commonly seen before Iinnii rematriation. This stresses the importance of considering corridor scale management to allow transboundary movements of local wild ungulate species.

Blackfoot Plants

Blackfoot Science is providing benefits for multiple grassland species at risk and culturally important species through Blackfoot-led habitat enhancement activities and culturally focused education and awareness initiatives. Restoration and stewardship of the Blackfoot prairie landscape are necessary to reduce threats to traditional plant habitats and maintain healthy harvesting sites. Kainai community members are concerned about decreasing and degrading traditional harvesting sites. BTLM conducts traditional plant surveys with community Knowledge Holders to collect presence and abundance data for each native plant site. This dataset complements Range Health Assessments by adding cultural value to the ecological-based Range Health score.


Cultural burning on Blood Reserve Montane grasslands.

BTLM is developing a grazing management plan to benefit the culturally significant Iinnii and species at risk and build capacity for establishing a native seed nursery, including collection for grassland restoration work in collaboration with Naapi's Garden. An awareness and information-sharing campaign on the importance of native grasslands is being planned for communicating within the Kainai First Nation, the Blackfoot Confederacy and beyond.

Another initiative to address ecological and land management gaps on reserve Kainai Guardians Project- Kainais' Skahkoyii Ecological and Invasive Species Initiatives by undertaking the development of a Kainais' Skahkoyii Plant Guide and building on the existing invasive species management program.

The Kainais' Skahkoyii Plant Community guide will address known gaps in the existing provincial range plant communities' guides and be developed and owned by the Blood Tribe for future land uses such as reclamation, livestock and Iinnii grazing, land use management and invasive species management. Significant gaps exist in the provincial guides where plant communities on Blood Tribe lands are not sampled, described, or accounted for. Tannas Conservation Services and Paskwa Consultants are providing their expertise in data collection and statistical analysis, with Blood Tribe Lands personnel supporting and providing traditional knowledge to inform field collection and providing valuable oversight to the development of the guide.

An invasive species monitoring program will be developed, and the program's first year will be implemented. A Land Guardian position has been created alongside this initiative to aid in invasives management on reserve, and training will be provided so the Land Guardian can complete future invasives and treatment efficacy monitoring. The Blood Tribe currently has two Invasive Plant Technicians and adequate capital invested in sprayers, trucks, and equipment which can support the long-term longevity and investment in the growth of this program. The monitoring program builds on existing efforts and addresses the need to assess, validate and adapt invasive plant management efforts.

Ksisskstakii Program

The Ksisskstakii (Beaver) Program is co-developing and implementing a beaver coexistence program on the Blood Reserve. Ksisskstakii is a culturally and ecologically important Blackfoot species that can assist stream and watershed restoration using beaver mimicry techniques. This includes utilizing computer mapping software and collecting field data to determine the distribution of beaver's historical and current habitat for potential beaver-mediated restoration. An essential part of the project is the co-development and implementation of a supplementary citizen science program with youth and the community. This is a collaborative project with elders, youth and community of the Blood Tribe, The Miistakis Institute for the Rockies, Alberta Riparian Habitat Management Society (Cows and Fish), among others, to provide the Blood Tribe Land Management Department with adequate information to determine best practices for beaver restoration on the Blood Reserve as a stream conservation and restoration agent over large regions and watersheds. Beaver Dam Analogues (BDAs) were constructed with local Kainai High School students at one site to assist in water collection.


Kainai Rangeland Health Assessments with summer student

Cultural Burning

BTLM is building the capacity to establish a cultural burning program in collaboration with Waterton Lakes National Park as a restorative practice where fire has been absent from the land. Fire was used as a management tool for First Nations people worldwide. The fire cycle that evolved with the land and Blackfoot people varied in each ecosystem. Depending on the ecosystem, fire would burn between certain intervals. Staff conducted low-intensity burns on Blood Reserve Montane grasslands to restore native plant species and biocultural diversity. Through renewal and reciprocity, reintroducing the natural fire cycle and relational experiences that have been suppressed due to colonial management has been needed to help the ecosystem's health. Restoring the kinship relationships with the elements of Blackfoot territory is part of a holistic management plan that Blood Tribe Land Management is implementing to provide healing and balance to the ecosystem, community and oneself.

Come Learn with Us!

4-H Alberta is very proud of its strong roots in the Southern Alberta region. This year, we celebrate with the Lethbridge-Coaldale 4-H Beef Club as they mark their 100th anniversary! It is an incredible feat, to maintain dedicated volunteers and a supportive community for such a lengthy tenure. Today, the same club that was started by the Alberta provincial government and the Boys and Girls Club, has 29 members, 4 trained leaders, 1 screened volunteer and countless helpers and alumni assisting them in their grand celebration!

While steeped in tradition, 4-H Alberta also remains fluid to the current socio-economic climate. With 25 livestock only clubs hosting amazing learning opportunities for their members, 4-H Alberta clubs in the south region also include 28 multi clubs. A multi club offers more than one type of project and include life skills projects, where members do not have to own livestock! Life skills projects are limited only by the imagination, such as: foods, shooting sports, canine, outdoor living, hockey, wood working, welding, field crops, veterinarian science and crafts, just to name a few! If club has a member and a leader interested in learning any subject, 4-H Alberta can help to make that subject a project!

While the majority of our life skills and livestock project members still live rurally, 4-H Alberta has become a foundational point for our urban youth to learn along side our rural youth where they acquire and demonstrate the fundamental skills that 4-H Alberta members are known for across our country!

While much attention is focused on project work, 4-H Alberta works to unite all youth and community members through a handful of exceptionally important fundamentals:

4-H Summer Camp Tug of War

4-H Summer Camp

- All members complete a community service project – where the goal is a collective improvement to their community
- All members complete a project record book – this skill allows members to identify cost-benefits to completing their projects, and is often a first-step into understanding how to turn their project into a business venture
- All members complete a communications activity – this may be a competitive speech or presentation, leading a workshop or conducting practice job interviews
- All members attend 70% of their club business meetings and project meetings – our members learn to run meetings, be excellent stewards of the democratic process and learn about accountability.

4-H Alberta encourages members to engage in learning opportunities that are FUN! 4-H Alberta Summer Camps are often the highlight of our members' 4-H career, whether they attend locally at the Regional Camp, or journey to the provincial 4-H Centre at Battle Lake. To facilitate growth, 4-H Alberta members, upon turning 15, are invited to attend camps as YLEADS which is the 4-H Alberta summer camp leader training program!

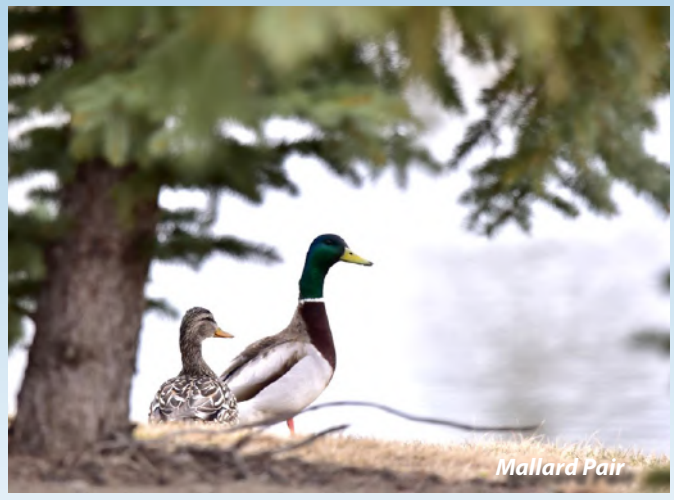
To reward our youth for their 4-H dedication to community betterment and help them on their path of personal growth, the South 4-H Region alone distributes approximately $30,000 of scholarship funding to deserving South 4-H Region members. Provincially, 4-H Alberta scholarships amount to approximately $282,000 awarded annually!

Whether youth are competitive or collaboratively focused, there are countless opportunities for success with 4-H Alberta. Learning clinics, competitions, social events and community service – the 4-H Alberta program was created to develop all aspects of our youth. Our motto is "Learn to do by doing", and 4-H Alberta celebrates that in a safe, inclusive environment, with the help of our incredible trained leaders and screened volunteers.

To become part of the 4-H Alberta family, please contact connie-lyne.harder@4hab.com. We invite you to "Learn to do by doing" with us!

Winged Wonders of Lethbridge County

Photos provided courtesy of Linda Danyluk



Mallard Pair

Canada Goose Flight

Common Redpoll

Chipping Sparrow

Common Grackle

Alberta Oat Variety Trials

The Best Oat Varieties for Alberta

Sandeep Nain, General Manager of Alberta's Gateway Research Organization (GRO), has submitted the annual report for the project: *Increase the Oat Acres in Alberta by Finding a High Yielding Oat Variety that Maximizes Producer Income and Meets the Demands of the Millers.*

The first table presented summarizes the top three varieties for β-glucan at both locations over the last seven years. The second table summarizes overall varietal yield for all varieties and all years, using the popular Morgan variety as a comparative base-line. Readers can access Nain's full report at https://poga.ca/research-results to see all data tables detailing comparisons between the two sites, varieties tested throughout the project lifespan for all other measured results (e.g.: height, lodging, test weight, etc.) and varietal β-glucan content. *(At the research results page, filter for Principal Investigators: Gateway.)*

Morgan continues to be the most popular oat variety in Alberta. However, this variety has lower-than-desired beta glucan content to satisfy millers' requirements. Nain explains, "The two most common indicators of grain quality are test weight and beta glucan (β-glucan). While Morgan produces higher test weight in Alberta growing conditions, it typically does not meet millers' criteria of a minimum 4% β-glucan content. Because of this, millers will source Alberta oats only after they have exhausted oats from other regions."

Morgan is also not resistant to crown rust, which has increasingly been advancing west into Alberta. Nain's variety trials continuously test various high-performing varieties and rate them for production in Alberta conditions. Morgan is used as the comparative variety and, each trial year, newly developed varieties are added and those with lower combined yield plus β-glucan content performance are eliminated.

Nain states, "Location continues to significantly affect yield and beta-glucan levels. Environmental conditions at the two trial locations (GRO, Westlock and Fahler, in the Peace Region) affect a variety's yield capacity to a higher degree than they affect its β-glucan levels."

The 2022 growing season was somewhat dry but in general, crops received adequate rainfall. Nain summarizes some of the most significant results for 2022: "The average site yield at Westlock was 193 bu/ac compared to 252 bu/ac in the Peace region. The Westlock site had some lodging issues while at the Peace site, no lodging was observed. Also, the plant height was surprisingly short in the Peace region compared to the Westlock site. There was no noticeable difference in the test weight at both locations. The quality of grain was a little bit lower at the Peace region site with a higher average hull percentage (21.16%) compared to the Westlock site (19.78%). The average thousand kernel weight was lower at the Westlock site (35.49 g) compared to the Peace region site (37.97 g)."

Eventually, it's likely that Alberta producers will need to choose viable varieties to replace the popular Morgan. This project, because of its on-going varietal comparisons at two regional locations, provides the information oat growers require to trial some of these varieties at their particular farm locations.

Producers may want to access some of the previous GRO trial articles, as they provide results during each year's specific growing conditions. The most recent articles can be found in the June 2022, March 2021, and March 2020 issues. Go to https://poga.ca/communication-advocacy/oat-scoop-newsletter/ to revisit this valuable information.

This project was supported by Prairie Oat Growers Association (POGA) and Grain Millers Canada.

Crop Year	Top 3 Varieties for Beta Glucan at Westlock		
2022	CDC Endure	OT3112	AAC Douglas
2021	OT3112	CDC Endure	CDC Skye
2020	OT3112	CDC Endure	CDC Skye
2019	CDC Endure	CDC Arborg	AC Morgan
2018	CDC Endure	CDC Arborg	Triactor
2017	CS Camden	Akina	CDC Ruffian
2016	CDC Seabiscuit	CDC Ruffian	CDC Orin
	Top 3 Varieties for Beta Glucan at Peace Region		
2022	CDC Endure	OT 6024	CDC Arborg
2021	OT3112	CDC Endure	CDC Skye
2020	CDC Skye	OT3112	CDC Endure
2019	CDC Seabiscuit	CDC Arborg	CS Camden
2018	Triactor	AC Morgan	CDC Endure
2017	CDC Ruffian	CS Camden	CDC Orin
2016	CDC Ruffian	AC Morgan	CDC Seabiscuit

	Yield	Overall Average	2022	2021	2020	2019	2018	2017	2016
Milling Oats	% of AC Morgan	Yield (Bu/Ac)	Yield (Bushel/Acre)						
AC Morgan	100	202	192	161	203	243	226	212	178
CS Camden	98	199	189	150	211	241	206	226	167
CDC Ruffian	101	204	208	147	206	219	207	245	193
CDC Arborg	101	204	198	150	208	244	221	-	-
CDC Endure	100	201	195	143	194	249	226	-	-
OT3112	90	183	195	140	213	-	-	-	-
Kalio	79	161	180	141	-	-	-	-	-
AAC Douglas	84	171	193	148	-	-	-	-	-
ORE Level 50	90	182	182	-	-	-	-	-	-
OT 6024	95	193	193	-	-	-	-	-	-
AAC Wesley	98	199	199	-	-	-	-	-	-
AC Summit	93	189	-	121	178	245	203	217	167
CDC Skye	93	188	-	115	211	237	-	-	-
ORE3541M	57	115	-	115	-	-	-	-	-
CDC Seabiscuit	104	211	-	-	205	239	212	208	189
ORE3542M	99	199	-	-	183	214	201	-	-
CDC Norseman	103	208	-	-	190	222	213	-	-
Triactor	105	212	-	-	-	238	229	208	172
Akina	102	206	-	-	-	-	221	222	176
CDC Orrin	100	202	-	-	-	-	218	221	168
Souris	86	175	-	-	-	-	-	194	155
Kara	98	199	-	-	-	-	-	222	175
CDC Minstrel	93	188	-	-	-	-	-	202	174

COUNTY WORD SEARCH

Can you find all the hidden words?

- Wheat Stem Sawfly
- Bee Flies
- Damsel Bugs
- Grasshoppers
- Flesh Flies
- Lady Beetles
- Cereal Leaf Beetle
- Ground Beetles
- Green Lacewing
- Bertha Armyworm
- Tachnid Flies
- Hover Flies
- Lygus Bugs
- Bracon Cephi
- Minute Pirate Bugs
- English Grain Aphid
- Stiletto Flies
- Rove Beetles

M I N U T E P I R A T E B U G S S S Q P A G S
Y P A O T L R O K R Q C L T R E H Y B U F F T
L S I H O U I A R U M E J D K O H N I R A N I
A W Y H I B E R T H A A R M Y W O R M O A E L
M J P L J Q L A P R M O A L H O V E A E L P E
E A G N I W E C A L N E E R G R E Y R E G D T
N I D O N R A U O O R Y O A O T R U A G R L T
G R A S S H O P P E R S H B R E F Z Z D O O O
L C M A W L M D O M S T E S G E L O E I U T F
I H S B Y L V X T D S L E R A G I P L Y N E L
S C E R E A L L E A F B E E T L E A L L D B I
H J L A N T U L I T O O E E I U S R Z F B L E
G P B G Q O L U R E P P A A C R O K O W E A S
R S U C A O L R O P M O O L Q V E S R A E T I
A E G S E I L F D I N H C A T E W E O S T X D
I L S E S O Y P A O U T E D B A X I K M L E S
N T K E L I G O T L O Y P Y O L B L I E E P R
A E N T E R U W O Q E I N B N O F F T T S E R
P E F J A B S W P A E W Y E Z J X H R S F R I
H B O R E A B M T D A L T E T A O S D T A N D
I E N O K Y U K T R I D I T X I Y E Q A V O E
D V I Z E A G T W O I F Y L S E I L F E E B E
A O H G S X S L N B G E A E A E D F B H T Z D
B R A C O N C E P H I O F S T N U O C W V I X

Exciting Prize Baskets up for Grabs

We are thrilled to announce not one, but TWO amazing prize baskets that will be up for grabs this December! Baskets will be supplied by businesses found in the Local Business Spotlight of the Summer and Fall Rural Living & Ag Extension newsletters. To enter, all you need to do is complete the survey to the right (scan the QR code). To double your chances, keep an eye out for our November issue as we will have an equally intriguing and captivating survey. Good luck!

Insect Survey

Do you know your insects? Complete this short survey for a chance to win 1 of 2 local business gift baskets this December! Entries will be accepted until August 11. Names will be drawn and contacted December 11.

Disease Suppressive Soils

Submitted by:
Scott Gillespie, Plants Dig Soil Consulting Ltd.

Scott Gillespie has nearly two decades of experience in dryland and irrigated specialty crop agriculture in Southern Alberta, Canada. He has always been interested in blending the practices of organic and conventional agriculture. All of his jobs have been focused on agronomy without product sales and so that is why he has focused his company, Plants Dig Soil Consulting Ltd., on #RealisticRegenAg, which is advice without the pitch. Scott has his B.Sc. (Agr.) with a focus in Agronomy from the University of Guelph and his M.Sc. with a focus in Plant Science from the University of Manitoba. Along with Certified Crop Advisor status he is also registered with the Alberta Institute of Agrologists as a Professional Agrologist

I often hear the phrase "Get the biology working for you." Regenerative agriculture proponents postulate that if you get the biology revved up all your problems will be solved. It sounds great, but as Corb Lund says "Well pay attention 'cause it ain't as simple as you think."

If we take a step back and think about the soil, its goal is not to grow plants for us. It doesn't really have a goal. The underground economy is all about organisms using the resources that they are good at extracting.

For example, a bacteria's world is so tiny it's unimaginable to us. If its skill is to liberate some phosphorus from the soil particles and there is a fungus there to give it some sugars, well, it's going to take it. It doesn't know the fungus is acting as a middleman: It was paid sugar by the plant to get it some phosphorus that its roots couldn't access. The fungus is too big to get into the crevasses that the bacteria can, so it outsources to them, and takes a little profit along the way.

The key to this system is the constant flow of energy – sugars – into the soil. The fungi have adapted to be a master distributor. Scientifically it's referred to as a mycorrhizal fungus. It is allowed to set up "ports" in the plant roots for direct connections. When a plant has many of these connections, and free roaming microbes living in the "sea" around its roots, it is harder for a pirate to swoop in and start eating its roots. We know these as root rots, or more specifically fusarium, rhizoctonia, pythium, and aphanomyces, to name a few.

In a natural prairie system, there will always be "pirates." A little feeding is okay but if they were too successful the host plant would die. We can't go back to a prairie system in our fields, but we can learn from it. There was diversity in time and space. An area might be dominated by a particular species for decades and then slowly another moves in. A hilltop will have a different mixture of plants than a river flat.

The basis for a good agricultural system is a good crop rotation. We need to grow different things so as to limit the ability of the pirates to take hold. A wheat-canola system is better than back-to-back of the same crop, but can we try to get something else in there? Cereals are good break crops from the broadleaf crops and two years between them is sufficient, so I suggest a minimum cereal-brassica-cereal-pulse rotation.

This takes care of the time piece, but can we get diversity in space? Intercrops – that is two crops at once – are a promising new strategy. A well proven system in Saskatchewan is chickpea & flax. There is real scientific evidence that there is less disease, and this is backed up by farmer experience. And of course, this is not something you can dip your toes into. You need to be able to seed both at once, find a way to control the weeds, and be able separate them at harvest time.

Interseeded cover crops can be a part of the strategy. They get over the problem of separating seeds or matching maturities, but establishing them seems to be the issue. I think the only way this will work is to have wider rows to allow for more sunlight between the crop rows. However, you will almost always have a yield penalty. Right now, this system is not economical, or borderline at best, but given time I think we can figure it out.

In a high value crop like potatoes disease suppression could justify a full year green manure. A well proven system involves growing a mustard crop to 4-6' tall and, just as it comes into flowering, it is mowed and immediately (within minutes) disked into the soil. The glucosinolates (that give mustard it's spicy kick to us) quickly convert to more deadly chemicals in the soil and do a great job of setting back potato diseases while (somehow) not affecting the beneficial organisms.

What about the good old fashioned brown manures? We have lots of those available in our area. They can be good for the soil if not applied in excess and you are mindful of what you are getting. A disease of potato – powdery scab – can potentially come with it. Also, be careful if the straw in the bedding had herbicides with the active ingredients clopyralid, picloram or aminopyralid (there are many trade names they go by so check the label). This can cause huge problems in potatoes and any other sensitve crop.

Manures come with a lot of microbes, and some will say this will help suppress disease. However, what comes in manure is good for concentrated manure. Once it's broken down those organisms dissipate, and the natural soil organisms take over. You may have a small effect, but it is fleeting.

And don't get me started on microbial inoculants. Grams per acre over a million kilograms of soil won't have much effect. They will not fundamentally change the soil. Placed close to the seed or the growing root, perhaps; but I've yet to see third party trials backing up the myriad of product claims.

There are no quick fixes to tired soil. This is not something that will change fast. Take a generational view. By the time you are passing on the farm the things you start now will give them better soil to work with. Had it not been for the pioneers in no-till, who knows what things would have looked like here. They made the first step in making no-till work. With the armour on the soil protecting the top, we can now work at making the underground economy work a little better.

Lethbridge County Buzz

Submitted by: Matthew Wells, Rural Extension Specialist

Summer 2023 is upon us and with it comes some exciting news I'd like to share with you. On August 9th, from 10:00 am – 12:00 pm, Lethbridge County is hosting Innovations in Ag at the Broxburn Business Park Pond. The workshop includes five presentations, exhibitors on site, and a delicious lunch supplied by various local businesses within Lethbridge County. This will be a great opportunity to get acquainted with local producers, experts, County staff and businesses to discuss local issues and challenges. Space is limited to 30 people, so make sure to sign up as soon as possible! Scan the QR code for more information, or visit our website (www.lethcounty.ca)

Looking for information and trees to plant on your farmstead? Look no further! Videos that discuss the various Coniferous, Deciduous, and Ornamental Trees and Shrubs that are available on the Lethbridge County website and YouTube channel. In them, Certified Arborist Grant Collings speaks about the pros and cons of the various woody plants that can be planted here in Lethbridge County. Be sure to check the videos, let us know what you think, and while you're at it subscribe to our YouTube channel! More installments are set to come out, so check back often, as you won't want to miss these informative videos.

From left to right: Matthew and Grant discussing woody plants.

On May 29th, Lethbridge County organized presentations for the Grade 6 students at R.I Baker. A great morning was had by all as students learned the importance of native plant species and their cultural significance to the Indigenous community, key characteristics of trees and tree care, and the importance of bat species here in Alberta. A big thank you to Michael Kelly, Grant Collings, Nathan Mistaken Chief, and Jaret Panther Bone for the wonderful presentations!

Grant presenting to students on tree healthcare.

From left to right: Michael Kelly, Grant Colling, Nathan Mistaken Chief, Julie Macklin, Jaret Panther Bone.

What's that Weed and What's that Insect is back! Continue to watch the Lethbridge County Facebook and Twitter page for posts on pests and beneficial insects, information on invasive weeds, and native plants found here in Lethbridge County.

Nature's Sanctuary

During the month of April, I stumbled upon an interesting site while working on the floating islands at Broxburn pond. I found a mother goose nesting on one of the islands. In truth, I shouldn't have been surprised as mother nature has a funny way of utilizing man-made structures to her advantage. What surprised me was each island is fenced to keep geese and other critters off, which I mistakenly thought would mean that nothing was going to get in. A ridiculous presumption that I'm glad turned out to be wrong. She'd fly, land on the edge of the wood beam and hop inside. As an outdoor and bird enthusiast, I was fascinated by this behavior. Most birds at the site nest on the shoreline. She was the only one smart enough to find her way into the perfect little sanctuary. I wasn't the only one watching, as a local photographer became enamored with the goose, and who also informed me when the goslings hatched on May 17th. With the goslings unable to leave the island, I wasted no time heading out to the site. It was a heartwarming experience being able to release the goslings as the parents waited patiently for their young. It seems such a small accomplishment and yet, getting to be a part of it felt truly amazing.

I hope everyone has a wonderful summer. Look for us again in November. As always, till next time.

Mother goose nesting on island with father close by. Image provided by Linda Danyluk

Goose landing on wood beam. Image provided by Linda Danyluk

Goslings stuck on the island with parents waiting. Image provided by Linda Danyluk

Parents patiently waiting for goslings to follow. Image provided by Linda Danyluk

Family reunited. Image provided by Linda Danyluk