



RURAL LIVING & AG EXTENSION

LETHBRIDGE COUNTY NEWSLETTER ★ SPRING 2022

Message from the Reeve

Agriculture Important to Alberta's Economy

Agriculture is the lifeblood of Southern Alberta. We need not look far to see the indelible mark that agriculture has made on our region. We benefit from the crops grown, animals raised, wages earned, and businesses supported. Producers are not only tasked with feeding a growing and diverse population, but also driving our local economy and community. Amidst rises and falls in energy prices, agriculture has consistently evolved and developed to propel us forward. As we embark on a new growing season, I'd like to reflect on some of the opportunities, challenges, and potential solutions that lie ahead for agriculture in Southern Alberta.

Irrigation has been and will continue to be one of the major keys to unlocking Southern Alberta's agricultural potential. A drive down a County road offers a glimpse into the wide array of opportunities that can be seen on a summer day. Cattle bellied up to a waterer, corn tickling the trusses of an irrigation pivot, potatoes soaking in the early morning rays, a freshly raked windrow of Timothy being baled up for its long journey. The crops and livestock we raise at today's intensity would not be possible without the irrigation water that flows through the region. Recent efforts to further build pipeline infrastructure to house this precious water resource and to create enhanced onstream storage bodes well for our ability to further push the boundaries of our production.

Location, location, location. Our location in Southern Alberta is of tremendous value to further unlocking our potential. Travelling Highway 3 between Lethbridge and Taber, "Canada's Premier Food Corridor" unveils itself. Access to water, a skilled and knowledgeable workforce, a well-developed transportation network, and raw agricultural products mean we are at the intersection of agricultural production and processing. Through the work of numerous stakeholders, our region has gained international recognition as a welcome home for ag investment and advocacy. Coupling this human energy with ample heat units, quality land, and established production, will continue to attract significant attention to what has been coined our "agricultural superpower".

While those of us who have grown up with close ties to agriculture readily realize its intrinsic value, it can pose a tougher challenge to clearly express the impact that agriculture has on our urban neighbors. While the vast majority of agricultural production takes place in rural municipalities, it is often the neighbouring urbans that house the processing plants and value-adding opportunities. Often the associated service industries that producers rely on are also located within urban boundaries. Businesses may decide to set down roots within the boundaries of an urban municipality, but those roots will be nurtured by the sweat equity invested in fields across



Reeve Tory Campbell

Southern Alberta and beyond.

Thomas Jefferson said that agriculture is our "wisest pursuit" and while this still holds much truth, agriculture is not without its challenges. This past growing season has made it once again glaringly clear that broad acre agricultural production is ultimately at the whim of mother nature. The drought and heat of the summer of 2021 proved an enormous challenge for both livestock and crop producers across the prairies. Diminished yields and depleted feedstocks put additional economic and mental stress on many producers. Rising input costs and unprecedented supply chain issues resulting from the Covid-19 pandemic have left a mark on many farming operations. Couple these concerns with rising inflation and ongoing labour shortages and concern can be felt when producers discuss the year that was and the one that will be.

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Hard work, Commitment & Resiliency



Lethbridge County Agriculture Service Board

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GARY SECRIST
Supervisor of Ag Services

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ASB/EFP Technician,
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Agriculture and producers continue to adapt and overcome

Continued from Page 1

Producers do an admirable job of controlling what is within their reach, but unfortunately, external factors will continue to breed uncertainty. Ongoing trade disputes and fluctuating border access will continue to be front of mind for numerous producer groups. Climate change and the corresponding government policies leave much uncertainty for both what mother nature will bring and what potential policy decisions will mean for farmgate bottom lines. The loss of control tools such as strychnine and the ongoing global debate regarding tools such as glyphosate weigh heavy on the minds of many producers. Increased public scrutiny means greater attention to detail in the field, at the bin, and the barn. Information and data are at a premium, but we need to continue to strive to better utilize the data being generated and put a greater emphasis on building the networks for accessing and distributing this information. Be it by fibre in the ground or satellites in the sky, we need to work collaboratively to find solutions to creating effective, economical broadband solutions.

Thankfully, agriculture and its producers continue to be resilient and adaptive. Crop breeders continue to develop seeds that will be more resilient and more productive. Technological advancements mean producers can track their animals and their field operations in real-time with greater confidence. Strides in fertilizer and crop input technology mean we can be more precise and timelier in our applications, thereby in many cases reducing what is applied and stretching producer investment that little bit further. Technological advancements also mean that we can overcome some of the labour challenges that continue to challenge the industry. We still need people, but we will rely more heavily on people that can adapt and learn. Thankfully we have several terrific local educational institutions making the most of both public and private dollars to invest in people and help to meet the labour needs of an advancing field.

At the end of the day, agriculture is people, and we need to take care of the people that build our communities. The scars of the last few years will be deeper for some, we must support our people and our industry the best we can. This means communicating, listening, and learning. Be that ear

that is content to listen, that friend that chips in when you can, and that vote of confidence in uncertain times. We're all ultimately tied to the success of our industry, and when we help each other, we help ourselves.

Agriculture has so much potential waiting to be released. It will take work, not just hard work, but smart work. We have many of the required tools in our belt, it's a matter of utilizing them. Success will also require cooperation and support. We need the support of the federal and provincial governments, connections between municipalities, producers, and processors, and the input of producer groups and advocates. We need to continue to educate and show the force of nature that agriculture is. Consumers want to know where their food comes from, and with the click of a smartphone, we can show them that we are acting responsibly to feed the world. The challenge is tall, but it is one that we can tackle together, to both feed the world and propel our home and our industry forward.

Tory Campbell
Reeve, Lethbridge County



Alberta Farmer Pesticide Applicator Certificate & Recertification Course

March 24, 2022
Lethbridge County, AB

**Do you need your Alberta Farmer Pesticide Applicator Certificate?
Is your Certificate expiring and you need recertification?**

Sign up for this 1-day course which includes:

- Classroom instruction by Dr. Bill Hamman and Erin McIlwraith
- Study manuals
- Exam (not required for recertification)
- Training for pest control in stored grain which enables producers to purchase fumigants for grain beetle control
- Lunch provided

Cost:

- \$126 for certification (includes manual)
- \$78.75 for recertification (no manual)

Date:

Thursday, March 24, 2022 from 9:00 a.m. - 5:00 p.m.

Location:

Visit <https://www.lethcounty.ca/p/agricultural-services>
for more information and registration details



FARM TECHNOLOGY PROGRAM

This program (2021 to 2023) focuses on sensors and security devices that support the adoption of innovative technology that:

- Minimizes agricultural waste, optimizes farm efficiency, or
- Improves the security of farming operations by encouraging the adoption of best management practices

Supported activities will fall under two streams:

1. Farm technology – Digital sensors that contribute to greater precision, more accurate matching of inputs with requirements
 - a. Eligibility varies by farm type. To be eligible, technology should be innovative and not commonly adopted for the applicant's farm type or sector
2. Farm security – Farm security devices to protect business assets and deal with trespassing, theft, vandalism and biosecurity threats

Eligible Applicants

- Produce agricultural crops and livestock worth at least \$25,000 annually
- Have current Environmental Farm Plan (EFP) certificate or letter, or will receive one before the end of the project term, conditional on grant approval. The name on the EFP does not need to match the name on the grant application, but must be for the same farm

Cost Share

Grants will be funded on a 50% cost-share basis

Eligible expenses for approved projects will be funded to a maximum of:

- \$48,000/applicant for Farm Technology Stream over the course of the program.
- \$2,000/applicant for Farm Security Stream over the course of the program.

Funding List

- Funding list subject to frequent change
- Check website for current list
- "Subscribe" to the program for automatic updates: <https://cap.alberta.ca/Cap/Programs>

Additional Information

- Applications are reviewed as they are received and evaluated according to the eligibility criteria and funding availability
- Purchases made before program staff receive a complete application are ineligible
- The program is not retroactive

Alberta

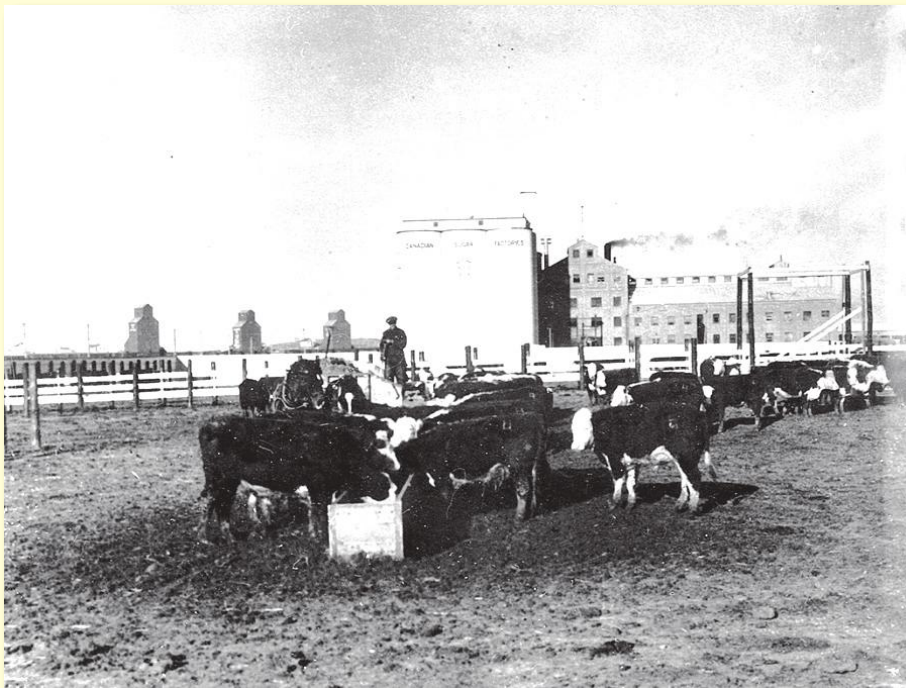
Canada

AEFP Process

The first step of registration begins through the Alberta EFP website www.albertaefp.com or by calling 1-587-200-2552 to receive over the phone assistance. Once registered, click on the confirmation email you received to fully activate your account. Once registered, a technician will be assigned to you over the following two weeks. If you feel comfortable you can begin your online workbook, with the learning

content guiding you through most of the process. However if you have any questions, you can contact your technician or attend a local/online workshop to receive additional support.

Matthew Wells is the local technician who helps farmers implement the Alberta Environmental Farm Plan (EFP) in Lethbridge County. If you have any questions, please feel free to contact Matthew at 403-634-0147.



Photos courtesy of Galt Museum and Archives

Above: 1964 Picture Butte sugar beet factory and cattle. Right: Aerial of Picture Butte showing factory, reservoir, etc, undated.



Sugar Beets and Lethbridge County

Submitted by: **Belinda Crowson**

By the end of 1930, close to a thousand farmers were living in the Lethbridge Northern Irrigation District. That same year, there was expansion in the district, with the construction of Park Lake Reservoir.

This put the area into a good position to withstand the Great Depression, as it permitted the growth of irrigated crops such as sugar beets. As sugar beets could be sold for a higher profit than grain and similar crops, this helped many farmers survive the Dirty Thirties. In fact,

To encourage Rogers to build the factory, the provincial government agreed to provide the company with water and land for the factory. The Picture Butte Reservoir was constructed and a quarter-section of land, previously belonging to Mr. Nimmons, was purchased for the factory.

The factory brought employment and economic growth to the area. When the Coalhurst Mine closed following the 1935 mine explosion, some of those suddenly unemployed went to work in the Butte factory.

the sugar beet industry across southern Alberta actually grew during the Depression years, with 12,000 acres under production in 1930 and over 21,000 by 1939.

The growth in the beet industry meant another factory was soon needed and by 1936 both Picture Butte and Raymond were home to a sugar beet factory. The new factory in Lethbridge Northern dramatically changed the region.

To provide homes for the new factory workers, some houses were brought to Picture Butte from Coalhurst and Commerce.

Rogers Sugar also built homes in Picture Butte, most notably the nine brick houses west of the factory. These homes were built for company employees, who initially rented them from the company. Eventually, the residents were given the option of purchasing the houses.

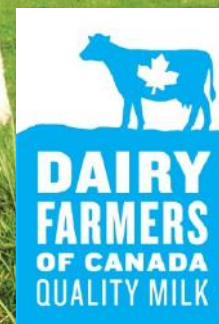
Both at Picture Butte and Raymond, the beet industry helped encourage other industries, including the feedlot industry. When advocating in the 1920s for a second factory, Mr. Holtman, a former irrigation farmer from Idaho, noted a benefit of beet farming was the production of cheap livestock feed, which included beet pulp, tops and Betalasses.

Feedlots and sugar beets complemented each other in another way. One difficulty sugar beet farmers faced was finding and retaining good labour. As the beet industry was seasonal, farmers often had to recruit new labour every spring. The livestock industry ensured workers could have year-around employment, encouraging beet workers and their families to stay for several years. This provided well-trained labourers and brought stability to the industry.

The Picture Butte Sugar Factory operated until 1977.



Local Dairy Farmers are Dairy Farming Forward



Did you know about one third of dairy farmers in Alberta reside in the southern region? Many of our dairy farms come from families that have been milking cows for generations. While they may have differing views on the best tractor brand, they are all passionate about taking care of their animals and creating a sustainable future for many generations to come.



proAction is now a mandatory program for every dairy farm from coast to coast. The program has six mandatory modules: milk quality, food safety, animal care, livestock traceability, biosecurity, and environment. Each module is carefully tested and evaluated, then updated regularly based on the latest scientific evidence.

Dairy farmers take pride in the hard work they do every day to ensure Albertans have access to safe, high-quality milk and dairy products. They understand that consumers are asking for more: more information on where and how their food is being raised or produced, more information on what the impact to the environment is, and more information about the care and treatment of animals. In response, dairy farmers stepped up to the plate to continue to earn consumer trust through a program called proAction®.

Provincial organizations like Alberta Milk, are responsible for enforcing proAction with independent validators to ensure the requirements are being met and that corrective actions are addressed in areas of improvement.

Canadian Values

proAction is more than just a program that farmers are required to follow. It is a program that reflects the values that dairy farmers share with consumers.

The best way to ensure products are made using Canadian dairy, which follow the guidelines set out in proAction, is to look for the Canadian Quality Milk symbol. Only dairy products that have been produced using 100 per cent high quality Canadian milk can use the logo. There are over 9,000 products across Canada that you can find the logo on! Many of those are products are produced right here in Alberta with locally produced milk.

Dairy is Green

A key component of proAction is the environment module. Dairy farmers are not only stewards of the land, but they are also innovative and collaborative individuals who strive to find new ways of doing more with less. They work to improve efficiencies in production, reduce greenhouse gas emissions, enhance biodiversity, conserve air, land, and water resources, and reduce waste, all while continuing to consistently and reliably provide consumers with a high-quality product.

- Canadian dairy farmers improved efficiencies in animal nutrition, genetics, and housing which resulted in each cow producing 13 per cent more milk since 2011.
- Canadian dairy has one of the lowest carbon footprints in the world! It is one third the amount of the global average.

Dairy Farming Forward







Dairy is one of the many agriculture groups who strive to improve sustainability both within the industry and for the industry. Consumer concerns and expectations help drive farmers to continue to evolve how they provide safe and reliable products to Canadians. Through programs like proAction, Alberta's dairy farms and farms across Canada illustrate their commitment to transparency and that's dairy farming forward.

Learn more about the Alberta dairy industry and proAction at albertamilk.com.

History in the Making

Almost a decade ago, Dairy Farmers of Canada had the vision for proAction: a program that provides consumers proof that Canadian dairy is produced in a socially responsible way. With input from Alberta's dairy farmers and farmers across the country as well as industry experts, the program's fundamentals were established.

Informed by science, farmers continue to adopt practices that benefit the environment, such as:

Action	Impact	Action	Impact	Action	Impact
					
FARMERS EMPTY MANURE STORAGE MORE FREQUENTLY	GHG EMISSIONS (Nitrous oxide, methane)	MORE FARMS ADOPT CROP ROTATIONS	LAND USED & WATER CONSUMPTION TECHNOLOGY	INCREASED USE OF PRECISION AGRICULTURE	YIELD INCREASES

Roadside Spraying

The Lethbridge County Agricultural Service Roadside Spraying Program for weed control will commence any time after May 1, 2022.

ASB Spray trucks are equipped with low drift nozzles to greatly reduce off target application and applicators are constantly monitoring wind speed and direction.

As per ASB Level of Service Policy - Appendix A "do not spray" signs are available by contacting the Lethbridge County ASB at 403-732-

5333 or the Lethbridge Administration Office at 403-328-5525.

Citizens obtaining signs must enter into a "no spray zone" agreement which holds the landowner responsible for weed control within the signed area.

"No spray zone" agreements must be renewed yearly.

Persons erecting "do not spray" signs along their property must ensure they are clearly visible to allow the spray truck operator enough lead time to react and shut down the spray boom.

For more information, please contact the Agricultural Service Board at 403-732-5333.



SOIL EROSION

It is three in the morning and the farmer jumps awake to the sound of hurricane-like wind and silt hitting the windows of his home. The weather reporter has warned this was going to happen, but now it is real. The farmer cannot get back to sleep as tomorrow is going to be a stressful day of watching airborne soil head to parts unknown, but definitely east. If this sounds familiar, you may farm in Lethbridge County where the last few winters have brought on significant soil erosion events.

Emergency measures

If this is your situation you may be questioning: what can be done now? According to the Soil Conservation Act producers must

mitigate soil erosion. This means taking emergency measures, which typically comes in the form of tillage to create roughness and turn moist soil to the surface. Other emergency methods include a manure application or in small areas bales can be placed perpendicular to the prevailing wind. Although these measures are sometimes necessary, they are not considered long-term solutions as further degradation of the soil will happen with additional wind, snow and the many freeze and thaw cycles of a Southern Alberta winter.

A Farmer's Nightmare

Prevention is key

If soil erosion is becoming a yearly event on your farm, perhaps it is time to think about preventative measures to avoid reaching the point of emergency control. Some options

include less tillage in the fall, cover crops and shelterbelts where possible. The Lethbridge County Agriculture Services department understands that trying to control soil erosion on frozen ground can be very difficult but establishing a program for prevention may be a way of alleviating some of the stress that comes along with these events. Further information on Soil Erosion can be found on the Leth-

bridge County website at <https://lethcounty.ca/p/agricultural-services>

Lethbridge County's Agriculture Service Board strives to work with producers in an effort to combat the effects of soil erosion. However, when compliance is lacking Lethbridge County has the authority under the Soil Conservation Act to issue a Soil Conservation Notice, which allows the municipality to take the necessary steps to stop soil loss from occurring and have remedial costs charged back to the landowner.

Lethbridge County has knowledgeable staff that can assist landowners in preventing and reducing soil blowing as a result of erosion. Please do not hesitate to call the County's resources if assistance is needed. Staff can be reached at 403-328-5525 Monday to Friday from 8:30 a.m. to 4:30 p.m.

Gary Secrist, ASB Supervisor



SPOTLIGHT

on Local Businesses

The Rural Woman Podcast™ is a collection of stories from women in farming, ranching, homesteading, agriculture and more. Each of these women are doing life in their own unique way and sharing their stories. Tune in each episode to be inspired by these amazing Rural Women.

The Rural Woman Podcast is available for download wherever you get your podcasts or stream over on WildRoseFarmer.com



CAMPBELL AND SONS GARLIC

What started out as a hobby farm several years ago has now turned into a thriving family run business. Initially raising horses, a donkey, many cats and dogs and even a goat, the farm evolved by growing and selling trees for



many years. Rob Campbell, the farm owner, is a journeyman landscape gardener. His landscaping business, Yard Doctor, has been operating in Lethbridge for over 30 years.

Beginning eight years ago, the farm began to diversify by growing and selling garlic commercially. Campbell and Sons Garlic is now a family run business. Rob and his sons Odin and Stone, work the farm and grow garlic in pesticide and herbicide free soil. Garlic is a unique crop in that it provides two harvests each year: scapes, the tender stem and flower bud of the hardneck garlic plant, are harvested in late spring and early summer and the bulbs are harvested in the fall.

The farm is now expanding its production to include pumpkins, squash, peppers, onions and a variety of other vegetables. These are sold at the Farmer's Market and through Campbell and Sons General Store. In addition to these offerings, the store partners with farms in the area and others to bring fresh preserves, artwork, hand made goods and much more to the community.

For more information on this family run business check out their website at www.campbellandsonsgarlic.com.



MENTAL HEALTH and AGRICULTURE

Farmers and ranchers take great pride in continuing the tradition and task of growing the world's food. This pride, love for the land, and life in the country are often what get farm and ranch families through the long hours, financial pressures, little separation between work and home life, and isolation that often come as part of the package.

These plus other factors that are out of a producer's control – weather, markets, and disease, for example – put them at high risk for mental illness, depression and suicide.

We have come a long way in talking about mental health in agriculture and discerning when there may be a problem, but do we know how to recognize good mental health in ourselves?

The following questions we can ask ourselves to check up on our mental well-being are a great place to start, based on the excellent "My Dashboard" tool found on the FCC (Farm Credit Canada) website:

Physically – Am I sleeping well? Do I have a good amount of energy? Am I motivated to take care of myself?

Mentally – Do I feel clear and focused? Am I able to see solutions to the problems that come up on a daily basis?

Emotionally – Am I as social as I normally am? Do I look forward to events or completing goals I have set? Am I able to talk about difficult things with the people I am closest to?

Just as fields need to be checked regularly and equipment needs preventative maintenance, evaluating our mental well-being on a regular basis is crucial. If you are not able to answer yes to a lot of those questions, it may be time to talk about it with someone.

Remember,

- Daily / weekly check-ins are a great way to keep mental wellness from being out of sight, and out of mind.
- Be sure to check in with everyone – farming is a family affair, whether everyone is out in the field or not!
- Take time for fun, a hobby, and connecting with others, even if (and especially when) it's busy.
- Find ways to remind yourself of what you love about life on the farm/ranch
- Keep educating yourself! There are wonderful resources to support the agricultural community in Canada. A few great places to start:

- The Do More Agriculture Foundation (domore.ag)
- Mental Health First Aid Training (mhfa.ca)
- As mentioned, Farm Credit Canada (www.fcc-fac.ca/en/community/wellness.html)

FCSS offers workshops as well as individual counselling to help you learn more. For more information call 587-370-3728 or email counsellingservices@fcss.ca. Visit www.fcass.ca for more information.

Submitted by:
Karen W. Vandenberg
FCSS Counselling,
Practicum Student



SERVING: Barnwell | Barons | Coaldale | Coalhurst | Lethbridge County | County of Warner | Coutts | Milk River | M.D. of Taber | Nobleford | Picture Butte | Raymond | Stirling | Taber | Vauxhall | Warner

Alberta Wheat and Barley Commissions focus on research and delivering agronomic solutions to Alberta farmers



Showcasing the innovative minds and activities behind the Alberta Wheat and Barley Commissions' growing research and extension program

With a mission to drive profitability for Alberta wheat and barley farmers, the Alberta Wheat and Barley Commissions have a longstanding commitment to funding research. Research is the largest spending area for both commissions as the farmer-led organizations have prioritized research and innovation key to on-farm success.

Yield boosting varieties with strong disease resistance packages and standability are amongst the many traits that Alberta farmers have come to expect from their research investments.

"The commissions seek to improve farmers' profitability and competitiveness by investing in research projects that will make an impact at the farm gate," says Dr. David Simbo, research program manager with the Alberta Wheat and Barley Commissions. "Development of new, improved genetics and best management practices is key to helping farmers adapt to changing environments."

The Alberta Wheat Commission (AWC) has numerous investments with the talented Agriculture and Agri-Food Canada (AAFC) Lethbridge research scientists including Drs. Brian Beres, Rob Graf, Harwinder Sidhu, Harpinder Randhawa, Haley Catton, Reem Aboukhaddour, John Laurie, Andre Laroche and Charles Geddes. Research projects co-funded at AAFC Lethbridge are used to breed new CPSR and winter wheat varieties, agronomic management, entomology, weed management and disease management. AWC's research investments at AAFC Lethbridge are nearly \$2 million.

Curious to learn about the commission-funded research projects? Visit the Research page at albertawheatbarley.com to learn more about our research investments and activities.

A boots-on-the-ground approach to extension

While both commissions have an extensive research projects portfolio, they're also growing a joint research extension portfolio and taking a leadership role in providing Alberta wheat and barley farmers with on-farm agronomic solutions.

With the aim to bridge the gap between commission-funded research and practical, on-farm agronomic solutions, the commissions launched *The Growing Point* e-newsletter in the



Dr. David Simbo

spring of 2019. *The Growing Point* is a timely, agronomy-focused newsletter developed by the commissions' very own Jeremy Boychyn, agronomy research extension specialist.

"*The Growing Point* serves as a conduit for Alberta wheat and barley farmers to access unbiased agronomic information and resources," says Boychyn. "There is an abundance of research available, so *The Growing Point* aims to deliver concise, timely and relevant agronomic research for growers."

In addition to *The Growing Point*, Boychyn developed the commissions' on-farm research program, Plot2Farm, which includes on-farm research trials that Alberta wheat and barley farmers can implement on their operations.

Through this program, farmers can evaluate agronomic questions using genetics, management and environmental conditions relevant to their farming operation. Plot2Farm's protocols test a wide variety of agronomic management practices on both wheat and barley including seeding rates, plant growth regulators, enhanced efficiency fertilizers, row spacing, and more.

"Farm scale research is helpful with advancing on-farm agronomic knowledge and can add further understanding on how particular management practices impact crop quality and yield," says Boychyn. "The Plot2Farm protocols are developed with the goal of producing results that farmers can use for future management decisions on their farm."

Aside from developing new agronomy programs for farmers, the commissions have recently adopted existing programs formerly executed by the Government of Alberta: one of significant value being Alberta's Regional Variety Trial (RVT) program. Dr. Sheri Strydhorst was hired by AWC in February 2021 to coordinate the cereal RVTs going forward.

"AWC recognized the value of keeping this program intact as RVTs provide Alberta farmers with independent, third-party variety data and from the various growing regions throughout the province,"



Jeremy Boychyn



Plot2Farm

says Dr. Lauren Comin, the director of research for the Alberta Wheat and Barley Commissions. "With the addition of Sheri to our team, along with funding support from Results Driven Agriculture Research (RDAR), private seed company entry fees and investments from Alberta Oat Growers, Alberta Seed Growers, Alberta Seed Processors, we are able to keep the RVT program running."

Aligning farmers' priorities and investments

Strydhorst brings a wealth of knowledge and research experience to the commissions as the agronomy research specialist – a complement to Boychyn and the growing agronomy extension portfolio. In addition to her role coordinating the cereals RVT program, Strydhorst seeks to improve the alignment of farmers' on-farm priorities to research activities.

"One of my responsibilities is to build stronger relationships with the researchers that we fund," says Strydhorst. "I provide support for developing funding proposals to help align producer-funded research with grower needs, while upholding strong scientific rigor. I also assist with extension of research findings so that they resonate with farmers leading to increased adoption."

The commissions created a research community e-newsletter called Shop Talk with Sheri to support Strydhorst's efforts in this area.

Added value through collaboration

In 2020, Alberta's Crop Protection Guide (more commonly known as the Blue Book) and the annual Agronomy Update event found their new home with Alberta's four major crop commissions – Alberta Barley, Alberta Canola, Alberta Pulse Growers and AWC. Formerly produced by the Government of Alberta, the four major crop commissions welcomed these collaborative opportunities to deliver more value and enhanced resources for Alberta farmers.

Curious to learn more about the programs and activities at the Alberta Wheat and Barley Commissions? Visit our website at albertawheatbarley.com or reach out to our agronomy extension team for more information on our growing agronomy portfolio.



Dr. Sheri Strydhorst



Supporting scientists who support western Canadian farmers



The Growing Point



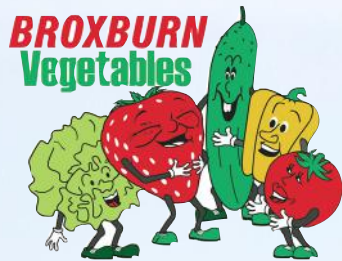
Dr. Lauren Comin

GARDEN PREPARATION TIPS

for Southern Alberta

Submitted by: **Daniella de Jonge**,
Marketing Manager at Broxburn Vegetables & Café

Are you considering growing your own vegetable garden but are unsure where to begin? Growing a vegetable garden can be an incredibly rewarding investment and experience which allows you the opportunity to provide your own food. Without proper care, however, it can also result in crop loss and weed takeover. With nearly 30 years of growing experience in Southern Alberta, Broxburn Vegetables has amassed a large amount of experience with growing various types of vegetables. Here are some tips we recommend for growing a garden in Southern Alberta.



So, you have decided to commit to growing your own vegetable garden. The first step to consider is the location of your garden. Some vegetable plants can survive without access to full sunlight, but most vegetables require a minimum of six to eight hours of direct sunlight. We recommend locating your garden in an area that receives eight hours of direct sunlight.

Southern Alberta is notorious for its dry winds. If your garden is frequently exposed to extreme wind conditions, it may lose too much moisture in the soil which will cause your vegetables to wilt. Placing your garden beside a fence or beside your house may offer some protection from the wind. If your garden is not sheltered by a fence or nearby a wall, a wind fence may be a useful tool to help protect your garden.

Once you have chosen an ideal location for your garden, the next factor to consider is the type of soil to use in your garden. Since plants draw their nutrients directly from the soil, the quality of the soil will directly affect the growth and flavor of the vegetables. To thrive, vegetables need to be planted in great soil to create the perfect growing environment for the roots. We recommend planting your vegetables in a loose soil, such as a clean topsoil mixed with potting soil, to give your plants as many nutrients as possible. To offer your vegetables more nutrients, consider adding a fertilizer to the soil.

Topsoil mixed with potting soil helps create excellent drainage and aeration for your vegetables. Drainage is important as it helps

prevent your plants from drowning after they are watered. If the soil in your garden primarily consists of a dense clay soil, your vegetables will not be able to root themselves deep enough in the soil and may not survive. This issue can be resolved by rototilling the soil with topsoil to create more breathability and drainage for your vegetables.

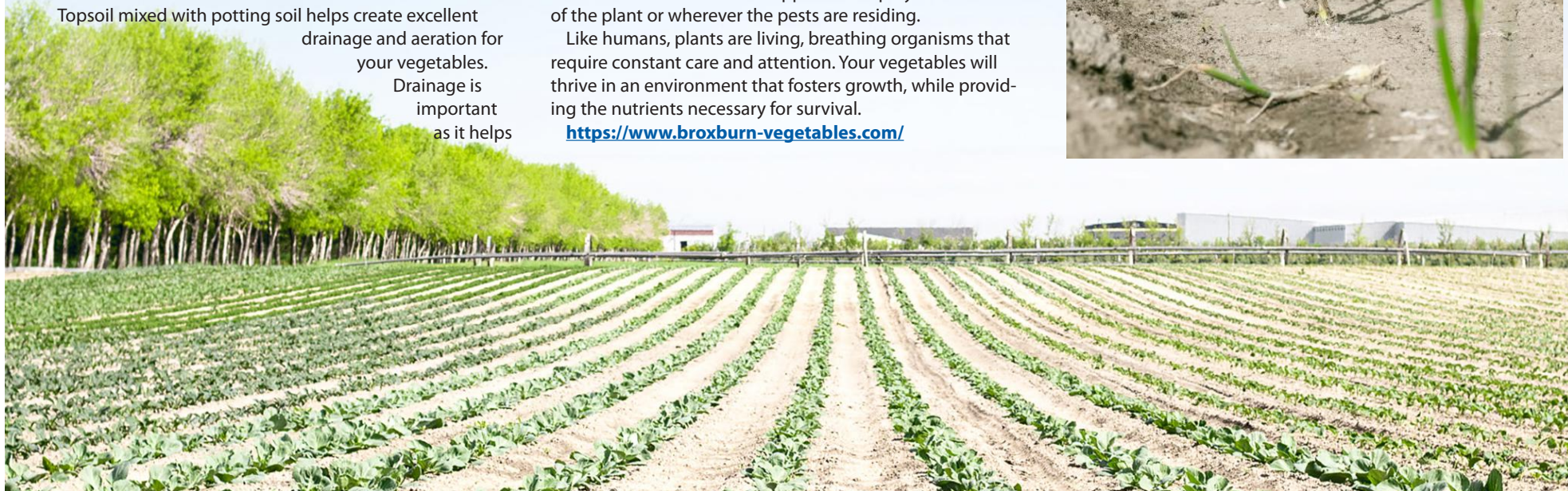
As Southern Alberta can be incredibly dry in the summer months, access to water is crucial for the survival of your garden. Hot, dry weather in combination with extreme wind conditions can be detrimental to a garden as the wind will suck out the moisture from the soil and dry out your plants. Your garden will likely require water several times a week, depending on the weather and on the quality of the soil.

To care for your garden, check the soil regularly for moisture before watering. While the top layer of the soil may appear to be dry, the bottom layer may have retained moisture. Too much water will drown your plants, and too little water will starve them. As caring for your garden will require a commitment of time, it may be worth setting up a sprinkler system to ensure your garden is watered regularly.

Living plant environments such as a garden will unfortunately attract nuisances such as weeds and pests. The key to weed control is to start immediately. Removing the weeds while they are still small will prevent their roots from growing to a size that could suffocate the roots of your vegetables. Common garden pests such as aphids and spider mites will feast on your vegetable plants and eventually weaken them. This could lead to diseases within your garden which will spread quickly between your plants if uncontrolled. Monitor your garden by regularly inspecting it for pests, and thoroughly examining the leaves of your plants as that is where the pests are most likely to reside. If you discover a pest problem within your garden, we recommend using an insecticidal soap on your plants to help eliminate them. Insecticidal soaps are practically non-toxic to humans and other mammals and can be applied as a spray on the leaves of the plant or wherever the pests are residing.

Like humans, plants are living, breathing organisms that require constant care and attention. Your vegetables will thrive in an environment that fosters growth, while providing the nutrients necessary for survival.

<https://www.broxburn-vegetables.com/>





BIOCONTROL RELEASE PROGRAM

Submitted by Alberta Invasive Species Council



WHAT IS BIOCONTROL

Biocontrol is the suppression of pest populations using living organisms. The release program started as a collaboration between Agriculture & Agri-Food Canada and several Agricultural Fieldmen in 2001. The AISC took over in 2016 and continues to use host-specific insects for invasive plant control in Alberta.



Leafy spurge, *Euphorbia esula*

LEAFY SPURGE

Leafy spurge (*Euphorbia esula*) is classified as a noxious weed in Alberta. This perennial plant blooms from June to mid-July. It reproduces through creeping roots and capsules that disperse seeds metres away, making it very difficult to control. It produces a milky sap toxic to most livestock and an irritant to human skin.

LEAFY SPURGE BEETLE

The AISC uses *Aphthona lacertosa* (black) and *Aphthona nigricutis* (brown) beetles as biocontrol agents for leafy spurge populations. Leafy spurge beetles feed on spurge leaves and flowers limiting the plant's ability to grow. Beetles are small (3-5mm) and can lay 200 eggs in the soil. Eggs will hatch and burrow in the soil where the larvae overwinter and feed on leafy spurge roots until early spring.

MOVING BEETLES

Once you have an established population of spurge beetles on your property, you can move them to nearby infestations of leafy spurge. Please note, not all biocontrol releases will result in established populations.



Leafy spurge beetles feeding on a spurge plant



Signs of leafy spurge beetle damage

Here are some tips to help you start collecting and releasing your spurge beetles:

When can you move the beetles?

Moving and collecting beetles is most efficient when populations of beetles are high and a site is well established with beetles (usually 3-5 years old). An established site will exhibit signs of damage to spurge plants and/or visible beetles (usually, beetles will aggregate on stems).

- After sweeping an area, give the beetles ~1-hour break to climb back up the spurge plant.
- Transfer beetles from the net to a plastic bag or yogurt container (with a spurge piece inside!) and store them in a cooler with ice packs.



Site in 2013

Release the beetles!

- Weather is no issue for releasing, release in rain or shine!
- Choose areas with no tree canopy, away from floodplains and south-facing slopes (see site requirements under 'How to prepare').
- Release on edge of spurge patch.
- Spread beetles around spurge plant tops.



Site in 2018

That's all folks! The beetles will get to work on your new spurge infestation and you should see changes within a few years!

Note: spend some time collecting beetles by sweeping spurge plants and approximating the number of beetles caught to give you the best idea of the number of beetles at a site. Remember - just because a site is not worth collecting one day, doesn't mean it won't be worth it later in the season, try again in a week or two!

Need help or have any questions?

Feel free to contact the AISC! We offer additional biocontrol agents for several invasive plants found in Alberta, please visit our website at abinvasives.ca to learn more!





Lethbridge
College

New Option for Bachelor of Agriculture Science available through Lethbridge College

Lethbridge College has continued evolving to meet the changing needs of the agriculture industry by launching its Bachelor of Agriculture Science program.

The degree, which is unique to Lethbridge College, began in September 2021 and offers opportunities for career development, a path to further education and hands-on research opportunities, while focusing on the science of agriculture.

Lethbridge College's Bachelor of Agriculture Science is a flexible program that ladders out of the current Agriculture Sciences diploma program. The program is the only one of its kind in southern Alberta and is comparable to Bachelor of Science degree programs offered at the University of Alberta and University of Saskatchewan.

The new Bachelor of Agriculture Science program is recognized by the Alberta Institute of Agrologists, meaning students will be eligible to apply for Professional Agrologist designation following graduation. The program also prepares students to pursue further MSc and PhD training.

"When developing new programs, the needs of industry are at the forefront and the Bachelor of Agriculture Science will support the entire agriculture sector," says Dr. Paula Burns, Lethbridge College President and CEO. "By focusing on the science of agriculture, this program supports sustainable, innovative and responsible agriculture and appeals to students from a wide variety of backgrounds who want to make a difference in feeding the world."

Students studying Agriculture Science at Lethbridge College have flexibility when it comes to their educational path. Students in the two-year diploma program have a common first-year curriculum, before choosing to major in Agriculture Business, Agronomy or Animal Science in the second year. Students may then choose to [join the workforce or](#) earn an additional diploma with just one extra year of study, or they may choose to pursue a Bachelor of Agriculture Science degree with two more years of study.

In addition to theory and classroom-based learning opportunities, Agriculture Science students in both the diploma and degree programs have many applied learning opportunities. [Our students have the chance to work](#) with the college-managed



[Integrated Agriculture Technology Centre \(IATC\)](#) and [other local researchers like the Farming Smarter association](#).

"This new degree will link our academic program with our expanded agriculture research on special crops and irrigation that are specific to southern Alberta, creating an excellent learning opportunity for students," adds Dr. Terry Kowalchuk, Dean of the Centre for Technology, Environment and Design. "We are also excited about the strong focus on business and communication skills, as well as the connection students will make with our community and industry partners as they work to complete the degree."

Students pursuing the Bachelor of Agriculture Science program also have opportunities to be involved in hands-on applied research through the Centre for Applied Research, Innovation and Entrepreneurship ([CARIE](#)) and the Integrated Agriculture Technology Centre ([IATC](#)). [Our research team includes PhD scientists who study irrigation, agricultural engineering technology and aquaponics, and our facilities keep growing. Lethbridge College now manages a 385-acre irrigation demo farm, located minutes from campus and set up with farm-scale grain storage and drying capacity. We also conduct aquaponic and hydroponic research in a 10,000 ft² greenhouse on campus and the 60,000 ft² Research and Production greenhouse at Brooks.](#)

"Industry is asking for a new graduate," says Byrne Cook, chair of the School of Agriculture. "There is a demand for fundamentals in plant and soil science combined with a strong understanding of data-driven agriculture. Every year there is new smart agriculture technology and opportunity."

Cook adds, "Our students will have the scientific background to not only manage and adapt these geospatial tools and sensors to specific production settings, but they will also determine return on investment. Using the latest interpretive tools, graduates will prescribe solutions to soil, moisture, pest, fertility, topography and crop rotation variability. This combination of knowledge in agronomy and data analysis will create a graduate unique to Western Canada."

Lethbridge College has offered agriculture education since 1965. Previous graduates of the college's Agriculture Sciences programs are eligible to enrol in the Bachelor of Agriculture Science program for the fall semester. To learn more, visit lethbridgecollege.ca/AgScienceDegree.

Wanted: Three Additional Agriculture Instructors

With the development of the Bachelor of Agriculture Science Degree, Lethbridge College is now searching for three specialized instructors. All three are full-time positions with primary assignments as follows:

- Agronomist – Development of and delivering instruction of Harvest and Crop Storage Technology as well as Crop Production Technology.
- Agriculture Data Specialist – Development of and delivering instruction of Precision Agriculture I and II, and Telematics and Sensors.
- Irrigation Specialist – Development of and delivering instruction of Irrigation Systems, Irrigation Management and Irrigation Technology.

The remaining workload (approximately 1/3) will consist of diploma course instruction, supervising student senior projects and conducting applied research. Course descriptions are available online. To apply, visit <https://lethbridgecollege.ca/>

Investing in the future of southern Alberta agriculture

When the McCain Foundation donated \$280,000 to the University of Lethbridge, they did so with an eye to sustaining agriculture in southern Alberta for future generations.

The McCain Studentships for Sustainable Agriculture, established in 2021, are training the next generation of researchers and thought leaders. The studentships support U of L master of science students in biology whose research focuses on science and leadership in sustainable agriculture. Through the pilot project, six graduate students are working with U of L faculty members and tackling complex problems in the field.

“The McCain Studentships are giving these students the opportunity to learn from our world-class researchers while they work to solve problems that affect agricultural operations in southern Alberta,” says Dr. Dena McMartin, U of L vice-president (research). “Their work could well

lead to solutions that can be employed far beyond Alberta and contribute to improving sustainable agriculture practices around the world.”

One of the graduate students, Oshini Fernando, is working at Frank Lake, a restored wetland located near High River. Fernando is examining the ability of the Frank Lake wetland complex to remediate nutrient and other chemical effluent from the nearby Cargill beef processing plant.

“This study will help to determine whether the restored Frank Lake wetland can be considered a significant nature-based solution — a solution that involves working with nature to address societal challenges like climate change while providing benefits for both human well-being and biodiversity,” says Fernando. “My project is meant to help raise the awareness of the importance of wetlands and this must be considered as part of making agricultural practices more sustainable in the Prairie provinces.”

Nadia Hand (BSc '21) is working on a project that proposes native plants be used as future crops for plant-based antibiotics. Hand's research focuses on the effect of native plant extracts on the staphylococcus aureus (*S. aureus*) bacteria. Certain plant extracts have been shown to make the bacteria clump together, this inhibiting their spread, which in turn can decrease the need to use antibiotics.

“Humans in general are using antibiotics at a rate which is allowing for the rapid development of antibiotic resistant bacteria,” says Hand. “Alberta producers also rely on antibiotic use. By finding a way to limit or stop the dispersal of bacteria, clump-inducing plant extracts will provide a local and sustainable alternative to antibiotic use.”

Other students involved in the pilot project are investigating topics such as the use of microalgae in sustainable development, increasing plant resiliency to environmental stresses and how a diverse group of beetles found on the Prairies may contribute to sustainable agriculture.

University of
Lethbridge



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PHEASANTS FOREVER

raising awareness of the value of roadside ditches and undeveloped right-of-ways

Cultivation through undeveloped right of way

Pheasants Forever Canada (PFC) is launching a campaign to bring awareness to the issue of trespass farming and the associated value of intact roadside ditches and undeveloped public right-of-ways. Bolstered by a grant of \$256,000 from Alberta Environment and Parks (AEP), the upland bird habitat conservation organization advocates that while it's no secret that edge habitat is critical for wildlife in all landscapes, seldom is it more so than across the vast tracts of cultivated land that dominate parts of southern Alberta.

Here, where roadside ditches and undeveloped county right-of-ways may provide the only sanctuary for a broad array of insects, birds, reptiles and mammals, an agricultural practice known as "trespass farming" is threatening these last vestiges of intact wildlife habitat. Fortunately, AEP has recognized the issue and has turned to PFC to inform, educate and spark change in the attitude towards these critical edge habitats, noting that the benefits accrued to society when these strips remain intact goes well beyond their wildlife habitat value.

Roadside ditches and right-of-ways are public land in Alberta, typically owned by the province and managed by local municipalities. In the tough economic climate that producers face, cultivating through these ditches and undeveloped right-of-ways is both easy and practical. To many producers, it makes sense to put those linear acres under production, often unaware that the societal benefits they provide far outweigh the farm revenue they potentially generate. That's where PFC comes in.

"Ditches and right-of-ways have been broken and farmed at an elevated rate in recent years," says Perry McCormick, president of PFC. "It's not uncommon to see ditches farmed to within inches of the road grade. Further, corporate farming has led to larger fields, and many right-of-ways that at one time supported critical edge habitat on each side of the trail have disappeared. When undisturbed, these strips of land provide a wide range of benefits to all Albertans," says McCormick. "With 85% of the natural wetlands lost across the prairies, we've come to understand that ditches play a critical role in flood attenuation, water filtration and purification through the absorption of excess nutrients, carbon sequestration, and biodiversity protection and enhancement. Roadside ditches and right-of-ways also provide critical habitat for grassland-dependant birds, including pheasants



and grey partridge, as well as for a broad suite of mammals and insects, including at-risk pollinators. Our job now is to help make the public, including the agricultural community, aware of these societal benefits."

PFC's two-year awareness campaign will include news releases, advertising on radio and in newspapers, billboards and placement on key websites. Two field tours are planned for mainstream media members to provide them a first-hand look at the issue. PFC also has plans to meet with individual municipal authorities to discuss issues and opportunities moving forward. PFC volunteer-led chapters in Calgary and Medicine Hat (Chinook Chapter) will play leading roles in supporting the delivery of this awareness campaign.

PFC was formed in 1992 and is dedicated to the conservation of pheasants and other wildlife populations in southern Alberta, primarily through enhancing the quantity and quality of habitat. Their programs include planting trees, shrubs and grasses to cre-



In both of these photos the ditch is now gone

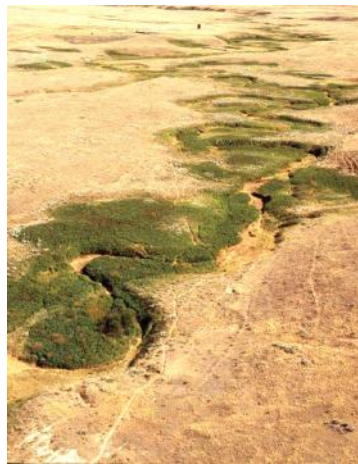
ate protective cover and safe corridors for wildlife travel, planting nesting cover for ground-nesting birds, and establishing riparian buffer zones. An education campaign highlighting the threat to roadside ditches and undeveloped right-of-ways, therefore, is a natural extension of their mission, says McCormick.

"We want to make people, including producers, municipalities and the general public, aware of the importance of retaining these critical strips of natural cover," McCormick says, adding that their public messaging will begin this spring. "As we all know, recognition that there is a problem is the first step in solving it, and we're proud to be leading this government-sponsored initiative to bring awareness to the threat of trespass farming."

Those interested in learning more about PFC and their conservation programs are encouraged to check out their website at www.pheasantsforever.ca or contact PFC's president at perry@pfcalgary.ca



Milk River Tributary



Sage Creek Watershed



Coulees, Bullshead Creek Watershed

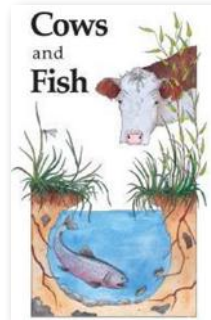
Cleaner Water, the Wetland Way

The diversity of trees, shrubs and grasses bordering sloughs, wetlands, lakes, creeks and rivers are called riparian areas. Riparian areas are portions of the landscape strongly influenced by either surface or groundwater and can be recognized by their productive, lush, green vegetation. If you drink water, farm or ranch, own a lakeside cottage or even fish, riparian areas are important to you and the quality of water you drink. These ribbons of green vegetation on our landscape work as nature's water filters, protecting our drinking water, by improving and maintaining water quality.

To measure water quality, physical parameters (such as colour, temperature and sediments), chemical parameters (such as nitrogen, phosphorus and pesticides), and biological parameters (such as parasites and bacteria) are monitored. We often only think of monitoring water quality for drinking water purposes, but monitoring is also done for irrigation, livestock watering, recreational uses, protection of aquatic life, and industrial supplies.

Riparian areas improve and maintain water quality by filtering runoff and reducing contaminants, such as nitrogen, phosphorus, pesticides and sediments from reaching our surface water. Plants, like willows, cattails and sloughgrass in the riparian area, take up, break down, trap, use or store these nutrients, contaminants and sediments, keeping them out of the water.

Contaminants can enter surface or groundwater supplies in one of two ways. Microbes, nutrients and pesticides hitch a ride attached to sediment particles found in runoff, or nutrients and pesticides can travel in a dissolved form in water. Riparian areas are more effective at trapping and



Cows and Fish

storing sediments and their attached contaminants than filtering out dissolved nutrients and pesticides. Riparian areas are more effective at improving water quality when slopes are gentle, riparian areas are wide, and not too much material comes in all at

once.

Cleaner drinking water supplies benefit all users by increasing consumer safety, decreasing risks posed by dirty water and reducing expensive water treatment costs. When livestock have access to cleaner water, they are healthier, often with fewer vet costs and greater weight gains. Aquatic life, such as fish and amphibians, also benefit through improved habitat.

Management of riparian areas to maintain water quality benefits is simple. Aim to maintain a healthy riparian area with a mixture of plants such as trees, willows, red-osier dogwood, saskatoon, cattails, rushes, and sedges. This will create the diversity and structure needed to effectively trap contaminants and sediments. Maintain a well-vegetated buffer alongside your riparian areas. Buffers minimize impacts from cultivated fields or livestock wintering sites. The wider the buffer, the more effective it is at improving water quality, and the less the riparian area will need to filter. In riparian areas that are grazed by livestock, allow for effective rest to maintain plant health and vigour. Consider providing an alternate water sources and moving salt and mineral away from the riparian area to reduce manure build-up, trampling or over grazing in these areas.

Cows and Fish is a non-government program working with ranchers, farmers and their communities on the importance of riparian areas and their functions, like improving water quality. For more information on riparian areas and water quality and Cows and Fish contact 403-381-5377 or visit their website at www.cowsandfish.org.



Biochar as an ingredient for Animal Bedding and Composting

What if you could buy biochar that is already amended into compost that is teaming with beneficial microbes and charged with plant available nutrients?

Let's talk about how this could impact the healthy plant-soil triangular relationships as described in this diagram.

Biochar as an ingredient in soil works to improve these relationships by creating an inviting environment for beneficial micro and macro biology, by absorbing and maintaining moisture conditions, and by adsorbing both macro and micronutrients. All these benefits are great, but how do we get biochar into soils and growing mediums without putting the burden on consumers (or farmers) to do all the mixing that is needed to achieve maximum benefits? It is difficult to move the biochar benefits proposition beyond the early adopter phase because of all the extra work involved in preparing and blending biochar and organics as a soil amendment. This needs to be changed if we want to realize biochar's potential as a soil enhancing agent as well as to be a climate change mitigation and adaptation method at a significant scale.

AirTerra has been searching for a way to increase size of the biochar market by making it easier for anyone to have biochar as an ingredient in their soil. We have concluded that this needs to involve finding a pathway for biochar to be included in normal soil amendments without changing the way gardeners, farmers, tree care professionals, and horticulturalists work. One normal activity that hasn't changed for 1000's of years is the need to amend organic material (compost) into soil to maintain healthy soil structure and replenish important nutrients.

What if biochar could become a beneficial ingredient for compost making?

Over the past few months, we have concentrated our efforts on the potential use of biochar as an animal bedding ingredient that is beneficial for animal health and indoor air conditions in barns and arenas. Amending medium and coarse granular biochar into animal bedding provides a "sponge" that adsorbs nutrients from animal urine and manure as soon as animals produce these valuable products. Since biochar is such a powerful sponge for these elements, odours in barns are reduced as the same time as important nutrients are retained. Additionally, biochar helps to aerate the bedding to prevent anaerobic conditions that invite pathogens that cause diseases for animals such as bumblefoot (abscesses in the foot pad) for poultry.

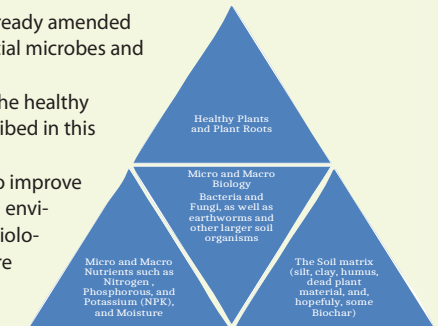
The greatest potential for practicing the use of biochar as an animal bedding ingredient is on mixed farms that operate barns or outdoor animal pens. To test this method of animal bedding amendment, AirTerra has teamed up with MiGO Carbon Ranch owned and operated by MGO Systems Inc. at a newly acquired former Hutterite Colony near Crossfield, Alberta. MiGO Ranch will be testing the use of biochar as an animal bedding ingredient with eventual composting of the spent bedding along with its amended biochar to produce a "Biochar Fortified Manure Co-Composted" product.

The biochar compost will be used as a top dress on MiGO Ranch's produce gardens and on its crop fields in the same way as animal bedding compost has been used for decades in Alberta. The health advantages of using biochar in the barns will then extend further advantages for the soils that are amended with this co-composted product.

With this as a concept, AirTerra's Don Harfield, VP of Technology and Rob Lavoie, CEO and President, submitted recommendations to include biochar as an acceptable feedstock for composting to the Alberta Government's department of Agriculture, Forestry and Rural Economic Development on their revision to the guidelines for "Acceptable Feedstock and Amendment List for Compost Facilities". The revision was just published and came into effect on January 14, 2022. It was published under the "Code of Practice for Compost Facilities" and is linked here: <https://open.alberta.ca/publications/acceptable-feedstock-and-amendment-list-for-compost-facilities#summary>.

Now that AirTerra has embarked on this journey, we would like to keep you regularly posted on our progress. Please check back often to our SoilMatrix Library posts at: <https://www.airterra.ca/the-soilmatrix-library/>

If you wish to dive more deeply into this topic, we have included a link to a white paper written on this topic in January of 2019 by Kelpie Wilson of Kelpie Wilson Associates. See: ["Use of Biochar in Poultry Barns for Nutrient Recovery and Ammonia Mitigation - Literature Review and Recommendations"](#)



Emergence of a canola-pea intercrop. Pea was seeded through the sideband opener.



Rob Lavoie, CEO and President of AirTerra Inc.



Mountain Bluebirds, the ideal farm tenant

Left: Cover photo by Wayne Dwornik

Right: Male (left) and female (right) Mountain Bluebirds provide excellent bug control. Photo by Lily Lai

Submitted by Curtis Goodman,

member of Mountain Bluebird Trails Conservation Society

Mountain Bluebirds are great neighbours! The return of their bright blue feathers are a welcome sign of spring. In Southern Alberta they are usually migrating back by mid-March, traveling in flocks of up to 50 birds or more. When they are perched on a fence line they look like brilliant cerulean-blue jewels.

The Mountain Bluebird (*Sialia currucoides*) is a medium-sized bird, similar to a Robin as a member of the Thrush family. Adult males have thin bills and are bright turquoise-blue and somewhat lighter underneath. Adult females have duller blue wings and tail, grey breast, grey crown, throat and back.

Providing nest box habitat for Mountain Bluebirds has been an important part of the work of the Mountain Bluebird Trails Conservation Society (MBTCS) for the past 48 years. MBTCS members are passionate about studying, conserving, and restoring the natural range of Mountain Bluebirds across Southern Alberta; they are members of one of many bluebird-focused organizations across North America.

The presence of bluebirds are an absolute delight!

Bluebirds provide natural pest control. They are insectivorous - which means they love to eat Coleopterans (beetles), Orthopterans (grasshoppers, crickets), Arachnids (spiders), and Lepidopterans (primarily caterpillars), and other insects. They prefer habitat that is sparsely treed grasslands with suitable cavity nest locations.

Nest boxes designed for Mountain Bluebirds are excellent additions to farm fence lines. Males will arrive first to establish territory and prepare to attract a mate through beautiful birdsong and exuberant flight displays that may last hours. Females who find a suitable mate will then help to establish the nest. Together they will raise up to two broods with up to nine eggs in each clutch. The pair will work throughout the spring and summer to meet the voracious appetite of their growing family.

Some of our best nest boxes have had decades of use. A quality built nest box will last a long time with the right annual maintenance. The hole is a crucial design aspect, one of many considerations needed for construction of a Mountain Bluebird



Nest boxes provide valuable cavity nest habitat for Mountain Bluebirds. Photo by Raymond Huel

nest box. The hole should be exactly 1 9/16" in diameter. Once built, depending on your location, nest boxes are best spaced at least 250 metres apart.

Ideal placement is next to native grassland, pasture, or mowed lawns. Avoid areas close to buildings or fields that are sprayed with pesticides and herbicides. Boxes should not be placed near farmsteads where bluebirds could become prey to cats. The nest box opening should be placed away from the prevailing winds. Nearby fences, trees, and bushes provide the birds with perching sites and important cover for the young when they fledge.

For the 110+ Trail Monitors who volunteer as part of the Mountain Bluebirds Trails Conservation Society, they help to maintain a network of 2,700+ nest boxes across Southern Alberta. They have helped to reverse the decline of Mountain Bluebirds since 1974 and the results have been encouraging.

Bird banding programs suggest that successful breeding bluebirds will return to the same area or nest site each year. Trail Monitors have a great opportunity to get to know their neighbours through regular biweekly inspection of the nest boxes from March through August. It is a great experience for families to work together and witness the cycle of life while also contributing to conservation. Watching eggs appear and develop into nestlings and fledglings is truly a delight for anyone.

Of course, bi-weekly checks are not required, as the bluebirds are self-sufficient outside of bi-annual nest box clean-outs in early February and late August. The natural pest control they offer is a real bonus in return!



President Jim Leitch at the Annual Spring Orientation in June 2021. Photo by Joe Michielsen

Want to take action to help the Bluebirds?

Make a charitable donation to support our efforts; add 20% to your tax-deductible donation with ATB Cares! 100% of donations go directly to bluebird nesting habitat enhancement across Southern Alberta.

We encourage you to get involved as a member - you can sign up to receive our bi-annual newsletter, or you can register as a Trail Monitor to get involved in the work of nest box placement, maintenance, and restoration.

MBTCS is also always in need of assistance with building nest boxes. This is the perfect high school shop class or service club project.

If you are interested in learning more about Mountain Bluebird Trails Conservation Society, plan to attend the annual Spring Orientation on the first Saturday of June. This is a great opportunity to meet other members, ask questions, and share experiences with bluebird nest boxes. We can offer support in maintaining a healthy and productive Mountain Bluebird Trail. Everyone is welcome and encouraged to learn more and do their part for our wonderful bluebird neighbours!

Check out our website BluebirdTrails.org for information that will help you establish your own Bluebird Trail - from blueprints to the best recommendations based on the results of four decades of tried and true experience. Join our newsletter mailing list to stay informed.



Alberta Birds of Prey Centre

Helping injured birds throughout Southern Alberta

The Alberta Birds of Prey Centre serves many diverse roles for Lethbridge County and the entire southern Alberta region. While the Centre is widely known as a tourist attraction and environmental learning facility, the core activity of the organization remains wildlife rescue focusing on hawks, falcons, eagles, owls, and lately vultures too.

While the Centre is located in Coaldale, most of the injured and orphaned wildlife comes from Lethbridge County, the City of Lethbridge, and all other municipalities of southern Alberta. Centre co-founder Colin Weir states "whenever people encounter injured wildlife they expect there will be someone, or some place, available to help. That is the role we have offered to fill, as a volunteer service for the region and province of Alberta".

We are so fortunate to have an abundance of habitat and wildlife throughout Lethbridge County, where rural residents provide valuable stewardship. Colin went on to state "in addition to their tireless work in agriculture, farmers and ranchers don't get enough credit for these efforts, caring for habitat and wildlife on land they either own or lease." Colin feels the support and interest of rural residents is the most important and appreciated element of the Centre's conservation work. While the Centre often receives credit for helping the birds, it's actually the farming and ranching families that deserve much of the thanks. They are the ones who find these crea-

tures in need of help, call us for advice, often picking them up and delivering them to us.

So what should anyone do if they see a bird of prey they think is in need of help? For a start, the best thing to do is to give us a call and we can help analyze the situation and provide options and advice. These days, the most helpful tool is to ask people to take a photo of the injured bird with their phone, and text it to us. These photos help us determine the species we are dealing with, and what the problem might be. For anyone getting close to these wild creatures, the birds won't understand your efforts to help, and will use their talons to defend themselves by grabbing any helping hand! Some birds like Great Horned Owls or the larger hawk species have quite a powerful grip, that combined with their sharp talons, is always quite a painful experience.

While Centre staff can sometimes help by picking up injured birds, especially locally, they often can't get away on a moment's notice due to very limited resources. On a busy summer day, there might be simultaneous calls for help coming from areas like Crowsnest Pass, Medicine Hat, Milk River or Brooks. So in addition to looking after the Centre here in Coaldale, it's sometimes not possible for Centre staff or volunteers to respond right away in person, to every call. This is where the help of the farmers and ranchers is so welcome and appreciated. Centre staff also try their best to answer the

phone outside of regular business hours, on weekends and often on holidays when most places are closed. Colin went on to say, "Since people care enough to help injured birds of prey and contact us, we try to be available to answer the phone, regardless of the time of day."

What should people watch for regarding birds of prey around us? That depends on the season. Right now in the late winter and spring, Snowy Owls will be returning back to the Arctic and Great Horned Owls will be nesting, with hatching young sometimes falling from their nests. Later in the spring and summer, various hawk species will arrive from their migration with Swainsons Hawks being the most common bird of prey that rural residents might encounter. Colin underlined one important point for County residents to remember. All these raptors feast primarily on ground squirrels (gophers) and mice. That means if you have any nesting birds of prey nearby, consider yourself very fortunate for the rodent control benefits they provide hunting all summer long, for themselves, and their nestlings. Some species like, American Kestrels, Merlin Falcons and Burrowing Owls prey upon grasshoppers.

The Alberta Birds of Prey Centre is normally open in the summer daily 9:30 to 5:00 p.m. until Labour Day Monday. This year the opening date is uncertain due to the many challenges created by the pandemic. Receiving no government operating subsidies, the Centre relies on admission fees and as a charity appreciates donations where tax receipts are provided.

For more information the Centre can be contacted at 403-331-9520, or through their web-site at www.burrowingowl.com



Right Source

Matches fertilizer formulation to crop needs

**Right Rate**

Matches amount of fertilizer type crop needs

**Right Time**

Makes nutrients available when crops need them

**Right Place**

Keep nutrients where crops can use them



FIVE AGRONOMY PRIORITIES FOR CANOLA

■ The Canola Council of Canada agronomy team has set five agronomy priorities to drive canola profitability, sustainability and productivity gains over the long term.

BY CLINT JURKE

The Canola Council of Canada's five agronomy priorities, when implemented fully in every field, will improve canola yield and profitability, and will help ensure success with the crop.

1. Use 4R nutrient management practices

All farms will benefit from applying the right fertilizer products at the right rate, right time and right place to improve yield, reduce nutrient losses

and increase profits. These are the 4Rs of nutrient management. One-pass seeding into standing stubble, a fairly common practice, is an excellent foundation for 4R. Canola Council of Canada (CCC) agronomy specialists also encourage farmers to use soil tests and set fertilizer rates based on soil-test recommendations. Canada's canola industry has a goal to see 4R practices utilized on 90 per cent of canola acres by 2025. Go to canolacouncil.org/4R for more details on the goal and on 4R practices.

2. Choose the best seed traits for each field

Try new cultivars all the time. Yield lost to incorrect cultivar choice may be a greater risk than yield gained by choosing the highest-yielding cultivar. The best seed traits can include disease resistance specific to risks for each field, maturity to match crop establishment and harvest timing goals, and pod-shatter resistance to harvest more of the crop. Use the tool at canolaperformancetrials.ca to compare cultivars.

3. Achieve a uniform 5 to 8 plants per square foot

Hybrid canola studies in Western Canada show that a stand with five to eight plants per square foot is best to maintain the yield potential of canola. Uniformity is also key. To simplify pest management and harvest timing, try to achieve the target population across the field and have all plants at the same growth stage. To set seeding rates that will achieve the target stand, use the calculators at canolacalculator.ca. For more agronomy tips, read the Plant Establishment chapter at canolaencyclopedia.ca.

**4. Identify and manage the top yield robbers**

Canola growers can find all kinds of pests and problems in their fields. The key is to focus time and inputs on the most important yield loss factors. Scout regularly to see what pests, environmental factors or mechanical issues (seed placement, sprayer settings, etc.) cause the greatest loss for each field. Find scouting and management tips for flea beetles, sclerotinia stem rot and all other major pests

in the Diseases, Weeds and Insects chapters at canolaencyclopedia.ca.

5. Every seed is sacred: Deliver them all

We want canola growers to deliver every seed at No.1 grade, and leave none behind. To do this, growers have three steps: One, give all seeds time to mature. Two, harvest with minimal losses. And three, store canola without spoilage. Grower survey results suggest that canola growers, in general, may achieve yield improvement through later swathing. The survey also showed that straight combining is associated with higher yields in the southwest Prairies. The Harvest and Storage chapters at canolaencyclopedia.ca have tips for all three steps.

For timely tips through the growing season, please sign up for the Canola Watch email updates at canolawatch.org.

—Clint Jurke is director of agronomy for the Canola Council of Canada. Email jurkec@canolacouncil.org.

4R graphic

Caption: 4R nutrient management, with principles based on the right fertilizer products applied at the right rate, right time and right place, can improve yield, reduce nutrient losses and increase profits.

Uniform target stand

Caption: To reach yield potential and to simplify pest management and harvest timing, aim for a stand of five to eight plants per square foot across the field and to have all plants at the same growth stage.

Hard work, Commitment & Resiliency

I hope everyone had a wonderful Christmas break! I can't believe some of the weather we are having and yet it's only the beginning of March. High winds, constant temperature changes and little snow. Even during this time of the year, I remember growing up with large snow drifts along the tree line, digging tunnels and building fortresses, and driving to hockey games on cold, winter nights. I find the whole thing perplexing and even sometimes frustrating. Now don't get me wrong, I love warm temperatures, but we are coming to the end of the winter season

that honestly felt nonexistent. I'll take -15 weather with snow on the ground any day! What may seem like merely the squabbles of one man is a harsh reality that farmers are facing. The benefits of snow go beyond putting moisture back into the ground. It insulates fall seeded crops, preserves moisture already in the soil and eliminates soil erosion. Soil erosion, a 'Farmers Worst Nightmare' (see page 5), and high temperatures were prevalent during the month of February. What the rest of the months leading up to Spring, Summer or Fall is anyone's guess, but I hope for bountiful crops and great weather for all farmers this season. I've mentioned it once before and I'll say it again. To be a farmer it requires hard work, commitment, and resiliency, attributes that look easy on paper, but difficult in real life. It's why I have such a strong admiration for farmers and wish nothing but the best this season.

Webinar Series

Lethbridge County, in collaboration with County of Newell and County of Warner, hosted the Nutrient Management Webinar Series back in January and February. We were able to reach far and wide with the Webinars, having participants from across Canada and the United States, and even as far as South Africa and Dubai! The presentations were outstanding



Matthew Wells was part of a County crew that came across an injured hawk this summer. They contacted the Birds of Prey Centre, who rehabilitated the hawk and Matthew was able to help release it back into the wild this fall!

with topics that included:

- Creating a Nutrient Management Plan
- An Introduction to On-Farm Composting
- Reclaiming Salt-Affected Soils
- Phyto-remediation of Nutrients in feedlots, and Storm ponds using Floating Islands
- Manure Spreading and Storage Regulations
- and Biochar as an Animal Bedding Ingredient

If you were unable to participate, the recordings have been posted on the Lethbridge County website (<https://lethcounty.ca/p/nutrient-management>) and our YouTube channel. You can also utilize the QR code

to view the recordings. If you have any questions on any of the subject material, please do not hesitate to contact the presenters as they are more than willing to answer any questions you may have. A big shout out to everyone that participated and spread the word about the Series. Without all of you, it wouldn't have been as successful as it was so thank you.

We are looking for feedback for next year's Webinar Series from producers in the agriculture industry. If there is specific information you'd like to see discussed in next years Webinars, please reach out to mwells@lethcounty.ca.

Final Note

This week is the Ag-Expo & North American Seed Fair (March 2-4) at Exhibition Park Lethbridge. The ASB Department is excited to take part and looks forward to seeing everyone. If you see our booth, make sure to stop by and say hello.

Look for us again in our next newsletter come the first week of June. Till next time!

Matthew Wells, ASB/EFP Technician

Nutrient Management
Webinar Series -
Recordings

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