FOOTHILLS FORAGE AND GRAZING ASSOCIATION
Innovation, education and regenerative agriculture

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GRASSROOTS NEWS & VIEWS

October 2022

Director's Note — Jerry Baerg

Howdy Folks,

Well fall is here, and '*The Frost Is On The Punkin'*, like the poem says. Fall is a favourite time of the year for me. By now most of the crops and feed should be in and hopefully we all have lots of grazing. It is time to ship calves or yearlings and lots of cattle drives with the family. Here at Ribbon Creek, we have sold yearlings and heifers that are coming home soon from the west country. They will get preg-checked and the opens sold. We will have some breds to sell as well. It has been a very interesting year again; it has been a bit of a roller coaster, starting out dry and then the rain came mid-summer. I think we are all very thankful for the rains. We all should have feed or at least access to some to buy.

I had some winter triticale, peas and sweet clover mixes planted in May for late fall grazing. My plan is to not graze it to short this fall and then hopefully have a nice growth in the spring for grazing. After that I hope to have enough chaff piles to last my cows until spring. The calves will get weaned and fed silage bales. I was reading a book on the history of ranching in Alberta. It mentioned that in 1910 there was a lot of cows grazing straw and chaff in the winters from the wheat farmers. It was very interesting reading history that shaped our province.

On another note, I want to bring your attention to a few field days coming up put on by Foothills Forage and Grazing Association. On October 4th there is a Prescribed Fire Workshop at Tongue Creek Ranch. There is a Using Cattle Behavior to Your Advantage workshop on October 5th at the Benalto Rodeo Grounds. On October 6th there is a Livestock Watering Systems Tour at Gerald Vandervalk's. Offsite watering is always a very interesting topic. Being innovative with our watering is what allows us to graze those hard to get to places. On October 25th there will be a Managing Soil Microorganism to Improve Soil Nutrient Availability And Plant Growth in Vulcan with Dr. Yamily Zavala and Dr. Isbelia Reyes. For those of you who like technology, there is a Cattle Drone school on November 1st and 2nd near Claresholm, with the admission fee you will come home with your own drone. Also coming up in December is the Western Canada Conference on Soil Health and Grazing. I would encourage anyone who could attend to be there. They have a great bunch of speakers lined up and a great time to network with likeminded people.

In closing I hope you all have a great fall and hope to see you at some events!

Spring Calving Grass. Photo: Jerry Baerg

IN THIS ISSUE

OFCAF (On-Farm Climate Action Fund) Update

Applications

To reflect on OFCAF's first month in operation, Program Manager Fiona Briody says that the program is seeing a steady flow of applications coming in across all three activity categories: Nitrogen management, rotational grazing, and cover crops. She also noted that "there is no one area that has the strongest interest". This is good news for Alberta farm operations, OFCAF funding will help producers approve, test, and build diverse projects to help tackle climate change. Applicants are eligible for multiple projects to a combined **maximum grant payment of $75,000.** Applicants are eligible for a maximum 85% reimbursement of eligible cash expenditures across the three BMP target areas

OFCAF 2022 Application Deadline

A reminder, the deadline to submit your 2022 OFCAF application is **Monday November 7th, 2022, at 4:30 pm MST.** Applications for OFCAF 2023 will open in early February and the OFCAF program operating date has been extended out to June 2024.

OFCAF Webinars

In early August, the OFCAF team hosted a series of webinars designed to give a program overview to farmers, ranchers and the general public. The OFCAF team presented 6 live webinars that were attended by over 400 participants! This webinar presentation series provided broad information about the climate change program and helped answer producer questions to support the application process.

If you missed out on attending an OFCAF Overviews webinar, we've got you covered. RDAR has uploaded a pre recorded webinar to the OFCAF website, and the webinar presentation slides are now available for download at rdar.ca/ofcaf.

Funding Outlook

OFCAF Program Manager Fiona Briody says that there are plenty of OFCAF funds available to producers, and she encourages interested farmers and ranchers to review the program website and keep those applications coming!

Questions about OFCAF: If you have any questions, please reach out to ofcaf.bmp@rdar.ca or call **1-877-503-5955**

On the Cover: **Weaning calves. Photo: Kayla Minor**

Thank you for your support!

Farming, farm programs, and the "prove it" generation


Photo: FFGA

What is a farmer's relationship with environmental and animal welfare certification programs? Would it be right to say that it's complicated?

On one hand, farmers feel targeted by those in the activist community who reject the realities of modern agriculture. No genetically modified anything, no fertilizer, no pesticides, only small holdings with a few chickens, a couple of cows, and a pair of pigs — farms drawn out of an idealized past of Ol' MacDonald.

Some farmers are concerned that certification programs might be helping to promote this agenda.

The reality is different. Agriculture can rightfully claim to be a leader in rapid advancement in environmental management. These improvements are made possible by the adoption of technology and innovation, not their rejection. Widespread adoption of minimum tillage is reducing greenhouse gas emissions and protecting our soils. Improved soil management is the reason Saskatchewan does not blow into Ontario anymore, like it did in the 1930s.

In the hog sector, the adoption of technology, manure injection for example, is helping to ensure organic nutrients are placed where they are most accessible to crops, maximizing their value and minimizing potential environmental impacts. Research has shown that the hog sector's environmental footprint has decreased significantly in the past 50 years. Hog farmers today produce more food with less environmental impact, a trend that is continuing because of investment of farmers' money into research on innovative technologies and practices.

However, there is a divide between the view of agriculture held by some urban Canadians and daily farming practices. This is impacting how policymakers perceive agriculture and affecting the programs they implement. This gulf was exposed recently when the Government of Canada announced a target of a 30 percent reduction in emissions from nitrogen fertilizer. Farmers felt they were unnecessarily targeted by policymakers who have not taken the time to understand the industry. Many believe that consultations were, at best, inadequate or even non-existent. Farmers are asking why there have been few attempts to collaborate with producers to align policies with agriculture initiatives that are already underway. There is a lack of evidence that policymakers understand the effect this target will have on Canadian agricultural production or the impact on our economy.

Why does this gulf exist? Part of the reason is the practice of wedge politics that pits one set of voters against another. All parties have been guilty of this. However, the divide is not just caused by divisive politics. Farmers and their representatives should also carry some of the responsibility for the gap between urban and rural perceptions because of the way in which we communicate the impacts of modern agriculture.

Poll after poll tell us that farmers are some of the most trusted folks in Canadian society. While I believe this to be true, I am concerned that this perception is based on an image of the 1950s farm and that it may not apply to the realities of modern, high-tech agriculture. In other words, Canadians may like farmers, but because of a lack of understanding of modern practices, they may not like what farmers do every day.

How do we change the narrative? As a first step, we need to stop apologizing for everything that comes with modern agriculture. It makes me cringe to see inaccurate portrayals, like advertisements with the little red barn next to a small field with an old cab-less tractor, and three pigs and a duck playing in the foreground. How about showing a modern, multimillion dollar hog production facility? Please, we need to forget the picture of the plow and show a 75-foot airseeder precision planting into a minimum-till field. We shouldn't hide modern agriculture away from the public.

Second, we are talking to the "prove it" generation and need to demonstrate the accuracy of what we say. This needs to include science-based assurance programs that set standards for environmental stewardship and animal welfare. These standards need to be backed by regular audits and commitments to continuous improvements, based on the latest scientific research. The hog sector is transitioning to Canadian Pork Excellence (CPE), a set of programs that allow registered pork producers to demonstrate compliance with food safety and animal care requirements. Other livestock groups have similar programs that help demonstrate responsible production. Farmers' participation in these programs needs to be embraced by the industry and better promoted as part of the story of Canadian agriculture.

Politicians take their cues from the voters who elect them to office, the vast majority of whom come from urban Canada. Changing the narrative with consumers and citizens will also change the narrative with policymakers. It may take time to shift the conversation, but highlighting the benefits of modern agriculture and demonstrating, not just talking about, the industry's existing commitment to management practices that enhance the environment and improve animal welfare will help prevent naïve and shortsighted policy announcements and burdensome regulations.

Author: Cam Dahl
Original Article: https://www.realagriculture.com/2022/08/farming-farm-programs-and-the-prove-it-

Grazing Greener


Photo: Kayla Minor

At 4 o'clock in the morning Keith Manders watched from his bedroom window as the 2018 Mount Eneas wildfire crested the mountain and raced down the slopes towards his house.

Manders is a cattle rancher born and raised in the Okanagan. He knew forest fires. But he didn't expect the fire to come over the mountain, and especially not that fast.

"Now I know how fast that fire can move," said Manders. "It was a real lesson to me."

Firefighters managed to get the blaze under control before it hit Mander's property, but he was left feeling exposed. Which is why he jumped on an opportunity to control fires using the two resources at his disposal: cows and land.

Starting in 2019, Manders has grazed 150 pairs of mothers and calves on a stretch of land on the north flank of Summerland. Scattered around this pasture are cages, underneath which ungrazed grass grows. When Manders moves the cow to different pastures after a few weeks, researchers come and compare the ungrazed grass and the grazed.

Manders' Summerland plot is just one of three plots of land used in a targeted grazing pilot project. The others are in Kelowna and Cranbrook, surrounded by houses, vineyards and golf courses.

The project's cows eat grass that would otherwise yellow and dry out across the summer, removing what would normally become volatile fodder for fires in July and August.

The strategy can be compared to mowing the lawn. Mowed lawn stays green longer, and is therefore less prone to fire.

"Our biggest objective is to prove that we can reduce fire behaviour by grazing cattle," said Mike Pritchard, the project's co-ordinator and a former employee of BC Wildfire Services, where he worked on fuel management strategies. "And we're doing that by keeping [the grass] green for longer, kind of like mowing the lawn."

The initiative wrapped up its third year a few weeks ago. So far the results are promising. Areas grazed by cattle contain 25.5 per cent less plant biomass, with pinegrass heights reduced by 34 per cent. This means, Pritchard says, forest fires will not have the fuel to move as quickly.

Pritchard also predicts that grazing has reduced the period of "combustible grass" from two months (July and August) to one month (August).

"You're never gonna be able to stop fire unless it's pouring rain," said Pritchard. "So it's not about eliminating the fire, it's all about keeping the intensity level down so fire crews can actually deal with it."

The initiative is part of a move to rethink wildfire management practices.

Over the past two decades, wildfires in the B.C. Interior have been controlled by thinning dense conifer stands, said Pritchard. However, this technique didn't work. The increased sunlight and rain only lead to more grass between the trees.

"We just exchanged one fuel type for another," said Pritchard. "We got rid of the conifers but we were growing grass and grass is one of the most volatile fuel types in the province because it moves so quickly."

Other preventative methods, such as controlled burning, don't work well in urban settings — it's logistically difficult and risky, and the smoke is also a nuisance and threat to the health of nearby residents.

By comparison, cows remove fodder for fire without the nuisance, danger and without replacing one fuel for another.

But if the strategy is to be effective at preventing fires near urban centres, it must be scaled up. To do this, they need to make it commercially viable.

Grazing cattle next to urban centres is costly. For example, fencing in B.C. can cost up to $20,000 per kilometre, depending on the landscape. In places where it's dry and hot in the summers, reservoirs also need to be built to provide cows with water.

It is also more expensive and inefficient for ranchers, who typically haul cattle to more remote Crown land for the summer, where fencing is not necessarily required and there are natural sources of water. The cows will graze in these pastures until the frost and snow drives them back down the mountain. In comparison, grazing cattle next to urban centres requires ranchers to move them every few weeks, which costs gas, time and labour.

While the majority of the current project has been funded by the BC Cattlemen's Association, this would not be an option if scaled up.

Manders predicts that grazing his cattle in this way would add about $10,000 in annual costs, who says that this strategy is very different from running cattle on wide-open land like the caribou.

"You have to have pretty good infrastructure to make it work," he said.

The key to implementing this on a large scale will be larger plots of land that stretch — undisturbed — into Crown land, Pritchard said. That way ranchers would not need to haul cattle. It would also create a larger barrier for the fire.

But carving off large swathes of land for cattle grazing would require the collaboration of municipalities right at a point when many of these communities, especially Kelowna and Cranbrook, are expanding.

Nevertheless, these preventative costs are minimal when compared to the cost of fighting a large-scale wildfire. For example, a medium-sized water-dropping helicopter costs $19,733 per hour.

"It doesn't take long for a large fire to cost millions per day," said Andrew Hunsberger, a planner with the City of Kelowna. "Any prevention work is a drop in the bucket, especially when we consider the cost of wildfires to business and our tourism industry."

Preventing fire is also about more than protecting

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property. In British Columbia, extreme fire years in 2017 and 2018 each produced three times more greenhouse gases than all other sections of the province combined, according to the provincial greenhouse gas emissions inventory.

Cattle grazing on grassland might also have benefits that stretch beyond forest fire management.

"Our beef industry is fundamental to helping to conserve our grasslands," said Cameron Carlyle, a researcher at the University of Alberta who is the head of a $3.5 million project examining the carbon sequestration of grasslands. He also sits on the board of the Saskatchewan Stock Growers Foundation, a land conservation charity that is connected, but distinct, from the Stock Growers Association, which promotes and helps ranchers.

According to Carlyle, grasslands, which are Canada's most endangered ecosystem, sequester and store huge amounts of carbon. But the majority of these grasslands in Canada are privately owned and at threat of being cultivated and turned into cropland, a process that would release up to 50 per cent of the sequestered carbon into the atmosphere.

As a director of the Saskatchewan Stock Growers Foundation, Carlyle has been part of initiatives to stop the cultivation of grasslands. For example, the foundation works to provide term conservation easements and payments to grassland owners; however, these are often turned down because the money does not compete with the profit that can be reaped from cultivating crops, especially crops like canola, which are currently seeing record high prices.

Raising cattle, Carlyle argues, financially incentivizes landowners to keep their grasslands intact.

"Landowners are looking for revenue, and that's either going to come from beef production or it's going to come from crops," said Carlyle. "So having cattle on the landscape is keeping our native grasslands as native grasslands."

Carlyle argues that in Canada, where the majority of cows are pastured on grasslands, the benefits of cattle ranching on grasslands outweigh the environmental cost of the methane produced by cattle.

Nearly 10 million cattle are raised for beef every year in Canada, according to 2016 census data. All the beef on the shelves of Canadian supermarkets is from either Canadian or U.S. producers, with Alberta and Saskatchewan the two largest producers. In fact, Canada exports 2.5 per cent more beef than it imports from the U.S.

The majority of Canadian beef is partially grain-fed, meaning that at some point the cows were fattened in feedlots with high-energy grains like corn and barley. But regardless of where they spend their final four months, cows in Canada are almost always born and raised on pasture before being transferred to a feedlot. The Canadian beef industry therefore relies on grasslands.

"When we think about our beef production cycle, it relies on our perennial vegetation in either native or in untamed pastures," said Carlyle. "This is because it's a relatively inexpensive source of forage. It's a critical part of beef production."

Carlyle did point out that this environmental calculus doesn't translate to the global context. For example, according to the World Wildlife Fund, cattle ranching accounts for 80 per cent of current deforestation throughout the Amazon.

"One of the common criticisms of the beef industry is that it is low efficiency and uses lots of land," said Carlyle. "But when analyses like these are done, they're often done at a global scale and they miss some of the finer details of local geography… when you think about Canada a lot of that is being done on native grasslands, which could [without ranching] be turned into something else."

Carlyle's research also suggests that the grasslands benefit from the grazing of cattle because these ecosystems evolved with the disturbance of fires, as well as grazing bison and pronghorn. Cattle grazing, when done responsibly, mimics the way bison used to graze, trampling the grass and therefore producing a mix of vegetation types and heights on pastures, which in turn promotes biodiversity and leads to the sequestration of more carbon.

For example, Grasslands National Park in Saskatchewan recently started allowing ranchers to graze within the park for a reduced fee, provided they also kept private grasslands for grazing. The park hoped that it would promote biodiversity and species at risk.

"We've lost bison, we don't like the risks associated with fire, so one of the only practical, large-scale ways to apply the disturbance is cattle grazing," Carlyle said.

Back in Summerland, Keith Manders is hard at work managing his cows up on Crown land, and growing hay that will be harvested in the fall to feed the cattle in the colder winter months.

The Interior has had an unusual amount of rain this summer, so Manders is not too worried about fire this year. But he'll never stop thinking about it. He still keeps his eyes on the mountain. "It's a type of insurance," he says. "We're always grazing.

Author: Kate Helmore
Original Article: https://thetyee.ca/News/2022/07/12/Grazing-Greener/

Poisonous Plants in Hay and Silage

There are many plants that are poisonous to animals. These plants can cause photosensitivity, abortions, birth defects, contact irritants, or have mycotoxins present that reduce animal performance or cause a quick death. When forage is plentiful, animals avoid these plants on pasture because they may taste bad, have physical barriers such as barbs to discourage consumption, or are in areas where cattle typically do not graze.

But with dry conditions in the last number of years, and virtually no feed carry over; hay is made in ditches, edges of dry sloughs and from areas that are not accessible in wetter years. These areas may contain poisonous plants (weeds) that could be present in silage or hay that was made. Some of these plants are still poisonous.

Some of the most common weeds that cause problems are:

Seaside Arrowgrass and Marsh Arrowgrass are found in salt marshes and in saline soil around sloughs. These plants (along with saskatoons and chokecherries) contain hydrogen cyanide (triglochinin) in the stems and leaves which causes poisoning. Death is caused by respiratory failure. Consumption of 7.7 pounds of fresh arrowgrass can kill a 1100 pound animal within 30 to 60 minutes. Hydrogen cyanide does not dissipate with time and maintains its' toxicity in stored hay or silage.

***Seaside Arrowgrass and Marsh Arrowgrass** . Photo: 1Left*

Death Camas is a plant that starts growing early in the spring. It can grow throughout the pasture especially in draws and depressions. All parts of the plant are poisonous. Highest concentrations of the steroid alkaloids (Zygacine) occur in the vegetative to bud stage. Ingestion of 0.2 kg of fresh material can kill a 50 kg sheep. Death is caused by cardiovascular failure. The toxins persist in cut hay.

***Death Camas** . Photo: Slichter*

Water Hemlock is considered the most poisonous plant found in low areas. The highest concentration of the toxin (Cicutoxin) is contained in the root and in the lower parts of the stem. The brown liquid that is found throughout the plant is also poisonous. When the plant is consumed, the root is often pulled out of the wet soil and is ingested. The

Water Hemlock. Photo: Calscape

cicutoxin acts on the central nervous system, causing convulsions, heart failure and death. Death can occur

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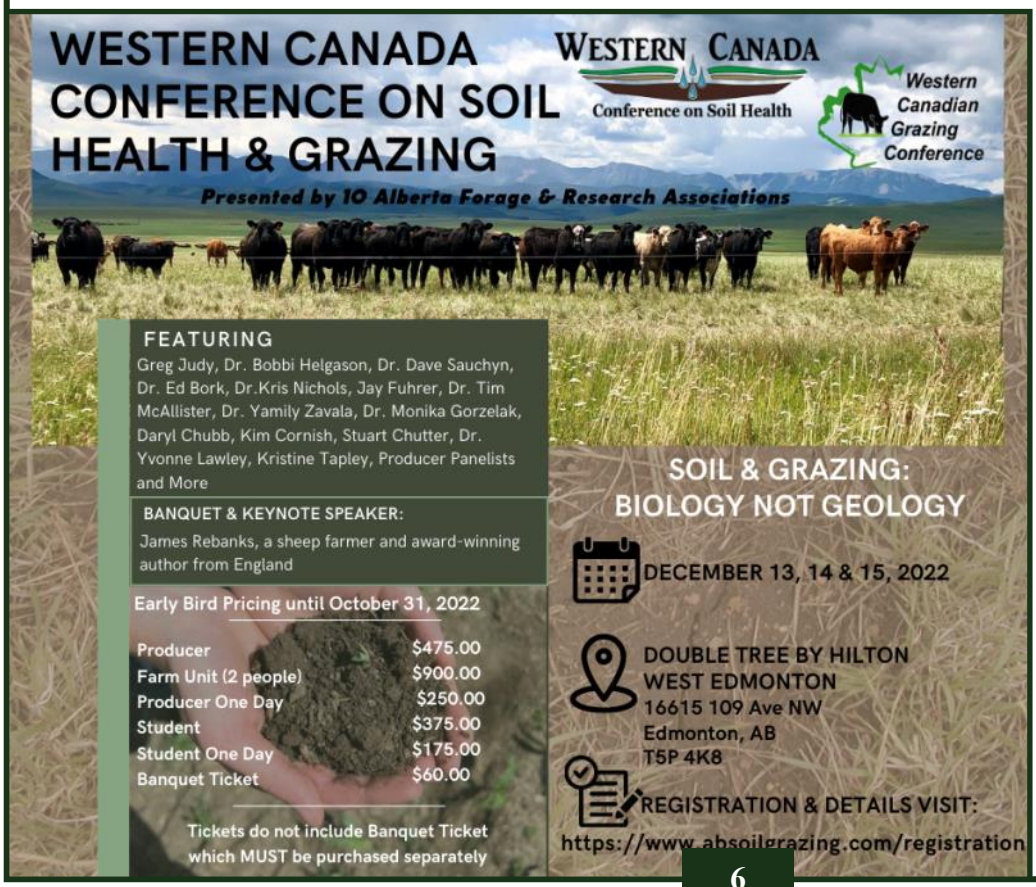

MANAGING SOIL MICROORGANISMS TO IMPROVE SOIL NUTRIENT AVAILABILITY AND PLANT GROWTH

Guest Speakers

Dr. Isbelia Reyes

Dr. Yamily Zavala

Details

Tuesday, October 25, 2022

Registration 9:45am- Wrap Up 3:45pm
Lunch provided

Vulcan Lodge Hall, Vulcan AB

Topics Include:

- Plant Growth Promotion with Microbial Inoculants
- Introduction to Soil Microbiome
- Soil microbiology thru the microscope.

REGISTER

Cost: $40.00 | https://www.foothillsforage.com/managingsoil-microorganisms

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withing 30 minutes of consumption. The toxin can also kill humans. Do not attempt to remove these plants without full protective equipment. Even when the plant is fully mature, the toxins remain in the plant and are a problem in hay.

There are three types of **Larkspurs** that are a concern. Tall larkspur, Low larkspur and Plains Larkspur. Tall larkspur is found at higher elevations and the other two Low larkspurs in lower elevations. These plants start to grow early the growing season. Mainly in areas where there is good moisture. There are many different alkaloids produced in the plant which cause muscular paralysis which leads to respiratory failure, bloat and often death. The concentration of alkaloids doesn't decline with maturity and may even increase in the flowers and pods. The alkaloids are present in mature plants that may be in hay or silage.

***Tall Larkspur** . Photo: Alberta Wildflowers*

Leafy Spurge is a contact irritant. They do not create metabolic problems but rather the toxin (phorbal esters) that creates skin rashes, gastric inflammation and severe irritation that does not rely on sunlight for activation (not photosensitivity). One example; is a rash that forms around the mouth when spurge is consumed. At the same time, the ingested spurge causes an irritation and inflammation in the mouth, and digestive tract. The esters remain in the plant even if it is mature and remains in hay or silage.

Leafy Spurge. Photo: Green Oasis

Tall Buttercup is also a contact irritant. A glycoside (ranunculin) and an enzyme produce an irritant oil when ingested plant material is digested and cell contents are released in the rumen. When activated, the combination causes irritation of the digestive system, abdominal pain and diarrhea. Fortunately, during harvest either for hay or silage the cellular tissue is damaged releasing the enzyme that combines with the glycoside resulting in most of the ranunculin to be released and is gen-

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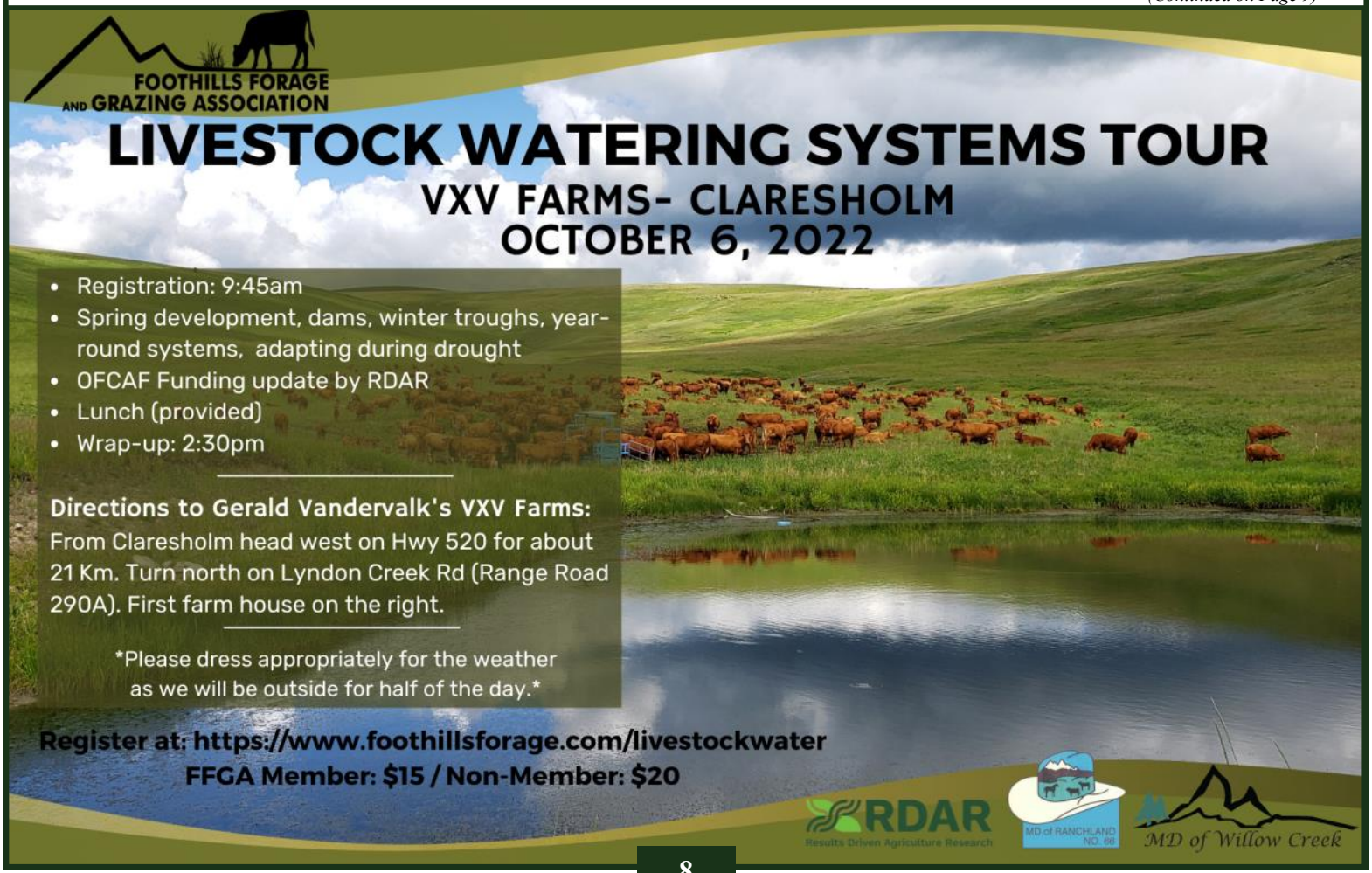


ENVIRONMENTAL FARM PLAN (EFP) WORKSHOP

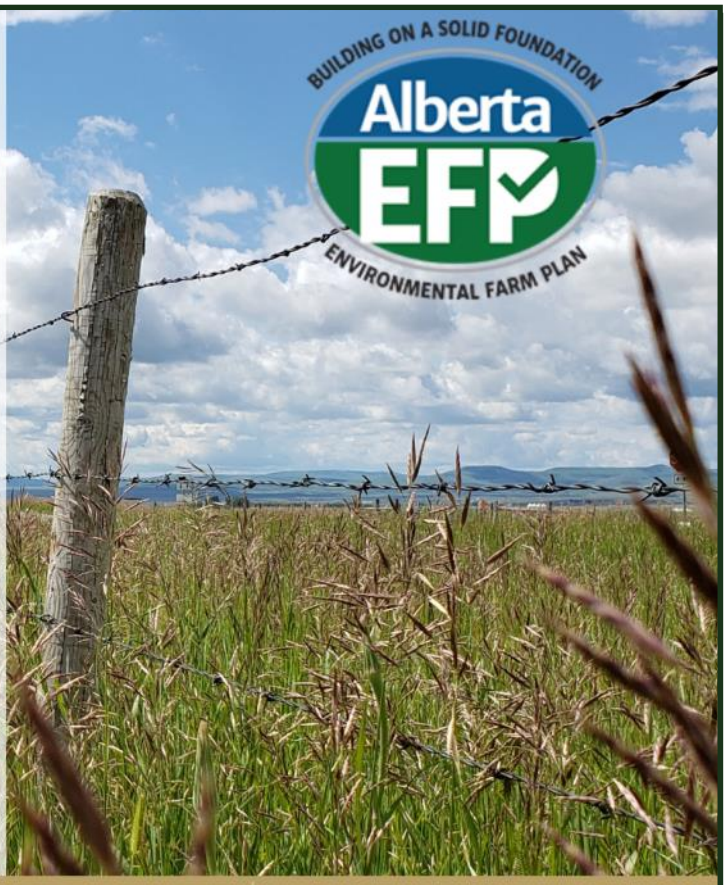
When: October 20, 2022
Where: Mountain View County Office

Workshop details:

- Workshop will begin at 1:00pm and wrap up around 5:00 pm.
- Please bring laptop or tablet if you have one
- Information on your water sources & water bodies
- If you are renewing your EFP and you have your old binder; please bring it as this can be helpful

To register visit:
https://www.foothillsforage.com/efpworkshop

Please Register before October 15, 2022



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Tall Buttercup. Photo: Lacombe County

erally not a problem in stored feed.

Kochia is a weed that is often used for winter forage. It is a plant that can accumulate nitrate and cause nitrate poisoning. The secondary problem with kochia is that there can be high amounts of oxalates present. Oxalates bind calcium that is in the ration. This causes a calcium : phosphorus imbalance which reduces metabolic efficiency. If feeding kochia, limit the inclusion to 20 – 25% of the total dry matter intake to reduce the risk. Also, increase the amount of calcium in the ration to offset the tie up by the oxalates.


Kochia. Photo: FFGA

There are many more environmental conditions that cause animals distress or cause death. High nitrates in annual cereal crops caused by hail or a light frost can become toxic. Excessive sulfur consumption can cause polio. This is a cumulative effect of both sulfur in the feed and in water. This illustrates that toxins can be present in many forms not only in weeds.

Some of the information in this document was found in the publication authored by Majak, Brooke, and Ogivie. It is worth the time to review. https://www.beefresearch.ca/files/Stock_Poisoining_Plants_of_Western_Canada.pdf

Additional information was obtained from the USDA Poisonous Plant site https://www.ars.usda.gov/pacific-west-area/logan-ut/poisonous-plant-research/docs/arrowgrass-triglochin-maritima-and-t-palustris/

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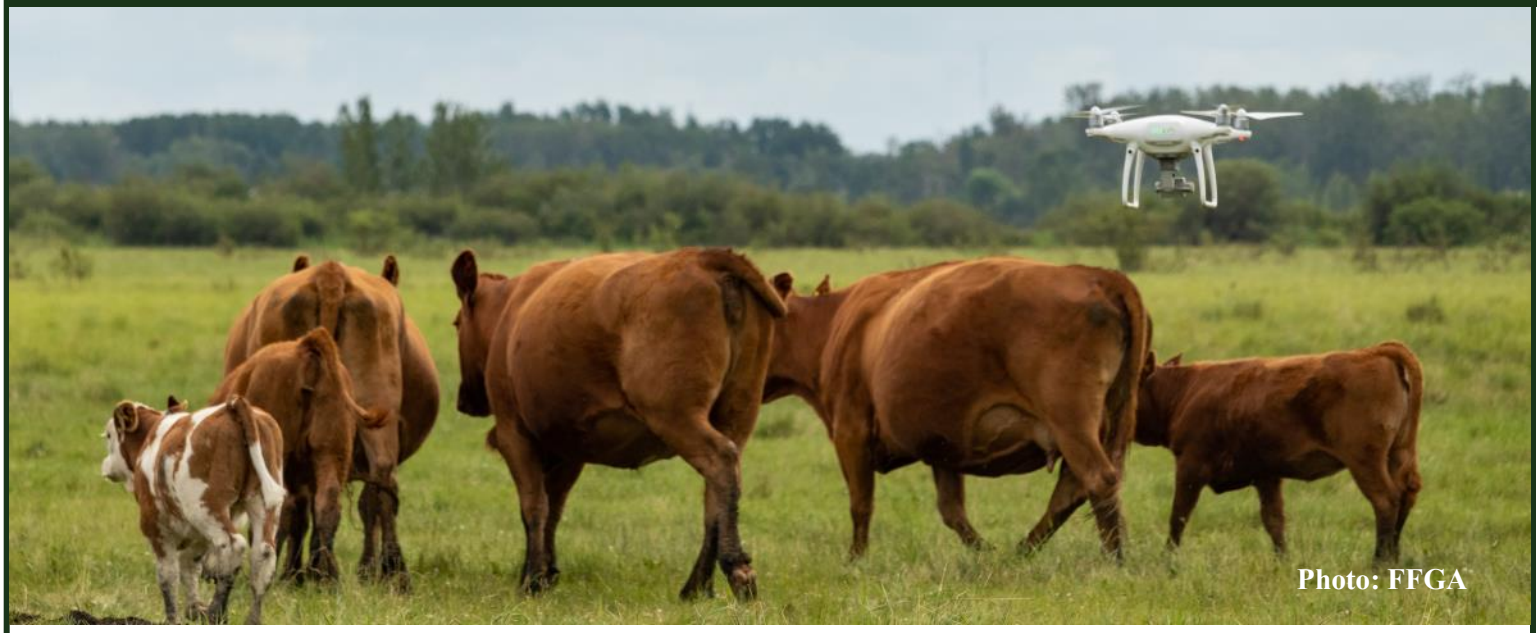
Aerial Views Save Time



The Foothills Forage & Grazing Association will be hosting a Cattle Drone School at Northern Lights Hall near Claresholm on November 1st -2nd 2022. LandView Drones will be delivering the course to show cattlemen how drones can effectively be used in their operations.

Remotely piloted aircraft systems (RPAS, or simply drones) have been available to consumers for many years now but are now increasingly being used as tools in many industries. They typically do one of three things for the business, and ranches are no different:

Provide safer access to areas not accessible by ground or safely by humans

Reduce time to find objects like cattle over great distances

Collect data and insight not otherwise available through simple observation (thermal cameras for cattle and multispectral cameras for forages, for example)

Markus Weber, founder of LandView, will be teaching this delivery of the course. Typically, their curriculum focuses on mapping, which is essential for crop producers. But he has developed customized content and brought an expert instructor to focus specifically on cattle uses.

Dr. John Church of Thompson Rivers University has been doing research on "precision ranching" for many years, with a plan to build a spatial pasture decision support system that can incorporate near real-time cattle positioning on unprecedented landscape scales to locate optimal grazing regions, prioritize fertilizer and pasture renovation zones, improve productivity ratings, and enhance invasive weed control plans. This precision ranching system will actively manage rangelands to make improved management decisions that are economically and environmentally justifiable, just like variable rate application tools do in precision farming systems. His research is focused on developing system that will minimize the environmental impacts of cattle production while maintaining the environmental and social benefits of domestic beef production for Canadians.

Dr. Church's research includes four themes such as developing improved ability to find lost cattle on range with a thermal infrared camera onboard a customized RPAS or using collars. Secondly, his research will look to innovate new cattle handling and management techniques by using the RPAS to observe and even herd animals non-invasively and humanely. Thirdly, it examines optimizing pasture management through aerial remote sensing. Lastly, he will examine animal welfare assessment by using the RPAS as a novel tool for studying heat stress, early disease detection and monitoring of pain mitigation strategies in the field.

The course itself won't just be about future visions. However, it is essential that ranchers understand best practices for operating a drone effectively and safely. The course is built for complete beginners to learn those basics – from first takeoff to autonomous missions within two hands-on learning days. The course content is also designed to provide the necessary information for participants to get a Basic Certificate from Transport Canada so that they will be operating legally – by passing an online test on the second day of the school.

Lastly, LandView will bring a variety of different drone models suitable for ranch use. The smallest will be a DJI Mini 3 which weighs only 249 grams, which doesn't have as many rules around its operation as drones weighing 250 grams or more. The Mini 3 can legally be used to check cattle several miles away. But there are also specialized cameras and sensors available for mid-size drones suitable for farm and ranch use. The other drones which participants will operate will also include the Mavic 3 with 28x hybrid zoom, and the Matrice 30T with 200x hybrid zoom and an integrated thermal camera.

LandView Drones and the FFGA invite you to join them for the school by registering at www.landview.com or by calling Markus at (780) 448-7445.

Cattle Drone School

LAND VIEW

Claresholm, AB
November 1 - 2, 2022

See your ranch in a new light

Drone School for Ranchers

Fly Safely

- Flight training suitable for complete beginners
- From first takeoff to autonomous mapping
- DJI Tello included, to keep practicing at home

Fly Legally

- Basic ground school: air law, drone systems, theory of flight, human factors, meteorology, navigation
  - Take the Transport Canada online test, leave with your Basic Pilot's Certificate

Save Time & Make Money

- Hosted by FFGA with focus on livestock uses, but also suitable for forage and crop producers
- Special guest instructor: Dr. John Church, Thompson Rivers University
- Demystifying the remote-sensing jargon: NDVI, multispectral, thermal, LiDAR
- Hands-on practice & real-world farm uses

Register at www.landview.com

$590 includes lunches and your own Tello drone
Register at www. landview.com
or call us at (780) 448-7445

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Vision: We envision a global community that respects and values profitable forage production and healthy soils as our legacy for future generations.

This Publication is made possible by our major funder -
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FFGA is a proud member of AFIN Alberta Forage Industry Network, ARECA, CRSB