FOOTHILLS FORAGE AND GRAZING ASSOCIATION
Innovation, education and regenerative agriculture

Unit 4A, 710 Centre St. SE, High River, AB T1V 0H3
Phone: (403) 995-9466 ~ www.foothillsforage.com

GRASSROOTS NEWS & VIEWS

November 2022

Director's Note - Tanis Cross

Howdy,

Well, we heard down the telephone line that some snow was headed our way. Of course we never know how much we are going to get until the day arrives. Here in the foothills, we got 2 feet of snow on the level in 48 hours. It came as a bit of a shock, being the first snow fall of the season. We are forever thankful for the amount and the timing. The ground isn't frozen solid here yet so this is going to help us out a lot in the spring, being it was a very heavy and wet dump of snow.

We had an enjoyable month of September, here at the A7 Ranche. We have been shipping our grass yearlings out. Thanks to mild weather, a great group of people and some nice looking yearlings. Currently, we are onto the planning phase of implementing a couple of reservoirs to support running higher numbers of cattle from spring to fall.

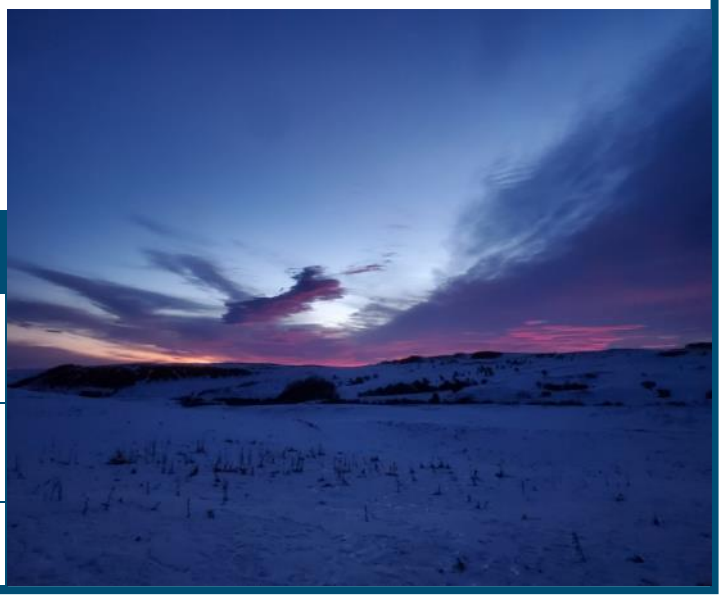
On the planning note, be sure to check out the FFGA website for some great upcoming events and workshops that will benefit you, your business or your workplace.

We were able to complete our Environmental Farm Plan (EFP) timely and smoothly, thanks to Sonja and Kayla who came out to the ranch about a year ago to walk us through the process. This would've taken me days to complete on my own with picking it up and putting it aside to go do other things. These winter months are a great time to get ahead on this.

The Western Canada Conference on Soil and Grazing is now about a month away, be sure to get lots of sleep and drink lots of water before this event! It's packed with variety and great visiting! This conference only comes around every other year and it will provide you with lots of information, contacts and guidance to enhance farming and ranching. The conference may bring you a new perspective and ways to incorporate it into your business. If you haven't already, be sure to sign up at https://www.foothillsforage.com/events.

Tanis

A7 Ranche. Photo: Tanis Cross



IN THIS ISSUE

On the Cover: Gerald Vandervalk giving a tour of his water systems at VXV Farms, west of Claresholm.

Thank you to our municipal supporters!

M.D. of PINCHER CREEK

WHEATLAND COUNTY AGRICULTURE & ENVIRONMENT

MUNICIPAL DISTRICT of BIGHORN

MD of RANCHLAND NO. 66

Mountain View COUNTY

MD of Willow Creek

Kneehill COUNTY

Vulcan COUNTY

ROCKY VIEW COUNTY

STARLAND COUNTY

Winterizing your grazing plans


(Photo: FFGA)

Some people try to make pasture management a lot more difficult than needed. I think sometimes it is more about how it is perceived in the eyes of the beholder. Some might think that a pasture that is grazed evenly to the ground, all the time, means that no forage was lost – no. Some might think that mowing it frequently and making it look like a prime horse pasture behind a fancy fence is ideal – maybe. It is really about the management of the forage to achieve the goals of production, forage quality and numerous added benefits that benefit erosion, soil biology, and usually also wildlife.

Anytime you can keep something simple it is usually best. I've been to several events this summer and had similar questions asked to me that can be summed up as, "What are the basic rules of good pasture management?"

I find myself repeating some things. That repetition is perhaps needed from time to time, but I don't want to be redundant either. I am reminded occasionally to just keep it simple. How exactly do we keep it simple? Follow a few simple rules.

Keep the soil covered with live plants – by doing so, erosion will be kept in check and the soil will be cooler, which is better for most forages and for reduced evaporation. You don't want to see any bare soil. Bare spots allow for increased evaporation, warmer than ideal soil conditions and space for opportunist weeds.

Maintain a good solar panel – which means, it takes grass to grow grass. We have to try and keep enough green plant leaves for photosynthesis, converting light energy into chemical energy. If the plants have been eaten down too much, energy for new growth is forced to come from stored energy in the roots if available, which is usually slower than photosynthesis. Like you have heard me talk about lots of times – don't graze or rather don't let the livestock graze closer than 4 inches for most cool season grasses and not closer than 6-8 inches for most warm season grasses. That is of course, the shortest forages left, not the tallest. If you are leaving at least 4 inches, there will be quite a bit of forage left that is actually taller.

Provide adequate rest before grazing it again. Everything needs rest, including forages. By maintaining good residual heights or stop grazing heights, regrowth is generally quicker especially with adequate moisture. The plant needs enough time to regrow and express itself again before the next grazing event. Multiple removals during a short time frame or continual removal weakens the plant and actually reduces production. It also reduces new root growth and lowers drought tolerance. So, grow it, graze it, then rest it – it is that simple.

We want the forage to be growing and producing abundantly, and as much as possible in a stage and quality that is best for the ruminant livestock grazing it. The livestock know what forage is noteworthy and will seek it out first. If it is the quality they need, they will eat it readily and without hesitation – definitely a desirable species in the eyes of the consumer. When we let these same forages mature too much, which does happen, then forage quality is reduced along with intake. A small amount of the sward reaching maturity isn't that bad. It can help to build deeper roots, increase soil organic matter from increased amounts and turnover of roots, and help bring up nutrients and water from deeper in the soil profile. This is especially valuable to soils that could use some additional organic matter.

Lastly, when possible, graze the paddock in a manner that will leave nutrients in place and replace as needed. Smaller allocations tend to have less nutrient transfer than the grazing of large pastures. This is especially true when there is a long walking distance to water, mineral and/or shade. Isolated areas without one or more of the mentioned will be grazed for a shorter period and the ruminating and resting periods afterwards rarely occurs there unless forced to. This process therefore slowly moves nutrients from one spot to another as manure is more likely to be deposited on the more frequently used areas. Enough with that for now, grow it, graze it, rest it. Maintain cover, don't over graze it, let it grow back before grazing it again.

You're starting to run low on time to get fall annuals planted. The earlier they are seeded the more growth and grazing potential they will provide. My favorite mix is spring oats, a brassica such as radish, rape, or turnips, and cereal rye. The oats grow fast with ample moisture, yield well and can make some very decent hay or grazing throughout the fall. The brassica is a nice addition and is readily consumed by most grazing livestock. The cereal rye will come on stronger later and will overwinter and provide good cover for the next growing season and perhaps even some early spring grazing if soil conditions are favorable. These annuals can help improve soil health, build organic matter, reduce some weeds, and be forage too. Other fall-seeded options would include crimson clover, winter peas, triticale, wheat, barley or multiple combinations. You can't graze it if you don't plant it.

It is also time to start assessing your winter feeding needs and supply. Consider how much livestock will be overwintering, how much they will be consuming and what they will be eating. Fall pasture, stockpiled forages, crop residues and annuals, and stored feed, such as hay, silage, or baleage should all be accounted for and prepared.

Remember, it's not about maximizing a grazing event, but maximizing a grazing season. Keep on grazing!

Author: Victor Shelton
Reprinted from: https://ocj.com/2022/09/winterizing-your-grazing-plans/

What is a Rancher


(Photo: Kayla Minor)

My family ranches in Arizona. It's a pretty good-sized place, but it's Arizona. That doesn't mean lots of cows. The pastures are big, there's a good amount of brush and the cattle get pretty scattered out. You can spend all day riding and only come across a few of them. We put a lot of miles on horses, and so I am always on the lookout for a good deal on a fresh horse we can use.

There was a ranch horse auction a while back, so I took a couple of my kids and their friends from town to see. They had some nice horses there and before the sale started they were roping steers off them and showing them off. I had my eye on a sorrel and was watching for it to go through the sale ring. I was out of the bidding pretty quick, and by the time it was done that sorrel sold for the value of 30 good steers. One of the kids wanted to know why I quit bidding on him and I said that as nice as the horse was, the numbers didn't add up. I told him a ranch can't afford to spend that kind of money on horses.

This kid had plenty of follow-up questions and at the end of the sale he looked at the guy who had bought the horse—he was loading it in his aluminum trailer with the big living quarters on the front end—and asked, "How can that guy afford him then?"

I said, "Well, that fella isn't a rancher." The kid says, "He has a ranch sticker on the door of his truck."

My smart reply to that was, "A rancher is somebody who raises livestock and hopes someday he will break even."

My answer was supposed to get a laugh out of the kids and it did. But on the drive home I thought about it. If someone who had no clue asked me that question, how would I describe what a rancher is? Of course a rancher is someone engaged in the livestock industry, grazing the animals on rangelands. But, to me anyway, there's just a little more to it than that.

The gentleman who bought the sorrel had recently owned a big private-land ranch near Phoenix. He drives new dually trucks and has an arena at his house in Scottsdale. He is very successful as a land developer and he figured his ranch, bought just recently, would be prime for development one day. It wasn't the first ranch he had owned. In the meantime, he wanted to take advantage of the agricultural tax laws and save on property taxes, so he continued to keep cattle on the place, hiring a few people to look after them while he worked to get investors interested in the site. He rarely visited the ranch except to show it to his land-development partners, and when the property did reach its potential value, the cattle and hands were gone in a month, and within a year there were 450 cloned homes on the land where the ranch headquarters and horse trap had been. He never looked back.

Now you could have called this fella a rancher and technically you would be right, but I think I can come up with some better examples.

I think instead of an old man I knew. He lived on a place in Colorado his dad had started back in the 1800s. His wife had passed on and their children, a son and a daughter, had no interest in spending their lives there. The rancher had managed to send them to college, and when they made it to the city they found their homes.

The son became an investment banker and the daughter was a successful trial attorney. Both had seven-figure portfolios. They would occasionally visit the old man with some of their friends from New York. They would dress up in the latest western fashion and ride around a bit, but the real work was done by the old man and his hired hands, a man-and-wife team. This couple worked for the old man for 10 years and lived in a onebedroom cinderblock house with no air conditioning and only a woodstove for heat on the other side of the ranch.

When the old man grew frail, his kids began inviting developers to look at the property. The place was only a few hours from Denver and being surrounded by mountains they anticipated they would make millions having it subdivided into ranchettes. But when the old man died, everyone was in for a surprise. The old man figured his kids were plenty successful on their own, so he left the ranch to the couple who ran it for him. It won't have huge log homes all over the pastures; it will continue to be a place where livestock, cow dogs, deer, elk and ranch kids get raised. This old man saw the value that ranching provides the world. He wanted his place to continue to provide that. To me, that's a rancher.

There is a family that runs cattle in New Mexico on land leased from the state and from the Bureau of Land Management. They live in a 45-year-old double-wide and drive trucks with 200,000 miles on them because every extra penny earned off the What Is a Rancher ranch is going into a pipeline that's being built so when the kids take over they won't have to worry so much if there isn't enough rain to fill stock tanks. And every water trough along the pipeline is being equipped with an escape ramp so rabbits and pack rats don't drown while trying to get a drink. These are ranchers.

There is another family from California who ranched along the Merced River. They had been ranching there since the 1860s. The state of California has become increasingly hostile to ranching. There was one obscure endangered creature after another discovered on their place that somehow couldn't live alongside cattle, and finally the state took the property on the river from them. It became impossible to run cattle there so they were left with no choice but to face the heartbreak and let the ranch go. The land was worth so much that everyone could have invested the money and lived a comfortable and easy life in any city, but they went to Nebraska instead and bought a cattle ranch. They wanted to pass the life down to their kids and keep their family legacy alive. These are ranchers.

The cowman who finds a cow bogged in the mud, far from any road, manages to get her pulled out of the bog, but she won't get up. So he leads a packhorse with him loaded with hay and water, and every day feeds her and waters her

(Continued from page 4)
and tries to get her up. In a situation like this, sometimes the cow regains her strength and gets up; sometimes she doesn't and finally has to be put down. Either way, that cowman has more invested in helping her than she was ever worth in dollars. He could have written her off and left her to her thirst and coyotes and that might have made better business sense, but it's more than just business to him. That's a rancher.

When I was 12, I was given a horse to ride that Granddad bought from a friend on the Navajo reservation. I was dumb and didn't know it, and I didn't think this horse stopped fast enough, or turned fast enough. Being a boy, I tried to strong-arm it as if it was an old tractor. That evening we had red chili stew, and Granddad told me he wanted to show me a trick. He asked me to put my spoon in my mouth and hold it between my teeth. When I did, he rapped the end of the spoon handle with his fingertip, just hard enough to jam the end of that spoon against the roof of my mouth. "The trick I just showed you is how your horse feels when you're riding him," he said. He didn't have to say anything else. When I rode next my hands were a lot lighter, and funny how this pony started handling better. I discovered that my horse wasn't machinery. My horse was a partner and could be of great help to me with a little patience and understanding. Granddad was a rancher. Anyone who has been on a gather on a big outfit can spot the best cowpunchers. Ranchers can be cowboys and cowboys can become ranchers, but they aren't always interchangeable. Often, when cattle are bunched up at a gate, you see fellas get their ropes down and little by little start crowding the cattle just a little too much until suddenly a calf breaks and runs. This is much to the delight of the cowboys who eagerly build to them, lay ropes on them, and bust them. These fellas might be handy, but they probably aren't ranchers.

These cattle are a rancher's life investment, and their value goes down quickly when they are being chased and roped for fun. Look for the gent who is just a little quieter with the cattle and doesn't tend to crowd them. He knows the rope on his saddle is like the revolver in his chap pocket. These are tools and there will be times when they are needed, but more often there is a less drastic way to handle things. This is the man who will back off at the gate so calves have time to see the exit. Maybe this guy is the foreman. Likely, he is a rancher.

There is a lady who manages the feed store in town. She works 60 hours a week. When work is done each day, she drives miles of gravel road to her house to find a baby calf her husband brought home. He found the calf's mother dead. This lady will stay up with the calf way into the night teaching it how to nurse off a bottle and finally end up with just an hour or two of sleep. In the morning she will feed the calf again and then head back to work because between the drought and the market the ranch is struggling to make ends meet. They need the paycheck she brings in from her job. She will work in town all day and work on the ranch most of the night. Her vacation time is spent branding or shipping. She has friends in town with much easier lives than she has, who go on cruises every year and spend a lot of time at the spa, yet she is never jealous or resentful. She actually feels a little sorry for them for what they miss. That's a rancher.

The way I see it, a rancher is not just someone who is engaged in the business of livestock on pasture. Critics say ranchers are exploiting the land for profits. Truth is, ranching is one of the least profitable and highest risk investments anyone can make. Ranching is an ancient profession that is inextricably connected to nature and nature's plan. Ranching follows the philosophy that man was tasked by God to steward his creation. There is a huge responsibility with that.

The person who embraces that responsibility is the rancher.

Author: Casey Murph
Reprinted from: http://www.rangemagazine.com/features/fall-22/range-fa22-what_is_a_rancher.pdf

Poisonous Plants in Hay and Silage (revised)

***Reprinted** from the October Newsletter; Poisonous Plants in Hay and Silage. This article was developed using various references that have proven to be accurate in the past. The original information about Milk Vetch was obtained from the USDA Agricultural Research Service. The information in the website refers to three species. I misread the information. The current version is correct. My apologies for the error. Thanks to Graeme Finn for alerting me and providing the correction.— Barry Yaremcio*

(Photo: Alberta Farmer Express)

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.

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.

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

Milk Vetch is safe for animals to consume at any stage of growth. Milk Vetch is a non-bloating, drought tolerant, agronomic legume species that holds its nutrient value well into the dormant season and is commonly used by cattle producers in Alberta. Unfortunately, **Hairy Vetch** and **Mountain Vetch** with mature seed heads are toxic. However during the growing season at vegetative stages they are a beneficial legume species often included in quality forage blends. The seeds contain miserotixin, or 3-nitropropionic acid (a glycoside) depending on species. Toxicity is caused by lung problems and inability to breathe which slows metabolism. Nitrate / nitrite toxicity can also occur.

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.

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 generally not a problem in stored feed.

Kochia is a weed that is often used for winter forage. It is a plant that can

(Continued on page 7)

(Continued from page 6)
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.

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/

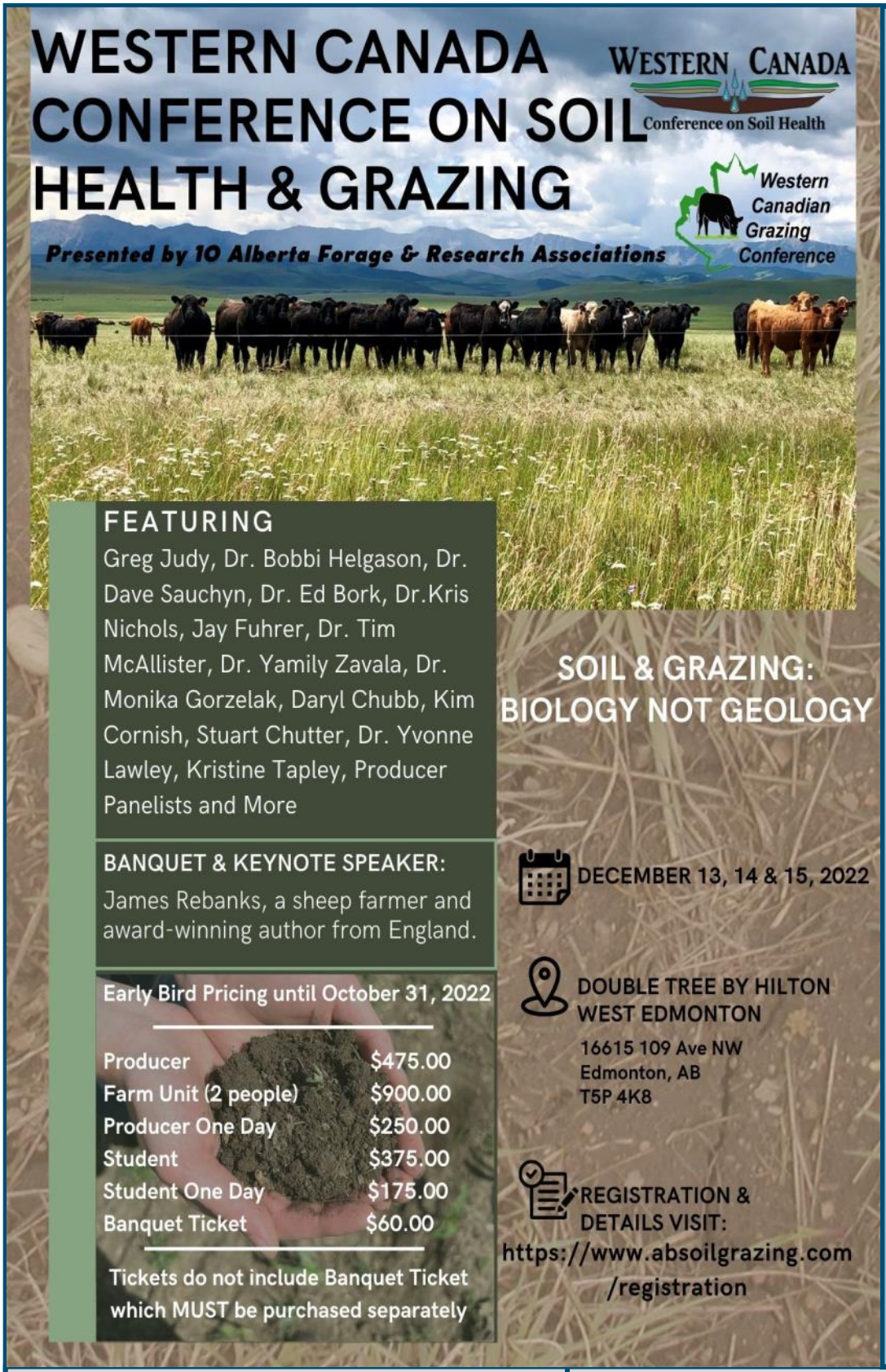
Author: Barry Yaremcio
Ruminant Nutritionist

Yaremcio Ag Consulting Ltd.
403-741-6032
bjyaremcio@gmail.com
https://www.beefconsultant.com

Thank You to Our Corporate Sponsors

Gold Sponsors

Silver Sponsors



Board of Directors

Chairman:

Daniel Doerksen
(403) 633-0530

Vice Chairman:

Daryl Chubb
(403) 836– 2202

Treasurer:

Justin Blades
(403) 336-5952

Directors:

Tanis Cross
(403) 652-0954
Emily Lowe
(403) 990-4548
Jerry Baerg
(403) 826-2016
Ryan Scott
(403) 682-8377
Wolter van der Kamp
(780) 335-3249
Morrie Goetjen
(403) 863-7484
Sarah Green
(403) 603-8772
David Sammons
(403) 934-0940

Staff

Manager:
Laura Gibney
manager@foothillsforage.com
Cell: (403) 998-4687

Environment & Communications Coordinator:
Kayla Minor
enviro@foothillsforage.com
Cell: (403) 700-7406

Mission: Assisting producers in profitably improving their forages and regenerating their soils through innovation and education.

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—Results Driven Agriculture Research

RDAR Results Driven Agriculture Research

FFGA is a proud member of AFIN Alberta Forage Industry Network, ARECA, CRSB