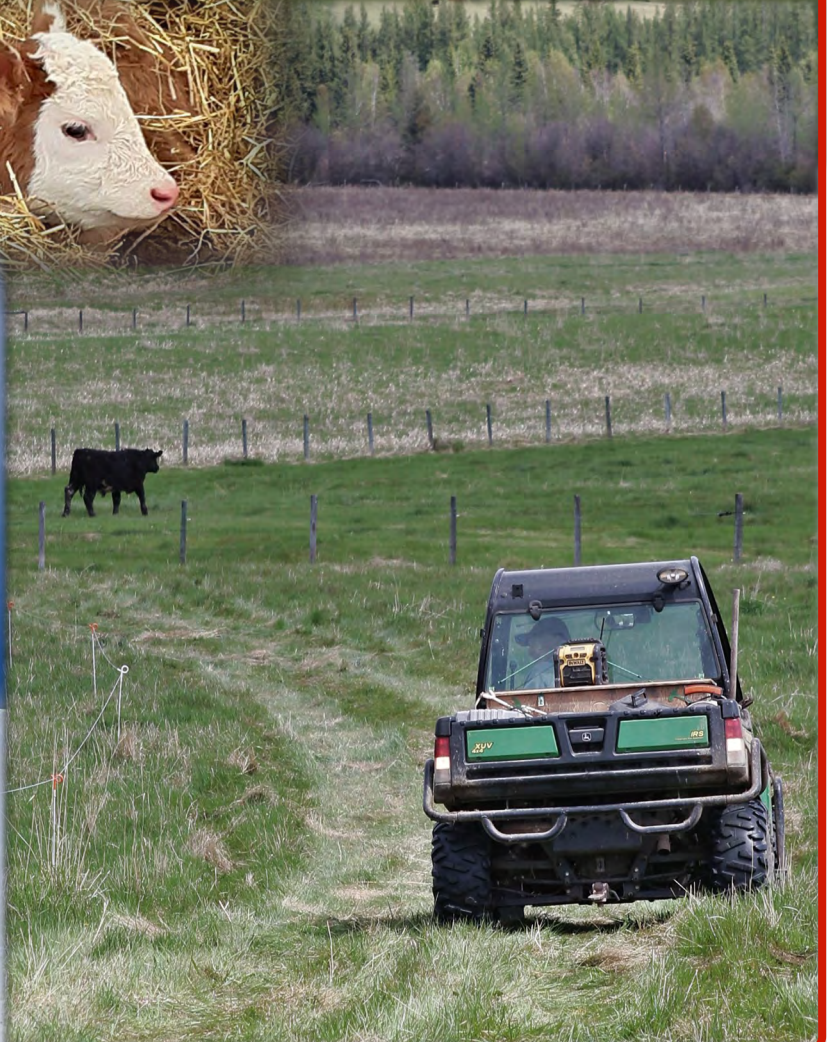
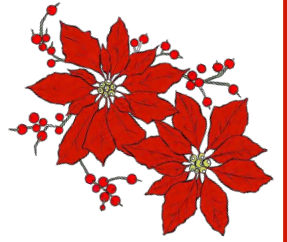




The Blade

Monthly Newsletter of the
Grey Wooded Forage Association

November-December 2020



SAVE THESE DATES!

DATE	TITLE	LOCATION
Dec 15, 2020	Streambank Restoration video release	Online, see poster on page 6
Jan 13, 2021	Webinar: Record keeping to meet your production goals.	Beef Cattle Research Centre Register online: beefresearch.ca
Feb 2&4, 2021	Webinar: Red-Bow Ranching Conference	See poster on Page 4
Feb 17, 2021	Webinar: Practical Genetics for Beef Production	Beef Cattle Research Centre Register online: beefresearch.ca
Dec 7-9, 2021	Western Canadian Conference on Soil Health and Grazing (tentative)	Plans depend on covid restrictions Visit www.absoilgrazing.com for updates

Contact us:

Box 1448
5039-45 Street,
Rocky Mtn. House, AB. T4T 1B1
403-844-2645
www.greywoodedforageassociation.com

Brenda: office@greywoodedforageassociation.com
Greg: field@greywoodedforageassociation.com

*Digital subscriptions are free.
Please call or email to learn more.*

Published by: Brenda Kossowan
Cover Photo: 2020 in review.
Contributing photographers: Steve Kenyon, Olivia Handel and
Brenda Kossowan

In This Issue:

A word or two from GWFA	Page 3
Hay Value and Hay Markets - Greg Paranich	Page 5
Forage Nitrates - Karin Lindquist Series	Pages 7-9
ALUS Trailblazers	Page 10
Grazing stubble - Barry Yaremcio	Page 11

The Grey Wooded Forage Association is a member of the Agricultural Research and Extension Council of Alberta



This publication is made possible in part through funding from The Province of Alberta

A word (or two) from the office

By Brenda Kossowan, business manager

A search of scholarly documents, i.e. “The Internet,” reveals that, by the time early Christians figured out that they could celebrate the birth of Christ, there was no one left who remembered when he was actually born. They guessed that he was most likely conceived around the Spring Equinox, so it made sense at the time to set his birth date in December.

Falling right after Winter Solstice, the widely accepted birth date of December 25 fits conveniently into that darkest period of the northern winter when, regardless of their faith, people find themselves in desperate need of some celebration to light up their lives.

Animal keepers in the Holy Land, which sits at around 31 degrees north, didn’t experience the wide variance in daylight and climate that played such a pronounced role in the lives of Europeans. Working days in the northern latitudes, however, started before the sun rose and wound down well after it had set: More reason to light a lot of candles and lay out a truly grand feast.

With that feasting came the tradition of heading out to the barn on Christmas Eve with a little extra for the beasts; distant offspring of the lowing, bleating, cackling, quacking and honking witnesses to a miraculous birth under the light of an uncommonly brilliant star.

Up here at 58 degrees north, we have now entered the darkest weeks of what seems to have been the darkest year in many decades. Who out there has not felt the impact of this coronavirus pandemic?

It’s been easy enough, when you live in the country and work from home, to say that travel restrictions and social distancing are not having that much of an impact. Here at GWFA, we have had to make only a few minor adjustments to keep our workplace safe, including limiting the number of people who can be in the office at one time. Right now, we’re limiting to one, taking turns to make sure that there’s someone here for at least part of every work day.

Our covid-related costs have been minimal. There has been no time lost, additional disinfection between turnovers has not been a problem and we don’t have to worry about social



distancing in terms of people visiting the office because walk-in visitors are fairly rare.

Our business is in your fields.

Where covid restrictions have hit us is in our ability to provide the learning opportunities that are our commitment to sharing knowledge about innovations and management practices that help improve your operations. The big hall we had rented for the Summer Showcase in June can now accommodate only 50 people and they must all be facing in the same direction. We can’t feed them. We can’t provide beverages, and we can’t offer any socializing during breaks. That has handicapped our ability to attract sponsors, who rely on those social opportunities to talk about their products and services.

Meeting online has become common place, especially in a year when we are looking a major changes in the way organizations like GWFA are funded. There will be more information on that once some final decisions have been made, likely in January.

I’m hearing bits here and there about producers becoming burned out with the number of webinars being offered on various topics, yet have seen excellent participation rates in topics that hold a higher degree of interest.

In the midst of all this, the recent tightening on social restrictions has created a culture of alone-ness that flies in the fact of everything the holiday season stands for, from staff Christmas parties and Christmas shopping to bringing family and friends together for that truly grand feast. Sick people lie in bed alone while families, friends and the medical staff who serve them are unable to share their grief.

Therefore, while the cash costs out here in the country have been manageable, the emotional costs are tremendous and at times overwhelming.

While we’re all in this together, we are unable to be together during seasonal festivities that evolved around togetherness. Your friends at Grey Wooded Forage Association are here to help. Connect with us in whatever way you wish, by phone or email or by social media. We’re here to listen, and we will do what we can to help you enjoy a very Merry Christmas!



IN-LIEU of Ranching Opportunities & Ladies Livestock Lessons

The Red-Bow Ranching CONFERENCE

Save the date

FEB 2&4 2021

Ranching in a New Era

For the current agenda and speakers
visit our website www.redbowag.com



Webinar Sessions

- Smart Ranch Innovations
- Marketing Your Beef
- Pain Mitigation Demonstration
- Lessons Learned from 20+ years of Riparian Management



Register at

WWW.REDBOWAG.COM

Hay value and hay markets

By Greg Paranych, Ag Field Specialist



With winter upon us, we settle into the long season of feeding livestock stored feed in one form or another. Whether it be baled hay, baleage, silage, or “field stored” swath grazing, the all-important question is “how good is it?”. We have discussed the importance of feed testing before, but we should revisit the value feed test analysis we get back from the lab.

Feed Test Analysis

Lab results are reported in a feed analysis sheet giving you information on moisture content, protein, energy, total digestible nutrients, fibre, as well as vitamin and mineral content. Additional requests could include presence of nitrates, mycotoxins, and Relative Feed Value. Labs will report on a dry-matter (DM per cent) and as-fed basis of nutrients based on the percentage of moisture. Rations are always formulated on a dry matter basis.

***“If you go in blind,
you could come out naked”***
**Don Bousquet,
former market analyst**

Energy is reported as Mcal/kg DM. This value can be used to balance any additional energy via grain needed for maintenance or gain.

Fibre content is often the basis of feed value. Two fibre values reflect either its relative energy content or feeding value. These include acid (ADF) and neutral detergent (NDF) fibre. A high ADF value indicates hay cut at a later stage of maturity, and poorer digestibility. It will be lower in energy content than the same hay cut at an earlier stage of maturity with a lower ADF value. high NDF levels also indicate a more mature forage. It is also indicative to the degree which cattle will consume the feed – high NDF values limit forage intake.

Obviously, a visual appraisal will not help you accurately identify the energy content nor the feeding value of your hay. Considering the forage harvest challenges in many parts of west Central Alberta, we should be on the lookout for moulds and toxins. **Mouldy feed** occurrences increase with cool and wet growing conditions that also favour many plant diseases that become present in forages. They not only reduce plant palatability and energy content, but also present dangers to reproductive failure, milk production, reduced gain, as well as dangerous health conditions (convulsions, gangrenous symptoms) and even death. If you have presence of moulds, get nutritional guidance from a nutritionist on safe options to blend feed to avoid problems.

Maturity in forages will have a lot of variability. The first cut can vary from mid-July to late August with considerable maturity spreads. The protein content of a grass hay could

possibly vary from six to eight per cent all the way up to 18per cent, depending on the stage of maturity it was harvested. With visual assessment only, it would be difficult to know if this was the proper feed for your purposes. Likewise, mineral content will vary with time of harvest, and the environment in which the forage grows in

Minerals such as copper, zinc, and manganese are

very important to animal health, and almost always need to be recognized in a ration supplementation formula. Knowing if a forage is deficient or high in various mineral content has an impact on their interaction with each other as beneficial or antagonistic. Producers should work with a nutritionist to ensure they are meeting their animals’ needs, and to make sure the product they are using are being consumed at appropriate levels. **Annual forages** also present some specific watch outs. For example, cattle feeding on Brassicas (canola, radish, turnip, kale) they may be consuming high levels of sulfur that will interfere with copper absorption and result in deficiencies. **Nitrate** in annual cereals (oats, barley, wheat, corn, millet) can accumulate under stress conditions caused by frost, drought, hail, etc. If nitrate levels exceed 0.5per cent production problems may include abortions, premature calves, newborn calf mortality, poor growth and reduced milk productions. Only a feed test will evaluate the presence in your forage.

With your feed test analysis in hand, you can begin to develop the appropriate ration for your cattle.

But what if you are buying hay? What would be the fair “market value” of that bale? Market value of hay will depend on several factors, not the least is the feed quality. Hay markets are not like any other agricultural product. There is no commodity pricing or Board that other products have to reflect market levers. We must do a lot of that discovery on our own. Available supply from one year to the next will be a starting point for feed pricing. This may change as the harvest season closes and the available feed via greenfeed and straw added to the market emerges. A trustworthy feed analysis from the seller would be one thing I would insist on to compare quality to the asking price. Visual assessment is the next thing we can use to check for appearance, dust, mould, bleaching, and how mature the grass heads appear can give us additional clues as to how and when the hay may have been put up.

Obviously, the weight of the bale is critical for a few reasons. Convert the asking price per bale to price per tonne (or ton if you prefer). This way \$/tonne or \$/lb will give comparison to different lots being considered to see if the “cheaper” but lighter bale is a good deal or not. Weight also is an end user factor to make sure it is of a size we can handle with the tractor we have at home. In the past when I was a hay marketer, I had to scale back the 1500 lb bales that could then

(Continued on next page)

Hay Value and Hay Markets

(Continued from previous page)

be made, back to 1250 lb to suit most my customers' handling limitations. Distance for freight could be a tipping point, but not if you decide the hay is worth it. Also, sometimes the more local supplier will be a benefit if you need some extra feed or if at a future date supplies become tight. Having a good relationship with a local supply is a valuable thing! Checking the advertisement on social media, websites (Farming the Web for example), local auction sales will give you some benchmarks to gauge the market. Remember, advertised asking price is not always the selling price. Some of these items may seem very obvious in feed purchasing, however, it never fails to be a high frequency topic of inquiries. It is easy to get caught up in advertised pricing, coffee shop speculation, and sometimes desperately acquiring feed in tight supply. My recommendation is to carefully go through the evaluation of the factors discussed, and decide what feed you need, and what is a good deal for your operation.

Until next time, stay well and stay safe!



STREAMBANK RESTORATION

VIDEO RELEASE

INCREASE RESILIENCE OF RIPARIAN AREAS, REDUCE EROSION, IMPROVE HABITATS

heal the land

We invite you to attend the release of our Streambank Stabilization & Extension video

DECEMBER 15, 2020

WWW.EVENTBRITE.COM/E/STREAMBANK-RESTORATION-VIDEO-RELEASE-TICKETS-130620193515

Is your annual compensation review coming this year?

It is time to start planning.

I can help. Give me a call.



Gilchrist Consulting

587-989-4180
www.gilchristconsulting.ca



Steve Fillinger
IT Specialist

403 844 3911

sfillinger@iologicit.com
www.iologicit.com

Testing for nitrates in a forage stand

By Karin Lindquist, The Bovine Practicum



This is the third and final article in a series on nitrates, written by Karin Lindquist, creator of the Bovine Practicum. Karin is an independent consultant seeking to share her knowledge and experience gained as a producer, a research assistant, a customer service rep and a forage and beef specialist with Alberta Agriculture and Forestry.

Currently located in Stettler, she was raised on a mixed farm northwest of Edmonton, where she and her family backgrounded calves and grew forage, cereal and oilseeds crops.

Karin has a BSc in Agriculture with an animal science major from the University of Alberta, including studies in applied beef and dairy sciences; ruminant digestive physiology and nutrition; forage, pasture and cropland management; rangeland management and ecology of Western Canadian plant communities, and wildlife and lake ecology.

Karin is an Agrologist in Training with the Alberta Institute of Agrologists. She is available for presentations and consultation in the area of beef and forage management.

You can find the full text of this and other articles on Karin's website, bovinepracticum.com

There are two primary methods available to test for nitrates in a forage stand.

The first (and easiest) is collecting plant samples to send away to a lab.

The second uses a nitrate testing kit that you may be able to get from your local county office or neighbour. For the purpose of this article, I won't go over the second method, as the kits available vary from wherever you live and some counties may not have kits available at all.

Rather, I will expand on the first method because it is important to know how to get back a satisfactory (or at least, accurate) test result.

Sending a forage sample away to a lab is the most recommended because not only do you get a nitrate test results back, but you also get your forage analyzed for nutrients including protein, energy, and macro-minerals especially. It's also ideal if you plan to graze the stand that you will test in a week or so. The only drawback with sending a forage sample to a lab is the time that it may take to get a result back; the lab may be experiencing a back-log in forage samples from other parts of the country and test results may not come back until several days to a few weeks later. This can be problematic if you want to start grazing very soon, and cannot wait much longer for the lab to get back to you.

Taking samples from a swath is the most ideal, but only if they're just made in the last couple days. Take at most five to six different plants from various parts of the field. Take one or two from up on a hill, another couple down in a valley area, and others mid-way on an incline and so on. This gets you a representative sample from around the field.

When taking samples from standing plants, cut the plants four to six inches (10 to 15 cm) from the soil surface, also one or two in various locations around the field as with the swath samples. You need, at most, five or six plants to send off. **Do not take them by the roots.** This will raise the nitrate values the lab technicians get when they're analyzing your sample.

With standing corn, you need about six plants taken similarly as described above (cut at about six to eight inches from the soil surface) and a wood chipper. Put the plants through the chipper, then collect two-thirds of a bread-bag full to send away. A forage-harvester works as just as well, as long as there's a way to effectively collect the chopped corn plants and then gather a sample from that pile.

When is much more crucial; *I would highly recommend taking fresh-forage samples from the field three to four days after the hail or frost damage as occurred.* This way you get an accurate reading on how high the nitrates have actually gotten in your feed, and then figure out how to introduce your animals on to this crop from there.

What About Taking Samples from Stored Feed, like Hay Bales or a Silage Pile?

Taking forage samples from stored feed is not like taking sample plants from an existing stand. For both bales and silage piles, you will need a forage probe coring tool to collect your samples from. A hand-grab sample will not give an accurate analysis for what you need, as it tends to be from a part of the bale, pit, or pile that is the most weathered and subject to external forces that will change the quality of the forage.

You will need the short, approximately three-foot (0.75 m) probe for coring large round or large square bales hay bales (smaller for small square bales), and a long probe of about six feet (two meters) for a silage pile. Unless the forage coring kit has a manual turn-crank, it's best to attach it to a power drill to get into the bale or silage pit.

With the bales, position the probe in the middle of the bale in between the strings—not at the non-stringed ends. Then push in, until you get to the centre of the bale. When you pull out, you should get a nice core sample. Repeat for about 10 bales out of every 100 bales, putting each core in a five-gallon bucket as you go. Each bale should be randomly chosen, not one after another in a single row or a certain part of the field (if the bales have not been trucked in from the field yet).

(continued on next page)

Testing forage for nitrates (*continued from previous page*)

Once you're done, mix the cores well, and then take half to two-thirds of a bread-bag full of the collection for the lab.

With a silage pile or pit, it's a matter of finding 10 random spots to take cores from near the middle of the pit, and then patching up each spot with silage tarp tape (important if you're coring through the silage plastic, versus doing so on a freshly-made and packed pile). Then, as with the collections obtained from the bales, mix them up and take a bit over half (not full) of a bread-bag full of silage material for the lab. Make sure to pick out the plastic bits before shipping. It's important to ship samples off as soon as possible. If you can't ship them right away, keep them cool in a fridge or freezer. It's also important to ship fresh material in an air-tight bag with disposable cool packs so they don't deteriorate en route to the lab. Store hay or straw samples in a cool dry place, until boxing them up to ship. The silage sample should also be treated similarly; keep it cool, dry in an air-tight bag to maintain its ensiled freshness.

Failing to do any of these results in fresh samples losing nutrient value or spoiling and rotting inside the bag, or silage samples going bad because of being exposed to oxygen, or hay or straw samples not being protected from moisture that could ruin the quality needed for testing. It makes the lab techs happier when they have fresh samples to deal with, and you happier because you don't have to go out and resample when you could spend your time doing better things.

You can find a forage testing lab that's local to you, and then give them a call to see what they charge for testing nitrates and other nutrient analyses. Or, you can ask your county office or local fertilizer dealer to send the samples away for you and deal with the paperwork and hassle of sending them off via the right mail or package carrier. I cannot make a recommendation on what is best for you. Personally, I would find a good reputable forage lab to ship to and go from there, especially if I want to know what the protein, energy, macro- and micro-mineral contents of my forage samples are in addition to nitrates; but that's just me!

Now that you understand all the factors that go into how plants could accumulate nitrates and are well informed about how to take samples, it's now time to figure out the timing of nitrate accumulation and risk for toxicity to livestock.

Why and How is Timing so Important in Deciding When to Harvest or Graze Potentially Nitrate-Bearing Forages?

This will answer the biggest conundrum of all: When can I harvest? When can I graze?

The time-frame for nitrates is fairly easy to figure out when you understand this:

Nitrate levels reach their peak five to seven days after a hail or frost. They settle down to normal levels five to seven days later.

That means **you have two to three days post-hail or post-frost event to harvest the crop** to get that swather gassed up, greased up and out in the field cutting down that crop, **or sit and wait for 10 to 14 days** until the nitrate levels are for sure

back down to normal.

If you're grazing cattle, it would be best to wait those 10 to 14 days out, just to be safe, or wait until the test results come back. I will talk more about this in a future segment, including how to read the nitrate test results you will have received.

I'm not sure if the science is still well understood about nitrates, but the reason I suspect that it takes this long for nitrate levels to reach their peak is that it takes a bit of time for nitrate accumulation levels to reach peak while the roots continue to supply, yet the leaves and stems cannot keep up with this supply due to the damage it has to first deal with. The best way I can explain it is by using the factory analogy.

Think of the above-ground portion of the plant as a factory, where goods are shipped in, created to make different things (such as amino acids), then shipped out. The roots act as a storage warehouse that sometimes has a communication issue with the factory. In this case, the warehouse didn't get the note that the factory was damaged, so it keeps shipping goods (nitrates) like normal to the factory. The factory storage area is doing okay for the first couple days, but the storage area gets noticeably more and more full as the days go on; not only that but the damaged factory's production line can't keep up with the warehouse's constant supply. Thankfully, builders are working as hard as ever to get the damaged factory fixed so that by the time the day comes when the factory's storage area just can't hold those packages any longer, production has just started picking up again and gets in gear to catch back up to the warehouse's supply line.

Frost is perhaps one of the more interesting nitrate scenarios I've had to do mental gymnastics on. It's not always guaranteed that the next frost (if an area gets a damaging frost) is going to come at the right time, such as two weeks after the first damaging frost; especially if it's a killing frost. Subsequent damaging frosts make life much more interesting compared with a damaging frost then a killing frost. Consecutive damaging frosts may prolong the nitrate timeline, depending on when they arrive. But when it comes down to killing frosts, you either get the luck of the draw or you don't.

A killing frost is going to be much more unsettling if it occurs five to seven days after a damaging frost. This is because that killing frost is killing a plant when nitrate levels are highest, locking those nitrates in, and there's nothing you can do about it. However, if it arrives 10 to 14 days after the damaging frost, you're in the clear, because it has killed the plants at a time when nitrate levels are low and nitrates are unable to accumulate up into the leaf/stem tissues.

Drought is a bit easier to figure out. Nitrates, during a drought, have already been building up over time, but spike out significantly when the rains arrive—particularly true with young plants, which happens over the matter of a few days. About a week later, with better growing conditions than before, nitrate levels will have settled back down to be deemed safe for grazing or harvesting.

(continued on next page)

(continued from previous page)

Conclusions

Overall, timing and being able to answer the question, “when is it safe to harvest or graze” really depends on your context,. I suggest that, if you still have questions, get in touch with a local agricultural extension agent, or shoot me a private inquiry via my Contact Me page if you have any further questions. In a future nitrate series, I will talk about the animal side of the nitrate equation, from the science behind how nitrates affect animals, to some feeding guidelines and how to read those nitrate test results.

References and further reading:

Alberta Agriculture & Forestry. **Crop Protection 2020.**

Alberta Agriculture & Forestry. **Nitrate Poisoning and Feeding Nitrate Feeds to Livestock.**

Cornell University Publication Series. **Drought and Risk of Nitrate Toxicity in Forages.**

Manitoba Agriculture. **Nitrate Poisoning.**



ALUS
Canada
A Weston Family Initiative

Red Deer County ALUS pays producer costs for on-the-ground projects like alternative watering sources, riparian management fencing, crossings, and tree plantings. In 2020, 19 Red Deer County producers enrolled 1,097 acres of land in the program. They receive an average of \$10,412 for their on-the-ground projects, and an average annual payment of \$895 (for 5 years) to manage their ALUS acres.



PROTECT YOURSELF FROM MARKET RISK WITH WLPPI

The market can change quickly. Our Western Livestock Price Insurance Program is designed to help mitigate your risk at every stage of production. Select from a variety of price insurance options to find the best fit for your livestock operation.

Protection at your fingertips. Visit wlpip.ca or phone **1.877.899.2372**



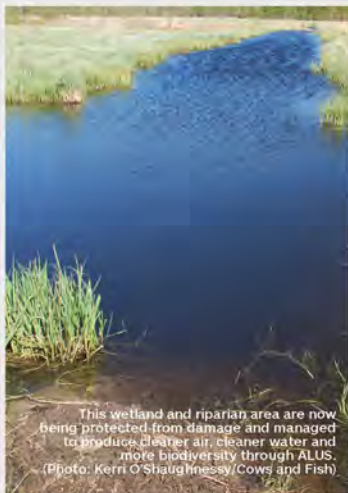
Trailblazers

ALUS Wetaskiwin-Leduc participants Alana and Justin Schamber

The Schambers manage Tin Forest Farm on 142 acres near Hillside, in the County of Wetaskiwin, Alberta, where they raise sheep and beef and grow hay and pasture. They specialize in farm-to-table local food events and hosting school field trips and various annual camps on the farm.

"We want to help connect people to the land and to their food," says Alana.

The Schambers regularly host farm-to-table fundraisers for the Tin Forest Farm Kids Nature Camp. These events are community-wide celebrations of the land, featuring a home-grown supper prepared by an award-winning chef, live music and a tour of their ALUS riparian projects.



This wetland and riparian area are now being protected from damage and managed to produce cleaner air, cleaner water and more biodiversity through ALUS. (Photo: Kerri O'Shaughnessy/Cows and Fish)

ALUS has helped the Schambers enhance several riparian areas on their property and establish livestock-exclusion fencing to protect a large wetland that drains into Big Stone Creek. This project was also partly funded by Growing Forward 2.

As of 2020, more than 40 of their acres have been enrolled into the program for 13 ALUS projects. These ALUS projects produce many ecosystem services that benefit the community and the environment, as well as their own farm. For example, fencing the

“ALUS is part of the long-range plan for our farm.”

riparian areas helps protect the riverbank and water quality in the stream, producing cleaner water for communities downstream.

"ALUS is part of the long-range plan for our farm," says Alana. "We wouldn't consider grazing our sheep in that area until there was a riparian fence; the fence

had to come first." It also allows native vegetation to return, enhancing biodiversity and providing habitat and food for birds and other wildlife.

"Increased biodiversity is already becoming apparent," says Alana. "The birds are more abundant—we only had ravens before, but in the last two years, huge flocks of geese have been resting on the wetland during migration. We've spotted bald eagles also! This certainly did not happen before the ALUS project."

Their wetland project also retains water to help combat drought in dry years, allowing the Schambers to enjoy good hay yields no matter what the weather holds.



ALUS Wetaskiwin-Leduc participants Alana and Justin Schamber and their family at Tin Forest Farm in Alberta. (Photo: Sarah Cassie)

ALUS is not the only group to have noticed their commitment to sustainability and land stewardship: The Battle River Watershed Alliance awarded the Schambers an OTIS Award in 2018 for their outstanding environmental stewardship and awareness.

ALUS Canada is proud to count Alana and Justin Schamber among its Trailblazers in Alberta.

Become an ALUS Trailblazer!

ALUS recognizes the important role farmers and ranchers play as stewards of the land and helps them provide solutions to some of the most pressing conservation challenges of our time, including biodiversity loss, flooding, and water quality in lakes and rivers.

For more information on the ALUS program in Alberta, visit ALUS.ca and contact ALUS Canada's Western Hub Manager.



Grazing stubble fields

By Barry Yaremcio, Nutritionist, Yaremcio Ag Consulting Ltd.

Cows have different supplementation needs when turned out on stubble fields in the fall.

Cows will pick and choose what they eat when grazing stubble. They will select to eat thrown over grain, chaff, weed seeds, and straw in that order. They will also consume slough hay from the low areas and mature hay growing along the fences and headlands.

The quality of what they eat can be variable depending on the type of crop grown, fertility program and stage of maturity when the crop was cut or harvested. The combine setting - the amount of light grain and weed seeds thrown out onto the ground - will also impact quality. Straw, chaff and over-mature grass hays are typically low in protein, energy, calcium and magnesium but relatively high in phosphorus. These feeds are also high in neutral detergent fibre, which can reduce total feed intake. Grains and weed seeds are also high in phosphorus and have higher energy and protein content than the grasses, straw and chaff.

Feeds consumed from the stubble fields are low in calcium and magnesium. Thus, the typical 1:1 or 2:1 mineral may not provide the required amounts of these nutrients. It is much different than cows grazing a mixed legume – grass stand.

A diet that is low in calcium and higher in phosphorus can reduce phosphorus absorption because the same mechanism is used to transfer these nutrients across the rumen wall. All nutrients that are absorbed must have a net “zero” molecular charge. Calcium has a +1 charge and phosphorus has a -2 charge. So, two calcium must bind with one phosphorus before transported across the rumen wall. If the combination is not correct, the unabsorbed phosphorus is excreted in the manure.

Phosphorus is the driver of all metabolic functions. When it is not absorbed, feed intake is reduced. That in turn reduces milk production and weight gain on the calves. Cows can also start to lose weight. A continuous imbalance can impair reproductive performance, with cows taking longer to cycle and conceive a calf next year.

A calcium or magnesium deficiency or a combination of the two can cause cows to go down or experience winter tetany, or milk fever. More typical in the spring or when the cow has just delivered a calf. It generally requires a veterinarian to treat animals in this situation.

A mineral supplementation program should contain additional calcium and magnesium, but a 2:1 mineral does not provide enough calcium to remedy the situation. He adds that a feedlot mineral with a 3:1 or 4:1 calcium to phosphorus ratio is preferred.

If a 1:1 or 2:1 mineral is left over from the summer, mix 1 bag of limestone - 38 per cent calcium - with 1 bag of mineral and 1 bag of fortified trace mineral salt - with selenium. One hundred cow-calf pairs should consume this mixture, weighing roughly 165 pounds, in five to six days. If consumption is too low, add eight to 10 lb. of dried molasses to the entire mix and adjust to get the proper intake.”

If feeding a mineral that contains a 3:1 or 4:1 ratio, the magnesium content should be in the three to five per cent range when the recommended intake is between 70 to 100 g per day.

The added magnesium and calcium reduces the risk of downer cows. Magnesium can be purchased as an individual product if it is not present in the mineral.

Feeds that are over-mature or crop aftermath are usually low in protein. A lactating cow needs a minimum on a dry basis 11 per cent protein to maintain feed intake and milk production. Dry cows can manage on 8 per cent protein.

Supplementing protein on pasture can be troublesome, but protein tubs or blocks will help solve the problem as long as mineral and vitamin supplementation continues as described. Watch the costs associated with these products. Another option is to feed three to four lb. of grain per cow every third day along with a protein supplement that is in pelleted form. Feeding canola meal or distillers grains on the ground results in the majority of these products being wasted because the cows cannot eat the small particles.

If the cows are not weaned, to offset the loss of calf performance when the cows are not consuming adequate amounts of energy or protein; providing a creep feed to the calves with a ration that is between 14 and 16 per cent protein will improve average daily gains. If feeding straight oats, which has 10 to 11 per cent protein on average, the calves will put down fat rather than lean growth. They may not frame out properly, resulting in a calf that could be discounted at auction. A mixture of 1/3 peas and 2/3 oats or barley by weight will provide a creep ration that meets protein and energy requirements. With lower grain prices and high calf prices creep feeding will pay very well in the long run.”

*Yaremcio Ag Consulting Ltd.
403-741-6032*





GREY WOODED FORAGE ASSOCIATION

greywoodedforageassociation.com | 403-844-2645

2020/21 Membership Application Form

Membership in the GWFA is open to anyone interested in forage production, grazing management and environment sustainability

The fee is \$40 per year, running from April 1 to March 31

For information, call 403-844-2645 or email office@greywoodedforageassociation.com

Benefits of joining GWFA:

- ♦ Discounts on courses, seminars, workshops and tours.
- ♦ An automatic subscription to *The Blade*, published monthly online. Hard copy is available on request.
- ♦ Assistance with your Environmental Farm Plan.
- ♦ Equipment rental (deposit required).
- ♦ Access to our reference library.
- ♦ Access to our members-only Facebook group.
- ♦ Networking with like-minded producers and advisors.
- ♦ Farm consultation services (farm calls are 55 cents per kilometre, each way).
- ♦ A copy of the GWFA Annual Report.

Please mail your completed form and cheque to:

Grey Wooded Forage Association

PO Box 1448, Rocky Mountain House, AB T4T 1B1,

Or scan and email the completed form and send an e-transfer to office@greywoodedforageassociation.com

Renewal <input type="checkbox"/>	New member <input type="checkbox"/>	How should we send your copy of <i>The Blade</i> : Email <input type="checkbox"/>	Canada Post <input type="checkbox"/>
Name: _____		Email: _____	
Mailing address: _____			
Landline: _____		Cell: _____	

***How do you describe your operation (tick all that apply)**

- ☐ Beef producer
- ☐ Sheep/goat\ producer
- ☐ Dairy producer
- ☐ Annual crops producer
- ☐ Forage producer
- ☐ Other _____

***How many head of livestock do you manage:**

Beef cows/heifers _____
Dairy cows _____
Feeders _____
Ewes _____
Does _____
Other _____

***How many acres of land do you manage:**

Pasture _____
Hay _____
Crop _____
Other _____

**These questions are voluntary.
We do not share your information*

How can we improve our service to you?

Please suggest topics you would like to learn more about: