



The Blade

Creating an Awareness of Forages

*Monthly
Newsletter
of the
Grey Wooded
Forage Association*



NOVEMBER 2017



Testing Hay

Message from the Chair

Amy Leitch



This month of nose nipping temperatures, which will soon become the norm for all of us. So, I propose a thought for you all to mull over. Mull reminds me of a warm drink AWE warm thoughts, the mind has so much power over our attitude to life. Find the positive in the everyday and the reward will be thankfulness.

Now to the thought to be mulled around... Most of us think of ourselves as Grass Growers of some sort, pasture/hay/cereal forage crops; but the profile picture is, we are first and always will be, Soil Farmers with very individual challenges. The soil on the land we farm is the battery for all our production. Have any of you thought 'huh... what makes up that battery, how do I recharge it, when and how long does it take'? 'Is it like the Energizer Bunny... probably not'? As we put most things to bed for the winter this is a thought to bring out to the table for discussion and contemplation. If you are at a crossroads in that conversation, or just need an excitement into the world of soil you are in luck! There is a conference coming up very soon, which may help you with insight on how to answer your individual soil farming questions.

Check it out!

Soil Conference "Profit above, Wealth Below" Western Canada Conference on Soil Health & Grazing (page 13)

www.absoilgrazing.com

Thanks for taking the time to thumb through the Blade and continue to educate yourself in agriculture, as a whole.

Amy Leitch

The Blade is a monthly publication
produced by The Grey Wooded
Forage Association

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GWFA Mission Statement

*To promote environmentally and
economically sustainable
forage and agricultural practices.*

GWFA Vision Statement

*The community is engaged in
regenerative agricultural
production methods.*

The Grey Wooded Forage Association is
a member of ARECA



This publication is made possible
in part with funding from:



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Grey Wooded Forage Association

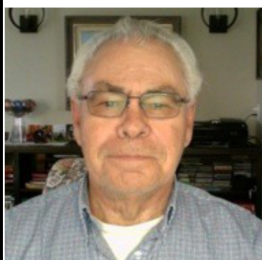
Creating an Awareness of Forages

Notice: Special Meeting

November 27, 2017 at 5:30pm

Election of Two Board of Directors

Grey Wooded Forage Association is holding a Special Meeting for their membership to elect two Board of Director candidates. Additional candidates welcome. The meeting will be via Go To Meeting; phone or online. Contact GWFA 403-844-2645 for more details. Meeting will be held upstairs at the Mountain View Credit Union in Eckville.



W. Gil Hegel was born June 10, 1948 in Beaverlodge, Alberta. He attended the U. of A. and graduated with a BSc. in Mechanical Engineering in 1970. Gil worked in the oil and gas industry for 46 years, the last 30 as an Independent Consultant providing drilling and completion engineering services to small and mid sized oil and gas companies. He retired from the energy industry in 2016.

Gil farmed in the Peace River country from 1985 until 2013, originally only grain then adding bison in 2000. They sold the farm and moved to the Eagle Hill area west of Olds in 2013. They currently have a small Highland herd and are establishing a herd of Black Angus. Their intention is to market grass finished beef.

Gil has been a director of the Peace Country Bison Association, the Bison Producers of Alberta, where he served as chair for 3 years and as a director of the Canadian Bison Association. He currently serves on the Subdivision and Development Appeal Board of Mountain View County.



Megan Snell is currently enrolled in her second year at Olds College, taking Agricultural Management Majoring in Production. She plans on taking another year at Olds College to complete an Applied Science Degree in Agribusiness.

After graduation, Megan plans on continuing her education in Agriculture at the University of Saskatchewan with a goal of obtaining either a Degree in Crop Science or a Degree in Agronomy. Megan Snell is from the small community of Oyen, Alberta where she comes from a grain farming operation. For the past two summers, Megan has committed to working at Chinook Applied Research Association in Oyen, Alberta as a field technician. Throughout the seasons Megan had learned and worked with a variety of crops, forages and specialty crops research trials, pasture rejuvenation projects, soil sampled crop land, provincial weed and pest surveys, and participated in several field days.

Megan Snell is very eager to learn and is very passionate about the agricultural industry.

Election of Board of Directors candidates

Mon, Nov 27, 2017 5:30 PM - 6:30 PM MST

Please join my meeting from your computer, tablet or smartphone.

<https://global.gotomeeting.com/join/113632365>

You can also dial in using your phone.

Canada: +1 (647) 497-9353

Access Code: 113-632-365

Ginette's Message

Ginette Boucher

Fall has settled in, the ground is covered in snow, the daylight hours are become fewer and fewer. I hope that all of you took full advantage of the fall weather and managed to get most of your winter preparation in place.

We have many things to be grateful for at Grey Wooded. We welcome our newest Corporate Sponsor the University of Alberta, Livestock Gentec. We look forward to the development of this new partnership. Through our partnership with Livestock Gentec, we also get the opportunity to work closely with Delta Genomics. Delta Genomics is a national not-for-profit genomics service provider created as the service arm of Livestock Gentec. They provide biobanking, genotyping, and sequencing for members of both the livestock industry and livestock research community. Delta Genomics is hosting producer information sessions on the Envigour HX product/service. Our meeting will take place at the Eckville legion on November 28th 5:30pm. We hope you'll be joining us.

We have an upcoming Special Meeting to elect two potential Board of Director candidates on November 27th; we encourage additional interested candidates. Please be sure to join us on the call or via the web link provided. This meeting is taking place at the Mountain View Credit Union board room, upstairs, in Eckville.

The Future of EFPs is online:

I attended the annual EFP training in Leduc last week; attendees included many sister organizations, and several Counties. We heard about the Alberta Wetland Policy Implementation, the Public Lands Act, Alberta Water Act. Follow the links for details:

<http://aep.alberta.ca/water/programs-and-services/wetlands/alberta-wetland-policy-implementation.aspx>,

<http://aep.alberta.ca/>

<http://aep.alberta.ca/water/legislation-guidelines/water-act.aspx>

We also shared some time together in discussion about producer EFP's and process of approving a plan. Other information included the benefits of online EFP's and Species-At-Risk, which I have listed below.

The benefits of doing an EFP online are:

Reduces Renewal Time: When it is time to update an EFP, producers can easily access their previous Workbook and only update the sections of the farm that changed.

Automatic Risk Ratings Calculations: It can be time consuming to calculate risk ratings in the binder version. The online workbook will calculate these automatically.

Automatic Submission: Easily submit an EFP to the assigned technician.

Most Up to Date Version: The online Workbook always provides the most up to date content, information, and best management practices.

Online Resources: Useful information and resources are just a click away to help the producer make improvement to their farm.

View Changes Anytime: The producer can log into the Webbook anytime to view any changes or updates to EFPs. This will provide the opportunity to keep the information about the sustainability of operations current.

The EFP Program is instituting a renewal period. Producer renewal will be substantially more time-consuming with paper versions. EFP is adding a new Species-At-Risk (SAR) section shortly. A printable SAR chapter will be available; however, it will be easier and far more accurate online. By 2021 we anticipate 3 additional chapters. When these chapters are ready, they are not expecting to have printable copies for the EFP Workbook. The EFP Program will not have funds to print the anticipated volume of binders.

SPECIES AT RISK (SAR)

If you have species at risk on your land it is because you have good management practices already, and the species are comfortable there. You would be encouraged to continue your current practices ensuring the least disturbance during sensitive times, such as nesting or spawning. From my understanding there will be some funding available for producers who are providing habitat for Species-At-Risk. More to come.

If you are interested in finding out more on how you can help species at risk or would like to get assistance with managing your native prairies, contact multisar at

www.multisar.ca - MULTISAR 403-382-4364

We have updated our website with a new template, and it is being updated regularly. Be sure to visit the resources tab, and see what is available to sign out of our library. Be sure to browse through the events and register for any upcoming events that interest you.

If you have suggestions for events and or projects please be sure to contact us. We invite you to participate in our projects and publicity committees. We meet every other month and during the winter our committees usually meet online. We thank all those who have completed the needs assessment survey; we will be compiling the information and will deliver on need.

Grey Wooded is gearing up in the delivery of the Environmental Farm Plan and can accommodate as many as 8 farm families in one workshop. There are two more upcoming EFP's workshops in this publication, there is limited seating please register at your earliest convenience.



Ginette

3D Wildlife Fence

Devin Knopp, PAg

The summer season has officially closed, the appearance of snow and below zero daytime highs seems to have slammed that door. It's that time of year when we can see snow and blizzards to warm and melting...in the same day. This changing weather doesn't just influence our livestock. The wild ungulates begin to wander in and look for an easy meal, as they too must adjust from high quality easy access feed to low quality scarce food opportunities.

Many producers aren't terribly concerned about a few deer nibbling on the end of a bale here or there, or standing amongst the cows out swath grazing. It's the bigger ungulates, that producers must contend with. Elk are the

biggest contributor to localized losses in feed. These vast herds of up to 200 head can move in without warning, camp out causing massive losses to stockpiled feeds. These elk herds can be the difference of a producer having reserves in place they may look at selling, to needing to purchase feed just to get their livestock through the winter. That's a lot of hard work put in during the summer to essentially see it go up in smoke.

A few years back Grey Wooded setup two 3D fence demonstration sites. We'd gotten in touch with some of our members that were having difficulty with herds of elk camping out on their feed piles. Both are south of Sundre, where nomadic herds can be as few as a couple elk to 150 head moving as one. It really doesn't take long for that many elk to go through a pile of feed. We built two separate fences to see if we could capture pictures of the elk trying to get in. Neither of the locations had existing fences around their feed yards. The fences are all built out of electrified high tensile wire and braided poly wire. The first design was a three-wire fence with the top wire about 4.5 feet of the ground and the bottom wire about 16 inches off the ground. Then out from that fence about 3 feet we built a single wire high tensile fence. The diagram is close to how our initial design looked.

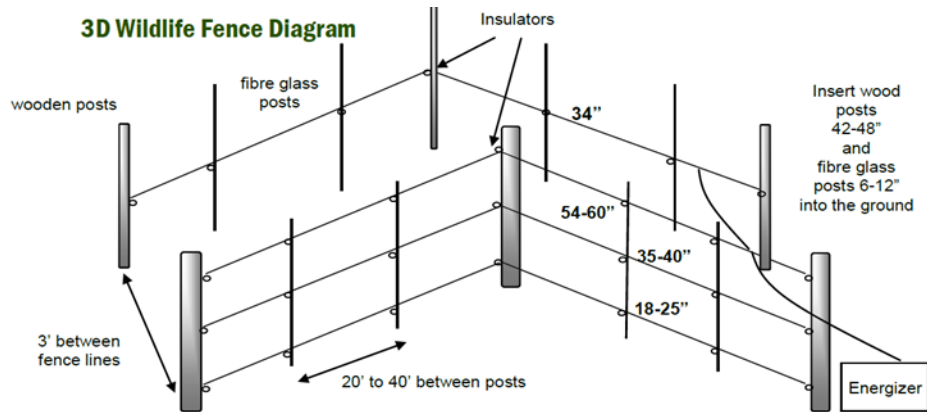
The trail cam pictures we got told us we didn't quite have the design right, as elk managed to jump over both fences. So that fall we made some adjustments. We build the fence higher with a

couple strands of poly wire and over hung a wire into the space between the outer fence and inner fence (see picture). This helped with the theory 3D fence, which is to have a fence with height, depth, and width. Most ungulates struggle with depth perception, so having an object with perceived height, depth and width would confuse

them and keep them from entering the site. This unfortunately, is where our data has stalled. The elk have decided not to grace our locations with their presence. This may not be all that bad, our fence may be doing the job it was intended to do. The elk have realized

the feed in not easy to get at, and so have moved on. We were hoping to capture some pictures of elk standing at our fence, then turning and walking away. We have a few pictures of deer doing that, but the elk just haven't come back. Either way, the feed is protected.

If wildlife is bothering your feed, 3D fence might be an option. We cannot predict the wildlife movements, but watching your hard work being eaten up or wasted is awful hard to watch. There is no perfect design, a little creativity goes a long way in making a 3D fence. If you're not sure where to start, we at Grey Wooded can help you. Whether it be design ideas or tools you'll need to get it done, we're here to help you protect that hard earned investment.



The Invasive Fish Hiding in Your Backyard

Janine Higgins, Community Engagement Lead, Alberta Environment and Parks

Lurking beneath the surface of Alberta's water is something much scarier than the ghosts and ghouls you might have seen walking the streets on Halloween. Goldfish, among other invasive fish, are showing up all over the province – and not just in pet stores or your aquarium at home.

Infestations have been found in storm water ponds at alarming rates over the last few years. To date, we currently have 47 known populations of non-native fish, mainly goldfish, across the province, mainly in urban stormwater management ponds. How did they get there? People have been releasing their unwanted pets into the neighbourhood ponds behind their homes thinking this is more humane than other alternatives.

So why are the goldfish an issue? Well, believe it or not, the sweet little pet goldfish you've cared for over the last 8 months can grow to be the size of a dinner plate! Now, you might be thinking to yourself "Wait a minute, I have tried to raise goldfish in my aquarium and they don't last a week...no way they can survive an Alberta winter!" Well, that is just not true.

These fish can tolerate large fluctuations in water temperature and low levels of oxygen, meaning they can survive the winters in poor water quality ponds. Feeding on snails, small insects, fish eggs and anything else they can fit in their mouth, they are both a competitor to and predator of our native fish. They stir up the mud as they feed on the bottom of the waterbody, making the water murky and affecting the growth of aquatic plants. Their presence in stormwater ponds and effect on the ecosystem prevents the stormwater management facilities from doing their job – cleaning and filtering the water before it re-enters a nearby river.

Don't think it's just goldfish that we are finding out there. The goldfish's wild sister species, Prussian carp, have also been found in the Red Deer, Bow River and South Saskatchewan watersheds. Alberta is the only jurisdiction that remains with this introduced fish, and in a recent study, it was stated that the arrival of Prussian Carp pose a serious concern for fisheries managers. It is likely that the introduction and spread of Prussian carp was facilitated by humans.

Another example of a fish illegally introduced by humans was the Black Bullhead in Texaco East Pond in Fort McMurray. The discovery of this fish prompted closure of the pond in 2015, followed by an eradication treatment. The pond remained closed for two years before fisheries biologists were able to confirm the treatment was successful.

The ecological impacts of all three of these invasive fish are similar. They disrupt the natural ecosystem, eating our native fish's food, creating turbid water and altering plant growth. They can even spread diseases. Even worse yet, is that they can survive and thrive throughout Alberta's cold winters, even as far north as Fort McMurray. So what's being done about their presence? Municipalities are partnering with AEP to treat high-risk ponds that directly connect to a river, using a plant-based pesticide called Rotenone. The City of St. Albert and Town of Olds both did treatments this year to get rid of their fish problem. We also encourage



people to catch and kill Prussian Carp.

If all of this is not enough to deter those thinking of releasing pet goldfish (or any other aquarium pet) into a neighbourhood pond, think about the legal issues. Releasing fish into a public waterbody is **illegal** and individuals can face penalties up to \$100,000 and a year in jail!

So, what do you need to do to protect our water resources from these invasive fish?

DON'T LET IT LOOSE! Give your unwanted goldfish to a friend, take them back to the pet store, or donate it to a school where kids can enjoy watching them eat their breakfast. Whatever you do, do not "set your fish free" into that near-by pond!

Don't flush your dead fish – whatever they died from could eventually get into our waterbodies and harm native fish. Provide them with a proper burial in the backyard, or dispose of them in the garbage.

Report any invasive species to 1-855-336-BOAT (2628). They can only be removed if someone is aware that they are there!

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ALUS in Red Deer County – the Numbers are Adding Up!

By Ken Lewis, Red Deer County Conservation Coordinator

In September, the County worked with Alberta Agriculture to tour the Tindastoll Watershed, where Alberta Agriculture and area farmers have been working on the Phosphorus Watershed Project. We learned about the project, and visited some of the farms participating. Two of those farms are also ALUS farms.

I was asked to put together a presentation about ALUS for the Tour. I gathered up the numbers so far...and was reminded just how well the program is taking off in Red Deer County. Here's those numbers (to September 2017):

5...the number of years Red Deer County has been doing ALUS (2013, 2014, 2015, 2016, 2017)

5-10...the number of years we sign ALUS Contracts for with our ALUS Producers

64...the number of different farmers and ranchers involved in ALUS in Red Deer County

1,053...the total number of ALUS Projects in Red Deer County

1,965...the number of wetland related acres enrolled by Red Deer County ALUS Producers

2,730...the total number of acres enrolled by Red Deer County

ALUS Producers

220,000...the number of feet of range and riparian management fencing installed by Red Deer County ALUS producers

\$1,009,460...the number of dollars we are providing to Red Deer County ALUS Producers during their ALUS Contracts

Please contact me anytime (klewis@rdcounty.ca or cell phone 403-505-9038), if you'd like to be a part of the ALUS Program in 2018.



Free Environmental Farm Plan Workshops

Second Thursday of Each Month at 10-2 pm

Red Deer County Council Chambers

Red Deer County Farmers and Ranchers are invited to join us for FREE Online Environmental Farm Plan (EFP) Workshops.

This is a chance to start, complete or update your EFP.



Lunch is Included
Please bring a laptop as this is an Online EFP Workshop (via internet).
For More Information and to Register: Contact Agriculture Services
403.342.8654 or agriculture@rdcounty.ca
Registration Deadline: First Thursday of each Month
For more information on Environmental Farm Planning, visit
www.albertaefp.com



Managing Winter Feed Costs

Barry Yaremcio Beef/Forage Specialist, AB Info Center, Stettler



Feed costs for a cow calf operation contributes approximately 70% to 75% of the variable costs incurred on a cow calf operation. 75 to 80% of the feeding costs occur during the winter feeding period. Harlan Hughes an economist from North Dakota State determined that a \$1.00 reduction in winter feed cost improves overall operation profitability by \$2.48. Adjustments to the winter feeding program can help manage these costs.

The "Blade" has published articles from Grant Lastiwka and others on the economic benefits of swath grazing, bale grazing and dormant season grazing of perennial forage stands. The authors have covered this topic well in the past. This article will focus on some of the possible feeding options to reduce winter feeding costs.

Meeting the nutrient requirements of the cow is the primary concern. Proper nutrition improves the quantity and quality of colostrum provided to the calf, reduces calving difficulties, ability of the cow to produce milk and the number of pregnant cows after the breeding season. Temperatures, snow accumulation, bedding and wind chill all contribute to nutrient requirements.

The feeding of a trace mineral salt with selenium, along with a good mineral and vitamin program will cost approximately 10 to 14 cents per head per day. Money well spent. Using information from feed test results and a ration balancing program such as Cow-Bytes is advisable to balance the ration.

Adjustments to the mid and late pregnancy feeding programs are the biggest opportunities to reduce feed costs. This is when a person can add in straw, slough hay or other low cost feeds such as oat hulls into the ration. There is minimal opportunity to feed straw or low quality forage after calving.

A 1450 pound cow in mid pregnancy can eat approximately 35 pounds of mixed hay or 85 pounds of cereal silage per day. If quality is good, this could result in the cow gaining one pound of weight (or more) per day. If the cow is in good condition and this feeding program continues, there could be calving difficulties because of excess fat in the birth canal. Currently, hay is valued at 5 to 6 cents per pound resulting in a cost ranging from \$1.75 to \$2.10 per head per day. Silage is valued at 2 cents a pound for a cost of \$1.91 per head per day.

How to reduce costs? When substituting in some straw or slough hay for the good hay or silage, maintaining energy and protein in the ration to meet animal needs is key. There might be some changes to the mineral / vitamin supplementation program as well. In mid pregnancy, it is possible to remove 15 pounds of hay

and replace it with 15 pounds of straw. The second option can be removing 35 pounds of silage and replace it with 15 pounds of straw. Daily costs for the hay – straw ration is reduced by \$0.37 to \$0.52 per head (\$1.38 to \$1.58 per head per day) and silage – straw ration reduces cost by \$0.41 to \$1.50 per day per head per day. The cost of mineral and supplements is not included in these calculations.

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Continued From Previous Page

In late pregnancy, protein and energy requirements increase due to the stage of pregnancy and colder temperatures. The colder temperatures increases the amount of feed an animal can consume on a daily basis due to increased passage rates. A straight hay ration is fed at 37 pounds a day. Hay can be fed at 29 pounds per head per day and straw inclusion is reduced to 8 pounds per head per day. Silage feeding rate increases to 73 pounds per head per day with straw included at 7.5 pounds per head per day as well. Reduced costs range from \$0.20 to \$0.28 cents per day for the hay and straw ration and \$0.26 per head per day for the silage and straw ration.

The differences in total feeding costs by mixing different feeds together to make a ration can be substantial. Assuming a 100 cow herd that is calving out March 1. What is the difference in winter feeding costs?

Creating a balanced ration is half the story. The feeding system used impacts feed waste and nutrients not consumed by the cow. Research completed at the Agriculture and Agri-Food Canada Research Station in Lacombe found that bales run through a bale processor resulted in 19 % of the forage was not consumed by the cow. Bales that were rolled out had a 12.9 % waste factor. Shredding hay into a bunk feeder resulted in 0 % waste. 75% of

the wasted feed was the fine leaf material that contains more nutrients than the stems. Protein loss was greater than the physical loss.

1450 pound cows	Mid Pregnancy		Late pregnancy	
	Cost / day	Cost / 45 days	Cost / day	Cost / 90 days
Hay @ 5 ¢	\$ 1.75	\$ 78.75	\$ 1.85	\$ 166.50
Hay@ 5 ¢ + straw	\$ 1.38	\$ 62.10	\$1.65	\$ 148.50
Difference	\$.037	\$ 16.65	\$ 0.20	\$18.00
Hay @ 6 ¢	\$2.10	\$ 94.50	\$ 2.22	\$199.80
Hay @ 6 ¢ + straw	\$ 1.58	\$ 142.20	\$ 1.94	\$ 174.60
Difference	\$0.52	\$47.70	\$ 0.28	\$25.20
Silage	\$ 1.91	\$ 85.95	\$ 2.09	\$188.10
Silage + straw	\$ 1.50	\$ 67.70	\$ 1.83	\$ 164.70
Difference	\$ 0.51	\$ 22.95	\$ 0.26	\$ \$23.40

The difference in feed costs could be \$ 35 to \$ 72 per cow during mid and late pregnancy. Each situation will be unique. Each farm will need to pencil out their own numbers.

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Nov. 14, 2017

Registration Begins
at 9:30

10:00-3:00

Mountain View
County Office



Environmental Farm Plan Free Online Workshop

Register by November 10, 2017 to Reserve Your Spot

Coffee & Lunch Provided

Please bring your own laptop. One will be provided if needed.

Space is Limited

Register by Nov. 10

<https://environmentalfarmplanworkshop.eventbrite.ca>

For Information Contact:

Daniela 403-335-3311 Ext. 204

dlemus@mvcounty.com



Environmental Farm Plan Free Online Workshop

Register by Nov 24, 2017 To Reserve Your Spot

Coffee & Lunch Provided

Please bring your own laptop. One will be provided if needed.

Space is Limited

To Register:

<https://ponoka-county-efp.eventbrite.ca>

For Information Contact:

GWFA: 403-844-2645



November 30,
2017

Registration Begins
at 9:30

10:00-3:00

**Ponoka County
Office**

**4205, Highway 2A
Ponoka**



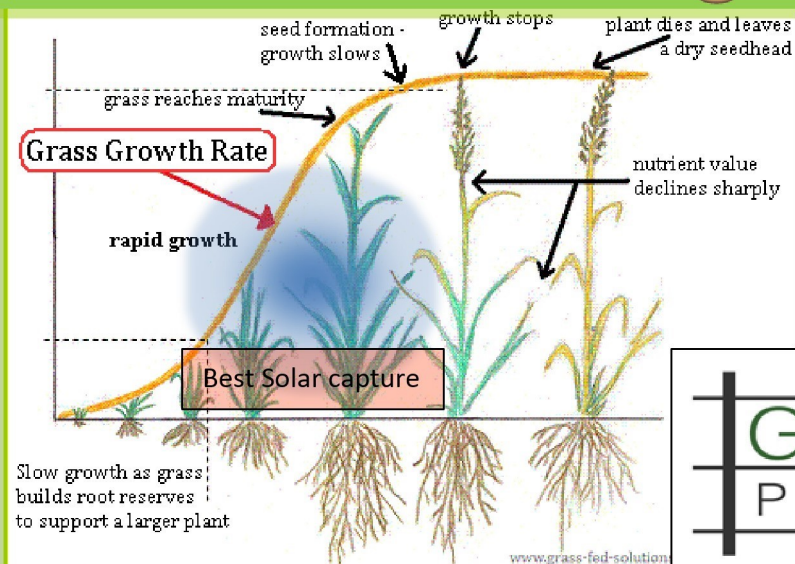
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Lessons from the Weaning Corral

Lloyd Quantz, Greenedge Precision Grazing

There's nothing that transfixes your thoughts on the challenges in the cattle business in Canada like a group of forlorn calves standing along a shelter fence on a windy day bawling for their momma's and a warm feed of milk. The event is called *weaning* and too often the place is a commercial scale feedlot on the prairies and the time is November – windy and wet - with the temperature falling to the coldest these young creatures have ever seen. Stocking around the auctions and feedlot pens are persistent bugs that love to get inside these young stressed bodies and cause havoc! This hazard is cause for alarm by owners and pen riders alike. But, weaning does not need to be this way. The reduction of stress and startup on new feed rations can create a dramatic shift in industry viability. Unfortunately, one of the oldest practices in the book is to “shrink” the calves as they go through the sales ring to bring a higher price per pound – the auction buyers preferring shrunk weights and hoping the first week or two will show a great gain as the calves fill-up on feed and water after their sometimes long and harrowing journey from Momma's side. It's just the way it works – But, slowly we see positive changes coming. Almost 3 decades ago I learned a valuable lesson in cattle sense and subsequently dollars and cents about weaning practices. One change to reducing stress in calves moved our feedlot statistics from very mediocre industry average to one order of magnitude (10X) better.

A demanding customer: I had the responsibility of running a 3000-pair cow/calf operation on 120,000 acres, finish feedling about 1800 pasture-to-plate of these calves as well as 25,000 head of bought and custom feeding calves for a publicly-traded, beef production enterprise in S.E. Alberta. We had tried to wring out some better results in the feedlot to stop the financial hemorrhaging that had bled \$75-\$100 loss per head out of each feedlot animal. Forget for the time being a profit – the shareholders just wanted to stop the size of the losses before our shrinking working capital was all gone. Some drastic measures were needed. In a good hap-penstance, the largest beef retailer in Central Canada, wanted to offer certain of their customers a ‘natural beef’ product including some consumers highly allergic to antibiotic residuals and more who preferred to know the production pedigree of the



beef they were eating - simply the healthiest animals possible. For us this meant designing and following a rigid treatment and handling protocol from pasture to plate aiming to keep animals healthy rather than spending dollars, days and weeks in the treatment pens. So, on our own ranch and on several dozen associated ranches, protocol contracts were put in place to practice, among other things, a low stress weaning program where calves were processed in advance including vaccination with an approved 7-way while still on the cows then creep fed, including long hay, then weaned on-ranch for 21 days prior to moving directly to the feedlot where they were maintained in a pen reserved for that herd of origin group for another 21 days while transitioning to feedlot rations. The contract accounted for a ‘pencil shrink’ rather than a real, physical shrink.

An amazing result. As we expected the calves transitioned to feedlot life noticeably quieter and better. What we didn't quite expect were the global health results. Knowing that any animal that became sick needed to be dropped from the program and put in with the regular run of calves, the stress on us was to maintain enough program animals to meet our commitments to the retailer.

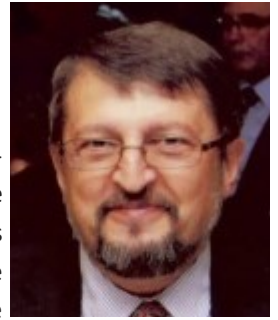
The results were stark and convincing. As the data poured in we realized that the morbidity (treatment) rate had fallen from our usual 50% rate to nearly 5% - a ten-fold reduction in treated animals. And, better still, we dropped our all-risk animal loss (those not finishing the normal feeding program for any reason) to 1% from a not-so-shiny 5% - a 5-fold improvement. Wow, that accumulated to a sizeable gain. First, we were able to meet our contract shipment numbers, and second, in savings from reduced labor, medicine and of course death losses which significantly impacted our bottom line. The amazing result was real-time proof of something that seems so simple - that the reduction of stress of weaning can bring rather sizeable benefits to our industry. While I realize it means working with a reliable feedlot partner to manage direct shipments and low-stress weaning, there are

enough gains and risk reducing reasons to make the work well worthwhile. -LQ/2017

The weaning process can be even lower stress if the pairs are separated leaving the calves in a familiar grazing paddock and kept across an electrified fence for 3-4 days. With the essentials such as water, protection and good feed source the mother-calf bond will break gradually with calves often lying next to the fence and the contented mother on rest from grazing herself lying on the other side. A mature animal – yearling or even a horse - with the calves will provide leadership for the calves to follow to some daily grazing. (Greenedge Fencing can provide recommendations and effective fencing for weaning setups)

Climate Change and Grassland Management

Mustafa Eric, AFSC Communications Coordinator



The science is becoming increasingly convincing that the weather patterns are changing and the repercussions of the change are being felt painfully as witnessed after the successive record-breaking strength hurricanes in the Caribbean during the late summer. While we have yet to know whether the instability in climate phenomena will, in time, settle into new patterns or the instability will intensify to wilder fluctuations, one thing landowners can do is to adopt good management practices so that soil health is kept strong and their operations are less affected by major changes in moisture levels.

For good management practices, the first requirement for a producer is to know the characteristics of the land. "Climate change affects different areas in different ways," said Karin Lindquist, Forage-Beef Specialist at the Ag-Info Centre of Agriculture and Forestry, Alberta. "Areas that tend to receive precipitation that is at or above 350 mm per year, like the Aspen Parkland, is more affected by drought than the dry mixed-grass prairie," she added. "The reason is that the prairie is already adapted to climatic extremes that include severe droughts or long hot, dry periods."

But regardless of the differences in levels of vulnerability to moisture level fluctuations, one constant, soil health, needs to remain at the top of all considerations for all producers. "Some studies have shown that areas that are more heavily utilized...tend to be the areas most susceptible and sensitive to the effects of climate change," Lindquist continued.

"The reason is that these areas do not have the litter cover to protect the soil and keep the soil cool, and plants have shallower roots than they should. "If grasslands and forage crops can be managed so that they have enough root depth and volume and litter left to cover the soil surface, then they have a better chance at surviving climatic extremes than those that are mismanaged." And one of the most detrimental ways of mismanaging the grasslands is allowing overgrazing. "Overgrazing is a function of time, and not the number of animals," stresses Lindquist. Because time is of essence to allow the plants to fully recover and to regain root strength so that the litter cover on the soil remains robust and the soil is not exposed to influences that harm its fertility. "If there is reduced litter over the soil surface, this encourages soils to warm up, which, in turn, causes soil to lose water via evapotranspiration," she added.

But what happens under the surface of the soil alongside on top of it is important to understand, according to Lindquist. "When plants are grazed, there is always going to be death loss in the roots. This

naturally happens no matter if the manager is doing things right or wrong," she said. "Grass plants strip off the old roots and grow new ones. But, just like with the top-growth, if plants are grazed before the plant has recovered and roots have been able to re-establish themselves, root growth is also going to be compromised to the point of suppression if plants are continually bitten before they have time to recover."


So overgrazing not only harms the plants by suppressing their re-growth both on and under the surface of the soil, but also deprives it of nutrients those roots can add to its composition. "This reduces the amount of organic matter in the soil, as it's the roots of plants that provide the most soil organic matter, not so much the litter above-ground," Lindquist added. "Plants that have not enough time to recover cannot put down as much litter as what's needed to protect and cool the soil. And plant populations can and will decrease in the stand."

And that brings us to the problem of weeds. "Weeds come up because of lack of competition from the grasses and other more desirable plant species," she explained. "But weeds especially are very likely to come up in areas... where bare-ground is present. And what makes weeds so tough to get rid of, without resorting to herbicides, is that they tend to quickly take over with tiny seeds or anti-quality factors within the plants that force the animals to eat more of the over-utilized desirable plants and clear the way for more area for more of these weeds to flourish. "It's a wicked negative feedback loop," she said.

Scientific evidence is pointing to increased average temperatures in the years and decades to come, which means hot and dry conditions will be more frequently experienced than before. That renders sound soil management practices even more important than they have been until now.

While management practices are vitally important, Mother Nature always has the final say over how the pastures and grasslands will perform in any particular season. For producers who might want to hedge their risks against droughts, the Moisture Deficiency Insurance offered by AFSC provides a number of options for pastures. AFSC website (www.afsc.ca) under the insurance tab-perennial crop programs contains detailed information on the available options. More information is available at AFSC branch offices.





Cow-Calfenomics

Enhancing Farm Business Decisions in Alberta's Cow-Calf Sector

Date	Location	Venue	Time
November 14, 2017	Brooks	Heritage Inn Hotel and Convention Centre 1217 2 Street West	9 a.m. Coffee and registration 9:30 a.m.-3:30 p.m. seminar
November 15, 2017	Lethbridge	Country Kitchen Catering (in the lower level of the Keg) 1715 Mayor Magrath Dr S	
November 16, 2017	Olds	Pomeroy Inn & Suites at Olds College 4601 46 Ave	
January 23, 2018	Vermilion	Vermilion Regional Centre 5702 College Dr	
January 24, 2018	Westlock	Westlock Inn & Conference Centre 10411 100 St	
January 25, 2018	Stettler	Stettler Agricultural Society 4516 52 St	

This year's agenda will cover:

- Cattle market situation and outlook
- The use of risk management tools in the beef industry
- Business structures for new entrants
- Production enterprise analysis
- AgriProfit\$ beef
- A farmer's guide to agricultural credit
- The value of having a mentor

For more information, visit agriculture.alberta.ca/cowcalfenomics

How to Register: Please register by Tuesday, November 7 for the 2017 fall meetings, and by Tuesday, January 16 for the 2018 winter meetings. The registration fee is \$30 and includes lunch. **Registration for students and young producers (those under 25) is free**, sponsored by the Alberta Beef Producers. To register, please call the Ag-Info Centre at 1-800-387-6030 or register online at <https://eservices.alberta.ca/cowcalfenomics.html>

If you are exempt from paying GST, please call 1-800-387-6030 to register.




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FOR MORE INFO AND TO REGISTER VISIT OUR
WEBSITE: www.absoilgrazing.com

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One Genome, One Health, Our Animals, The Environment and US

Livestock Gentec Conference Summary

The theme of this year's Livestock Gentec Conference was One Genome, One Health: Our Animals, the Environment and Us. The two-day conference provided an overview of the investigation and application of genomics across many disciplines. Participants also explored the challenges, benefits and opportunities at the intersection of Alberta's food production and human health. Talks ranged from separating agricultural myth from fact, animal health, and building partnerships to evidence-based outcomes in the beef industry, the rancher's perspective, and students showcasing their research.

Steven Jones of the Michael Smith Genome Sciences Centre spoke about personalized medicine in human cancer treatment. In a true flash of cross-sectorial insight, he suggested that, in genomics, research done in one area can inform research done in another to the betterment of both.

The two panel discussions elicited plenty of questions and feedback. The first traced the path from discovery through commercialization, distribution and application as Alberta Agriculture and Forestry's John Basarab together with Delta Genomics CEO Michelle Miller, and Shannon Argent, Manager of Olds College's Technology Access Centre and Doug Wray (rancher) discussed the processes involved at each step in moving EnVigour HXTM from lab to pasture. They also discussed lab logistics, and the new EnVigour HXTM distribution agreement between the Technology Access Centre and Delta Genomics. The goal of the agreement is to give producers easy access to EnVigour HXTM and valuable educational experiences for students involved in agricultural training at the college. As the person responsible for the development of EnVigour HXTM, John outlined the value to the cow/calf sector of verifying parentage, determining genomic breed composition, and assigning a Vigour score to each animal in a herd. He illustrated an increase of approximately \$81,000 per 100 cows over five calving periods when comparing a high-vigour herd vs. a low-vigour herd. Rancher Doug Wray spoke about some of the practical considerations involved in implementing new technologies into a cow/calf operation and ways to maximize the benefits given the practicalities of running a ranch.

The second panel featured Alta Genetics Inc.'s David Chalack, Alberta Innovates' Rollie Dykstra, Acceligen's Tad Sonstegard and Cattleland Feedyards' William Torres with moderator Stephen Morgan Jones from Amaethon Agricultural Solutions to talk about moving ideas through to innovation in the province. Key takeaways were the benefit and need for additional resources dedicat-

ed to the knowledge translation and commercialization of products like EnVigour HXTM. Discussion also indicated that more support is required for entrepreneurs, and communication between stakeholders needs to improve.

At the poster session, one student in particular, Sasha Van der Klein, originally from the Netherlands, was keen to highlight Alberta's impact on the global research community.

"I was attracted to Alberta because of the research of the UofA's Martin Zuidhof. It was very inspiring," she said. "The conference gave me the chance to tell people about that."

Similar stories were heard from the poster winners, such as Jiehan Lim and Mohammed Abo-Ismael originally from Malaysia and Egypt respectively. They were pulled to Alberta because of the reputation for excellence in the application of genomics in livestock. "This year's Livestock Gentec Conference once again showcased how Alberta is a leader in developing genomic solutions for Canada's livestock producers but also in ensuring that every effort is made to assist producers in adopting these technologies into their production systems," said Dr. Cornelia Kreplin, Alberta Innovates Executive Director of Sustainable Production/Food Innovation. "The lineup of speakers not only clearly illustrated how to use tools like EnVigour HXTM to improve the performance of their herds, but engaged participants to dig deeper in identifying ways we can continue to move forward in improving our province's vibrant livestock industry."

Livestock Gentec CEO Graham Plastow couldn't resist the play on words pun when he described the conference as a "heterosis of ideas in action"... the coming together of ideas to improve outcomes. "One of the most exciting things in research is when you hear from someone investigating something completely different, and you suddenly see a way to overcome a barrier in your own work. I saw several light bulbs come on at this year's conference," he said.



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