The Blade

Monthly Newsletter of the *Grey Wooded Forage Association*

September, 2018

COMING UP

Nov. 5-8	Edmonton Northlands	Royal Agricultural Society of the Commonwealth Conference www.therasc.com
Nov. 14-15	Calgary Sheraton Cavalier	Canadian Forage and Grasslands Association Conference www.canadianfga.ca
Nov. 22	Crossfield Community Hall	Red-Bow Water & Agriculture Conference details on pages 12 & 13

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Cover Crops Demonstration Plot, By Brenda Kossowan

In This Issue:

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Harvest Time Safety Message

By Maria Champagne, ex-officio, GWFA Board of Directors

As we approach the fall season, many of us are thinking about getting ready to harvest our crops, some of you might already be taking on that task. Harvest of crops or annual forages is often stressful. If you have livestock, you are monitoring forages for optimal cutting time and then patiently waiting for it to dry. You may be doing silage and monitoring moisture levels for proper fermentation to occur.

Similar monitoring occurs with crops. You hope the weather will cooperate and give you a nice plump kernel to develop and mature nicely. If mother nature holds off her fury until late in the season, the stand dries and you don't have to run your grain through a dryer to achieve top quality grain for bin storage. In turn, your cereal crop may be grown for green feed bales or swath grazing for winter feed. Either way, the clock is ticking, the days are getting shorter and you are getting anxious to get going and to be done.

It's all about being prepared, ready for the busy task ahead: Keeping our minds and our healthy in check and being safe in the process. We get so focused on the task at hand that we often neglect to care for ourselves. Long days and nights are in the forecast so here are a few tips to keeping yourself fueled up for the job and avoid fatigue and injuries.

Your number one priority should be yourself. As producers, we often put ourselves last and our livestock and crops first.

To manage the long hours, fuel your body with nutritious meals and snacks. Rather than one or two big meals a day, try eating smaller meals more often and snacking throughout the day. This allows for your metabolism to be more constant and prevents big hunger and tired feelings before and after a big meal. Snacking throughout the day also prevents dealing with grumpy hungry people!

Focus on the job – don't get tunnel vision. We often are so focused on a task and getting it done as quickly as possible that we forget to assess our surroundings for hazards. Always remember to look for others even though you might be working by yourself. Maybe someone has decided to come help or bring you a meal or simply stop in for a visit unannounced. We cannot assume that they know how to be safe around the task you are performing. It is everyone's responsibility to watch out for each other's safety and prevent injuries from occurring. If you see something that is unsafe, make efforts to correct it. If you see someone being unsafe, stop them before they can potentially get hurt. Take this situation and turn it into a teachable moment to learn how to work safely.

Harvest time encompasses many hazards. Although we are familiar with these, we should not allow ourselves to become complacent. We should always be reminded of power-take-off safety. Incidents happen quickly around a PTO, so prevention is key. Avoid walking over a PTO. Do not wear loose clothing that can get snagged or entangled in the PTO. As more women are operating PTO-driven implements, it is wise to remember to tie long hair back. For you men out there with long hair and beards, this applies to you as well: Time to rock that man bun! Also remember to cut or remove strings on garments such as a hoodie, bunny hug, kangaroo, or whatever you wish to call this particular piece of clothing.

Auger safety seems straight forward. However, every year in Alberta we see injuries and fatalities with this piece of equipment. Keep the guards in place – they are there for your protection. You may feel that they slow the binning process down but removing them may halt your harvest. Do not use your fingers or toes to get the last few kernels of grain out of the auger hopper or boot.

Avoid removing belts by hand to stop the auger. You may think these shortcuts are faster, but they eventually bite back.

We are also seeing an increase in the size and length of augers, causing powerline safety awareness to be at the forefront. Consider having someone spot you as you are moving equipment around powerlines. An extra set of eyes can prevent contact with a powerline and severe injuries or fatalities. If you can avoid storing any equipment or bales by a powerline, this would help lessen the risk of striking a powerline.

Late fall is also a busy time for many producers hauling hay and straw bales to the farmyard. When loading bales, let's not forget to work safely.

Keep the tractor bucket as low as possible, go down a hill rather than across it, avoid sharp turns at the bottoms of hills and watch for overhead hazards such as powerlines.

Hauling bales back to the storage yard using public roads can be challenging. Practise defensive driving and be comfortable doing this task. We all know that it doesn't matter how big your tractor is on the road; someone will try to cut you off, so be ready for it. Help share the road and be safe. Ensure your reflective triangles are on your tractor and on your bale hauler, wagon or flat deck trailer. Every piece of equipment you are towing must have its own "slow moving" triangle and be kept clean and visible to other motorists. Let us not forget the importance or properly functioning flashers on our vehicles and equipment for safe turning to occur.

Remember, you are your greatest asset and your farm needs you. Work safely this fall and have a great Harvest!

Farewell Message from our Summer Student

By Erin Willsie

As this is my final article of the summer before I head back to school for the year, I wanted to talk about my exciting summer, as I was very busy both in and out of the office.

Brenda and I learned how to work together efficiently not long after we started, on May 16. I feel very lucky to have spent a summer learning with her.

As the summer intern, my job was to work on our social media presence and update the website. So hopefully you've enjoyed the Facebook posts.

I also helped with building *The Blade* and with mailing them out. In the case of events, I helped plan, keep track of attendees and build promotional posters.

My office skills have developed exponentially since I started, and I hope to put them to good use in the future.

On the flip side, I took over running several of our projects for the summer as mentioned in my previous articles.

I was given the chance to learn about weevils, like what they do and how they tackle thistle patches, before heading out to the field to look for proof of their presence in our site, which was created in the previous year of the project, and showed how they had survived the winter.

For our pollinator project I did site checks to find new habitats for pollinating species created at farms without our association's influence, which is to aid in bringing awareness to and educate about the loss of habitat for these species.

Our other projects needed only some contact with the office to make sure they were developing properly.

Throughout the summer I've had many new experiences and got to meet lots of exciting people along the way. T

Thank you to everyone who has helped me this summer on my journey and I hope that everyone has a successful fall.

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Office Report

By Brenda Kossowan, manager

A young man walked into the store where I hang out on weekends and he seemed quite amazed at the sudden change in weather. A biting wind was blowing through the door and it had carried along a fair dump of rain and snow.

"I come from Nova Scotia. Is this normal?" he asked through chattering teeth.

I replied that there is no normal in Alberta at any time of the year, and that it is not unheard of to have snow squalls and outright storms in the late summer as the days shorten.

After weeks of burning hot sun with virtually no relief, the wet weather was a welcome start for next year, even though it comes in the middle of harvest and caught some hay growers with their crops lying in the field. And that, I suppose, is the origin of that familiar Alberta and Saskatchewan expression: Next Year Country.

Next year, we should have lots of moisture left in the ground.

Next year, maybe the hailstorms will miss us.

Next year, maybe . . .

One of the founding principals of this forage association's existence is the idea that we can take some control over what happens next year and in the years and decades to follow. We look at the impact of farming practices through history and we take those lessons to become more sustainable, to ensure that water supplies and soil can withstand extreme weather conditions and that our fields and livestock can continue to thrive in concert with nature rather than in opposition to it.

This month, *The Blade* includes a five-page feature based on a cover crop demonstration plot operated by Clearwater County and Performance Seeds, with help from the Grey Wooded Forage Association. The demonstration plot was featured during the county's annual West Country Ag Tour, which highlighted activities in the region for two busloads of people—largely livestock producers. Speakers discussing the demonstration plot shared one observation that we are hearing almost daily: GWFA was formed more than 30 years ago to look at ways to improve grazing and livestock management practices. We have come almost as far as we can on that front, but we have a long way to go in terms of understanding soil health and the various ways producers can enhance the land beneath their feet.

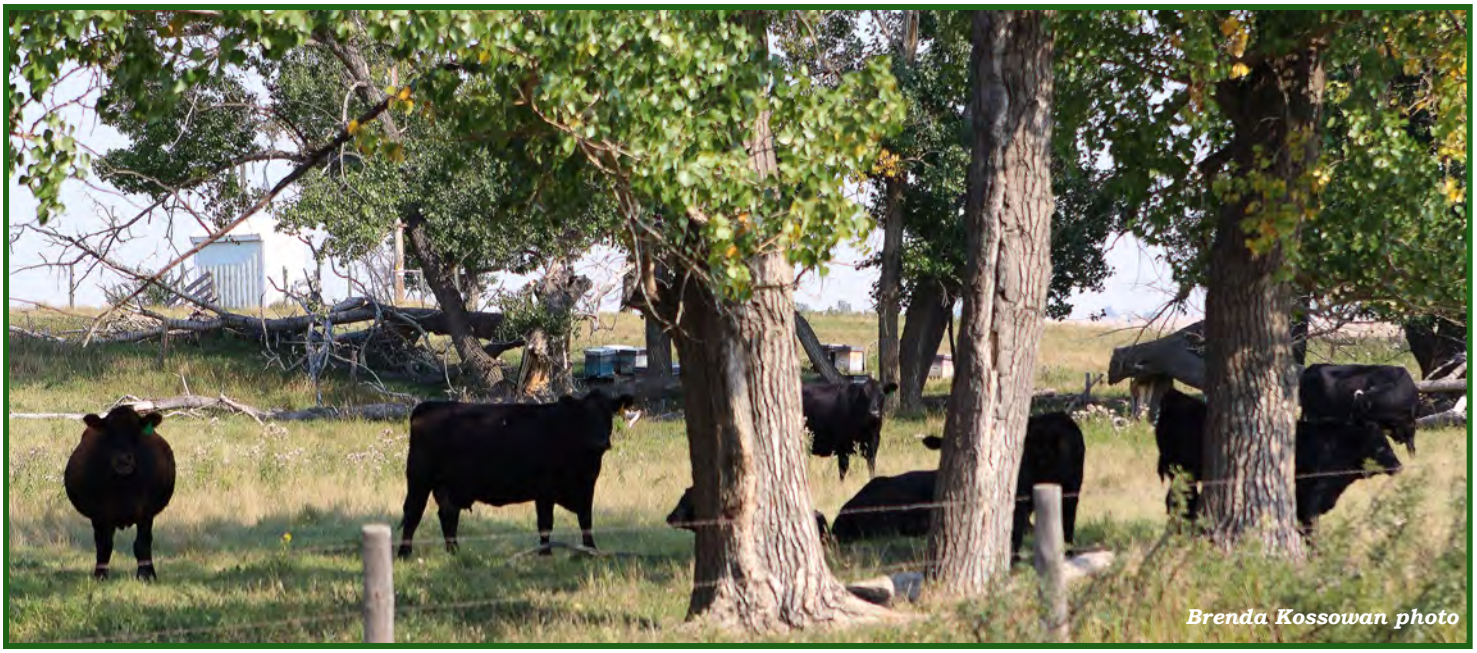
There is also some interesting comment in Deb Skeels's profile on Page 17 about social licence, sustainability and the reasons farmers need to show consumers the methods they use to care for their land and their animals. During our interview, Doug told me his and Deb's goal is to improve the public's generally unfavourable perception of livestock production and, hopefully, benefit economically from that change.

Before closing I would like to express my thanks to the GWFA Board of Directors for having enough faith in my work to offer me a permanent position.

Thanks also to Erin Willsie for the work she did as a summer intern. Although she has returned to her studies, Erin continues to work a few hours per week with the GWFA, ensuring that our web page and social media sites are up to date.

The board is now refining the job description for the livestock and forage specialist, likely with a new title as well, and hopes to fill the position in October so we can get to work on planning for next year.

In the meantime, GWFA is laying plans for a variety of events over the fall and winter with an aim to better serve its members and attract more people into the fold.



Brenda Kossowan photo

Soil Health: Clearwater County Cover Crop Demonstration Plot

Earlier this year, technicians from Clearwater County, Performance Seeds and Grey Wooded Forage Association created a project that would investigate the role of cover crops in creating healthier soils. On August 23, the demonstration plot located near the Rocky Mountain House airport was the first stop of the day for the county's annual West Country Ag Tour. The following pictures and stories were taken from presentations by the various partners, including Anne-Marie Bertagnolli and Danielle Ens from Clearwater County, Greg Paranich from Performance Seeds, Karin Lindquist from the Ag-Info Centre in Stettler and Rocky-area producer Ken Ziegler representing GWFA.

Water Infiltration Demonstration

Clearwater County staff Anne-Marie Bertagnolli and Danielle Ens introduced the trial as well as a water infiltration simulator created and built by Red Deer and Clearwater Counties along with Alberta Agriculture and Forestry.

By August 23, the day of the tour, the varieties seeded into the plots were struggling from extended drought while volunteer oats were everywhere.

"This is typical; you could have oats with your cover crops, so that's OK by us, but you can see that they are struggling and that is obviously due to the drought," said Bertagnolli.

"These were all seeded on the 20th of June, and since the 20th of June, we have had 3.3 inches of rain. We were hoping they would be further along for today.

"Unfortunately, they're not, but it's a great year to talk about cover crops because in order to retain our moisture in the soil we are going to need organic matter, which cover crops build, and we're going to need cover on the soil to prevent runoff," she said.

Ens, land care co-ordinator for the county, interpreted the mechanism behind the simulator and discussed the results shown after 10 minutes of "rain" from a truck-mounted water supply. Each of the five samples, as shown in the photo above, drained into two separate jars.

One showed the amount of water that drained through the soil while the other showed how much material it carried with it.

The first set of jars showed the level of run-off from each sample.

"With the conventional till, we've got a lot of runoff. There's nothing there to help capture the rainfall there and there is increased nutrient loss," said Ens.

Moving to the cover crop, she pointed out some run-off, but it was not as bad, and had absorbed quite a bit of the rainfall

The heavy graze sample, which included some compacted soil, showed some runoff as well, while there was not as much run-off from the lightly-grazed sample because of the light vegetation that held some of the water back.

The riparian sample showed some run-off, but the water did not take as much soil with it because of the moss and other things growing there, said Ens.

She then exposed the second set of collection jars to show the level of infiltration from each of the samples.

The heavy graze sample didn't work as well as expected, possibly because of the way the sample was cut and also perhaps because of a technical glitch which allowed extra water to fall on that spot during the test.

The samples showing the highest level of infiltration, with the least amount of material escaping the soil, were the riparian are and the cover crop, in that order.

"Depending on how you manage your land, you'll get a lot more of the water absorbed in the soil," said Ens.

Cover Crops: The Grazier's Role

By Ken Ziegler, Grey Wooded Forage Association

Over the years, agricultural producers have become aware of soil physics through summer fallow and the damage that it has caused our soils and soil chemistry because of all the science that's gone in to applying fertilizers. Relatively speaking though, we have not spent much effort understanding the biology that's in our soil. And yet, the biology plays a very important part to play in the health of the soil both from a chemistry perspective and from a physics perspective. We must begin to understand soil biology and how we can manage our land to enhance it so that our soils can produce well for forever.


Ken Ziegler

I would like you to visualize all the infrastructure that is in any town so that life can exist there. In Rocky Mountain House for example, there are six or seven thousand people, lots of dogs, cats, a few deer, the odd resident coyote and fox and lots of squirrels and birds – all kinds of life going on there and infrastructure to keep that life going, 365 days of the year.

Visualize for me the water system that's there – the system that draws water out of the river, that distributes water into every home and to every business, the opportunity for people to turn the tap on or turn the tap off. And then consider the water infrastructure that exists to take that water that's been used and send it away somewhere – all the plumbing that exists in the homes and under the streets all the way to the septic lagoons; not just the septic water but all the storm water as well, that takes the water off of the streets out of the community and back to the river.

Imagine the infrastructure that also exists for electricity. Every resident and business owner, simply flips the switch and power comes on. The wire, the power poles, the huge insulators, all of that infrastructure allows people the privilege of using electricity at a moment's notice, 24-7. And then also, think about the natural gas infrastructure that keeps the houses warm in winter time: The plumbing, the pressure system and the piping that bring natural gas to Rocky in the first place.

There's incredible infrastructure that exists in that town for people to live 365 days of the year. It's commonly taken for granted – but is still there and working.

OK, now imagine for a moment that an airplane goes across the sky, coming from the Edmonton International Airport and heading somewhere in the world, and you happen to be sitting in that airplane. You look down and you see Rocky Mountain House. You give the guy next to you a poke and you say to that person: "That's my town there. I live there, that's Rocky Mountain House." And the person looks over and says, "Oh, that's cool."

All you can see from up there is that little block of buildings and community that share and use all that infrastructure that's down there. You can't see much of it, can you? It's on a minute level when you're way up there.

That is how we are with our eyes right here at this very moment, looking down at the soil. We sort of know what's there because we've been told that it's there. We've been told that it's important for life to exist, but we really can't see it. As a matter of fact, even if we get down to ground level and we put our eyes as close to the soil surface as we can, we still can't see it. It's all at a very small, microscopic level.

Now imagine with me, three scenarios that could happen while living a quiet day in Rocky Mountain House with all of that infrastructure. Imagine that a massive tornado comes along and just decimates the town. It knocks over buildings, tears off rooves, breaks windows – there's a conundrum for quite some time. People are crying out, the ambulances are travelling, helicopters are taking people to Calgary and Edmonton via STARS and we're calling for disaster assistance. There's been a massive catastrophe in Rocky Mountain House. People die. People get hurt. It's a reality that happens – not very often, but it could happen to that population living there. *(continued on Page 8)*

Gentle Reminder: **2018/19 memberships are past due.**
Please help support your organization and ensure you have full benefits of membership, including reduced costs for events and access to exclusive programs.
Please see the back cover for details.

Cover Crops Demonstration: Plot Varieties and Response

By Greg Paranich, Certified Crop Advisor, Performance Seeds

One of the things that we've been talking about with this plot, we heard people talk about soil health, cover crops and what does all that mean? Before we get into the individual building blocks, let me go over what I feel about why we want to talk about these things. "A nation that destroys its soil destroys itself." Franklin Delano Roosevelt mentioned that, and they had a program to address that, and I think that is as true now as it ever has been, and it's going to continue to be a key focus for anybody who is in agriculture, regardless of what you do.

Greg Paranich (cowboy hat) helps producers with their cover crop questions

What is soil health? We can't say it's got pink cheeks or anything like that, or take its heart rate, so how do we say, "healthy soil?" It's the continued capacity of the soil to function as a living eco-system, so there's a living eco-system beneath our feet and beneath everything that we grow, whether it's annual crops, or perennial crops, or anything that's forestry or anything else.

There are four primary principles of soil health:

- Maximize continuous living roots.
- Minimum disturbance (no-till or minimum-till cropping; permanent cover)
- Maximum soil cover
- Maximum Biodiversity

There's a lot of different avenues, a lot of intricate segments regarding this – it's not just one singular, linear type of solution.

One hectare of healthy soil contains about 20 tonnes of micro-organisms at about six inches of depth. That's about 20 cows on two and a half acres. Stop and think about that, do we have that in our soils? That's one thing we can think about when we look at our soils at home in our different fields. *(continued on Page 9)*

(continued from Page 7) Or maybe look at a different scenario: A massive hailstorm, with hailstones the size of baseballs that smashes up the rooftops, tears off the shingles, breaks out windows and tears off the siding, resulting in massive damage, but the fundamentals of the buildings are still there standing as firm as before.

Now, let's pretend you're a resident of Rocky Mountain House and you buy your food there and you come to the Co-op one day and you look around and there isn't any food.

Well the first response is to just head over to Sobeys but you soon realize that they don't have any food either – it's all empty. So, you go to Extra Foods and it's the same thing. Well, that's terrible.

What are we going to do now? Soon you've picked up the kids, the dog and the pet pig and off you go to Red Deer to find that there isn't any food there, either. So, we have to start making some serious life adjustments.

We start making arrangements with our local pig farmer and our local cow guy; find a market garden or two – we go back into our gardens and we start planting food. Invariably we adjust to the fact that there's no food in the traditional routes. Some of us will lose some weight as a result. Maybe the odd person might even die – not likely, but possibly.

The bottom line is that we have to readjust.

These three scenarios are what the soil microbes and the earthworms have to deal with on a regular basis when we come through with our plough or with our disc and we just tear up the infrastructure that's down there and not even realize it. All those microbes and earthworms have to adjust their lives to this massive restructuring that's just happened and have to start living life differently and beginning to rebuild which they do. They're set back, but they re-establish life again in new times, similarly to the people in Rocky Mountain House having experienced a tornado.

The next scenario, the hail storm, is like that of grain farmers practicing minimum tillage or zero tillage. The hail storm comes. It tears up the surface, but the infrastructure down below is still intact. The minimum tillage people cruise the surface when they establish the plant population without doing damage to the infrastructure down below.

The third scenario of not finding food in the grocery stores is where we come along with the silage machine, we take all the growth off and that land then is left barren of living plants.

The relationships between the living plant roots and the microorganisms underneath has ended and the world underneath the soil has to re-establish itself. Invariably, they'll survive, but they have to restructure.

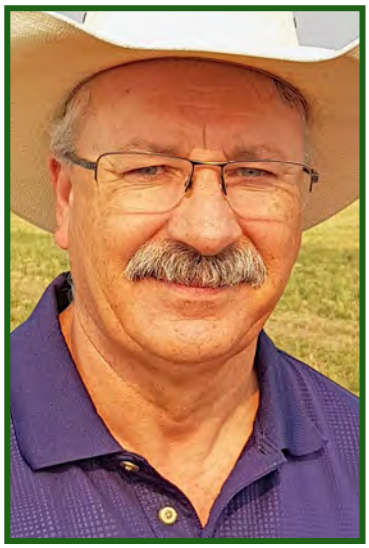
That's the heart of using growing crops to cover the soil surface. Living plants have win/win relationships with the soil microbes, each entity existing to benefit the other. As we increase the number of days of green growth per year, we invariably enhance soil biology.

The question for us as land managers is to know which crops give the soil bugs the greatest value.

As we feed the soil bugs well, they invariably feed the crops with the resulting advantage of healthy soil and good yields.

Cover Crops: Varieties and Responses (continued)

(Continued from Page 8) Where do we want to go, where are we and where do we want to go to get there? Why do we even want to grow cover crops? There's a lot of different reasons for it: Reduced erosion, increased soil organic matter and structure.



You want to conserve soil moisture, you want to improve water infiltration, you want to capture nutrients – some plants have nitrogen fixation, some have nitrogen scavenging and other aspects of it. You want to suppress weeds for weed control when you have non-crop periods, and it's reduced compaction; you want to take a look at reducing the traffic or else get the penetration, breaking up hardpans. Of course, today we're all thinking of livestock feed, where it is and where it isn't, Also, the foraging of other things, whether it's for wildlife or for bee pollination. The bottom line is increased crop yields year over year . . . so we can maintain that and actually increase that by increasing that soil health.

So, what's the rational of a cover crop. How can it work, how does it fit into a system? Basically, you're growing something in typical non-growth periods between crops or in concert with crops. You want to capture any feed opportunities, you want to capture sunlight, you want to feed the soil organisms, you want to sequester carbon, you want to capture some nutrients from further down and bring them up to the surface and make better use of limited time resources. Cover crops are going to fall into four categories: Warm-season and cool-season grasses, brassicas, legumes and mixtures of all those. There is no one simple solution – it's something that's a learning curve. It's taste test, just like in the supermarket, and then you can circle back to see just what might interest you or what might be applicable for your farm. Brassicas include turnips, kale, collards, rapeseed and canola. Legumes include clovers and alfalfa is a permanent one. The unique part about some of the cover crops coming to Western Canada are annual legumes, like annual clovers, that can give you the benefit of a legume without having to have a permanent cover on it.

The demonstration plot describes the various types and mixtures.

Forage peas is an annual with a fibrous root system that grows well in low fertility because it's going to produce some of its own nitrogen and it's typically used as a silage or a graze or both.

Next is a soil-builder mixture of four different legumes intended for nitrogen fixation and organic matter buildup in your soil, but it can be used for other things, too. I'm not saying you can't graze that, you can't hay it or you can't harvest it. During a year like this, anything that's green and is palatable and edible and is going to go in a bale or a pit, I think you should go there. We're going to need it.

Spring green festulolium is an Italian rye grass crossbred with an annual fescue grass. It's a cool-season grass, and depending on where you grow it, we're thinking it's going to be an annual, maybe a biannual in this part of the world, depending on how it winters. It's got some really good durability, it's got some drought resistance, it's got some heat resistance. It has been hybrid-crossbred for cool-season hardiness as well, so in this part of the world, I'm hoping it is something that can be part of our toolbox going forward because we can have some cooler falls and we can have some deferred grazing in it. It's usually a quick establishment and pretty palatable and productive, and so a lot of times you want to include it in some kind of a mix. Some people have been using it in a perennial mix when they're establishing a crop as a bit of an early cover, some early growth for some of that early weed competition.

Italian rye grass has been around and we've got some better genetics as we've been going forward. Added to silage or as an annual graze can add some of that quality and maybe look at some regrowth after harvest.

Brassicas – The intent of a lot of these is not just for the upper biomass – you get a lot of biomass on these things, so there could be a lot of grazing there, but also for penetrating hardpans or some compacted soils. Between that and leaving them in there, when they decay they're going to deposit a lot of nutrients in there so you're going to get some of that organic matter. Be aware they are sulfur accumulators, which is a feed concern, and hosts for canola related disease and pests if you are a canola grower.

The other group is where we've got the annual legumes. Annual legumes I think offer a unique and exciting opportunity for us because we can grow a legume to get some really significant nitrogen fixation in one year, and then it terminates, and we go into another crop, if you're going into annual cropping, whether that's going to be a cereal or some other cash crop as well as feed opportunities. *(continued on Page 10)*

Is your EFP current?

The 10-year renewal policy became effective as of April 1, 2018 and affects all participants.

Contact us for more info to help upgrade or create your plan.

An Environmental Farm Plan is a tool to help identify environmental risks on the farm.

It is used to develop plans that prevent future problems related to the identified risks.

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Technical Issues with Grazing Cover Crops

By Karin Lindquist, forage-beef specialist, Alberta Ag-Info Centre

Grazing cover crops involves leaving enough residue behind and doing so by monitoring how much your cows eat and what you allow them to leave behind. Looking at the heavy-grazed versus lightly-grazed sod samples on the rain simulator, you can really see how much plant residue was left behind with either samples. The plant material above-ground can tell you a lot what's going on with the soil. When you have a high plant residue cover, living or dead, that means there is a lot of roots down in the soil, which is great for water filtration, and for feeding the microbes and larger life forms including earthworms and other soil-dwelling bugs. Of course, it's also great for fungal and the bacterial relationships that plants have formed with to exchange carbon for plant-available nutrients.

Grazing cover crops (as with any other pasture system) is both an art and a science You really need to look at what's beneath your feet (what kind of plants are there and how much), what the cows have been biting off and how much must be left behind before you decide when they should be moving on to the next site. It's important to know what kind of stocking rate you can have to be able to determine how many animals you can put on your cocktail cover crop. A stocking rate is based on an animal unit, which is a 1,000-pound cow with or without a calf. Not all cows are 1,000 pounds, so you have to adjust for the cow's actual weight. For most producers, the standard weight of a cow is 1,400 pounds. You have to adjust for another 400 pounds, which means you could potentially be adding more animal pressure with the same number of cows if you do not adjust for actual cow size.

Those heavier animals eat more, meaning you risk taking off more of the cover crop than you intended. With heavier animals, you will need fewer animals to get the same amount of forage grazed compared with if you actually had a herd of 1,000-pound cows

Some issues around cover crops include nitrates, a big issue if you get a frost or hail damage. Brassicas and cereals like oats and barley tend to accumulate nitrates. The other thing to consider is fog fever, which affects older cows when they get put on a rich crop like this too quick without any adjustment period. It's a condition where liquid accumulates in the lungs from sudden high digestion of a feed. There have been a few cases where a number of cows have died. Make sure you introduce them slowly, so they're on some hay or some other dry feed or on a grass pasture a week or so as they slowly get moved onto a cover crop.

Because cows can be particularly picky about what they eat, consider rotational grazing or managed intensive grazing. This way you have much better control of animal movements. That means there's going to be better nutrient distribution – you're basically getting them to put nutrients all over the land instead of less in one spot and more in another.

You also have good control to how much residue is left behind, whether there's not much left behind, or a high amount of residue for regrowth later in the year.

Cover Crops: Varieties and Responses (continued)

(continued from Page 9) Berseem Clover,: "Frosty": This one has cold tolerance bred into it that fits a lot of northwestern North America. It's bloat free. It's got about the same nutrient production as alfalfa, so if you've been looking for bloat-free grazing alfalfa for a long time, that's an option. Also mixing it with other annuals for grazing, it's going to give you that boost.

Looking at annual legumes, it's not just for organic matter and for the nitrogen additive, but also for a bit of a feed quality boost.

One of the things, if anyone is looking at doing cover crops, is understand that it is a system – it is a planned thing.

You want to see how you can incorporate it over a two or three-year rotational plan and start small.

If you're going to go at something, let's do it right, let's do it well, but maybe not do it on 500 acres. What works for you – 20, 40, 80 acres – whatever you're comfort zone is, enough that you're going to treat it like a crop, but enough that we can manage it and compare it with what we're doing already to see which particular tool in the toolbox, ideally having a mixture of all of them together to give you all of the different benefits, bringing it to your soil.

Remember the definition of soil health is just to increase as much life below ground as we see above ground.

In closing, let's consider the words of Albert Einstein: "We cannot solve problems with the same kind of thinking that we used to create them."

We've got to wrap our heads around some things, let's try some different things, lets look at things differently.

When we look at things differently, things start to look different.

Can ALUS Restore Riparian Areas? You Be the Judge

By Ken Lewis, Conservation Coordinator, Red Deer County

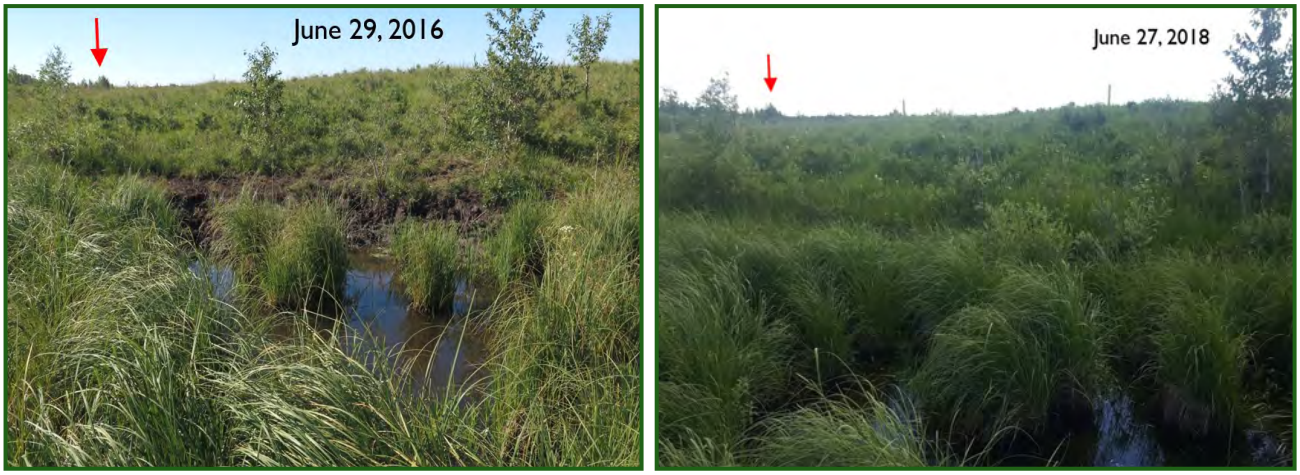
A picture is worth a thousand words they say. If that's the case, then a before and after picture is worth ten thousand words.

When a farmer or rancher does an ALUS (Alternative Land Use Services) project, we try to get pictures taken, that show what the area looks like before the project happens. Then, after a few years pass, we go back to the same place (thanks to GPS) and take the same picture again.

This is basic photo monitoring—something anyone can do any time. It provides a great record about the impacts that a change in management can have.

We're starting to see some amazing things in our photo monitoring of ALUS Projects. I've put in arrows to draw your eye to a spot that shows the two photos are in the same location. Here are a couple of examples:

BEFORE **AFTER**



To find out how you can do ALUS projects on your place, please contact me any time at 403-505-9038 or klewis@rdcounty.ca . Remember, an ALUS Project could be anything that helps you produce increased ecosystem / environmental services from your land. With ALUS, you can get up to 85% of costs covered, and you can get up to $40 per acre per year, for the acres involved.

ALUS Canada
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The Red-Bow Agricultural Partnership Presents
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& Agriculture
Conference
Valuable information for farmers and ranchers managing water on the landscape
• How agriculture and wetlands can co-exist
• How the Alberta Wetland Policy impacts producers
• The value of riparian areas and wetlands to producers
• Agriculture's water footprint & social license in Alberta
• Farm adaptation to extreme weather
9:00am to 4:30pm
Lunch included
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$50
Register by November 16th at:
AGWATER2018.EVENTBRITE.CA
For more information visit the Eventbrite page or contact:
Daniela at Mountain View County
Ph: 403-335-3311 Ext. 204 or darcher@mvcounty.com

Red-Bow Partners Offer Water and Agriculture Conference

The Red-Bow Agricultural Partnership is hosting a one day Water and Agriculture Conference on November 22, 2018 at the Crossfield Hall.

This inaugural conference is targeted at livestock and crop producers of all ages as well as any other interested people in the agriculture industry.

The partnership's goal is to promote environmentally beneficial practices around riparian areas, wetlands and other marginal lands. The day will include speakers that relate to water issues from both the perspective of ranching and crop production. The morning sessions will include both perspectives and in the afternoon participants can choose to go to either livestock related sessions or cropping.

The first speaker of the day will be Dr. David Sauchyn from the University of Regina and part of the Prairie Adaption Research Collaborative. Dr. Sauchyn will talk about what the weather changes mean for agriculture and how producers can adapt to make it work for them.

The two other sessions that all participants will hear about includes the function of wetlands and the importance of agriculture working with wetlands as well as working with wetland policies.

After lunch, participants will have the chance to choose the livestock or cropping stream of sessions.

On the cropping side topics will include: buffer zones around wetlands in a cropping area, a quick overview of programs through Ducks Unlimited, a brief outline of the field manual for designing a buffer as well as hearing from producers about their experiences with cropping around wetlands.

Participants interested in the livestock aspect will be given an overview of the studies demonstrating the benefits of a maintained or improved riparian area, the best management practices for rehabilitating and using a riparian area within pastures as well as hearing from ranchers who have experience in effectively managing riparian areas on their ranches.

No one will want to miss the final speaker for the day, Dr. Reynold Bergen, Science Director of the Beef Cattle Research Council (BCRC) which is under the umbrella of the Canadian Cattlemen's Association. Dr. Bergen will talk about agriculture's water footprint and social license.

The Red Bow Agricultural Partnership is a municipal collaboration created with the purpose of sharing resources, information, knowledge and facilitating networking opportunities for the benefit of sustainable agriculture within the rural communities in which they operate.

The current partnership consists of Clearwater County, Kneehill County, M.D. of Bighorn, Mountain View County, Red Deer County, Rocky View County and Wheatland County; their events target producers in these regions. Since 2007, the committee has hosted two annual events: Ladies Livestock Lessons and Ranching Opportunities and have intermittently hosted additional events which are pertinent to the agricultural industry at the time.

For more information about the Water and Agriculture Conference, please find the conference in coming events on Ropin the Web. The deadline for registering for the conference is November 16, 2018.

Find us on Twitter: #agwater2018

CANADIAN AGRICULTURAL PARTNERSHIP
Innovate. Grow. Prosper.

AgriProfit$ Cost of Production Calculator for Cow-calf Producers

Calculating your cost of production (CoP) is an important step in assessing performance and understanding the current health of your business. Ann Boyda, livestock economist at Alberta Agriculture and Forestry (AF) explains how the AgriProfit$ Business Analysis program can help cow-calf producers figure out their CoP.

"The CoP is measured in terms of cents per 100 lb. of calf weaned for cow-calf producers," says Boyda. "It is an indication of the outlay required to produce each pound of beef. It includes all costs associated with producing the animal."

The AF AgriProfit$ Business Analysis Program provides this standardized performance indicator. Explains Boyda, "A comparison of your CoP indicates whether there is scope for improvement or where you are performing well. It looks at the cow -calf operation as a collection of enterprises. In addition to cow-calf - for example - there may be backgrounding, hay, pasture, replacements heifers."

"To get the whole picture, you need detailed financial and production information," says Boyda. "The CoP can be used to compare the health of your business year on year and against other beef producers. There is value in comparing successive years as CoP can vary greatly between years due to a range of circumstances: drought, changes to herd management, unusual or one-of expenses such as pasture establishment."

Boyda adds that producers need a good understanding of their CoP if they wish to improve their performance, with an eye to efficiencies.

AgriProfit$ efficiency measures:

Technical efficiencies capture physical measures of output and input use for cow-calf producers. Examples can include:

- *Pregnancy percentage* as an indicator of breeding efficiency but also highlights cow body condition and reproductive problems.
- *Calving percentage* incorporates pre-natal calf mortality and pregnancy percentage
- *Weaning percentage* adds calf mortality to calving percentage.
- *Weaning weight* as a measure of productivity, however pounds of calf weaned per exposed female provides a more robust measure.

Boyda notes that too great a focus on technical measures can place too much attention on maximums, such as weaning weights, or minimums, such as death loss. Often times, maximums and minimums are not optimal in terms of economic outcome.

Economic efficiency measures include values of inputs and outputs as well. "Think of least cost feed rations. Ration formulation may change, not because of changes in the nutrient contribution of feeds, but due to changing values of feed ingredients," explains Boyda. "Economic efficiency measures tend to focus on optimal levels rather than physical maximums and minimums: dollars of return per pound weaned and dollars of return per cow wintered. Here again, caution needs to be taken - changes in output values or input costs can lead to improved returns but may be the result of changing market conditions."

AgriProfit$ looks at a combination of technical and economic efficiency measures needed for maximum economic returns. "Technical efficiency measures help understand physical productivity and identify weaknesses in production systems. Economic efficiency measures focus on optimal use of inputs relative to the value of outputs. It takes both to ensure that the operation is moving in the right direction," says Boyda.

Boyda makes the following suggestions when determining CoP:

- Look at CoP over successive years and look for consistent trends. Try not to make changes solely based on only one year.
- A good record system will help measure the productivity and input use. Time and effort are needed to capture the full picture of performance based on production and financial information.

Producers should look to a combination of technical and economic measures to manage their operations. Programs like AgriProfit$ can help provide these measures.

Find more information about the AgriProfit$ Business Analysis and Research Program. It is free to farmers/producers/ranchers. Go to www.agriculture.alberta.ca/agriprofits to register for the 2018 production year. Interviewers will begin scheduling farm visits in January 2019, to collect and compile the detailed data. In return, producers will receive individual farm business analysis as well as provincial benchmarks for comparison.

Contact Ann Boyda, 780-422-4088

AgriProfit$ Sign-up

Alberta Producers have until the end of November to sign up for the AgriProfit$ program.

AgriProfit$ is a free cost-of-production program to help Alberta producers with decision-making. The program has two interrelated objectives. It aims to help farmers analyze their decision-making activities by producing customized economic reports for them and it produces economic benchmarks that can be used by producers, government and industry to make informed decisions.

Farmers participating in the survey receive customized economic reports, a budget sheet, income statement and analyses of major enterprises like cow-calf, dry-lot, and crops. Producers are asked to provide information about their operations, such as the types of enterprises and land base. They will receive a guide outlining the type of data needed to conduct the analysis including assets, liabilities, expenses, revenue, labour, and crop and feed rations and inventories. A business specialist meets with each participant to help organize and compile the detailed information. This information is then used to generate the farm and enterprise analysis.

Grazing Hay Fields This Fall? Here are Some Things to Consider

By Karin Lindquist, Forage-Beef Specialist, Alberta Ag-Info Centre

Pastures have undergone a lot of stress this year. Much of them have been stressed from as far back as 2017 with the hot, dry summer. This year has proven no different, and the hot and dry conditions have reduced the amount of time livestock typically spend on pasture—until September or November. This year, cattle are pulled off pasture around 60 to 70 days earlier than normal, which means some options must be considered to continue to pasture cattle for as long as possible, before the snows come again. One option to think about is grazing hay fields in the fall.

Most hay stands will have a significant amount of alfalfa in them. Higher quality hay typically needs to have a legume component in providing sufficient protein and energy to meet animals' needs. The grass component of a hay stand is more beneficial for grazing than a pure alfalfa stand. Alfalfa, though, still poses risk in the fall with regards to bloat.

The best time to begin grazing alfalfa-grass stands in the fall is after mid-September, when plants have begun to slow growth and go into dormancy. This is also past the critical growth period, which is 45 days long starting from the first of August, that alfalfa plants need to prevent winterkill. Alfalfa must be able to put energy down into its crown and roots so that it can survive winter and use those energy stores for regrowth in the spring.

Also, when plants have already reached maturity and are going into dormancy, fibre content is higher and digestible protein and energy content are lower. This makes them harder for ruminants to digest, which lowers bloat risk especially when cattle are first introduced onto hay stands.

However, there is still some risk of bloat, so management practices to reduce incidences are still good to keep in mind.

Introduce animals to the hay stand in the middle of the day, and when they are not hungry. If you have access to some hay or straw, leave a bale or two out for them for the first four to five days. Also, having access to another forage stand that is predominantly grass may also work, especially if hay is in short supply. Check on them at least twice a day during this first week, as you may have some chronic bloaters that will need to be removed as soon as possible.

Don't be alarmed if you start grazing and you get frost on the alfalfa. Nitrate toxicity with alfalfa is not an issue because of its nitrogen-fixing capacity—as with all legumes—and most hay stands are usually not fertilized. Nitrates are mostly a problem with annual cereals such as barley or oats.

Frost, however, tends to increase digestibility of the plants because it breaks apart the plant cell walls making the contents within more readily available to rumen microbes.

This can be concerning particularly when introducing animals onto hay stands. Avoiding introductions in the morning and supplying a more fibrous feed source will help.

Once animals are becoming adjusted to the hay stand, it is best not to remove them from that stand, even at night. They will need to be re-introduced to the stand using the same practices as you would use when they first enter the hay field. It is best to leave them there for as long as you need them to graze that stand.

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Technology – The Art of Balancing What You Need to Know with What you Don't

By Clinton Brons, Director of Business Development, Livestock Gentec

It seems that more commercial producers are coming forward with questions about DNA and how to use the new tools and technologies being developed for the beef industry. Part of this interest can be attributed to the increasing presence of DNA references in daily life. These range from the ability to trace one's own geographic / genetic ancestry to car makers advertising that certain traits are "in their DNA."

This steady progression has been the result of these tools becoming firmly established within the nucleus and pure-breed sectors of various species, the rapidly increasing size of the databases available, improving prediction accuracy and the reducing cost of http://www.deltagenomics.com/assets/Uploads/Clinton-Brons-Photo.pngapplying these technologies. Another factor is that, looking over the fence, some of our neighbours have begun to use the technologies. Because of this, many producers who have stayed on the sidelines are asking how they too might benefit from adopting the various DNA technologies – but with concerns about their lack of detailed understanding relating to the science of DNA.

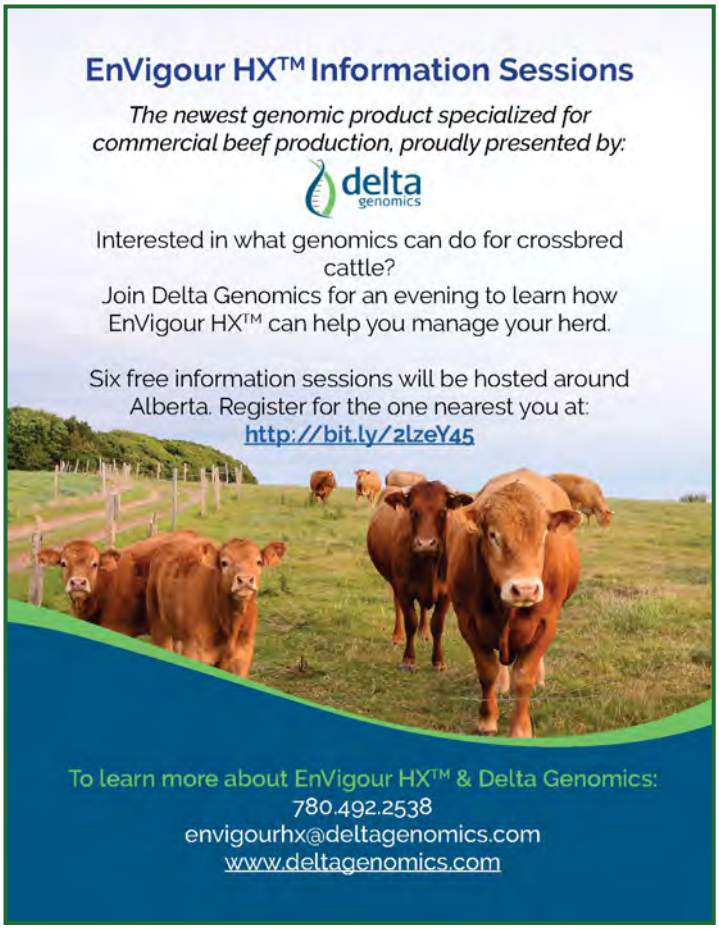
It may seem counter-intuitive, but you don't have to fully understand how DNA technology works to enjoy the benefits. How many producers can explain the mechanism and effect of

prostaglandin synthesis, cyclooxygenase enzymes, inflammatory, endotoxic, exudative, pyretic, and analgesic properties? Yet all of these terms relate to the mechanism of the action and benefits of the non-steroidal anti-inflammatory, Meloxicam – one of the most widely-used pain medications utilized by cow/calf producers. They know that Meloxicam is an effective pain medication that allows cattle to resume normal activities and feeding behaviour sooner after dehorning, castration or branding, and they see the benefits of using it.

In many ways, it's the same with DNA technologies. How they work is often less important than where they work, how to use the information they provide and where to find more information, if required.

And if you have questions, there are many places that a producer can turn for information, most of which are happy to help free of charge as part of their mandate to ensure the ongoing competitiveness, profitability, and sustainability of the Alberta livestock sector. Many of these names will be familiar: Alberta Agriculture and Forestry (Andrea Hansen); the Agricultural Technology Access Centre at Olds College (Shannon Argent); the Beef Cattle Research Council (Reynold Bergen); Delta Genomics (Michelle Miller); and of course, us here at Livestock Gentec and the University of Alberta.

Over the past months, this column has provided a great deal of information regarding the benefits of genomics, specifically, of parentage in determining which bulls are earning their keep, free-loading and / or causing problems; on the value of breed composition as a tool to manage the complementary characteristics delivered by crossing various breeds of cattle; and in particular on the use of genomic "Vigour" to select and retain those heifers most likely to remain in the herd and deliver a weaned calf year after year and their resulting impact on producer profitability.



Director Profile—Deb Skeels, Secretary

My husband, Doug and I farm with our daughter, Anne Melnyk and her husband, James in the Dovercourt area, east of Rocky Mountain House and north of Caroline. Our primary business is focused on grass, commercial beef and purebred dairy goats – a recent addition. And yes, the kids are every bit as much fun as the videos you see on Facebook . They're just unbelievable.

Doug and I have been involved with the Grey Wooded Forage Association since the early 1990s, when we started receiving copies of the spring and fall newsletters. The information we gleaned from those pages has helped and encouraged us in our search for more sustainable means of extending the grazing season and getting maximum productivity from our land. The more we learn, the more we find out that there's always more to learn.

In recent years, we have invested heavily in efforts to improve the public perception of livestock production, with hope that people will view our methods more favourably and that, in turn, will improve our bottom line. As Doug says, consumers in general don't seem to see us realistically or favourably.

We feel they need to see how we really treat our land and animals to help them understand what they mean to people who raise livestock.

We have enrolled in a variety of marketing and research programs to help reach that goal, primarily to put what we see is the real face on the industry.

We volunteered our farm with McDonald's pilot project on sustainable beef. We were subsequently audited and passed by them and later were audited and passed by Verified Beef Production Plus, an accreditation program established to prove to consumers that participating farms adhere to the highest standards possible for food safety, animal care and environmental stewardship.

We also volunteered for an audit by the Canadian Roundtable for Sustainable Beef, which fosters sustainable practices across the beef value chain.

We continue working on a groundwater project with Agriculture and Agri-Food Canada and have provided a research plot for a GWFA alfalfa study that has been replicated at the Lacombe Research Centre. The groundwater study is looking at various effects of bale grazing, including watching for signs of nutrients migrating into the groundwater from bale-grazed sites.

The alfalfa study looks into the longevity of strains of alfalfa that were seeded from stands that are 20-30 years old and no longer commercially available.

Within our plot, one strain popped up this year that had not been doing well in the three or four years since it was planted. But the jury is still out on the study, which is looking at how well those strains perform over 15 to 20 years.

We enjoy having agriculture tours come to our farm from time to time and would welcome more visitors, but organizing farm days can get pretty hectic at a time of year when we are extremely busy with cattle, goats and haying.

WLPIP claim window: What to keep in mind

As fall is just around the corner, attention in the livestock industry is turning to the upcoming volumes of cattle coming into the marketplace. In view of this expectation, there are two important considerations for producers to take into account:

1. It's time to start monitoring the claim window for policies.

All WLPIP policies have a built-in claim window attached to them, which is often the three weeks prior to the expiry date associated with the policy. Settlement numbers are published on Mondays, except in the event of a holiday Monday, when Tuesday becomes the effective claim date. Clients are encouraged to review their policy expiry date and cross reference it with the WLPIP Calendar of Insurance available on wlpip.ca to find the dates when their policy will be in a claim window. It is important to note that not all policies have a full four weeks to claim, as policies that are near a "blackout" (periods when sufficient data is unavailable to calculate a settlement value) will have shortened claim windows.

Once the claim dates associated with the policy are identified, it is important to watch the settlement index that is published every Monday. A producer wishing to claim on their policy during this claim window must submit a Request to Claim form to any AFSC office or go online between 1:30 p.m. and 7 p.m. Monday to claim against that published settlement index. Claims are available only on Mondays. Clients can claim all or part of their weight on policies during a claim window. Any weight not claimed on the expiry date is settled against the settlement index published on their expiry date.

Claim windows are best utilized to match the actual sale movement of the insured cattle. Policies can be claimed on while the cattle are still owned by the policy holder, but if market fluctuations happen after all the weight on a policy has been claimed, no insurance will be in effect to help manage any unforeseen declines in the remaining weeks. Producers are reminded that the claim window is built to help producers fit themselves into a policy as cattle may be sold in multiple weeks covered by the same policy.

Example: Policy expires on October 29, claim window weeks associated with that policy are: Oct.22, Oct.. 15 and Oct. 9.

Settlement indices are published based on weekly auction market data for the Feeder and Calf programs, and producer reported data for the Fed program.

With the feeder and calf programs, the information regarding head sales volumes coming from participating auction markets is robust and current. *(continued on Page 18)*

Stacking Bales

By Barry Yaremcio, beef-forage specialist, Alberta Ag-info Centre

When it comes to stacking bales, a little forethought can go a long way to ensuring a better product.

Storage losses from improperly stacked bales can be anywhere from 15 to 20 per cent of the dry matter yield while protein and energy losses can be anywhere from five to ten per cent. It takes a lot of time and money to put up a good quality hay, so why risk losing 10 to 15 per cent of your productivity by just not stacking the bales properly?

Before bringing the bales into the yard, I recommend mowing the grass that's already present in the lot. This will help reduce a lot of the moisture and soil-to-bale contact and help prevent bottom spoilage. If possible store the bales in a high area, so the bales don't end up sitting in water after a rain.

Leave two to three feet between the rows of bales and stacking them from northwest to southeast or to allow the prevailing winds to blow through the rows of bales. This allows the wind to blow to blow the snow from between the bales, so it does not melt and water will not accumulate between the bales come spring.

When it comes to stacking bales in the field, there are various methods for stacking:

The pyramid style, with three bales on the bottom, two in the middle and one on the top. That is the poorest way to stack hay. When it rains, or when the snow melts during the winter or in spring, all the moisture moves down between the bales all the way through the stack from the top down, and cause spoilage wherever the bales contact each other.

The mushroom stack, with the flat side of the bottom bale flat on the ground and the second one on top, is better than the pyramid but still will end up with a lot damage. The best method, however, if you have the space, is to put single bales in rows with the individual bales in the rows separated by about six to ten inches so they don't touch.

If using a tarp, leave the ends open so air can blow between the tarp and bales.

Build the stack so it is aligned with the prevailing wind. That way, the wind can carry any moisture away that has evaporated out of the bales and condensed on the inside of the tarp away from the bales so before it drops back onto the bales and causes damage.

For more information, call the Alberta Ag-Info Centre at 310-FARM (3276).

(continued from Page 17) However, to ensure that best data set available to Alberta producers, outliers that would skew the index are excluded. Therefore, when published, the settlement values represent the averaged price, averaged quality market in Alberta for each program's corresponding weight band. More information on the settlement details is available at wlpip.ca.

2. It's good to keep the future in mind.

If a producer is buying calves or feeders, or retaining ownership it is a good idea to keep a thumb on the pulse of feeder and fed coverages to see if there is an opportunity to purchase insurance on owned cattle for the last few months of 2018, or into 2019.

Feeder and Fed coverage is available to purchase year-round and serves as a valuable risk management tool for those looking to minimize price risk for a future sales date on cattle they are buying right now, or calves they are retaining ownership on.

Coverage and premiums are available every Tuesday, Wednesday, and Thursday from 2 p.m. – 5:30 p.m. and forecast coverage from 12-36 weeks from date of purchase.

From a historical average perspective, the peak month when feeder and fed purchases have been made in the fall has been November.

Premiums and coverage levels are published on the www.WLPIP.ca website. All local AFSC branch offices and the Client Contact Centre are available to help execute a purchase or discuss the program for any questions producers may have.

If you would like more information about your policy or the program in general, please contact your local AFSC office or the Client Contact Centre at 1-877-899-2372. The most practical way to access to up-to-date information is to subscribe to the e mail distribution of premium and settlement tables by sending an email to cattle@wlpip.ca.

Grey Wooded Forage Association

2018/2019 Memberships

Memberships are $40.00 and run from April 1 to March 31

Memberships are open to anyone interested in forage production, grazing management and environmental sustainability

For information call 403-844-2645

Membership Benefits:

- Receive discounts on courses, seminars, workshops, and tours
- Receive The Blade
- Receive Environmental Farm Plan delivery
- Free Equipment Rental (deposit required)
- Access to the GWFA library
- Access to our Member Facebook Group
- A chance to network with like minded producers
- Free Farm consultation service (phone, email, and in person in the office)
    - Farm calls are $0.55/km travel each way
- Receive an Annual Report

Please fill out and mail the portion below with a cheque or e-transfer of $40 to:

Grey Wooded Forage Association
Box 1448, Rocky Mtn House, AB, T4T 1B1

Renewal_____ or New Member_____

Name/Company Name:_____

Address: _____

Town/City:_____

Province & Postal Code: _____

The Blade: Email_____ Canada Post _____

Phone: _____

Mobile Phone: _____

Email: _____

Please print clearly

How would you describe your occupation

- Beef Producer
- Sheep/Goat Producer
- Dairy Producer
- Annual Crops
- Forage Producer
- Other _____

How many head of livestock are you managing?

Beef Cows/Heifers:_____
Dairy Cows:_____
Feeders:_____
Ewes:_____
Does:_____
Other:_____

How many acres are you managing?

Pasture:_____
Hay:_____
Crop:_____
Other:_____

What topics are you interested in learning more about?_____

_____

How can GWFA better serve you?_____

_____

_____