

The Blade

"Creating an Awareness of Forages"

AUGUST 2014

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VISION STATEMENT

GWFA – The centre of choice for gathering and dispersing of forage and livestock information, providing a strong link with producers and the research community.

MISSION STATEMENT

To enhance awareness of the organization as an information exchange centre, illustrating forage and livestock production practices that are environmentally and economically sustainable for the agricultural community.

Director's Corner

By Kristen Ritson-Bennett

Hello Grey Wooded folks! I hope this newsletter is greeting you with some great weather. It has been a wonderful summer so far. We have had it all – some cool wet weather and some very hot dry weather in July. Our summer started with lambing June 1, right on time with a set of twin girl lambs. Now – for some – this would not be such a big deal.... But for us, this was quite the time as it was our first experience with lambing! Our next challenge was that we were lambing on grass, A LOT of grass. We couldn't find those lambs for the life of us! Just think, sometimes it's hard enough to find a calf hiding in the grass, never mind a 3 lb baby lamb!

We spent plenty of time searching grass looking for lambs – Lo and behold! They were still there, healthy as could be and just taking a nap. We probably were a little more worked up than we needed to be, but after some of the coyote/eagle predation stories we had heard from other shepherds we were not taking any chances. Overall it went very well – we are going to try this again next year, but maybe aim for May lambing. The grass shouldn't get ahead of us so quick!

In July we had the opportunity to spend the day with



Photo credit: Kristen Ritson-Bennett

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Jim Gerrish, "The Grass Man". It was a hot July morning that started with pancakes made by our very own Albert Kuipers. The morning session was great and I learned that the more you learn about a subject, the more you learn you don't know! I spent days afterward going into my pastures counting tillers, evaluating pasture readiness for grazing and trying to estimate the number of cow days there are left on a pasture. I don't think my eye is quite as developed as some of those that are a part of GWFA, but I am starting to develop some skills I never had before! Don't ask me to visually tell you how many cow days/acre you have left in your pasture - I'm still working on this. ;)

My husband Andrew and I have implemented a strip grazing plan this summer. The nutritionist in me is coming at it from a nutrition point of view, taking the best quality first and giving the grass plenty of time to recover before we are back to it. The veterinarian in my husband likes strip grazing because it helps reduce exposure to parasites until the pasture is re-grazed later in the summer or fall. Most parasite species take a few weeks or more under ideal conditions to become infective on pasture. If the animals are moved along at a decent rate they can stay ahead of the maturation of the parasites. Really hot dry weather will help kill parasites on pasture but for a pasture to become clean (all of the parasites killed) it takes at least a year and likely longer, not really feasible for most grazing scenarios. However, most parasites are likely to be consumed when the animals are grazing close to the ground so parasite exposure can also be reduced on the second or third grazing if the animals are not allowed to graze the forage stands down below the tillers (exactly what we grazers strive for). Typically pasture lambs and cattle develop high worm burdens throughout the summer but if grazed properly, the exposure can be reduced and hopefully worming intervention will not be needed as often. At the end of the day if we can control this to the best of our ability we can reduce the impact that it has on our production traits like average daily gains, milking ability, reproductive efficiency and feed efficiency.





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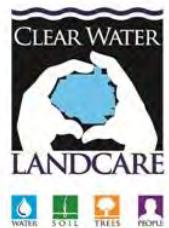
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Manager's Notes:

By Albert Kuipers

Use it all, or it's wasted. That is a common belief, or paradigm among pasture managers. Most of us really don't think about it that way, but how we manage our pastures in fall certainly says it. Yes, I had that problem too. I got really good at banking grass in the summer, but when we got to fall, I rationed out the banked grass daily, only leaving about three or four inches behind.



I have since learned the error of my ways. That practice of using everything gave little thought to the next grazing season, and the next one after that. It also delayed the beginning of grazing as the forages had to start with little reserve energy from the previous year.

Just so we're clear, rationing out the banked grass daily is good, and not the problem, leaving only three or four inches to go into winter is the problem. In particular, while forage plants are working on storing energy in late summer and early fall, severe grazing like this will result in reduced energy reserves going into winter.

Some forage species respond by being more susceptible to winter kill. Others respond by being slow to get going in the spring. If this is our on-going practice over several years, we'll start seeing increasing bare ground and increases in invasive,

weedy plant species. You see, nature hates a void. If by your grazing management you're causing more bare ground, something will grow there, most likely something you don't want there.

Besides allowing plants to store energy, leaving sufficient residual grass as "carryover", a term we use to describe forage that's carried over through winter, we leave the ground covered by dead plant material. This is an important way to reduce bare ground, reducing the potential for increases in those weedy plants we don't like to see in our pastures.

This dead plant material also serves another very important function. It provides food for a host of little critters, from earth worms and dung beetles at the large end of the scale, to many species of microscopic bacteria, fungi and amoeba. All these critters work together to keep your soil healthy and fertile. I'd say this is probably the biggest reason for leaving lots of carryover.

"He who leaves the most, gains the most" is a favorite saying of mine that some of you may have heard at one time or another. That's something I've observed as being common among those who have the best pastures I've seen. Whether it's the residual forage left behind after each grazing, or whether it's what's left behind at the end of a grazing season, this applies. Everything left behind contributes to healthier forage plants and healthier soils and, in so doing, healthier, more productive, more financially and economically sustainable pastures.



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You likely have seen the advertising in our spring and fall newsletters, but did you know you can advertise in The Blade? Well, yes you can.

For some time now we have accepted a limited number of paid ads submitted by GWFA members. (Membership is only \$20/year.) If you have a bull or production sale coming up, or if you have hay for sale, pasture for rent and you'd like to reach our audience, give us a call. Also, if you sell products, equipment or services that would be of interest to our readers we can help you reach our audience. Of course, we do want to make sure that ads we put in The Blade are for products and services that would be of considerable benefit to our members, so ads will be accepted for The Blade at our discretion.

So, give us a call at **403-844-2645** or email Muriel at **gwfa1@telus.net** or Albert at **gwfa2@telus.net** to learn more about our advertising policy for the Blade and to find out what it would cost to have your ad in the next issue.

Your Fall Mineral Package is Vital!

By Kristen Ritson-Bennett

Going into the fall season is a good opportunity to talk a little bit about mineral nutrition and feed testing. You don't know what you are feeding unless you test it. Many of us got what we could consider good quality feed put up in July. No rain, and most folks cut at a good stage for quality and quantity. The legume levels, age at cutting, age of stand, amount of moisture are all going to have an impact on the quality. Just because it is green does not mean it is of high quality. If you have any questions about testing please feel free to give me a call.

I spend much of August/September/October travelling around the province testing forages – I can always try to fit you in while I am in the area. Interpreting results can always be a challenge too. Talk to a nutritionist, or someone who is familiar with the feed terms – you can't make any decisions if you don't know what you are reading!

With respect to mineral nutrition – once the grass browns off it is time to get a plan in place for the winter. Vitamin levels, and trace minerals to a lesser degree, drop off once that browning off period occurs. We naturally have low levels of copper, zinc, selenium and iodine in our forages throughout Alberta; this is why these supplements are necessary.

When I test feed I always test for mineral contents as well as protein and energy (Wet Chemistry analysis) – this way I know exactly what I am working with and what I need to do to cover any deficiencies. It is not that much more expensive and is data from your land that you can monitor for years. You can monitor progress on mineral and nutrient cycling with this data.

Swath grazing is a practice that many implement in the fall and early winter. Mineral decisions here are very important as you can affect milking ability and chances of downer cows if mineral ratios are not managed. Often producers are overfeeding phosphorus in this case and throw the calcium/phos ratio out of whack. This can have long term effects right into calving.

Talk to a nutritionist if you are implementing swath grazing on your property. We can test the swath grazing for protein, energy and mineral content. Blue Rock Animal Nutrition customizes all the mineral manufactured for this exact purpose – no farm is the same!

There is a lot to mineral nutrition, and like everything else the more you learn the more you learn you don't know. If you have any questions at all this is an area I can certainly help you with!

I can be reached at 403-358-1674.



GWFA Staff photo



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310-farm

Phone 310-FARM (3276) toll-free to contact Alberta Agriculture and Rural Development, or visit one of our field offices across the province for your agricultural information needs.

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Late Fall or Dormant Seeding Frequently Asked Questions

Can you seed forages in late fall?

Yes, seeding forages in the fall can be a viable option in successfully establishing a forage stand if proper timing and management is practiced. On a pasture walk in mid July Jim Gerrish said he now prefers late fall seeding to spring seeding of forages after being a die-hard spring seeder for many years. GWFA's "Late Fall Seeded Legume" demonstration project was seeded at the end of October, 2009 with good germination the following spring. Cicer milkvetch, kura clover, birdsfoot trefoil and red clover were seeded there.



GWFA Staff photo

When should dormant seeding occur?

Late fall seeded forages should be planted from October 15 until freeze-up when night temperatures are consistently below zero. It's OK if the ground has already started to freeze as long as you don't try seeding with a seed drill with knife openers.

What type of equipment should I use for dormant seeding?

Direct seeding drills with disc openers, especially something heavy like the John Deere 750, would penetrate well enough for small seeded forages. Broadcasting works quite well for late fall seeding as well, even if there's a little snow. A few years back one of our past directors seeded clovers successfully in March with a quad mounted spin-spreader. The freeze/thaw cycles in late winter and early spring will get most of the seed sufficiently buried.

Why is timing of seeding so important?

The soil temperature must be below 2 degrees Celsius so that the seed will **not** germinate. The soil is basically storing the dormant seeds until spring, at which time, the soil will warm up signaling the seed to germinate.

What happens if I seed to early?

If you seed before the soil temperatures are low enough, germination can begin and as decreasing winter temperatures take over the seedlings will die and you will have a poor forage establishment if any next spring.

What are the advantages of fall seeding?

- Late fall seeding, or seeding while the ground is frozen is advantageous anywhere it's usually too wet to seed during the usual seasons for seeding.
- This process will allow the seedlings to use good mois-

ture from winter snow where rainfall is limited later in spring.

- Some legumes, like cicer milkvetch and kura clover, could have better spring germination when late fall seeded.

What risks are involved with dormant seeding?

Seeds will start to germinate as soil warms in the spring and they could be susceptible to damaging spring frosts. Grass crops are planted the most successfully with alfalfa having variable success and sweet clover not working at all, possibly due to scarification

What are some other factors affecting the success of dormant seeding of forages?

If seeding into sod, make sure to do something to reduce competition from the sod when seedlings are emerging. Severely over grazing the field will help to depress the existing forages, thus reducing the competition from that stand in spring. Suppression with a half rate of glyphosate has also been done successfully.

Seeding into stubble will reduce the chance of seed movement from wind and water erosion. Make sure to deal with any weed issues, but be careful not to use herbicides with a residual effect that could prevent establishment of your chosen forages.

Other things considerations when successfully establishing a healthy forage stand are:

- the use of quality seed,
- use proper seeding rates and depths,
- a firm seedbed if seeding into tilled soil,
- increase your seeding rates by 20 – 30% to account for any losses of viable seed over winter..



ARECA

Agricultural Research and
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www.areca.ab.ca

Environmental Farm Plan Process in Alberta

The Environmental Farm Plan (EFP) process helps identify environmental risks and strengths and to develop a plan to reduce the risks and build on the strengths. Every step in the process is entirely voluntary.

The EFP is a tool that farmers and ranchers can use to assess and improve their environmental stewardship, at a direction and pace they choose themselves.

Producers use a workbook to undertake a self-assessment of their operation. This gives them knowledge and options to develop a plan that is the right fit for what they want to accomplish. Along the way, producers have access to knowledgeable EFP Technicians who can help answer questions and provide advice. The outcome is a plan they know is technically sound, doable and in line with their overall farm management planning.

Quick steps to getting started

The EFP process in Alberta has three main components that all revolve around self-assessment and planning. Producers complete these components by following the steps clearly outlined in the EFP workbook, which they can access online or by request through Alberta Agriculture and Rural Development (ARD), who currently coordinate the program in Alberta. There are two quick ways producers can get started:

- Contact ARD at 310-FARM (3276) toll free anywhere in the province.
- Contact an EFP Technician.

An online option using a WebBook for developing an EFP is now available.

Find an EFP Technician

Alberta farmers and ranchers who have completed an EFP know the backbone of the program is its network of knowledgeable technicians across the province who provide EFP services.

These EFP Technicians are available to anyone who is interested in developing or updating an EFP. The fastest way to find an EFP Technician in your area is to check the list available on the Growing Forward website:

<http://www.growingforward.alberta.ca/Map/index.htm>

Just click on the marker on your area of Alberta and a list of names comes up.

Review

The producer has the choice to submit the Farm Plan to the EFP resource person for a final critique and review.

After the *Farm Plan* has been reviewed it will be personally returned with any necessary suggestions along with a letter of completion acknowledging the producer's participation and interest in making agriculture more environmentally sustainable.

Implementation

The action steps in the *Farm Plan* should be implemented continuously from one year to the next according to the priorities established by the producer. Annually, the producer reviews the Farm Plan to evaluate progress.

General Inquiries:

Alberta Agriculture and Rural Development
Toll-free help line: **310-FARM (3276)**

For More Information:

Fiona Briody, EFP Manager
briody@areca.ab.ca
 Ph: **403-877-4800**



Worried About Nitrate Poisoning this Fall?

Barry's answer to Kristen applies very well to fall frost concerns about nitrate poisoning.

Barry,

Can you familiarize me a little more on nitrates and what to do when? ...

I have a customer at Erskine that had a crop of barley (headed out) that he wants to silage that got hit badly with hail 9 days ago. Where are we at on nitrate risks and what is the best approach to this?

Thanks!

Kristen,

Nitrate accumulation in cereal crops occurs after physical injury to the crop. A hail storm or light frost will cause damage to the plants.

Nitrate levels increase and peak at 4 to 5 days after the hail storm or frost. **IF** the crop is able to recover and start to regrow, the nitrate levels will be back to "normal" 12 to 14 days after the injury.

If you are cutting the crop for silage or greenfeed – get into the stand as soon as possible and cut within 1 to 2 days after the storm. If the fields are too wet, then you will need to wait the 12 to 14 days.

For alfalfa and the legume crops; the nodules are great hoarders of nitrogen. The root system allows as much nitrogen as needed into the plant on a daily basis and does not accumulate in the plant. These crops can be cut anytime.

Barry Yaremcio, M.Sc., P. Ag.

Beef & Forage Specialist

310-FARM (3276)

Ag-Info Centre, Agriculture and Rural Development, Stettler

Some additional notes from foragebeef.ca on nitrates from the animal's perspective:

- In ruminants, nitrate is converted to nitrite then to ammonia by rumen bacteria. Excess ammonia is filtered by the kidneys and is voided in the urine as urea. This conversion process continues on as long as nitrates and nitrites do not accumulate in the body.
- Nitrate poisoning occurs when the conversion of nitrate to nitrite exceeds the animals' capacity of converting this nitrite to ammonia. Nitrite causes toxicity by reducing the capability of blood to transport oxygen. Nitrite combines with hemoglobin to form methemoglobin, which is unable to carry oxygen, this causes internal suffocation.
- Nitrate is continually released from feed digested in the rumen. When nitrate levels in the rumen increase and are not converted to nitrite, nitrate crosses the rumen wall into the bloodstream. Free nitrate from the blood is recycled into saliva. Through rumination, saliva is added to the cud and additional nitrate is returned to the rumen, intensifying the problem.

The change in the hemoglobin (red blood cells) is influenced by the following:

- rate of nitrate intake (amount of feed and how quickly it is consumed)
- rate of conversion of nitrite to ammonia in the rumen
- rate of digestion of feeds and the subsequent release of nitrates
- movement of nitrite out of the rumen
- quality of feedstuff consumed (heated moist forage vs dry feed)

The amount of nitrate being recycled back into the rumen, rate of nitrite breakdown, and diet composition all influence what the "toxic" level of nitrate is for different animals.

Different ruminants have different capacities to convert nitrate into nitrite and finally to ammonia. Sheep have the highest tolerance to nitrates, because they have the greatest capability of all ruminants to convert methemoglobin back to hemoglobin. Cattle have the lowest capability and therefore are at greatest risk. The ability of individual animals to tolerate nitrates in feed is variable, which complicates the determination of a safe level of nitrate in a feed.

An animal in good body condition, receiving a diet that meets daily nutrient requirements is able to convert nitrate to nitrite and finally to ammonia more efficiently than an animal that is inadequately fed or in poor condition. Animals in poor condition, even if well fed, have more trouble converting nitrite to ammonia.

What is the safest way to introduce cattle to graze a damaged crop?

Be sure that the animals are well fed before grazing the damaged crop. On the first day, let the animals eat from one-half to one hour and then remove them from the area. The idea is to slowly get the animals accustomed to the crop so that they can become less affected by the nitrate that is present. Eventually the animals can be left on the pasture full time. It will take five to seven days for the animals to become adjusted to the new feed. A sample of the feed should be taken three or four days after the damage has occurred and tested for nitrate content to find out how severe the problem is. Peak nitrate levels should be present by this time.



GWFA Staff photo

One Man's Experience with Selenium Deficiency

A good reason to get your feed tested.

I had a bad experience with weak and dying calves when I moved up to the Rocky area back in 1979. The vet working on my behalf through autopsies diagnosed my problem as white muscle disease, caused by a selenium deficiency in my cow herd. I had never heard of that before and never had that problem on the family farm in southern Alberta .

To cure my problem I started feeding trace mineralized salt with selenium as the veterinarian recommended to the cows and had no white muscle problems since.

Two other benefits I noted as well were no more pink eye or hoof rot in the herd from that time forward. I usually had one or both problems a few times each year prior.

To get educated about selenium, I found that selenium is a trace element that is naturally present in many foods. One of many important dietary minerals.

Selenium occurs naturally in the soil, and in Alberta the soil range for selenium is from high in the Cypress Hills area to deficient in other areas, such as high rainfall areas like Rocky



Photo credit: Kristen Ritson-Bennett

Mountain House. Cow-calf producers located in areas with selenium deficient soils should pay particular attention to selenium supplementation for their cows, as most are doing I expect.

Selenium deficiency may suppress the immune system and generally increase susceptibility to infectious disease. Selenium is an important nutrient for the maintenance of normal cells and tissues in the body and therefore required for good health and production.

Selenium deficiency, I found, can be as big a problem as too much selenium, so there is a happy medium, so to speak. The toxic dose is not much higher than the requirement.

Soil type maps and selenium analyses in forages have helped to distinguish in which geographic areas cattle are more likely to experience deficiencies.

With the internet today there is all the further information you may want at your finger tips, through search engines such as Google.

By Neil Godlonton

These publications are available to our members by phoning or emailing the GWFA office!

Booklets:

- Forage & Grasslands Guide - A Canadian Forage and Grasslands Association publication
- Management of Canadian Prairie Rangeland
- Pasture Planner - A guide for developing your grazing system
- Sod Seeding - Seeding forages into existing stands using minimal tillage
- Stock-poisoning Plants of Western Canada (Not many left)
- Grazing Notebook - A handy pocket-sized pasture records booklet
- Wintering Site Assessment and Design Tool - A guide to selecting and Managing Wintering sites in Western Canada

Factsheets:

- Agronomic Management of Stockpiled Pastures
- Agronomic Management of Swath Grazed Pastures
- Beef Ration Rules of Thumb
- Nutrient Management on Intensively Managed Pastures

Other:

- Wealthy Rancher Calculator - A simple Excel spreadsheet calculator on a CD



Western Canadian Grazing Conference



"Going Beyond Sustainability"

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Keynote Speakers:

Judith Schwartz - Cows Save the Planet

Dr. Diane Knight - How Legumes Feed the Soil

Josh Dukart - Thinking Regeneratively...Beyond Our Own Borders

Producer Panel - Transitioning to Pasture

Banquet: Greg Johnson - I'm Just a Tornado Hunter

For more information contact:

www.wcgconference.ca • ARECA • 780.416.6046



GWFA Member Benefits

- Farm calls and consulting on grazing management, pasture rejuvenation, feed production (annual forages) and more...
- Receive discounts on Controlled Grazing courses, seminars, tours,
- Receive the GWFA newsletter in spring and fall and the Blade monthly

Memberships are available for \$20.00 and run from April 1st, 2014 to March 31, 2015.
Membership is open to anyone interested in forage production and grazing management
in an economically and environmentally sustainable way.

Don't delay-renew today; Membership renewals are due!

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Box 1448, Rocky Mountain House, Alberta T4T-1B1

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Please give us an idea of what area of forage production you are interested in:

Controlled Grazing & Pasture Management: _____

Growing Annual Forages for Extended Grazing or Swath Grazing: _____

Growing Annual Forages for Silage or Greenfeed: _____

Growing Hay: _____ Ration Balancing: _____

Soil Biology: _____ Pasture Rejuvenation or Renovation: _____

Low Cost Cow/calf Production: _____

Environmental Sustainability: _____ Economical Sustainability: _____

COMENTS: _____

!!GWFA Argentina Agricultural Tour!!



Leader Tours Inc.

Agricultural Tour: Feb 20th to March 3rd, 2015

Agricultural Tour & optional Iguazú Falls Tour:
Feb 20th to March 6th, 2015



You will visit:

- the Argentine Cooperatives Association (ACA) Headquarters for a description and discussion about the Agricultural Industry in Argentina followed by a visit to the Canadian Embassy - overview of doing business in Argentina.
- LA PASTORIZA - A large 4000 cow ranching operation and several other cattle ranches.
- the Farmers and cattlemen Association of Las Flores.
- the Town of Tandil, known for their cheese and cured meats and an agricultural cooperative.
- the Martinez & Staneck Agricultural Machinery factory.
- Cabaña Santa Ana, a ranch where they raise the Argentinian "Criollo" Horse".
- the Instituto Nacional de Tecnología Agropecuaria (INTA) to learn about the beef cattle situation in Argentina and visit the INTA experimental farm.
- the School of Agriculture of the University of Mar del Plata.
- a traditional Gaucho Party.
- Liniers Livestock Market, the largest cattle market in the world.

The optional Iguazú Falls Tour includes:

- Boating tour across the Paraná and Iguazú rivers with live music on board.
- a full day visit to the Iguazú Water Falls (Argentinean Side)
- a full day visiting the Ruins of Saint Ignacio and the Wanda Mines

Visit www.greywoodedforageassociation.com for more information!