The Blade

Creating an Awareness of Forages

Monthly Newsletter of the ***Grey Wooded Forage Association***

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June 2017

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This publication is made possible in part with funding from: Alberta

Photo Credit: Ken Ziegler

GWFA Mission Statement

To promote environmentally and economically sustainable forage and agricultural practices.

GWFA Vision Statement

The community is engaged in regenerative agricultural production methods.

Message from the Chair

By Ken Ziegler

It's in June that we typically have more growth than our animals can consume which makes it the best month to build up a bank of forage for later in the year.

It's in this month that the advantages of time controlled grazing pays off.

As we manage the animals harvesting the growth, we either build the bank of feed or deplete the plants that have been bitten earlier this season.

Interested in how this all works out to more forage in September, October and November? If so, ask for a grazing course.

Improved grazing management has been one of the major factors that has contributed to improved ranch economics over the past 25 years.

Also, we hope you enjoy this newsletter! Have a close look through at the events and programs being organized by staff.

Take special note of the AGM which is coming up on the 12th.

We look forward to hosting a tour of the Olds College before the AGM and invite you to join in for the afternoon. Consider it a priority to meet the board that drives the association and especially the new board members coming on for the next three years.

Ken

Foragebeef.ca Technical Information for the Canadian Forage Beef Industry

Manager's Notes

By Ginette Boucher

Greetings,

Summer is fast approaching, calving season is winding down and most are out in the field seeding. This is an extremely busy time of year, with the long days and short nights, please be safe in all you do.

An exciting opportunity has come our way. We are in the planning stages of our High Legume Field Tour set for August 22nd. This tour was a partnership between GWFA and Agriculture and Agri-Food Canada to tour producer pastures containing high legume plant species and the Lacombe Research Center alfalfa test plots.

While planning a separate tour with Gentec they realized the date for the Gentec event was conflicting with the GWFA legume tour. After some consideration, AAFC and Gentec felt that it would be extremely valuable to producers to have an option of taking this high legume tour during the Gentec day. AAFC and Gentec have invited GWFA to partner with them for this event and have our High Legume Pasture Field day as one of the tour options.

This is an incredible partnership opportunity for Grey Wooded Forage Association members. Charlie Brummer, PhD Director and Professor UC Davis will be the keynote speaker at lunch and will discuss the Alfalfa cultivar trial at the research centre during the High Legume tour. On page 14 of the Blade you will see a save the date poster. Stay tuned for more details

Our AGM and tour is fast approaching, for those of you who have not yet registered please do so at your earliest convenience. The caterer is requiring that we let them know the number of meals we will require one week ahead of time. This would mean that on June 5th we must know how many meals to order. We want to ensure everyone attending the AGM will be fed.

Our Advanced Fencing for Precision Grazing event hosted on May 10th went very well. The weather cooperated, our attendance was 38 and all were very satisfied with the time spent learning. Gallagher showed his fencing systems, Greenedges Fence did his high technology fencing presentation and we got to experience the capabilities of the UAV "unmanned aerial vehicle" from Fotocure. Sundog Solar shared his experience with solar watering. GWFA presented an overview of grazing management and Jeremy Clyde the land owner shared his plans for his farm. Jeremy received some funding for an ALUS project, as well he received some GF2 funding. On our website under the events tab we have a gallery of photos from the event if your interested in browsing these.

We have several upcoming events, you'll find these in this publication. After our AGM, we will be hosting a pasture walk at Anchor JB Ranch in Acme, our host being Jim Bauer. This

is schedule for June 26. You don't want to miss this.

Enna, our summer staff, has been doing an excellent job with building our website and updating resources. Please take a moment and see how refreshing our site is. Enna also has been providing administrative support & developing posters. Thanks Enna for your great work:)

We hosted our Weed Management & Control webinar on May 30th. Devin presented on weeds ID and management practices, and Candice Manshreck presented on weed control options. This was an introductory seminar one of a series, thanks to the presenters.

Our Pollinator project is under way, the enrollment form has been filled out and submitted. The seed has been ordered and these projects will soon be underway. We will keep you posted as the year progresses.

Our sanfoin project at Murray Abel's farm has been spot seeded and the plot is looking great. Very few weeds and many new seedlings. Murray will be fencing off the plots and animals will be grazing in July. We will be deploying some grazing cages and doing some clippings throughout the summer.

In the past, our Alfalfa project was funded through the Federal Government. Agriculture and Agrifood Canada has many other projects on Doug and Deb Skeels farm and assisted us with the research work to do with the Alfalfa project. These projects included bale grazing, and nutrient monitoring. Now that these projects are winding down AAFC will no longer be going to this site. For us to continue with our project we need to look at ways to fund this project. We would like to invite you to give thought to ways we could consider raising some dollars to support this project.

.

Best regards,

Ginette


A NEW JOINT VENTURE
Introducing
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MANAGEMENT
This joint venture brings proven innovation to Precision Grazing. Using a new electric fencing and post vibration technology in conjuction with aerial pasture biomass measurement and terrain modelling, our clients can expect to see a doubling of production output.
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Comparing the New Solar Economy and Grazing Management

By Greenedges Precision Fencing and Fotocure

Everywhere today we see great effort and expense aimed at capturing the suns energy – panels and wires and batteries and microprocessors.

It's even a very "in thing" for companies and home owners to clad their building roofs with panels to channel solar energy into powering up their homes, businesses and sleek electric vehicles. While there are over 1300 watts per square meter of energy delivered on a sunny day, much of it is yet unavailable with current panel technology. Of course the skeptics among us also ask the age-old, boring question – but at what cost is this new energy delivered?

The bad news: solar derived energy costs can still be multiples higher than conventional power sources. The good news: solar costs are becoming more competitive and it looks like sunlight will be plentiful and long-lasting. Our local star, the Sun, is an amazingly powerful energy source even at 130 million kilometers away. But, the really good news – forages can capture energy even better.

Sunlight lands on plant leaves, these plants, using an amazing photosynthesis technology convert the Sun's energy to carbohydrates, using atmospheric carbon dioxide, which go directly to new cell growth both on the stems and down stem into the roots - including feeding the microbes attached to the underground water collection system.

Properly managed pastures are amazing solar collectors! And, while they may not directly power-up the latest gadgets in our homes, the energy produced is processed into life giving feed and food for a hungry world. While Bio-energy conversion (wood or grass burning) electricity stations are becoming popular again in many countries with wood pelletizing mills coming into the forest residuals industry, the life-cycle costs appear to be little better than fossil fuel conversion activities.

Simply put, by harvesting forages in a timely, optimal, natural way – through grazing or selective cutting, the energy captured and used in livestock production represents captured and stored carbon and some of the best food sources available anywhere. How do you beat that with expensive panels, wires and large factory development?

Further good news: The management of nature's solar collecting system can be easily tweaked to produce much more total food calories by implementing small, inexpensive management methods. Information from many practitioners and research sources around the world is pointing to the productivity gains by managing forage plants and foraging animals in a mutually beneficial way to result in a 2 to 3 fold increase in total production and a multiples more increase in profits for the manager.

Here's how: as the forage plant grows there is a range of stages of leaf development - from stunted weak to succulent, active growth to mature dead and dying leaves.

Managed properly these can be turned into healthy stands of mostly verdant plants much desired by grazing animals. The manager needs to simply guard against destroying the solar collector – over grazing of juvenile, active leaves, on the plant. How? By removing the excess through once-over grazing but protecting the plants from re-grazing or over-harvesting the active leaves.

Above ground the photosynthesis activity is maximized by the same blanket of active leaves that protect the soil surface from the hot rays of the daytime sun or the cold night temperatures in the shoulder seasons.

So, while the above ground view is part of the great story of forages, below ground, the protective leaf cover gives harbor to active mycorrhizae-root activity and water storage.

We'll dig further into this in a follow-up article. Meanwhile, keep on harvesting the sun!!

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Thistle, Buttercup and Caraway

By Devin Knopp, P.Ag.

Spring is my favourite season of the year. The weather is warm, flowers are blooming, trees have bright green leaves, and livestock are heading out to pasture. It appears to be an almost prefect serene setting, except for weeds.

The renewed spring growth is also the most prolific time for weeds to grow and spread. Most of the pasture weeds that are affecting us here in the Grey Wooded soil zone are quick out of the ground and early to bloom. They are also a very good indicator of pasture health issues. Plants, or the lack there of, will tell us a lot about what is going on in our pastures. Routine overgrazing, disturbed or bare ground, and lack of fertility will all be highlighted by a patch of weeds. Most of the weed species can be controlled. or prevented from establishing, with good strong competitive pasture plant stands. However, once they get a toe hold many can get a death grip on the pasture and become a wreck in a short time. Spring is the best time to control weeds. They're at their most vulnerable state right now.

Tall Buttercup is one that doesn't waste anytime on the early spring growth. It prefers moist areas, which are usually the first places to green up in the spring. These areas attract grazing animals however, most wild and domestic species will avoid grazing Buttercup. Tall Buttercup blooms early and sets seed quickly, which means the grazing animals will get the burs caught in their fur and transport this weed everywhere they go. Under intense infestations, grazing animals may have no choice but to graze this plant. That can lead to problems, as it contains toxic juices in the stems and leaves. The toxic juices can cause blisters and lesions in the mouth, throat, and digestive tract of the animal. In severe cases this can cause death. Grazing is not a recommended control method for this weed for that reason. Since most livestock avoid grazing it, the carrying capacity of the pasture is reduced.

Wild Caraway isn't such a wild plant. It is the same one grown for Caraway spice. It has just escaped the field and become a range and pasture pest. It only spreads by seed, and has a root similar to a carrot or parsnip. It is completely edible, but grazing cattle won't eat it. Wild Caraway is a biennial that has a competitive advantage over most species. The carrot like top of the first-year growth shades everything below it, putting Caraway at a distinct advantage. Since it's a biennial it blooms early and continues to compete with surrounding vegetation for nutrients and moisture. Its taproot can access moisture and nutrients at much deeper soil levels. Since cattle won't eat it, Caraway will severely reduce the carrying capacity of any pasture, and it can be especially problematic in drought years.

Canada Thistle is so wide spread, and grows under just about any circumstances the Alberta Government, is and has been for some time, considering removing this one from the list of controllable weeds. I hope that doesn't happen, as it is probably one of the worst in terms of range and pasture. I like to refer to Canada Thistle as an indicator species. It indicates the problems that may be occurring, so listen to a thistle patch, it never lies. It is quick to colonize and once fully in place difficult to get rid of. That is because Canada Thistle has many modes of reproduction. It produces seeds but it also produces rhizomes from the roots that can sprout a new plant. That's why you see pockets of thistle in certain spots but not evenly spread across a field. Now, most livestock will graze thistle, but you have to push them to do it. Which in lies the issue. Most thistle on pasture is not in highly managed rotational grazing scenarios. It is most often found in continuous or long duration rotational grazing situations. Most livestock will generally avoid it, reducing the carrying capacity of the pasture. Which under continuous grazing, perpetuates the issue as other areas now become over grazed, creating prime opportunities for thistle to continue to establish and thrive. According to Dr. Edward Bork of the University of Alberta, an "increase in thistle biomass of 1kg/ha reduced the forage yield by 2kg/ha". It becomes a viscous circle. Canada Thistle is relatively easy to control. There is a long list of herbicides that will control it. However, because of its never lie attitude, you must also address the underlying issue which is soil health problems. Otherwise controlling the patch is kind of useless as the next round of fluff that blows by from the neighbours is just going to start another infestation. Good robust competitive pasture plants will prevent thistle from establishing.

I chose to pick on these three, as they are probably the three biggest threats currently spreading in this area. Controlling them isn't easy or cheap in many circumstances, but letting them infest your pastures can get a whole lot more expensive. They're not making any more land, so we must be as efficient as possible with the land we have.

How to Identify Plants

By Karin Lindquist, Forage Beef Specialist, Ag-Info Centre (310-FARM)

We've all been there: A particular plant catches our eye that we've never noticed before. We wonder what it is, and whether it's going to be a pesky weed or not. This is where plant identification can become a great tool to have; a means to be able to look at the various structures of a plant and use them to identify what that plant actually is.

I thought it's about time I share with you a few of my tips and tricks for plant identification.

Good Books & Good Photos

I use a combination of plant books and photography. My favorite books to use are all three volumes of *Common Plants of the Western Rangelands by Kathy Tannas (published by Alberta Agriculture and Forestry/Olds College). I also like using the books Plants of Alberta and Weeds of Canada by F. Royer and R. Dickinson (Lone Pine Publishing) for additional detail and colourful photographs.*


Western Wheatgrass in vegetative state—note bluish tinge


Beautiful Sunflower

Photos are a must-have for plant ID. I either don't have enough time to skim through my books to key out a plant, or I just don't pack them around as they're more of a weight issue than if I were packing my smartphone or dSLR Canon Rebel with me; particularly if it's just a simple walk around the farm yard. It's a different story if I'm out hiking or doing a one-to-three-hour-long pasture/rangeland walk: Then, it's backpack + camera + books = fun with plant ID.

I could write a whole article on how to take good photos of plants, but basically it's important to *take multiple shots at different angles of the whole and different parts of the plant. Also important, please make sure you download them as large photos (1 megabyte or more in size). That way, it makes it much easier to zoom in on a particular part without getting all pixelated and blurry, particularly if you have to send some in to someone like me to help you out.*

Plant Identification

There is a lot more to be learned with identifying forbs (broad-leafs), shrubs and grasses than what I can squeeze into this article. That is why I'm only going to focus on forbs and grasses. Literally trying to identify a plant is admittedly easier said than done, as it takes a lot of practice and trial and error to get it right. That's why I stress the importance of *good plant books, a camera, and a good little magnifying glass to pick out details not noticed with the naked eye. Attention to detail is also crucial. Those subtle differences can be the difference between being able to tell the differences between species as difficult to tell apart as Northern and Western Wheatgrasses (Agropyron dasystachyum & Pascopyrum smithii, respectively)!*

Plant ID: Forbs

Forbs are relatively easy to identify because of certain features of either leaves or flowers that can be easily remembered the next time you find them. However, these plants can be particularly challenging when they're in their vegetative stage. I won't touch on their growth forms because they are highly variable, ranging from creeping to climbing, or bushy to erect.

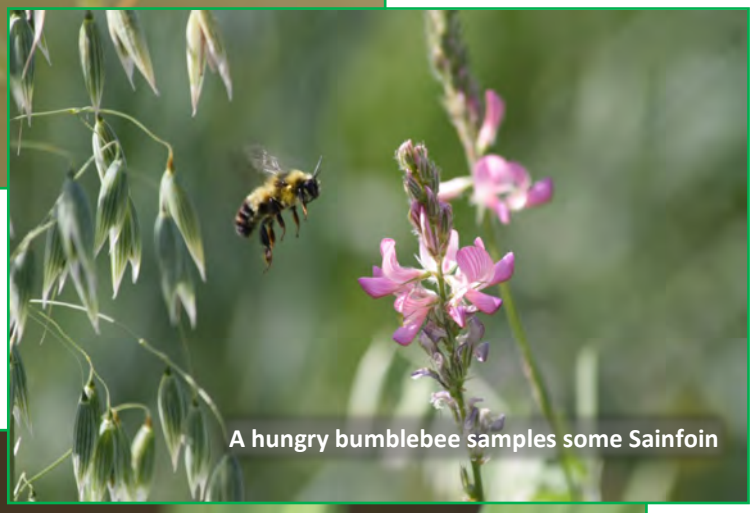
Start by going beyond the shape of a leaf and the arrangement of the leaves on the plant's axis. Look for other subtle details, such as presence of shiny, waxy, or hairy surfaces on the leaf, presence of toothed margins, what kind of base a leaf has, and how it attaches to the stem. Veining is also important to look at.

If you have flowers to work with (when the plant is reaching maturity), great! You'll have much more to work with, in addition to the leaves. First notice the colour, size and "regularity" of a flower ("regular" means it is symmetrical like that of a sunflower (see Beautiful Sunflower [*Helianthus pauciflorus ssp. subrhombodieus], left);*

(continued from previous page)

"irregular" means it is only symmetrical on one side, just like that of a pea or alfalfa flower). Now notice where it sits on the plant, and how it and other flowers are arranged on the main stem. The differences are remarkable: Just compare the flowers of Common Yarrow (*Achillea millefolium) to that of Sainfoin (Onobrychis viciifolia), and you'll see what I mean. There are numerous of other types of floral arrangements (and not the kind you get from florist for Valentine's) that are possible, aside from the two examples here.*


Common Yarrow


A hungry bumblebee samples some Sainfoin

Plant ID: Grasses

At first glance, all grasses look the same. They're not nearly as easy to point out as most forbs or shrubs. However, once you get down on your knees and start picking out the different grasses from ground- level, you start seeing the differences. This is where a magnifying glass can come in handy.

Grasses come in two different growth forms: "bunched" or "creeping." Bunch grasses come up in a big clump; creeping grasses spread out via rhizomes in the soil. Crested Wheatgrass (*Agropyron cristatum) is a bunch grass, for example, whereas Quackgrass (Agropyron repens) is a creeping grass.*


Quackgrass—collar region

Grasses at the vegetative stage are tougher to identify. So you'll need to look at the leaves starting with the tips, the width and length of the blade, note particular surface characteristics (shiny vs. hairy, for example), and the veins. For example, Kentucky Bluegrass (*Poa pratensis) is easily discernable from Creeping Red Fescue (Festuca rubra) by noticing how the tip of the blade is always boat-shaped, unlike that of the fescue.*

If you still can't tell what grass is what by the blades alone, then move on to the collar region.

The collar of a grass blade is where the leaf connects to the stem. Folding the leaf back reveals tiny clues as to its identity, including presence of a "ligule" (membrane extending up from the collar), "auricles" (claw-like appendages bending around the stem), and the shape of the "sheath" (how the blade attaches to the stem; may be V-shaped or open). Brome grasses, like Smooth Bromegrass (*Bromus inermis), typically have no auricles; all Wheatgrasses, including Quackgrass, always has large auricles extending around the stem.*

Quackgrass Collar Region

There are basically two types of seed-heads or "inflorescences": "Panicles" like that of oats or brome grasses, or "spikes" like with wheat, barley, and all wheatgrasses and ryegrasses. The "awns" are the long, thin protrusions extending from the "spikelet" or "seed," and may be completely absent like with Smooth Brome, or very long as in Needle & Thread Grass (*Hesperostipa comata). As with forbs, the presence of the flowering body in grasses really helps to*

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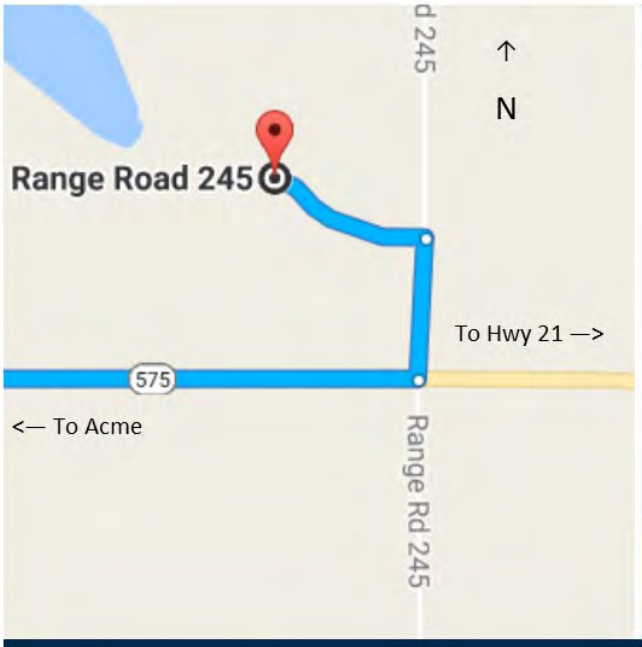
Needle and thread grass

ease the difficulty of plant identification.

So there you have it, a few little tips and tricks for plant identification. As I mentioned before, there is far, far more to this than what I can put into this article. If you are more interested in learning more about how to identify plants, there are courses offered by different groups around the province to attend. I for one am happy to teach anyone who's interested in how to go about identifying plants.

Also, if you are stuck on a plant that you can't figure out in your pasture or hay land, feel free to give me a shout, or email some pictures to me at karin.lindquist@gov.ab.ca.

Karin Lindquist
Forage-Beef Specialist
Ag-Info Centre, Stettler
310-FARM



June 26

2:00 — 5:00

Host

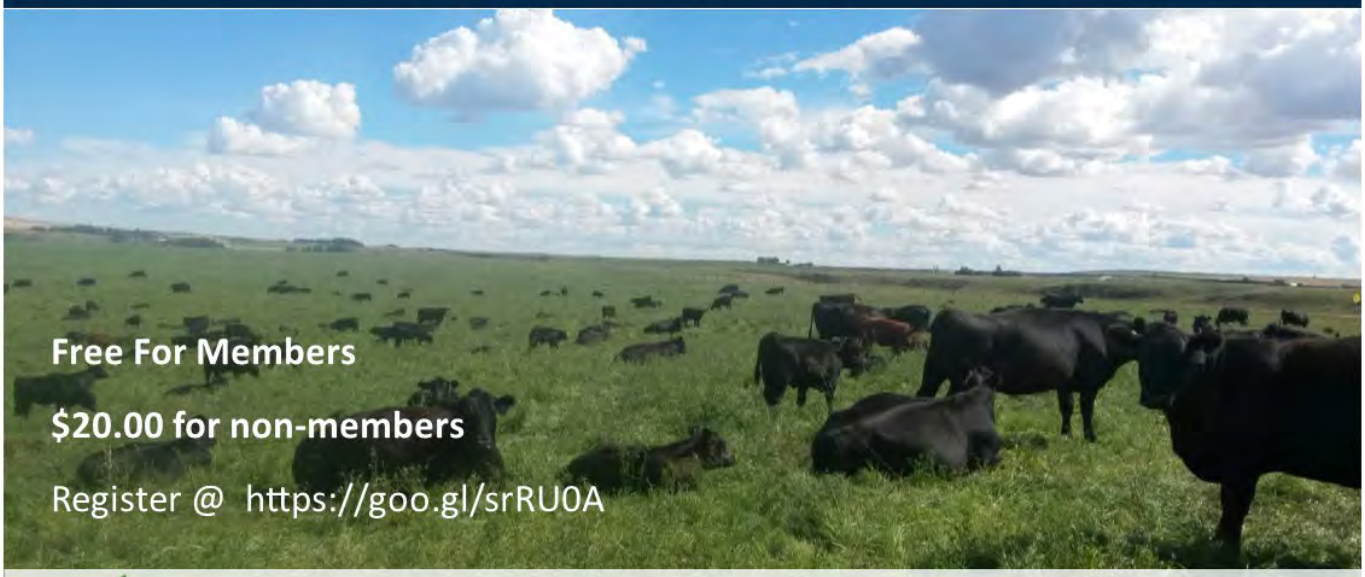
Jim Bauer

JB Ranch

PASTURE WALK

&

Electric Fencing for Pastures



Grey Wooded Forage Association

Creating an Awareness of Forages

Energizer Selection and Grounding

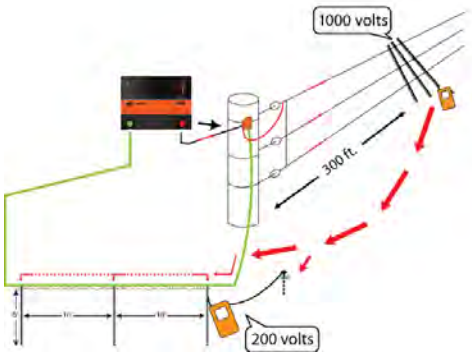
By Garth Hein

Picking a fence energizer for your Power fence project can be a little confusing at times. Here are some things to consider when making your choice.

All Energizers deliver voltage on the fence. Usually the voltage from an energizer is between 7kv. & 10kv. Voltage is pressure, so that is what we need to push the power on to the fence. Energizers are also rated in Joules.

Joules is a measurement of energy that keeps the voltage up on a fence. A lower Joule energizer will not be able to maintain the voltage to control livestock as well as a higher Joule energizer can. In other words if you have a fence that is going one mile a 1 joule energizer could handle that but if that fence had grass touching it, poor insulation or trees/shrubs then there would not be enough power left to deliver a shock that would send a message to stay away. A minimum of 3kv is required to control livestock.

So when you are selecting an energizer pay attention to the Joule rating to help you make a good choice. If it doesn't say on the packaging ask the employees where you are buying it. You are always better to err on the side of more Joules than less.



Grounding Rules

1. Use galvanized ground rods only
2. Rule of Thumb 1- 6ft ground rod for 2 Joules of stored energy.
3. Sandy light soil may require more ground rods.
4. Minimum of 10 ft. between rods.
5. One continuous galvanized 12.5 gauge. wire to join ground rods.
6. Select a damp site even if you need to go 300ft from the energizer
7. Make sure rods are at least 33 ft. from any power supply ground rod, underground telephone or power cable.
8. Use galvanized clamps for all ground connections.

Do Not

- Use copper rods or wire. Copper and steel mixed create a chemical reaction that corrodes the connection and creates problems.
- Connect to water system or electric power source.
- Connect to metal building.

Testing the Ground

- Short the fence out with steel posts to lower the voltage to 1000 volts or less.
- Use a DVM or SmartFix to read voltage at the ground rod with the probe placed in the soil.

How is an "Alternative Livestock Watering System" an ALUS Project?

By Ken Lewis, Conservation Co-ordinator

First off, what's an "Alternative Watering System"?

It's any watering system that provides livestock on a farm, an alternative to drinking water directly from a creek, river, wetland, pond or lake.

Here are just a few examples:

- A waterer supplied by a well
- A solar-powered system pumping from a creek or wetland, to a trough
- A nose pump where cows pump water themselves from a wet-well accessing shallow groundwater or a dugout
- A pipeline moving water from the pressure system in the yard.

When livestock are provided with an alternative to drinking directly from a creek, river, wetland, pond, or lake, most of them, most of the time, will choose that alternative. This is especially true if that alternative is on high, dry, solid ground, 100 – 200 feet away (or more) from the creek or wetland.

When livestock don't have to drink directly from a creek or wetland, they'll spend less time in and around those water bodies. This means less manure right beside (or in) water bodies. It means less soil compaction and soil erosion around water bodies. It means less damage to trees, shrubs, flowering plants and grasses near the water. In short, it means improved ecosystems and increased ecosystem services.

As you know, with ALUS, when you make management changes on your farm or ranch that increase ecosystem services, you can get paid.

When you decide to install an alternative watering system, you could get 75% of the costs, up to $75 per head using the system, from Red Deer County's ALUS Program. AND, you could get $30 per acre per year, for your new management that is producing ecosystem services. These acres could include the natural waterbodies in your pasture, and the riparian areas alongside those water bodies.

If you'd like to talk about alternative watering systems and ALUS on your place, please contact me anytime at 403-505-9038 or at klewis@rdcounty.ca .

Environmental Planning

Carving out a role in the succession of your farm

Besides all of the expected reasons to have an environmental farm plan, one often overlooked reason is the opportunity to engage youth in your operation. If your farm is looking for a way to transition to the next generation, consider creating, finishing or updating an environmental farm plan.

Connect to the Bigger Picture

If you farm, you're connected to the land and have concern for the future viability of the natural resources it houses. If you live on your farm, you care about clean water, air and viable soil. Creating a plan to reduce environmental impact is a starting point where people on the farm can agree. A critical part of the Alberta Environmental Farm Plan is to connect the natural resources, to the operations. Through this process, you are bound to understand the natural resources even if you have been living on the farm for years. You can engage a younger (or older) member of the farm by deepening their connection to the land can be a motivating force.

Develop a Clear Role

Planning in this way makes your operation relevant for generations to come. The next generation on the farm needs to carve out a role for themselves (or perhaps carving out a new role for someone who is looking to pass the farm on). Having a clearly defined project like an environmental farm plan can be a great way for a person to transition to a new decision-making role. It can also help those parents and the young person to highlight ways that they can build management thinking not only in the operations but the full scope of the business.

Leverage Strengths and Interest Areas

A report by the UN points out that youth should be more motivated to help in this area since they will be likely living with the consequences of the choices made today. On a micro level, this may be the case for your farm too. Young people looking to take over the farm are going to have to manage the natural resources to make sure that it provides a living in the long term, much like older generation has for years. The same UN report highlights how intergenerational education is a useful way to gain a depth of knowledge that they can't get from youth culture or peers alone. The process of environmental farm planning encourages independent learning and can lead to a new understanding of the industry that these young people are about to enter. At the same time, just because the older generation is looking for change themselves, doesn't mean that they don't care about the farm and its impact. On the contrary, those that have farmed the land for generations have a unique connection to it, seeing it go through many growing seasons and knowing how it has provided for the family.

Train, Discuss, Plan

Adopting an environmental plan is such a useful training tool. The plan is thorough and likely there will be many conversations on the inner workings of the farm because of the requirements of the project. The environmental farm planning process is an excellent way to stimulate that discussion so that a young person can get a very thorough understanding of many aspects of the farm operations. If there is not a formal training program already in place, this is an easy way of implementing one that can take into account a variety of learning styles. Combining new technologies with the wisdom of previous generations is important to be able to see the advantages the farm has through a different lens. Innovation that can contribute to the farm to reduce its environmental impact may also be the discovery of a practice that helps to lower costs or increase efficiencies. Fresh eyes (or at least perspective) on the operation can highlight overlooked opportunities.

If your farm is going through a succession planning process, consider environmental farm planning as a tool to help you through the transition. Building a clear role for new (and old) partners in the farm can be motivating and inspiring for all involved

Contact Alberta EFP

For more information, go to www.albertaEFP.com or send an email to inquiries@albertaEFP.com

To start the EFP process, email us at register@albertaEFP.com
Phone 780-612-9712

Canada Alberta Government Growing Forward 2


SAVE THE DATE
AUG 22
High Legume Field Tour & Gentec Field Day
Lacombe Research Center
High Legume Tour Stops:
Murray Able—Sainfoin, Alfalfa, Cicer Milkvetch
Kevin Ziola—Cicer Milkvetch
Gentec Field Day Keynote Speaker
Charlie Brummer, PhD
Director & Professor
UC Davis
livestock gentec
Agriculture and Agri-Food Canada
Grey Wooded Forage Association
Creating an Awareness of Forages


Western Canadian Grazing Conference
Western Canada
Conference on Soil Health
Profit Above, Wealth Below
Western Canada Conference on Soil Health & Grazing
December 5-7, 2017
The Radisson Hotel South — Edmonton, AB
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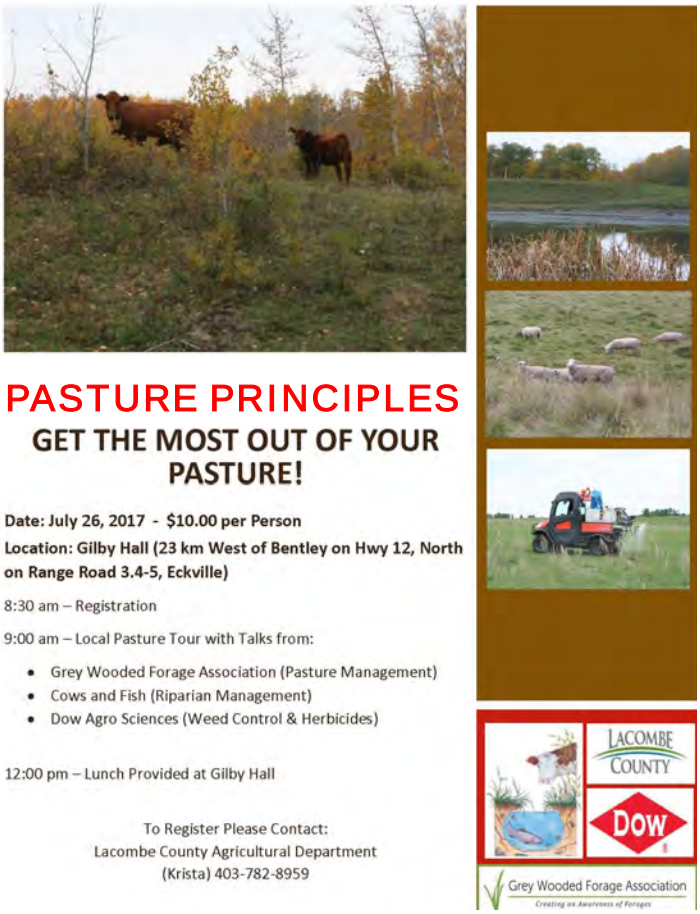
PASTURE PRINCIPLES
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Date: July 26, 2017 - $10.00 per Person
Location: Gilby Hall (23 km West of Bentley on Hwy 12, North on Range Road 3.4-5, Eckville)
8:30 am – Registration
9:00 am – Local Pasture Tour with Talks from:
Grey Wooded Forage Association (Pasture Management)
Cows and Fish (Riparian Management)
Dow Agro Sciences (Weed Control & Herbicides)
12:00 pm – Lunch Provided at Gilby Hall
To Register Please Contact:
Lacombe County Agricultural Department
(Krista) 403-782-8959
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DOW
Grey Wooded Forage Association

How Forages and Grasslands Contribute to Biodiversity

By Mustafa Eric

In the earliest theoretical literature on market economy, land is often cited as the only real source of wealth as it was the sole element in the equation that yielded a lot more than what it took in. Former President of the United States Franklin D. Roosevelt was once quoted as saying: "A nation that destroys its soils destroys itself."

How we manage land today, remains one of the most important issues in maintaining our ability to cultivate it and continue to produce food for the ever-growing population.

In managing the land, however, less can be more, as in the case of forages and grasslands.

As the modern agricultural practices involve quite a number of mechanical and chemical inputs in the production process, these elements can, paradoxically, deprive the soil of some (or all) of its diversity while helping increase the yield and quality of the crops it is seeded with.

"A tame forage stand can have as few as one species and as many as 20. Native grasslands can have as few as 10 species or as many as 150 or more," says Karin Lindquist, a Forage-Beef Specialist with the Ag- Info Centre of the provincial government.

"Croplands are, 99 per cent of the time, going to have only one species present-a monoculture, if you will."

Clearly, that statement speaks for the vital function of forage and grasslands in sustaining the biodiversity the soil naturally possesses.

However, that is not the only positive environmental benefit that grasslands and forages serve.

"Grasslands are covered in perennial vegetation, or vegetation that covers the soil surface 12 months of the year. Croplands only have vegetation that covers the soil surface for about four months out of 12," says Lindquist.

"There is more litter present (on grassland), so a lot more vegetation is covering the soil surface. This is very important for erosion control from wind and water."

There are quite a number of other services that grasslands and forages offer to the environmental sustainability, according to Lindquist.

These include protection of the integrity of the soil, maintenance of unfettered natural cycles of water, nitrogen and carbon and increased water holding capacity of the soil, among many others.

However, while the value of protecting the biodiversity and natural cycles of the soil is almost universally appreciated, the soil itself doesn't generate income or support livelihoods. So, the primary goal of maintaining forages and grasslands is and will remain, feeding livestock.

And that does mean forages/grasslands need to be managed and should not be left off to be looked after Mother Nature only.

The management decisions, though, are more than just simply deciding whether the land is to be used for crop production or haying or as forage stand.

Lindquist says producers should carefully weigh a number of important factors before making a final decision on how to make the best use of their land. These factors include soil type and its characteristics, topography, accessibility to the area, type of vegetation present or the types of plant communities present (treed areas or grassland areas), climate (precipitation and even evapotranspiration rate), presence of endangered/threatened/rare species (plants or animals) and potential for improvements to the landscape by way of presence of weeds, eroded areas, forage yield, etc.

"You can have an area with flat land and good soil, but the plant community there needs grazers much more so than hay equipment," she adds. "Then those grazers are going to take precedence over that haying equipment."

There are even more subtle details to be taken into consideration in deciding what will roam over your acreage as Lindquist explains:

"*There are a wide variety of species, both native and tame, that are not adapted or not suited for haying. Low-growing plants get missed by the knives of the haybine, but not the hungry mouths of cattle and sheep. Tame grasses like Meadow Brome (*Bromus biebersteinii*) are ideal as pasture plants, as are native grasses like Sheep's Fescue (*Festuca saximontana*) and rough fescue.*

*Other species are sensitive to the impacts of the tractor wheel, like Moss Phlox (*Phlox hoodii*) or biological soil crusts made up of a variety of lichen and fungi. It may seem odd to read this, but these organisms tend to recover better after a long period of rest after being impacted by hooves than being impacted by vehicular rubber tires.*

The reason may be because these ruminant animals stand on four þegs,"in a manner of speaking, that have a sharper impact to the surface with a smaller surface area of coverage, rather than the rolling, smooth impact to the surface like with a typical tire that has a larger surface area."

And not least to be counted as a major factor in forage/grassland management is the time. There is a time for grazing, there is a time to give a rest to the land to allow plants to recover and these times never come in a recurring rhythm as they should be decided in connection with other factors, including moisture levels and weather conditions, among others.

"If you look after land, the land will look after you," says Lindquist.

"It is our ***duty*** to make sure that these lands will continue to be both productive and ecologically healthy--diverse, productive, biologically active--because we **need** them for our survival, just as the plants and the animals also need those lands."

Grey Wooded Forage Association

2017/2018 Memberships

Memberships are $20.00 and run from April 1, 2018 to March 31, 2019.

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

For information call 403-844-2645

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    - On-site farm calls are $0.55/km travel each way
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Please fill out and mail the portion below with a cheque for $20 or $30 ($10 printing/postage fee for paper copy of The Blade added) to:

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