# The Blade

*Creating an Awareness of Forages*

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

**SEPTEMBER 2017**

**Operation Pollinator**

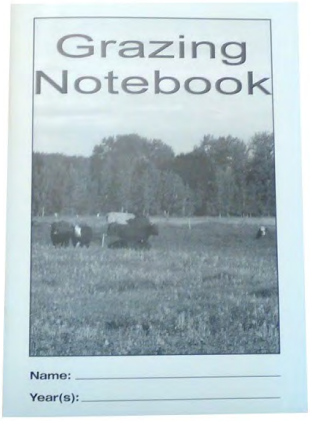
**Lodgepole Ranch**

# Message from the Chair

*Amy Leitch*

Welcome back to another edition of the blade. As many of you will be aware I am a meat goat producer and as you all know animals will teach us so much about our grazing programs sometimes just once in a season or weekly. The lesson I am taking home this grazing season is that they will work efficiently for us i.e. fence clearing and weed removal, but only if we as the producer put in the time as well, whether it is with fencing, grazing plans or day to day management on the land. Our herd did a bang-up job of fence clearing for us to repair fencing this season, but it took planning and day to day management on our part.

So, as I see the grasses fading to a golden brown and the day length disappearing I make notes of what work and what was an Epic Fail in that ever-important Grazing Notebook. As always, I will ask you all a question in my message, do you use a basic note pad or a more sophisticated form of recording your grazing? Which ever for you choose it is invaluable to your operation in the increase of grazing days or management in a drought or excess moisture season and to the AU's you can run effectively on you land. We at Grey Wooded Forage would love to hear about your pastures and Geek out on Grass with you all. Feel free to give us a call, text, email or be part of our Facebook forum.




Amy Leitch

Another Successful West County Agricultural Tour, summary and photos available on the Grey Wooded Forage Association website

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***GWFA Mission Statement***

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

***GWFA Vision Statement***

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

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Alberta

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PC Amy Leitch

# Manager's Notes

*Ginette Boucher*

Greetings all,

This month I was thinking out what message I wanted to share with you. As a member of the Grey Wooded Forage Association we need your assistance in providing suggestions for prospective board members and cultivating future prospective board members.

We are currently seeking two new Directors to join our board. The role of the Board is to govern the organization. The Board of Directors is the legal authority for the association. As a member of the Board, a Director acts in a position of trust for the community and is responsible for the effective Governance of the organization. Governance is the act of establishing and monitoring the long-term direction of an organization through policy.

## *Below is a brief list of benefits and experience that we seek from potential board members*

- A positive attitude towards continued learning
- Enthusiastic supporters of our association
- Willingness to share experiences and grow
- Social interactions and networking with Industry representatives, GWFA members, staff and other board members at our events and meetings.
- Prospective board members who have a broader view of the community and the world are an asset
- Prospective board members are a formal link to the community and to the people that our organization serves.
- Advocating for the association is a key role we need in a Director
- Your contribution will impact future generation in agriculture
- Opportunities to attend conferences, approve project, and personal development

## Key Roles of a Board:

Guide the organization into the future
Ambassador for our organizations mission & vision and for the people that our organization supports
Set strategy and structure, monitor progress and goals
Delegate to management
Exercise accountability to shareholders and be responsible to relevant stakeholders
Ensure proper books of account are kept
Protect & Direct

For more information on our board positions, a job description and roles and responsibilities and time commitment please contact me at 403-507-5478.

Kind regards,

Ginette

# Should I Forage Sample Now?

Devin Knopp, PAg

With the inklings of fall slowly settling in, our thoughts are starting to creep toward harvest. Harvest is a busy time, but there are a few things producers should start thinking about to be ahead of the forage sampling rush prior to late fall feeding.

Now you may be wondering why I'm talking about forage sampling already. Most finished making first cut hay by the middle of August, however there are still a few working away at first cut. To those of you who are still making first cut hay, I strongly encourage you to get a feed test done on that late maturity hay. It looks green, smells green, but the quality will not be there because feed quality drops off drastically as tame grasses and legumes mature. Last year there was a lot of poor quality and late mature hay made. I've heard of a few wrecks from last year where producers had malnourished and even downer cows because they did not realize how poor their hay was. This poor level of nutrition doesn't only affect the cow at that moment, it will have lasting effects on her ability to breed, supply milk to her calf, and put adequate body condition on for the next winter.

Regardless of whether your hay is done or you're still working on it, it's a good idea to know what you are going to be feeding or selling to your customers. Most experts will tell producers to take feed samples right before they are going to begin feeding to give the most accurate account of the feed. Taking feed samples too early doesn't account for any potential storage losses or damage that may occur between sample time and feeding time. However, sampling early does have its advantages. I tell producers to forage sample when it's a convenient time for them, which may be when you are stacking hay or preparing to sell it. Also, sampling with enough time allows you to make changes to your feeding plan and to accommodate for potentially unforeseen test results. This will give you time and resources to act accordingly. Sampling early also means you beat the rush and get a faster turnaround time on your results.

I've been asked a few times how best to sample hay and silage. The best method for sampling hay is to use a forage probe. This allows you to core into the bale as near to the center as possible to get a sample. This will be much more representative for that bale. As you core into the bale toward the center you pass through multiple layers that represent different areas of the field. It doesn't matter what type of bale you are sampling, rounds vs squares. Always sample from the twine or wrap side of the bale not the face of the bale. You'll want to take core samples from about 15 - 20 bales in the lot. A 'lot' is bales made from the same field or area within a field. If you have a large number of bales or a large field you may want to boost the number of samples to 40 to get good representation for the lot. Put sampled cores into a clean pale or plastic bag. Twenty cores should easily fit in a large plastic sample or Ziploc bag. If doing more than 20 samples, try and avoid mixing the samples too much by hand. Mixing in a pale can cause the fine particles and leaves to fall off and skew your feed results. The best is to take the large bulk sample, on a clean surface, table top, cardboard, newspaper, etc. dump the sample and divide it into four quarters as evenly as possible. Take two of those quarters and place in the sample bag and the other two will be discarded. This allows the samples to be mixed, fine materials will not be lost, but evenly distributed throughout. Make sure to label the sample bag with some form of identification so you know which lot the sample represents, date of sampling, who sampled and any other information you feel is relevant to track the sample or required by the lab you are submitting to.

Silage sampling is a bit more specific to the silage technique you are using. Pit silage can be probed, but you can also bulk sample off the face of the pit by taking a few handfulls, mixing and then submitting. Make sure when sampling off the face, to brush away some of the surface material and get the material that hasn't been exposed directly to the outside air. Also make sure you sample high and low on the face, to better represent the true profile of the pit. When using a silage probe, you want to get as deep into the pit as possible. There are special silage probes that can reach 6 to 8 feet into a pit. As with bales, you want to take multiple probes of your pit to get any variance from side to side or front to back. It is important to get as deep as possible to better represent the entire profile of the pit. Sampling bale silage can be done just like with dry hay. Core, the bale as close to center as you can. Always core into the bales from the twine or net wrap side. Never core the face of the bale, this will not give you a representative sample of the bale. Since you are sampling silage, I tell people to cut a half circle into the plastic and then take the core. Don't core through the plastic and mesh wrap. By cutting that half moon or circle shape, once you have taken the core. you can use tape to seal the plastic up again and reduce the chance of spoilage due to contamination from air. Like with hay, you will want to take 10 - 20 samples per lot, depending on lot size, and label the samples accordingly. One important thing to note with silage samples is to be sure to remove any excess air from the sample bag and seal the bag tightly to prevent spoilage in transit.

I've been asked when is the best time to sample silage, after the ensiling process or right as its going into the pit. I caution against sampling silage when it is freshly chopped, for two main reasons. First, if something goes wrong with the ensiling process, the sample you submitted will state something very different, then what is actually in the pit or bale. For example, if a pile isn't packed well enough, the ensiling process will not happen properly, and there will be a lot more spoilage from mold and heat damage. The second reason I tell producer to wait is due to the high moisture content of the green sample. You must remove as much air as possible from the sample prior to shipping, the ensiling process will begin to happen to your sample in transit. You can begin to see damage to the sample in a very short time after the sample is taken, which can skew your results. This risk decreases after the initial ensiling process. I feel it is lower risk to sample the pit after the ensiling process. You still have to preserve the sample by removing excess air, but at least you get a better representation of what is in the pit or bale. Once the ensiling process is done, it won't keep ensiling, it'll only spoil if exposed for too long to air.

Forage sampling is an easy and inexpensive way to determine what quality of feed you have. There is no sense in over feeding your livestock during periods of low feed requirement and underfeeding them in times when they need it most. Its an easy process to take samples, and is a small investment that could save you a lot of money and headache down the road. If you need access to a forage probe for taking samples, Grey Wooded Forage Association has two different styles of forage probe available to use. We have a standard hay probe that attaches to any half inch drive drill and we also have a silage probe for sampling silage pits. We understand the importance of obtaining a forage sample and will provide these forage samplers to our membership at no charge. We simply ask for a damage deposit, which is returned once the probe is returned to us. If you have any questions about how to use the forage probe or would like to come and get one, just let us know and we'll make sure to get it to you as soon as possible.

# Environmental Farm Plan Coordinator

Lisa Nadeau was born and raised in Red Deer before moving to Edmonton to obtain an Environmental Sciences degree and Sustainability Certificate from the University of Alberta. She double majored in Land Reclamation and Human Dimensions of Environmental Management. Lisa is passionate about food security and local food production. She has a background in agricultural research, coordinated two community gardens in Edmonton, is a board member for Alberta Food Matters, and helps coordinates the Edmonton Urban Agriculture Initiative. She enjoys spending time with her husband, two dogs, and cat. She is very excited to join the ARECA team as the Environmental Farm Plan Coordinator.

**Lisa Nadeau**

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# One Genome, One Health: Our Animals, the Environment, and Us

This year, Livestock Gentec is taking the global perspective and looking at the larger impact of genomics on everything from precision, or individualized, medicine in the treatment of cancer (Dr. Steven Jones, Canada's Genome Science Centre), the incoming revolutionary impact of gene editing utilizing CRIPR technology on livestock production (Tad Sonstegard, Acceligen – the livestock subsidiary of Recombinetics) to the ways in which the application of the way these technologies are being applied in plants, and pets (and livestock). Our presenters also examine the resulting impacts on the environment and the ways in which public perception can empower (or severely limit) the benefits provided (Joe Schwartz, McGill Centre for Science and Society).

The first half-day is dedicated the economics of genomics in cow-calf production with emphasis on hybrid vigour and longevity. John Basarab (Alberta Agriculture and Forestry) will discuss the science and preliminary economic benefits while Troy Drake (HerdTrax) will discuss the role of Veterinarian in facilitating the adoption of this technology along with practical considerations for commercial cow-calf operators electing to adopt tools to maximize "vigour" such as EnVigour HX™. Michelle Miller (Delta Genomics) discussed the operational aspects from the laboratory services perspective, and a cow-calf producer involved in piloting of the validation of the tool shares his experience before they all come together to answer audience questions as part of a facilitated panel discussion.

The remainder of the conference also features presentations on antimicrobial resistance (Tim McCallister, Agriculture and Agri-Food Canada) and the impact of various respiratory microbes in the respiratory health of feedlot cattle (Edouard Timsit, University of Calgary Veterinary Medicine).

# Environmental Farm Plan Webbook Workshops

| County of Wetaskiwin | Mountain View County | Ponoka County |
|---|---|---|
| November 2, 2017 | November 14, 2017 | November 30, 2017 |

# Helping Make Energy Efficiency Affordable

Vern Steinborn


There are many technologies and practices farmers and ranchers can implement on their operations to reduce their energy footprint and protect (and possibly even increase) profit margins. Carbon emission reduction and energy sustainability can both be practiced while also running an economically sustainable farm.

Increasing energy efficiency often requires an up-front investment in order to obtain equipment that will save energy and money. Unfortunately, the initial costs of energy efficient products can be prohibitive for some producers. The Government of Alberta, through *Growing Forward 2 (GF2)* a federal, provincial, and territorial initiative, offers two incentive-based programs aimed at helping Alberta farmers and ranchers reduce energy consumption and thus costs.

The *GF2* On-Farm Energy Management Program (OFEMP) and the *GF2* On-Farm Solar Photovoltaic (OFSPV) Program offer farmers and ranchers the opportunity to become energy efficient by sharing the cost to purchase energy efficient or renewable technologies. These initiatives are intended to make energy efficient technology as affordable as current technology, making the environmentally friendly choice also the economically sensible choice.

Eligible projects of OFEMP include:

Construction projects that install high-efficiency equipment from the program's Funding List;

Retrofit projects that improve operation energy usage per unit of production; and

Installation of submetres to monitor on-farm electricity and/or natural gas usage.

Eligible OFSPV systems must be:

- Grid-tied, not off-grid;
- Approved under Alberta's Micro-Generation Legislation;
- Positioned to optimize sunshine and minimize shading;
- Have manufacturer-warranties on: Solar modules, Racking, Inverters and/or Micro-inverters; and
- Producing power that is used in the production of a primary commodity.

The government has partnered with three grassroots organizations staffed with Energy Outreach Officers whose role is to promote the OFEMP and the OFSPV Program to Alberta communities. Energy Outreach Officers are available to attend community events, talk about energy efficient technologies, as well as answer questions about the OFEMP and OFSPV Program and explain the benefits of these programs to farmers and ranchers. The Outreach Officers are also more than happy to meet one-on-one with farmers and ranchers to help them find potential energy efficiency solutions for their operation. You can get in touch with your regional Outreach Officer by contacting your municipality, or by calling your regional representative directly.

Regional Contact Information

North-central Alberta, from the MD of Mackenzie down to Wetaskiwin County. Gateway Research Organization (GRO). GRO's mission "Provides cost-effective applied agricultural research, demonstrations, and extension for producers in order to facilitate greater returns to farms by providing economically and scientifically sound information that enables our clients to make informed decisions."

Energy Outreach Officer – Kale Scarff

Phone: (780) 307-7849

Email: groextension@telus.net

Eastern Alberta, from Lac La Biche County to the Special Areas.

Lakeland College. Founded in 1913, Lakeland College's mission is "To create a model of rural community development through collaboration in research and learning."

Energy Outreach Officer – Lyle Lawrence

Phone (780) 853-8482

Email: lyle.lawrence@lakelandcollege.ca

South-central Alberta, from Clearwater County to Cypress County.

SouthGrow Regional Initiative. SouthGrow's mission is "To accelerate and enhance quality of life, development and sustainability for the communities of the SouthGrow region of Alberta."

Energy Outreach Officer – Vern Steinborn

Phone: (403) 894-0050

Email: vern.steinborn@southgrow.com

To learn more about the OFEMP and the OFSPV Program visit www.growingforward.alberta.ca

# GWFA Needs Assessment Survey

Over the summer GWFA has sent out two emails containing our Needs Assessment Survey. We need your assistance in filling out this survey. For those of you who have already responded, we greatly appreciate your contribution. We will be sending the survey out one final time in the coming weeks. Please take the time to fill our the survey, if you haven't done so already. It is very important that we assess the needs of our membership, as our Provincial Funding depends upon it. The links from the previous emails are still active. If you have those emails please take a few minutes to fill out the survey. If you have not received the survey please contact us a soon as possible, so we can provide the survey directly to you. Thank you!

**Classifieds**

Looking for harvest work in Caroline area. Have experience.
Please call 780-841-9367


# David Bissett and ALUS Canada announce great news for environmental conservation on farms and ranches in Alberta


Alberta philanthropist David Bissett and the national charitable organization ALUS Canada, A Weston Family Initiative, today announced "The Bissett Action Fund," a new $500,000 gift which will support environmental projects on farms and ranches in southern Alberta.

Speaking at the Indigenous Plant Species Biome garden at the Southern Alberta Institute of Technology (SAIT) today, Mr. Bissett gave a ringing endorsement of ALUS as the new generation of Canadian conservation.

"It's all very well to promote conservation," he said, "but we can't regulate farmers into providing ecosystem services; we have to work with them, and provide the resources to encourage them to produce these valuable services. That's why ALUS is a great way to go."

The $500,000 Bissett Action Fund will be used to help 39 farmers and ranchers maintain 186 ALUS projects south of Edmonton, between the County of Vermilion River to the east and Lac Ste. Anne County and Parkland County to the west. These projects include wetland restorations, buffer zones around croplands, riparian zones with pollinator habitat, and wildlife-friendly fences that keep cattle out of streams to protect water quality.

"David Bissett is a long-time supporter of the program, and we are thrilled he has renewed his support for ALUS," said Bryan Gilvesy, CEO of ALUS Canada. "By funding ALUS' work on privately owned parcels of agricultural land, the Bissett Action Fund will increase ecosystem services beneficial to all Albertans. Specifically, this funding means that 958 acres of marginal, ecologically sensitive farmland in Alberta will now be deployed by the landowners to produce cleaner air, cleaner water, increased wildlife habitat and other ecosystem services."

The Bissett Action Fund is already being put to good use on the Movald Farm in Brazeau County. ALUS participants Duane Movald and his parents run a fifth-generation family farm, growing forages and cereals and raising purebred Simmental cattle on 1,900 acres west of Breton, Alberta. "We've enrolled 23 acres in ALUS so far, mainly for riparian projects," says Movald, "and we can already see a difference, with more birds and pollinators, less erosion, cleaner water and just a healthier environment all around. I am very proud to be part of ALUS."

Following the announcement, ALUS unveiled new signage for Alberta wild rose and sweetgrass plants it has donated to SAIT's indigenous species garden. For ALUS, this urban meadow is an important demonstration to SAIT's students, as future technical experts of Alberta's agriculture sector, that even small pieces of marginal land can be useful for producing valuable ecosystem services.

A lesson not lost on the 50-odd guests at today's press conference, where Bissett and Gilvesy were joined by SAIT's Vice President of External Relations, Heather Magotiaux, prominent leaders from Calgary's philanthropic and business communities, ranchers and farmers participating in ALUS, and mayors and reeves of Alberta communities running ALUS programs.

There are currently ten ALUS communities in Alberta, including the Counties of Parkland, Red Deer, Mountain View, Brazeau, Lac Ste. Anne, Wetaskiwin/Leduc, Northern Sunrise, Flagstaff and Vermilion River—whose Reeve, Daryl Watt, passionately described the benefits of ALUS for local communities, speaking as the first municipal leader to bring ALUS to Alberta back in 2010.

"Municipalities continue to express interest in starting up new ALUS programs," noted Gilvesy. "A year and a half ago, we had 3,600 acres enrolled in the ALUS program here; today, we have more than double that. And over the next five years, we anticipate doubling our capacity to deliver ecosystem services in this province."

The ALUS program is also expanding rapidly in other Canadian provinces. In total, ALUS has already created more than 18,000 acres, an area the size of 45,000 hockey rinks, dispersed among 20 ALUS communities in Saskatchewan, Manitoba, Ontario, Quebec and PEI.

By 2025, ALUS aims to reach 150,000 acres in 75 communities across the nation. To get there, the charity will rely on philanthropic donations like the Bissett Action Fund, grants from many sources, and a corporate sponsorship program called New Acre™ Project.

"It's the first of its kind in North America," said Gilvesy. "With New Acre™ Project, corporations can invest in the environmental issues that matter most to them, knowing their investment will produce lasting benefits for the communities they serve."

**ABOUT ALUS**

ALUS Canada, A Weston Family Initiative, is a national program dedicated to supporting farmers and ranchers who produce cleaner air, cleaner water, more biodiversity and other ecosystem services in their communities. As an Alberta Emerald Award winner, ALUS Canada is a recognized leader in sustainability that is rapidly expanding across the nation.

ALUS Canada
A Weston Family Initiative


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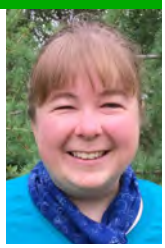
# Fall Harvesting Alfalfa: Things You Need to Know

Karin Lindquist, Forage-Beef Specialist | Ag-Info Centre, Stettler



**The critical time period for not harvesting alfalfa**

Alfalfa should not be cut 45 days or approximately 4 to 6 weeks before the first killing frost (about -5°C). Shorter days, cooler temperatures, and drier soils will trigger the plant to slow down its growth rate. This will prompt it to begin storing energy reserves in the roots for the winter. These reserves are important for growth the following spring.

If alfalfa gets cut during this period, it will need to use these reserves to regrow. A killing frost that occurs before the plant has a chance to restore root reserves (when the plant reaches 10-inches in height or the bud stage), will compromise the survival of the plant over-winter and to be able to grow back in the spring.

Alfalfa has higher risk of being affected if cut in the middle of this time period (3rd or 4th week) than at the beginning or near the end. When cut early in the period, alfalfa will use existing root reserves for regrowth, basically "emptying the tank." If cut later in the period, alfalfa uses photosynthesis to produce carbohydrates and stores them as root reserves, "refilling the tank." However, if alfalfa is cut in the middle of this critical period, alfalfa will have a more difficult time to regrow because root reserves have already been depleted and not yet replenished.

**Time to not harvest**

In most areas of Alberta, the first killing frost occurs around September 10th. Thus, the first day that the critical no-harvest time period occurs is on August 1st up to August 15th. s

**New stands are hardier than old stands**

A newly established stand of alfalfa is less likely to be injured than an older stand (or one that is 3 years old and older). Younger stands tend to be healthier and more likely to be free of crown and root diseases. Available nutrients are also higher in younger stands and helps in improving their winter survival. However, if you do harvest a stand during the critical fall period, do not repeat this practice the following year.

**Fertility helps**

Fertility is a very important part of winter survival. Alfalfa can fix nitrogen, but it will still require large amounts of the other nutrients. Potassium (K) helps protect the plant tissues from freezing, plays a role in storing winter reserves, and improves resistance to diseases. Phosphorus (P) will help establish strong root systems and promote vigorous spring growth. Sulphur (S) is important in the production of protein in plant tissues. The most efficient way to provide these nutrients is at the time of establishment.

**Other factors that affect winter survival**

*Variety*, *fall moisture conditions*, and *soil pH* will all play a big a role in winter survival.

Not all alfalfa varieties are the same with regards to winter hardiness. Remember that rapid growth and yield will usually come at the cost of winter hardiness.

Alfalfa is best adapted to a soil pH of 6.5. Stands grown in slightly acidic soils (less than 6.0) will be at a greater risk for winter injury and should not be harvested during the critical period.

Wet field conditions in the fall will reduce the amount of dormancy and increase injury from ice sheeting and frost heaving. Dry soils are actually better-insulated and hasten the onset of dormancy which will improve winter survival.

**The safest way to harvest alfalfa so as to not harm it**

The best thing to do is to wait until just before or after the killing frost. Alfalfa will be difficult to dry under these conditions so it is advised to ensile it. If you can, leave a 6 in. stubble and some uncut strips to help trap snow. Alternatively, you could try and move up your first cutting date (again you may have to silage it to beat the weather) so that your second cut will fall just before the critical period.

From the *Fall Harvesting Alfalfa FAQ* sheet, Alberta Agriculture's Ropin' the Web.

# Raising alfalfa yields in focus at Gentec Field Day



Mustafa Eric, AFSC Communications Coordinator

Alfalfa is often referred to as the "queen of forage plants" and it was in focus during the Cow-Forage Gentec Field Day on August 22, when producers, researchers and other stakeholders spent the day at the Agriculture and Agri-Food Canada (AAFC) Lacombe Research Centre.

The event was jointly organized by AAFC and Livestock Gentec, a genomics research institution based at the University of Alberta.

Main discussion topics of the day included the challenges of maintaining the durability and managing the dormancy of alfalfa varieties in order to increase the late season yield of the forage plant.

Vern Baron, the lead researcher on forage and grazing issues at the Lacombe Research Centre, told the participants during a tour of alfalfa cultivars that dormancy of alfalfa varieties was conditioned as much by the length of daylight time available as the temperatures in a particular growing area.

He added that within two to three years, research could produce new genomic information with regard to the sensitivity of alfalfa breeds to winter hardiness and dormancy and that could lead to new varieties of the plant.

The keynote speaker of the day was Charlie Brummer of University of California, Davis, who runs a research program on alfalfa development in the US.

In his presentation, Brummer spoke about his research regarding the relationship between the level of dormancy and fall yields of alfalfa and indicated that both new breeding experiments and genomics can help achieve the goal of increasing yield.

He added that manipulation of dormancy levels could lead to enhanced late season yields.

The legume tour organized by the Grey Wooded Forage Association, included two different legume stands at Murray Abel's farm. Murray Abel is a local producer that has been cooperating on a project with Grey Wooded Forage Association (GWFA) and Alberta Agriculture and Forestry (AAF), one of the sponsors of the event.

Abel informed participants on the experimental project with GWFA and AAF, where he seeded a combination of alfalfa, hybrid brome and sainfoin as a blend.

He said mixing alfalfa and sainfoin had produced a positive result, the sainfoin had completely reduced the bloat risk that comes with grazing pure alfalfa. The cattle appeared to select the sainfoin over the alfalfa as they ate the sainfoin before they started to eat alfalfa.

Abel added that he was happy with the speed of the regrowth of the plants after only being grazed the week prior.

The tour also stopped at another one of Abel's stands, which was seeded to cicer milkvetch and meadow brome 12 years ago and is still producing forage at a satisfying level.

Speaking in an interview, Abel said the project with the GWFA and AAF on alfalfa-sainfoin mixture came at the right time.

"I have already been using cicer milkvetch for 10, 11 years in my own stands," he said.

"We were already considering using sainfoin in a stand and when they (GWFA) came along and asked, 'would you try it', it was easy to say yes."

He added that another motivation for him to get involved with the GWFA and AAF project was to encourage people to adopt legume species in their pasture management practices and to stop worrying about the bloat.

Murray Abel has been running a cow-calf operation with about 70 cow-calf pairs and about 30 bulls. He has always been in favor of staying away from synthetic inputs.

"I feel very strongly that we need legumes as nitrogen fixing plant and with nitrogen fixing plants, we have the ability to fix nitrogen for other plants in association," he said.

"So, in that association with the brome, we are strengthening their position in the pasture system without adding synthetic fertilizer and synthetic nitrogen."

Referring to the yields at the cicer milkvetch and meadow brome stand he seeded in 2006, Abel said "I have been very thankful, I have been very pleased."

He went on to say he had not added any synthetic fertilizer to that stand since it was first seeded and, despite this being a drier year, "there has been an abundance of production." It was thanks to his efficient management of the manure on the pasture that he could maintain the high yield from the stand for so many years.

With the yields staying high on his stands and giving him more grass than his operation currently needs, Abel also said he was planning to expand his operation.

The other activities during Cow-Forage Gentec Field Day included a few presentations. One that attracted most interest from producers saw research scientist John Basarab give extensive information on genomic breed composition involving Angus, Charolais, Hereford and Simmental bulls and cows.

There was also presentation of equipment used in measurement of methane gas emissions by cattle being raised at the research centre.

# Responding to Whirling Disease in Alberta Waters

Kate Wilson, Aquatic Invasive Species Specialist | Alberta Environment and Parks

Whirling disease is becoming more widely known in North America as a serious fish health issue. It can affect salmonid populations including trout and mountain whitefish, and is caused by a microscopic parasite called Myxobolus cerebralis. The parasite is not transmittable to humans or wildlife.

In August 2016, whirling disease was first reported in Canada, inside Banff National Park at a popular fly fishing spot, Johnson Lake. It is unknown how the parasite was introduced, but research suggests it is most commonly introduced by infected fish via fish culture practices or anglers. Whirling disease can spread naturally downstream by fish and also by human activity like angling, boating, and any kind of in-water work. Myxobolus requires two hosts to complete its life cycle - salmonid fish and a segmented worm, Tubifex tubifex. Once introduced to a waterbody as microscopic spores the parasite is ingested by the tubifex worm found in the sediment of some waterbodies in Alberta. Once the parasite matures inside the worm, it produces tiny triactinomyxons ("TAMS") that are carried in water currents and infect fish through the skin. Penetration of the fish by TAM spores takes seconds and within hours the infectious sporoplasm is spread via the nerves; taking days to weeks to eventually reach the cartilage where most of the damage occurs.

Whirling disease mainly affects juvenile salmonid fish. Fish exhibiting signs often "whirl" in a corkscrew-like manner, have difficulty feeding, and are more vulnerable to predators. The mortality rate can be high with losses up to 90% of an infected population (as seen in Colorado and Montana). Fish that survive infection and fish that show no symptoms can act as a reservoir for the parasite, which is released into the sediment following the fish's death. There are no treatment options currently available for whirling disease. Containment and prevention are the focus for responding to the threat of whirling disease.

In 2016 the Government of Alberta took immediate action upon the detection of Whirling Disease working closely with the Canadian Food Inspection Agency (CFIA) and Parks Canada. Since the initial discovery, Alberta Environment and Parks created the Whirling Disease Program which has developed and implemented a three-point action plan built around delineation, education and mitigation to reduce the risk to our wild trout populations.

In 2016 Fisheries biologists province-wide were deployed to over 200 "susceptible waters" (e.g. waters that support trout and whitefish) across 6 watersheds to delineate the spread of the disease. Over 6,000 wild fish samples were collected in fall 2016 by Alberta Environment and Parks staff. To expedite testing Canada's first whirling disease laboratory has been established in Vegreville, Alberta.

Currently, The Canadian Food Inspection Agency has confirmed the Bow River, Oldman River and Red Deer River watersheds have tested positive for Whirling Disease. While provincial fish culture facilities remain free of whirling disease, fish from several private aquaculture facilities have also tested positive. All facilities that test positive for whirling disease are placed in quarantine; this means that no fish or fish culture equipment is allowed to leave the positive facilities until infected fish are no longer present, the facilities are decontaminated and deemed to no longer be a risk by the Canadi an Food Inspection Agency and the Government of Alberta. The government is working to improve biosecurity standards at all provincial fish culture facilities and develop comprehensive decontamination protocols. More information on the issue and what boaters, anglers and the public can do can be found at aep.alberta.ca.

Be part of the solution! Fish diseases are commonly spread by organic material (fish, plants), mud and contaminated water. It is imperative that anglers, boaters, researchers and anyone coming into contact with water CLEAN all equipment, DRAIN any residual standing water and DRY watercraft, waders and equipment thoroughly before using again. These "boat and gear hygiene practices" are always a good idea because they reduce the chances of spreading all kinds of fish diseases and aquatic invasive species. These practices are especially important for those going from positive zones to susceptible waters. If possible, use hot water (90°C) to wash your gear, and ensure water does not go down a storm drain or enter surface water. If you are using a boat, the drain plug must be pulled while in transport - it's the law! Boat inspections are mandatory for all passing watercraft when inspection stations are open. Do your part to protect Alberta waters from aquatic invasive species and fish diseases – CLEAN, DRAIN and DRY your watercraft and equipment before you leave the launch/lake every time. To report suspect fish or aquatic invasive species, please call 1-855-336-BOAT (2628).

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