The Blade

Monthly Newsletter of the
Grey Wooded Forage Association
May/June, 2019

COMING UP

DATE	EVENT	LOCATION
Aug 13-14	AgSmart	Olds College
Aug 13-15	Canadian Beef Industry Conference	BMO Centre, Stampede Park, Calgary
Aug 17-18	Open Farm Days	Province-wide, including Solar Harvest near Leslieville

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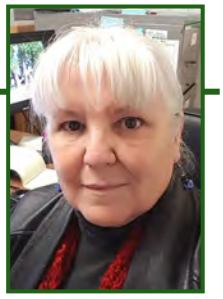
Office Report

By Brenda Kossowan



Today seems as good a day as any to acknowledge the people of vision and energy who created and nurtured the cutting-edge think tank that was to become the Grey Wooded Forage Association. Thirty-five years have past since the association's founders gathered at a series of meetings in Winfield. In the time since those early meetings, this association has become a leader in finding, testing and promoting management schemes that improve production while improving the soil under their feet.

The founding board consisted of nine people: George Reid, Bill Adair, Wayne Carr, Harvey Sharp, Dave Willows, Paul Pritchard, Len Godkin, Jim Bauer and Lorne Turner. A district agriculturalist from Rocky Mountain House—Ken Ziegler—was appointed as an ex-officio director, and then named secretary of the organization.

More good people came to the table as GWFA gained momentum, including Alberta Agriculture specialist Grant Lastiwka and Ponoka -area producer Ulla (DeBruijn) Thomsen, who was GWFA's fourth chair. It was outstanding to see Ulla and her husband, Paul at our Annual General Meeting and to have pre-recorded greetings from Grant, who was unable to attend in person.

Those mentioned above are among the giants upon whose shoulders we stand as GWFA gains momentum following a year of renewal. Their ambition and ideas continue to guide our development as a producer-driven research group dedicated to helping fellow producers find management practices that work best for them on their own farms.

We took a huge step forward with our AGM this year, moving it to a high-profile venue where we could go beyond the traditional format of holding the business meeting, followed up with a nice supper and a bit of entertainment.

For 2019, the board and staff decided to raise the bar, adding a set of technical workshops in the afternoon along with a fundraising auction to help cover the costs. We enjoyed tremendous support from the get-go, with enthusiastic buy-ins from auctioneer Don Montgomery and a group of specialists invited to host the workshops. Kim Nielsen, GWFA Chair in 2000, stepped into the breech when we were having difficulty booking a speaker, offering to tell the story of farming in two hemispheres and donating generously to the auction.

Thanks also to Ken Lewis, Lorelee Grattidge and Christine Campbell from ALUS, Lee Eddy and Kristen Ritson-Bennett from Blue Rock Animal Nutrition, Andrea Hanson from Alberta Agriculture and Forestry, Steve Cannon and Brendon Anderson from Lone Star Ranch Sales and Markus Weber from Land View Drones for putting on a great set of workshops and presentations. The only complaints we had were from people who were disappointed that they could attend only two of the four workshops.

Special thanks also to the sponsors who provided high-quality items for the auction and door prizes: Montgomery Auctions, Westerner Exposition Association, Pro Rodeo Canada, Evergreen Co-op, Juul AgAdvance and 4 Clover Ranch, Lone Star Ranch Sales, Lazy H Box Ranch, AFSC, Tanglewood Soap, ALUS, Blue Rock Nutrition, Wolseley Industrial (Rimbey), Land View Drones and Andrea Hanson with AAF.

Looking at the successes we experienced from this year's AGM, we plan to crank it up again in 2020 to create what we hope will become our signature event of the year. The AGM committee is in place and working now. Please call us with any ideas you have for workshops, speakers and entertainment. We may also be at your doorstep soon, in search of donations and sponsorships.

On a (ahem) lighter note, have a look at the bulletin on the left side of this page and see if that doesn't raise your eyebrows just a little. A couple of days before this issue went to press, our Ag Field Specialist (Greg Paranich) and Summer Technician (Erin Willsie) got into some shenanigans at the test plot north of Rocky Mountain House. They buried two pairs of tighty-whities at the site to see how they fare in soil conditions under the cover crops planted this spring. If the soil microbes are working as they should , the undies should show some hard wear when they're dug up at the end of the growing season. You can also give this a try. Call our office or email Greg at gwfa5@telus.net and prepare to dig in.

Grey Wooded Forage Association

Creating an Awareness of Forages

CUTTING EDGE

Research programs and Information

SOIL YOUR UNDIES

Healthy soil means hungry soil. With proper management, the ground beneath your crops should teem with millions of tiny lifeforms (bacteria, fungi, protozoa, earthworms, etc.) all busy transferring nutrients, eating and decomposing organic material through nutrient cycling in processes that help plants thrive.

You can measure the biological activity of your soil with this "Soil Your Undies" test. Simply bury a pair of white, 100% cotton undies beneath your soil, come back two months later and dig them up. Sterile, lifeless soil will keep your tighty-whities clean and intact whereas busy, organically thriving soil will eat away at your briefs, leaving nothing but an elastic strap!

Photo Credits : Canadian Soil Undies Campaign

How to Participate

1. Register with your Name, Contact and Location with our office.
2. Dig a shallow hole, 5 cm deep and wide enough to lay your undies flat along the bottom.
3. Play undies in hole flat and bury them with previously removed topsoil.
4. Mark the location with a flag so you can find your undies later.
5. Leave undies buried until our follow-up workshop in late August/ early September.
6. Make sure to dig carefully during removal. There should mainly be only the waistband left. Take some pictures then place them in a bag to bring to our event.
7. Try and get before and after pictures of your undies to show at our event!

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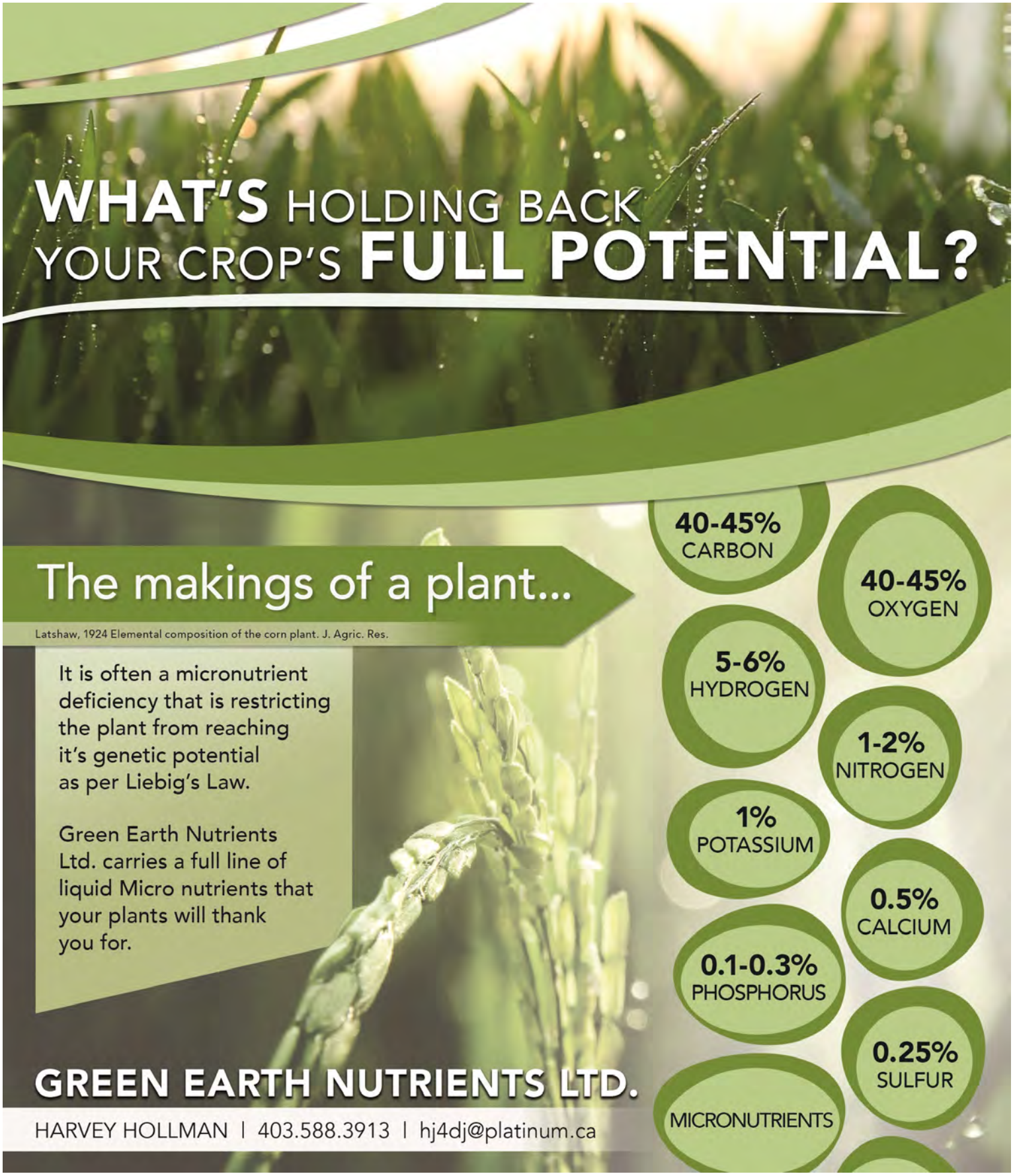
WHAT'S HOLDING BACK
YOUR CROP'S FULL POTENTIAL?
The makings of a plant...
Latshaw, 1924 Elemental composition of the corn plant. J. Agric. Res.
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To Seed or Not to Seed

By Greg Paranich, Ag Field Specialist

With the recent rainfall in West Central Alberta, most areas have received a valuable and timely shot of moisture. One of my favourite scenes on the landscape is the sight of slick cattle on a vibrant green pasture; healthy calves bouncing around, yearling heifers moving onto new grazing and momma cows lazily reclined in good grass, absorbed with chewing their cud. Not many weeks ago many of us were not as optimistic, given dry conditions presenting serious grazing challenges.

We should be aware that we are blessed with rain in our part of the world while not far off our neighbors in the Peace, Eastern and Southern areas of Alberta have not been as fortunate and still struggle with drought conditions. While we have been wet for a couple of weeks, we all know that we are not out the woods yet and there is the whole summer before us. Here's hoping the trend continues.

This is the time of year that I always get questions on what to do with that old, worn out pasture. How can we improve it without breaking and starting all over? There are a few considerations to begin with. For starters, what is in your stand right now? Is it mostly grass and thinned out and you want to restore or add in more species? Maybe you want to upgrade the amount of legumes in your grazing stand that is already in good shape but is mostly grasses and lacks diversity. Or you might find that a lot of the "green" in your pasture is not grazable, and you need to restore the pasture to a more productive grazing stand with fewer invader species. Big challenges. I have always said that many of our forage problems did not get there overnight, and solutions won't come that quickly either, or they won't be cheap. Knowing what you have and where you want to be with your forage and what you are willing to do to get there is what it's all about.

Sod Seeding

Sod seeding has been played around with for over 25 years, with mixed results ranging from failure to moderate results. It is one of the reasons we are currently involved with Alberta Agriculture, and 7 other Associations like ours, in considering a project (*proposal status* at this time) to determine how to make sod seeding work to retrofit your pasture into a higher-value legume pasture. First let me outline what makes any forage seeding successful.

- **Seed and seeding rate:** You must start with the right species for your environment and intended use (grazing) and seed enough seeds (seeding rate) to target the number of plants you want per square foot or meter. Good selection and sufficient seeding rates will get off to a good start.
- **Seed placement and packing:** This is very important in forage seeding. We want our forage seeds placed ¼ - ½ inch deep and into mineral soil and packed for good seed to soil contact. Sod seeding challenges this because at that shallow depth, we run into an organic "duff" layer above the mineral soil which can result in the seed suspended in a dry layer that is not favourable for germination. Packing behind the seed in sod is a problem because we deal with a live and fibrous root mass that does not pack and close like loose soil and putting the seed in an "air gap" with poor soil contact.
- **Germination and emergence:** The alternative is seeding deeper, but at a one-inch (2.5 cm) depth we reduce the successful emergence of the seed. We might get the packing we need for germination, but we are asking the seedling to travel twice the distance to the surface for emergence and using up its limited energy at that early stage with little root development, resulting in poor survival rates.
- **Establishing with low competition:** Probably the most neglected and weakest link in establishing forages is managing early competition for the young seedling. In a sod seeding environment, the competition has an established massive root system and canopy to compete above and below ground for all resources.

It becomes clear that we have big hopes for the sod seeded forage seed/seedling in a rather harsh environment. We should set our expectations accordingly in this scenario. Things we can do to help manage these challenges can include:

- Forced stand stress: Deliberately stressing the existing stand to reduce the competition level and improve seed establishment. Pre-seeding stresses include intensive overgrazing or moderate glyphosate (sub-lethal) applications.
- Late fall (dormant) seeding may also contribute toward tipping the scales in favor of the seeded forage, giving it time to germinate and emerge before the existing stand becomes too competitive.

These are things that have been tried in various ways with varied results. Understanding what the forage seed and seedling needs and how we can manage the environment to help its success will make us more successful.

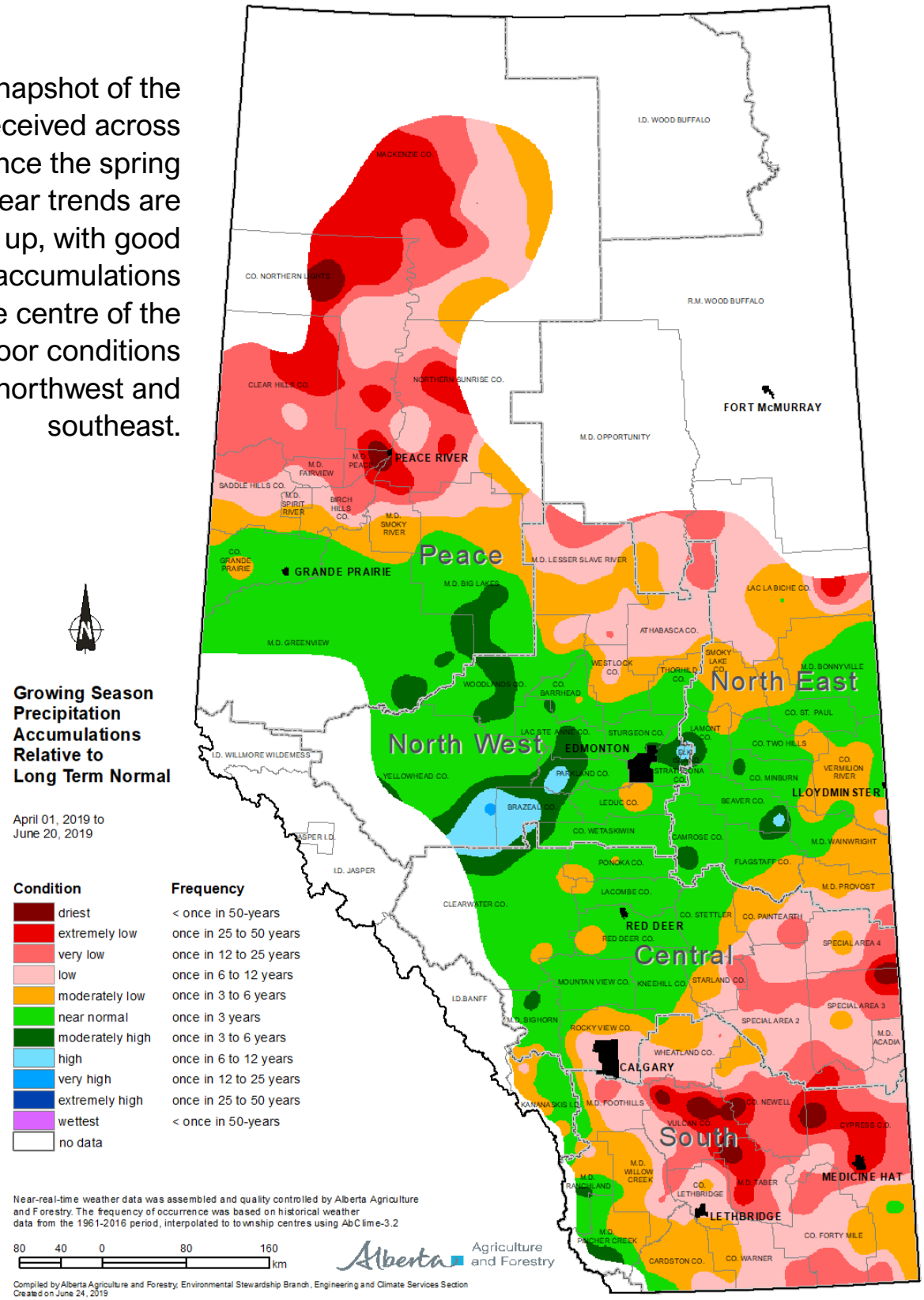
Another alternative – if enough grasses exist, but are being crowded out by a lot of invasive species – is to spray out the invaders with selective herbicides. These products, however, will usually remove legumes along with the weeds, but leave the grasses behind.

We can then reintroduce forage into the spaces vacated by the invaders by:

- Sod seeding with little competition left in the large open areas,
- Broadcast and "rough in" grass seed into the surface of the open spaces,
- Managing grazing to allow any remaining creeping grass species to fill in (i.e. creeping red fescue, bluegrass or smooth brome). While these may not be your target goal, they give more grazing than some of the invaders, which may also be noxious weeds.

Good grazing management to start with keeps us from getting too far down the road for the need to restore pastures. None of these practices will deliver a silver bullet solution, but in combination they can help get us back on track again to restoring that worn-down pasture. If you have any questions on these or other pasture restoration options, give us a call.

Here's a snapshot of the precipitation received across the province since the spring melt. Some clear trends are showing up, with good moisture accumulations across the centre of the province and poor conditions in the northwest and southeast.



Visit weatherdata.ca for additional maps and meteorological data

Performance of Annual Crop Mixtures in Northern Alberta

Akim Omokanye, Herbert Lardner, Lekshmi Sreekumar & Liisa Jeffrey

The following abstract is excerpted from an article published in the Journal of Applied Animal Research, Vol. 47, No. 1. It has been edited for brevity.
Visit https://www.tandfonline.com/doi/full/10.1080/09712119.2019.1631830 for the full article and citations.

A two-year field study compared annual crop mixtures and monoculture cereal crops (controls) for forage yield and quality value for beef cattle production. Each of the mixtures consisted of two to nine crop species. The cropping treatments investigated significantly influenced forage dry matter (DM) yield, quality and economic performance parameters. Forage DM yield was up to 9.25 tonnes per hectare for the mixtures compared to 7.72 t/ha for the control crops. Forage yield advantage from mixtures was up to 50 per cent over controls. Forage crude protein (CP) was more than 13 per cent for most mixtures, while CP for controls was about 12.0 per cent. All mixtures and controls mostly exceeded the suggested required levels of potassium, magnesium, manganese, sulphur, iron and zinc for beef cattle. The four top ranked mixtures in terms of marginal returns and benefit/cost ratio were mixtures #4, 8, 10 and 12 in that order. Study results demonstrated that growing a minimum of three annual crops, rather than one or two crops, increased forage production and offered a forage-based diet that, which in most cases, was able to adequately meet the nutritional requirements of beef cattle. The mixture with the highest forage yield consisted of crops from three different species categories: *poaceae, leguminosae* and *brassicaceae*.
The study demonstrated that growing the right annual crop mixture can increase forage production and provide beef cattle with a diet that in most cases is able to adequately meet the nutritional requirements for gestating beef cattle. Overall, in terms of forage yield advantage, marginal returns and benefit/cost ratio, 3 of the mixtures (#4, #8 and #12) were consistently satisfactory compared to all the monoculture cereal crops. Most of the mixtures had greater than 12 per cent forage CP compared to less than 12 per cent forage CP for controls. Because most mixtures did not meet the required TDN level for young beef cattle, some form of energy supplementation would still be needed to ensure that TDN requirements are met. The present study results therefore suggest that growing an annual crop mixture with diverse plant functional groups compared to a monoculture cereal, can be used to improve forage production in northwest Alberta.

Discussion

In western Canada, feed accounts for a large portion of the total cost of beef cattle production. Winter feeding costs alone account for more than two-thirds of the total annual feeding and management expenses in beef cow-calf production. Beef cows are commonly fed hay from perennial forages, greenfeed from annual crops or cereal grain silage, and limited amounts of feed grains such as barley during this period. Beef cows are also managed extensively through swath grazing with cereal crops such as oats or triticale.
Typically, annual cover crops are sown as monocultures within annual crop rotations to protect soil from erosion or give other agroecosystem services such as building soil fertility and organic matter, retaining nutrients, or suppressing weeds during periods when cash crops are not actively growing. Forage production from cereal-legume intercrops have been widely reported in western Canada and elsewhere. In northern Alberta, the latest trend among beef cattle producers is growing a multispecies annual crop mixture for forage production. Growing multispecies annual crop mixtures or annual crops sequences/intercrops may often be considered as a practical application of ecological principles based on biodiversity, plant interactions and other natural regulations mechanisms as well as improved soil carbon stocks. Such mixtures could increase forage production, improve water and soil quality, increase nutrient cycling, moisture conservations and crop productivity. A multispecies annual crop mixture can be selected from a diversity of plant families, corresponding to different plant functional groups. Each crop species in a mixture may reach maturity at slightly different times, therefore providing available immature forage continuously through the growing season.
Several new annual crop mixtures are currently available on the market in western Canada. When making decisions about which annual crop species to include in a mixture, producers need to be aware of the adaptation, potential forage productivity and ecological stability of any newly introduced crop species (warm season crop such as sorghum, cowpea) in their area. Cool season annual forage-type cereal crop varieties such as barley, oats, triticale and field peas are well suited to Western Canadian growing conditions and provide acceptable forage yield and quality for winter grazing.
The present study had two objectives: One, to evaluate annual crop mixtures for forage yield and quality and, two, to estimate production costs and associated economic performance of mixtures in comparison to commonly-grown, cool-season, forage-type cereal crops. Our first hypothesis was that a multispecies annual crop mixture could provide greater forage production and quality and offer a diet that is better able to meet the nutritional requirements of beef cattle, compared with a single crop. Secondly, using forage biomass as benefit, we hypothesized that a single crop and a multispecies annual crop mixture would differ in economic outcomes (returns and benefit/cost ratios), which would greatly be in favour of a multispecies annual crop mixture.

Results

Forage dry matter yield and notes on crop growth

The forage dry matter (DM) differed significantly between cropping treatments. Except for mixture #8, which had similar forage DM yield to mixture #4, forage DM yield was generally significantly higher for mixture #4 than other mixtures and controls (monoculture cereal crops, Table 4). Three of the mixtures (#4, #8 and #12) had more than eight t/ha forage DM yield, while other mixtures and monoculture cereals had values less than eight t/ha forage DM. Among the monoculture cereal crops, triticale had significantly

greater forage DM yield than oats and barley, but not soft white wheat. Also, triticale gave higher forage DM yield values than five of the fourteen mixtures (#3, #7, #9, #13 and #14). The forage yield advantage from mixtures was as high as 37, 48, 29 and 20 per cent respectively over barley, oat, soft white wheat and triticale. Only three of the mixtures (#4, #8 and #12) appeared to have consistently higher forage yield advantage over all of the monoculture cereal crops. Other mixtures did not seem to have consistent forage yield advantages over the annual cereal crops. However, on several occasions, other mixtures did have some yield advantage over barley and oat crops. Also, two three-way mixtures with only cereals and legumes showed yield advantages of 0.17–2.27 t/ha forage DM yield over control cereals.

It was observed that BMR sorghum and forage sorghum, hunter forage rape and teff performed poorly in the mixtures. These species had poor seed germination and limited establishment in stands. It was also noted that the barley in mixture #6 grew slightly taller than the barley in mixture #7. Generally, the monoculture cereal crops seemed to grow slightly taller than their counterparts in mixtures. Though control cereal crops grew taller, no lodging was observed during any of the two growing seasons.

Forage nutritive value

Matching the nutrient requirements of beef cattle and the nutrients supplied by forage type feeds will help identify nutritional sufficiency and inadequacies. In the present study, in almost in all cases, the mixture had better forage nutritive value than the pure cereal crops (controls). The better forage nutritive value from most mixtures than pure cereals could be attributed to complementary N functions in mixtures that included legume(s). Complementary N function can lead to facilitation, an increased N availability to non-legume species due to the presence of N_2 fixing legumes. Including other non-legume crop species like Italian ryegrass and forage brassicas like Winfred, Goliath and T-Raptor were thought to have improved forage quality of mixtures that consisted of any of these crops.

The forage CP, TDN, Ca, K, Mg, Na, S, Fe, Zn, Mn and RFV were greater for mixtures #9, #10, #11, #12 & #13, compared to other mixtures and the control cereals. This shows that a mixture with the right type of multispecies crops can be fed reliably to beef cattle as another forage feed source in the study area.

For young beef cattle, 12–14 per cent CP and 65–70 per cent TDN is suggested for their total diet content. In the present study, in most cases, the mixtures (except for # 7 and #8) exceeded the CP requirement for young beef cattle. In the control group, only barley was able to meet the 12–14 per cent CP required. Most mixtures appeared to be within the 65–70 per cent TDN suggested for young beef cattle, while none of the control cereal crops had sufficient TDN. In the present study, because of the failure of most mixtures to be in the upper limit of the required TDN for young beef cattle, producers will need to test their mixtures for feed quality and use energy supplementation where needed to ensure that the TDN requirements are met. Further research is therefore needed to determine the right mixture of cover crop species, their sowing rates, and the appropriate stage to cut for silage or greenfeed for back grounding beef calves in the environment of northern Alberta. The net energy system separates the energy requirements into fractional components used for tissue maintenance, tissue gain, and lactation. All tested mixtures and monoculture cereals exceeded the NE_M levels suggested for a mature beef cow (1.19 to1.28 Mcal kg^{-1} NE_M) and were well with the 0.53 to 1.37 Mcal kg^{-1} NE_G suggested for growing and finishing beef calves.

Mineral imbalances and/or deficiencies can result in decreased performance, decreased disease resistance, and reproductive failure, which results in significant economic losses. In the present study, all mixtures as well as pure cereal crops far exceeded the suggested minimum target levels of K, Mg, Na (except for pure soft white wheat), S (except for mixture #14), Fe and Zn for young and mature beef cattle. All mixtures and pure cereal crops had enough Ca and P for a mature gestating beef cow. However, for a lactating beef cow, all pure cereal crops and mixtures #6, #7, #8 and #14 fell short of meeting the Ca requirements of this category of beef cows. Only mixture #12 had sufficiently met the P requirements of a lactating beef cow. No cropping treatments (mixtures and pure cereal crops) met the requirements for Cu, and some mixtures (mixtures #2, #5, #6, #7 and #10) did not meet the required amount of Mn needed by mature beef cattle. In the present study, forage Cu, Fe, Zn and Mn contents were far lower than the maximum tolerable levels for beef cattle as provided by NASEM.

For growing and finishing calves, all the mixtures had adequate Ca, while only one of the pure cereal crops (barley) was able to meet the 0.31 per cent Ca needed by these calves. Also, for young beef cattle, all mixtures and pure cereals met the suggested minimum levels of K, Mg, Na (except for pure soft white wheat), S (except for mixture #14), Fe and Zn. Only eight of the 14 mixtures and pure triticale conveniently met the 0.21 per cent P requirement for calves.

Six NDF and ADF-based forage quality standards (prime, 1, 2, 3, 4 & 5) have been described for beef cattle. In the present study, only five of the mixtures (mixtures #9, #10, #11, #12 and #13) qualified for the prime standard (less than 31 per cent ADF and less than 40 per cent NDF). No pure cereals could be considered for the prime standard. The ADF values are important because they inversely relate to the ability of an animal to digest the forage. The NDF values reflect the amount of forage the animal can consume. In the present study, pure cereals generally had higher forage ADF and NDF values than mixtures. Mixtures #11, #12 and #13 had lower ADF and NDF values than other mixtures and pure cereals. With the lower ADF and NDF values obtained for mixtures #11, #12 and #13, when all the treatments tested here are presented side by side to cows in a preference study, mixtures #11, #12 and #13 would likely be preferred and consumed more than other treatments. Future study is needed to determine how beef cattle will utilize and respond in terms of growth performance to mixtures versus traditional cereal crops used for livestock production in western Canada.

Mixtures with brassicas species seemed to improve forage CP, TDN, detergent fibres (ADF and NDF) and forage Ca more than mixtures without brassica species. Brassicas have a readily digestible carbohydrate content but are relatively low in fibre, so cattle

should be provided a fibre source to prevent rumen acidosis or bloat.

Economic performance indicators

The economics of a mixture depends primarily upon the costs and returns associated with forage DM production and nutritive value.

As expected, mixture #4, which had the highest forage DM yield, also had the highest revenue from forage production as well as significantly higher returns than the other mixtures and pure cereals. The significantly higher revenue obtained for mixture #4 compared to other mixtures (except for #8, which had similar revenue), and pure cereal crops in particular, was a reflection of the benefits of growing a mixture containing a functionally diverse and adaptable group of cover crops representing different plant families (*brassicaceae*, *fabaceae* and *poaceae*; C4 and C3 grasses; nitrogen -fixers, nutrient scavengers).

Seed costs for eight of the mixtures were within the CAD $40–80/ha seed costs for the more traditional pure oat and barley crops for forage production in the study area. Higher seed costs for some mixtures could be attributed to higher seed costs of some imported annual crop species such as hairy vetch, brassicas and annual clovers (crimson and frosty berseem). Local seed production of such crops that have great forage production potential in northwestern Alberta would help reduce seed and total input costs/ha when such a crop is included in a mixture.

In the present study, the benefit-cost ratio (BCR) was generally greater than one, an indication that the cropping treatments' benefits outweigh the costs. On a BCR basis, mixtures #4 and #10 were more profitable, followed by mixture #8. Overall, mixtures #1, #7, #9, #13 and #14 did not seem to have any improvement in BCRs over the more traditional oat and barley crops grown in northwestern Alberta for livestock feed. It is important to note that grazing animals (e.g. annual pasture or swath grazing) would be the key to making mixtures work better on a cow-calf operation. This will eliminate forage processing costs (e.g. cutting, baling, silage and hauling) and make the mixtures more profitable. But where mixtures are to be harvested and stored for later use, silage would work better due to the higher moisture content of most mixtures at harvest compared to the traditional oat or barley monocrop.

Forage DM yield per CAD $ spent was highest for the pure oat crop (0.16 t/CAD $), followed by both mixtures #3 and #4, with about 0.13 t/CAD $. The difference in the forage DM yield per CAD $ spent between both mixture #6 (inoculated hairy vetch) and #7 (un-inoculated hairy vetch), which was in favour of mixture #6, further confirms the need for a legume inoculation, particularly when the legume is new to an environment. The cost per ton of protein was highly variable. Overall, in the present study, mixtures #3, #4, #11 and #10 could be considered the least expensive mixes to produce both forage dry matter and protein.

Acknowledgements

The study was funded by the Alberta Government (through the Agricultural Opportunity Fund of the Alberta Agriculture and Forestry) and Municipal District of Fairview #136. Seed donations were received from Nutrien Ag Solutions in Fairview, Union Forage (through Graeme Finn) and Barenburg (USA). Legume innoculant was supplied by Smoky Applied Research and Demonstration Association (SARDA). The technical help by Peace Country Beef and Forage Applied Research Association staff and summer students and Grande Prairie Regional Collage farm (Fairview campus) is highly appreciated. Thank you to Alan Lee for assisting with statistical analysis.

Supporters

The Grey Wooded Forage Association operates on the good will of a huge contingent of supporters, including government and private businesses. While their fields of endeavour may be broad and diverse, they share an interest in helping organizations like ours serve their taxpayers, clients and customers.

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Mountain View COUNTY

Range and Riparian Health Assessments in Red Deer County

By Ken Lewis, Red Deer County conservation co-ordinator

For the last four years, Red Deer County has hired Cows and Fish to do Range and Riparian Health Assessments at ALUS (Alternative Land Use Services) projects throughout Red Deer County. We will also be doing more in the future, until 2022 at least.

This work has been funded by grants that Red Deer County has applied for, from the Watershed Resiliency and Restoration Program, and from the Environmental Damages Fund.

In the last 4 years, Cows and Fish have done a total of 103 Riparian and 14 Range Health Assessments (RHAs).

The main reason why we are doing these RHAs, is to get a baseline of riparian or range health, at the site of ALUS Projects that farmers and ranchers are doing. Four or five years later, we will go back and do the RHA again at the same site. This is where it gets really exciting.

By doing a Revisit RHA a few years later, we can show the environmental improvements being made when farmers and ranchers do ALUS Projects like riparian fencing, alternative livestock watering, and crop buffer zones. Cows and Fish are a well-respected, science-based neutral third party in this. So, when we see measured improvements, we can be confident those measurements have been made objectively.

We can then tell that story far and wide, about how our farmers and ranchers are improving environmental functions in their range and riparian areas, when they do ALUS projects on their farms.

We are starting the Revisit RHA work in 2019, thanks to a new grant from the Canadian Agriculture Partnership's Environmental Stewardship and Climate Change Program. We can't wait for the results and to start telling this great story.

Below are a couple pictures from a Cows and Fish report where a Revisit RHA was done. The left picture shows the site in 2002, while the right picture shows the same site in 2016. You can quickly see how environmental health of the riparian area has improved.

What is a Range/Riparian Health Assessment?

IT IS A TOOL TO EVALUATE AND UNDERSTAND THE CURRENT STATE OF ENVIRONMENTAL FUNCTIONS IN A RANGE AREA OR RIPARIAN AREA.

IT'S LIKE A PHYSICAL YOU GET AT THE DOCTOR'S: THE DOC LOOKS AT SOME "VITAL STATISTICS" TO GET A GOOD IDEA OF YOUR OVERALL HEALTH. THE TRAINED RHA TECHNICIAN DOES THE SAME THING FOR A RANGE OR RIPARIAN AREA.

To find out more about the ALUS Program, please contact me at 403-505-9038 or any of our ALUS Farmer Liaisons:
Kevin Ziola (West) at 403-352-0662,
Tom Towers (Central) at 403-352-6901,
Stephen Smith (East) at 403-318-3371.

2002

2016

Grey Wooded Forage Association

Creating an Awareness of Forages

2019/20 Membership Application Form

Membership in the GWFA is open to anyone interested in forage production, grazing management and environment sustainability

The fee is $40 per year, running from April 1 to March 31

For information, call 403-844-2645 or email gwfa3@telus.net

Benefits of joining GWFA:

- Discounts on courses, seminars, workshops and tours.
- An automatic subscription to *The Blade*, published monthly online. Hard copy is available on request.
- Assistance with your Environmental Farm Plan.
- Equipment rental (deposit required).
- Access to our reference library.
- Access to our members-only Facebook group.
- Networking with like-minded producers and advisors.
- Farm consultation services (farm calls are 55 cents per kilometre, each way).
- A copy of the GWFA Annual Report.

Please mail your completed form and cheque to:
Grey Wooded Forage Association
PO Box 1448, Rocky Mountain House, AB T4T 1B1,
Or scan and email the completed form and send an e-transfer to *gwfa3@telus.net*

Renewal ☐ New member ☐ How should we send your copy of *The Blade*: Email ☐ Canada Post ☐

Name: Email:

Mailing address:

Landline: Cell:

***How do you describe your operation (tick all that apply)**

- ☐ Beef producer
- ☐ Sheep/goat\ producer
- ☐ Dairy producer
- ☐ Annual crops producer
- ☐ Forage producer
- ☐ Other

***How many head of livestock do you manage:**

Beef cows/heifers
Dairy cows
Feeders
Ewes
Does
Other

***How many acres of land do you manage:**

Pasture
Hay
Crop
Other

**These questions are voluntary. We do not share your information*

How can we improve our service to you?

Please suggest topics you would like to learn more about: