Forage Facts

Published by the Peace Country Beef & Forage Associaton

September 2019, Volume 15, Issue 176



Welcoming a New Face to the High Prairie Office!

By: Johanna Murray & Katie McLachlan

Exciting news! We have hired a new Extension Coordinator who will be working out of our High Prairie Office! We had the pleasure of working with her this summer as a part of our Summer Research Staff, and she will be starting in High Prairie in late October when we are finished harvesting our research plots. Let's meet Johanna!

"Hi! My name is Johanna Murray.

Some of you have definitely met me while I worked here over the summer as one of the Ag Research Interns, and I'm excited to say I'm going to be staying on at PCBFA for the long haul!

I grew up on an acreage about 35 min-

utes East of Olds, near the tiny town of Wimborne, Alberta. Although my dad comes from a farming background, my real introduction to agriculture came through the family friends who hired me when I graduated high school.

For the next 3 and a half years, I worked on a 400 head cattle ranch near Sundre, and learned to love working with cattle.

Eventually, I decided that as much as I enjoyed

ranch work, I wanted to know more than what one operation and management style could teach me. I started at Olds college in 2016 and graduated two

years later with a diploma in Agriculture Management, majoring in Livestock Production.

Last summer, I worked as a Forage student at AFSC, collecting native pasture samples and collecting data on pasture health. I was able to travel a lot of Southeastern Alberta, and now I'm super excited to explore more of the Peace Country and meet more PCBFA Members!

As is maybe obvious from my schooling, I am fascinated by different management practices and how they change by region. I am passionate about both livestock health and handling, and the longevity of pastures. I'll talk about grass, bio-diversity, and cows until they're ready to come home!



We are very excited for you all to meet Johanna, and are thrilled to welcome her on as a permanent fixture to the PCBFA Team!





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The Canadian Grasslands are the world's most endangered ecosystem? Grazing cattle is an integral part of protecting the grasslands, helping them fuction properly & thrive.



Tips for Feeding Salvaged Grain Crops

By Katie McLachlan

And just like that, September is here! And we are still trying to make hay...

2019 has been an exceptional growing season, many areas starting out dry, with an exceptionally wet July and August throughout the Peace. While the grass has been doing well, conditions have not been overly conducive to making good quality feed. When you take a look across the quarter line, the summer has unfortunately been tough on our grain farmer friends as well. The lack of sun, wind, and good curing days has delayed many crops in the area, some crops even are continuing to grow rather than make seed.

We all hope for the best case scenario going into fall, but we should also make a plan for the worst case scenario as well. Depending on how this month plays out, there may be opportunity in the area to purchase crops as feed if they are not going to be mature enough to combine.

Here are a few tips to keep in mind if you are thinking of purchasing a crop to green feed, silage, or even graze.

Yellow feed

When an annual crop is sprayed, allowed to stand until dry, then swathed and baled, we consider it yellow feed.

When considering yellow feed, it is important to select a herbicide that is safe for livestock. Glyphosate, applied at a rate of 1 - 1.5 L/ac, then allowed to dry down for about 10-12 days before cutting is the typical recommendation. For more herbicide and application options and information, please refer to the *Alberta Crop Protection Manual 2019*, more commonly known as

the Blue Book.

Nitrates

Nitrates are taken up by the plant when it is stressed, be it extremely dry, a long period of dull weather with no sun, or frost. In this case, we will focus on frost.



The amount of nitrates accumulated, and the length of time that plants will hold nitrates varies with the severity of the frost and the stage the plants are in. Nitrate accumulation occurs when the plant is actively absorbing nutrients, but is unable to photosynthesize properly and turn those nutrients into protein.

Therefore, if the plant is dead ripe, there will be little nutrient uptake, therefore little to worry about.

However, if the crop is still green and actively growing and is hit by a frost, it will continue to take up nutrients and be unable to convert nitrates into protein, leading to a nitrate accumulation.

If it is a light frost, the plant can recover, and work through the nitrate accumulation through photosynthesis. If it is a killing frost, your best bet is to cut the crop the day of the frost to prevent too many nitrates from accumulating in the plant. If you are unable to cut the crop the same day that a killing frost occurs, it is recommended to wait for 10 days - 2 weeks to allow for the plant to dry down and release the nitrates back to the soil.

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Canola

The major concern when looking to feed a canola crop is the risk of nitrate and sulpher poisoning due to the amount of fertilizer pushing the crop. Before feeding a canola crop, be sure to get it tested for feed quality.

Oil content is another concern with canola. A crop that is close to maturity can have an oil content of up to 42% oil by weight. In a ration, cattle can only handle about 7% oil content in the rumen before having negative effects.

Weed Control

As with all crops, it is important to

note which pesticides were applied prior to their use as forage and check their labels in the Blue Book. A

number of grazing and feeding restrictions may apply.

Feed Testing

When considering an alternative feed source, it is extremely important to get your feed tested for quality. With your PCBFA Membership, you get 2 free feed samples. As a member, we will also send out as many tests as you like at a cost of \$30/hay or green feed sample & \$40/silage sample after the first 2 samples.

Also be sure to mark your calendars for November 4th & 5th for our Nutrition Workshops in Sunset House and Hines Creek.



The Second Principle of Soil Health

By Marianne Krahn

In this second of five articles on soil health, we will explain the concept of "soil disturbance" and why minimizing soil disturbance is important for building soil health.

Soil disturbance can generally occur in three different forms:

- Biological disturbance, such as overgrazing, which limits the plants' ability to harvest CO2 and sunlight.
- Chemical disturbance, such as over application of nutrients and pesticides, can disrupt the soil food web functions.
- Physical disturbance, such as tillage, which we will focus on in this article.

A typical soil is approximately 45% mineral (sand, silt, and clay), 5% soil organic matter, 25% water, and 25% air. The water and air portions exist in the pore spaces between the soil aggregates. Over time, tillage implements reduce and remove the pore spaces from

our soils, restricting infiltration and destroying the biological glues which hold our soils together.

Ultimately tillage results in one or more of the following:

- Water erosion transporting soil, nutrients, and water to offsite locations, which negatively impacts water quality and quantity.
- Wind erosion transporting soil and nutrients to offsite locations, which negatively impacts air quality, human health, and animal health.
- Ponding water stays saturated on the surface for long periods of time, a result of reduced infiltration and increased runoff.
- Crusting easily, which restricts plant emergence.
- Soil organic matter depletion.

Can we reverse the impacts from tillage and improve soil function? Yes, we can. Minimizing soil disturbance is a good start to rebuilding soil aggregates, pore spaces, soil glue, and soil organic matter. This is an essential step for long term soil productivity.

Upcoming Events

Event	Date	Location
Tough Enough to Talk About It - Mental Health in Agriculture	September 10th 7-8pm	ATB Entreprenuer Centre, Grande Prairie
EFP & CAP Open House	September 17th 11-3pm	St. Isidore Community Center
EFP & CAP Open House	September 18th 11-3pm	PCBFA's High Prairie Office
EFP & CAP Open House	September 19th 11-3pm	Woking Community Hall
Herd Health Evening	October 16th	Valleyview
Alternative Energy Workshop	October 23rd	Triangle Hall, High Prairie
Alternative Energy Workshop	October 24th	Gordondale
Nutrition Workshop	November 4th	Sunset House
Nutrition Workshop	November 5th	Hines Creek
Extended Grazing & Watering Tour	November 16th	Fairview

For More Information or to Register for any of These Great Events, Visit peacecountrybeef.ca/upcoming-events Email info@pcbfa.ca or Call 780-835-6799 ext. 3

Connect with Us!

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