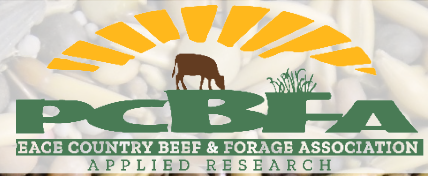


Forage Facts



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DID YOU KNOW?

PCBFA works in both the Mighty Peace Watershed and the Lesser Slave Watershed, and proud to work with both organizations to support the protection of our water resources

Pasture Rejuvenation in the Peace Country

By Johanna Murray & Katie McLachlan

Maintaining perennial pasture is key to efficiency on many livestock operations as perennial pasture is one of the least expensive sources of forage.

There are many reasons you might need to improve or regenerate your pasture, the most obvious, of course is a decrease in perennial vigor or production. This might be caused by a number of things such as winter kill from lack of snowfall, overgrazing, drought, compaction, weed

invasion, erosion, removal of nutrients or, more likely, a combination of all of the above. Disturbance from overgrazing might cause erosion or compaction, erosion and compaction provide opportunities for weeds and weeds reduce the overall production of the pasture.

However, the best method of improving or rejuvenating pasture is not always a straightforward choice. Aside from breaking and re-seeding pasture, there are several methods of rejuvenation that can increase pasture yields.

And whatever lead to the pasture's decline should be considered in the rejuvenation method. More fertili-



Tour of PCBFA's Wanham PGR Pasture Rejuvenation Project, June 20th, 2018. Photo: Dan Przybylski

ty probably won't improve compaction, whereas breaking and re-seeding may be risky during drought.

Rejuvenation can be a costly process and if the method of rejuvenation is not adjusted to the type of degradation, it might be a lot of trouble for no reward.

Luckily, PCBFA has conducted many studies over the years, and we have amalgamated all of our findings for you! Over the next few months, we will be covering various aspects of our findings, which will hopefully give you some considerations for your own pasture rejuvenation activities.

About PCBFA's Studies

For the sake of this article series, we will be pulling information from three of our on-farm, field-scale trials.

Trial 1: On-Farm Evaluation of Forage Stand Rejuvenation Methods to Determine the Most Effective and Profitable Methods for Northern Alberta Producers.

This project took place from 2015-2017 in Rycroft at Soames Smith's and a second site near Grovedale at Bill Smith's. This trial had 12 treatments, listed in the chart below.

Trial 2: Pasture Rejuvenation Trial at Wanham

Trial 1 Rejuvenation Methods

- 1 Control Check Strip - No treatments
- 2 Subsoil to 12" depth with Agroplow subsoiler in the Fall
- 3 Spread Manure & Subsoil to 12" Depth with Agroplow Subsoiler in the Fall
- 4 Spring Sod-Seeding of Forage Mixture with an Agroplow No-Till Drill
- 5 Spring Sod-Seeding with a Conventional No-Till Drill
- 6 Summer of Pasture Rest
- 7 Break & Re-Seed
- 8 Fall/Frost Sod-Seeding of Forage Mixture with Agroplow Drill
- 9 Fall/Frost Sod-Seeding of Forage Mixture with a Conventional No-Till Drill
- 10 High Stock Density Grazing
- 11 Winter Bale Grazing
- 12 Dry Fertilizer Application



Direct Seeding at the Wanham PGR Pasture Rejuvenation Project, June 7th, 2016. Photo: PCBFA

Provincial Grazing Reserve.

This project took place from 2016-2018 at the Wanham Grazing Reserve over 30 acres. This trial had 11 treatments, which were:

1. Control - No Treatment Implemented
2. Broadcast Forage Seed & Aerate in Spring
3. Broadcast Forage Seed & Aerate in Fall
4. Aerate in Fall
5. Aerate in Spring
6. Spray Grazon Herbicide in Spring
7. Fertilizer Application (Broadcasted)
8. Spray Herbicide & Direct Seed in Spring
9. Spray Herbicide & Direct Seed in Fall
10. Spray Herbicide Only in Spring
11. Broadcast Forage Seed Only in Spring

Trial 3: Rejuvenating Pastures with Legumes: Potential of Alternative Pasture Improvement Strategies for Maximum Environmental and Economic Sustainability

This project took place from 2019-2021 near Teepee Creek at Mack Erno's. Treatments conducted in this trial included:

1. Broadcast Legume Pasture Seed Blend (Cicer Milkvetch, Sainfoin, Yellow-head Alfalfa, and Birdsfoot Trefoil)

Rejuvenation vs. Renovation



2. Feed the Legume Seed Blend with Mineral During Winter Bale Grazing
3. Broadcast Legume Pasture Seed Mix Prior to High Stock Density Grazing
4. Direct Seeding of Legume Pasture Seed Mix with a No-Till Drill After High Stock Density Grazing
5. Direct Seeding Legume Pasture Seed Mix with a No-Till Drill into Existing Vegetation After Typical Spring Grazing
6. Direct Seeding of Different Alfalfa Types (Flemish, Siberian, Standard, and Hybrid)
7. Break & Re-Seed with Legume Pasture Mix
8. Control: No Treatments Implemented.

Methods of Rejuvenation:

Over the years, PCBFA has examined several different rejuvenation methods, and while we will examine each method in more detail, they can fall into either renovation or rejuvenation. Renovation methods add or remove plants and change the community structure of the pasture. Rejuvenation methods aim to increase and improve the plant stand that already exists.

Renovation

Adding or removing plants; Breaking & Re-seeding, direct seeding, spraying and broadcasting seed are all rejuvenation methods that intend to address the plant population with varying aggressiveness. Breaking and re-seeding a pasture completely changes the plant population of a field, while direct seeding or broadcasting might alter the community without completely removing what was there prior. There are many ways to adjust these methods as well using mob or bale grazing, aeration, spraying or other disturbance to weaken the plant community before introducing the seedlings.

Herbicide: Applying roundup, Grazon, or other chemical to shrubs and unpalatable weeds is a common method of renovation that may be slightly less expensive than breaking and re-seeding.

As well, this method can be combined with broadcast or direct seeding new plants into the pasture to improve the diversity of the stand.

Rejuvenation

Changing Management: Bale grazing and mob grazing are both management techniques that may be used to improve or regenerate pastures. Bale grazing is an alternative to dry lot feeding cattle in the winter. By feeding cattle out in the pasture, more nutrients from manure and urine can be more effectively transferred to pastureland. As well, this method adds significant amounts of organic matter to the pasture. While Mob grazing is effective primarily because it doesn't allow cattle to remain on pasture for long enough for plants to start re-growing (about 5 days as a rule of thumb) By moving cattle in a tight bunch over smaller ar-

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The advertisement features a photograph of a man and a woman walking in a field. The man is wearing a dark jacket and blue jeans, and the woman is wearing a green shirt and blue jeans. The background is a soft-focus field under a cloudy sky. The text is overlaid on the right side of the image. At the bottom left of the advertisement, there is a logo for "Young Farmer" (YFC) in white on a blue background.



Upcoming Events

Event	Date & Time	Location
DeBolt Perennial Plot Tour	Wednesday, June 15th 9:30am	PCBFA's DeBolt Plot Site
Fairview Perennial Plot Walk	Thursday, June 16th 5:00pm	PCBFA's Fairview Research Farm
Stockmanship Clinic with Dylan Biggs	Thursday, June 23rd 9:00am	Meet at Fourth Creek Hall
Stockmanship Clinic with Dylan Biggs	Friday, June 24th 9:00am	Meet at Sunset House Community Center
Pasture Rejuvenation Field Day with Dr. Bart Larder	Tuesday, June 28th 9:30am	Lyons Events Center, Teepee Creek
8th Annual Field Day at the Research Farm	Thursday, August 4th 2:00-8:00pm	PCBFA's Fairview Research Farm
Western Canada Conference on Soil Health & Grazing	December 13-15th	Edmonton

For More Information or to Register:

peacecountrybeef.ca | 780-523-4033 | info@pcbfa.ca

Save the Date!

Upcoming Events




Fairview Perennial Plot Walk


See How Our Plots Overwintered, and We Talk Drought Recovery with Karin Lindquist



Thursday, June 16th
5 - 8:30pm
Fairview Research Farm

\$30/PCBFA Member
 \$35/Non-PCBFA Member
 Supper Provided

For More Information or to Register:
peacecountrybeef.ca | 780-523-4033



DeBolt Perennial Plot Tour

See How Our Perennial Plots Established & Overwintered through the Drought and we talk Drought Recovery with Karin Lindquist

Wednesday, June 15th 9am-Noon
 PCBFA's DeBolt Plot Site near Marc Pellerin's

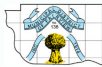
\$25/PCBFA Member \$30/Non-Member
 \$45/PCBFA Member Pair \$55/Non-Member Pair

For More Information, Directions, and to Register:
 780-523-4033 | peacecountrybeef.ca

This Event Supported by:



Brett Young



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Thank You to Our Municipal Partners!



Where Agriculture & Nature Meet

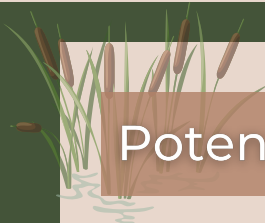
ALUS NORTHERN SUNRISE

ALUS helps farmers build nature-based solutions on their land to sustain agriculture and biodiversity for the benefit of communities and future generations. The program provides financial and technical support for the implementation of these projects, as well as annual payments to participants to ensure the ongoing stewardship of each ALUS projects.

"Conservation will ultimately boil down to rewarding the private landowner who conserves the public interest" by Aldo Leopold, 1934.



NORTHERN SUNRISE
COUNTY



Potential Projects:

- Exclusion of livestock from waterway or direct watering from dugout to restore riparian and wetland health
 - Fence off water source and utilize Alternative Watering System
- Exclusion of wetlands from cropping
- Erosion control structures
- Wetland enhancement and restoration
- Wildlife & pollinator habitat enhancement/ creation
- Shelterbelts and Eco-Buffers

& Many Other Opportunities!

If you are a producer in Northern Sunrise County and are interested in the ALUS program, contact Katie at kbartman@northernsunrise.net or at 780-322-3831 for more information.



eas, you can ensure good utilization of the pasture as well as moving on before the cows graze anything too severely. It also ensures an even distribution of fertility across the whole pasture.

Iron: Subsoiling and Aeration are both methods of addressing what's going on below the soil surface, whether its' reducing compaction or improving drainage, the benefit of both of these methods is the conservation of the current plant population.

Applying Fertility or Manure: Applying fertilizer and manure to pasture has both its' vocal supporters and vocal critics. In brief, this method aims to replenish nutrients that have been removed through haying, or over-grazing. Of the two, manure is helpful for its addition of organic matter, and the fact that many producers have a buildup of manure from bedding packs or calving barns. However, fertilizer may be simpler to apply, and it is easier to apply specific nutrients that may be

missing in both your manure and your soil.

Rest: Of all rejuvenation methods this is likely the simplest, resting your pasture means letting it sit for an extended period, whether that means skipping it in your first rotation, or leaving it ungrazed for a year or more.

Each method of improving pasture has a set of benefits and drawbacks. Rest can help with a pasture that's been heavily grazed or suffered during a drought, but it might not help chronic compaction, fertility or invasive weed problems. Conversely, spraying a pasture might reduce or eradicate invasive species, but won't help with a lack of production, or erosion issues.

Keep your eyes out for a discussion of the results of our PCBFA trials in our next edition of Forage Facts in July! In the meantime, join us on June 28th in Teepee Creek where we will be touring the project site!



Presents:

Stockmanship Clinics with Dylan Biggs

Learn Practical, Low-Stress Cattle Handling Techniques from One of the Best!

Thursday, June 23rd
9am at the Fourth Creek Hall

Friday, June 24th
9 am at the Sunset House Community Center

\$80 / Single Registrant
\$150 / Farm Pair

For More Information & to Register:
peacecountrybeef.ca | 780-523-4033



Pasture Rejuvenation Field Day

Join us along with Dr. Bart Lardner & Akim Omokanye as we Talk Introducing Legumes to Worn Out Pastures with Classroom Presentation & Pasture Walk



Tuesday,
June 28th
9:30 - 2:30
Teepee Creek
Lyons Events
Center

\$40/PCBFA Member \$45/Non-PCBFA Member
\$75/PCBFA Member Pair \$85/Non-PCBFA Member Pair

For More Information or to Register:
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Get in Touch with Our Staff

Liisa Jeffrey

Executive Director

e: liisa@pcbfa.ca

p: 780-394-7419

Dr. Akim Omokanye

Research Program Manager

e: akim@pcbfa.ca

p: 780-835-1112

Chelsey Hostettler

Farm Projects Coordinator

e: chelsey@pcbfa.ca

p: 780-834-8780

Katie McLachlan

Extension & Office Manager

e: katie@pcbfa.ca

p: 780-772-0277

Dr. Blasius Azuhnwi

Research Associate

e: blasius@pcbfa.ca

p: 780-835-6799

Buthaina Al-Maqtari

Research Technician Lead

e: buthaina@pcbfa.ca

p: 403-667-2219

Johanna Murray

Extension Coordinator

e: johanna@pcbfa.ca

p: 780-523-4033

Fairview Office

e: info@pcbfa.ca

p: 780-835-6799

Shelley Henkel

Research Technican Intern

e: shelley@pcbfa.ca

p: 780-978-9088

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