

**SPECIAL  
POINTS OF  
INTEREST:**

- Upcoming Events in Centerfold!

# FORAGE COUNTRY

SUMMER 2016

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## Fall or Spring Management Options for Pastures: Renovate or Rejuvenate?

*By: PCBFA Staff*

Alberta dominates Canada's beef production, and the province accounts for about 40% of the national cattle herd. Importantly, pasture land accounts for 43% of total farm area in Alberta. Producing high quality forage and maintaining productive forage stands is a major challenge that Alberta's beef producers face.

Very little information is readily available on the biological and economic benefits of individual production components (soil & environment, forage, livestock, and economics-cost/benefit analysis) and how these components interact for rejuvenation success.

Last summer, PCBFA was approached by the Wanham Grazing Association to complete a pasture rejuvenation project. Historically, the grazing association has taken a 'renovation' approach to pasture rejuvenation—plowing the pasture down and re-seeding. Observations from the association board of directors saw that their current method of renovating pastures was time-consuming, expensive, and took the pasture out of production for too long.



Wanham PGR Project Site. Photo by PCBFA Staff

PCBFA submitted a proposal to Alberta Beef Producers last fall. We were pleased to have been granted approval for a large-scale pasture rejuvenation project at the Wanham Grazing Reserve, with a replicate near Oyen, AB to give the project a provincial-wide scope. The Oyen site is being managed by our sister association, the Chinook Applied Research Association (CARA). This project is looking at several different methods of pasture renovation and rejuvenation to determine the best route for forage stand re-establishment and the economic viability of each method.

We are aware that declining productivity of a forage stand does not necessarily mean that high disturbance management techniques must be used. With different production components involved in assessing pasture rejuvenation methods, a systems approach will be utilized to analyze the different methods of forage-stand rejuvenation to help producers improve their ability to make better decisions in the use of resources and choosing proper options that may exist for them to rejuvenate their own forage stands.

The project site at the Wanham Provincial Grazing Reserve is a 640 acre pasture dominated by willows, wild rose, small shrubbery, with very little to no legumes remaining in the stand. Baseline data taken from the site indicates that compaction is

*Continued on Page 3*



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**Room 229**

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# Peace Country Beef & Forage Association

## Local Information for Peace Country Producers

Having worked in the Peace Country for many years, we have established ourselves as an innovative association, willing to work with local businesses, educational facilities, other research groups and always with the producers from across the Peace Region.

Our programs vary from environmental concerns to finding the newest technology and helping producers implement it on their operations.

Our board is made up of producers from across the Peace Region, who actively voice questions, ideas and concerns to address the needs of farmers and ranchers of the Peace.

**Vision**

The Peace Country Beef & Forage Association is a producer group with the goal to be a hub of innovative, relevant and local beef, forage and crop information for Peace Country producers.

**Mission**

A Peace Country producer's first stop for optimizing beef, forage and crop production to maximize profitability with innovative and credible information.

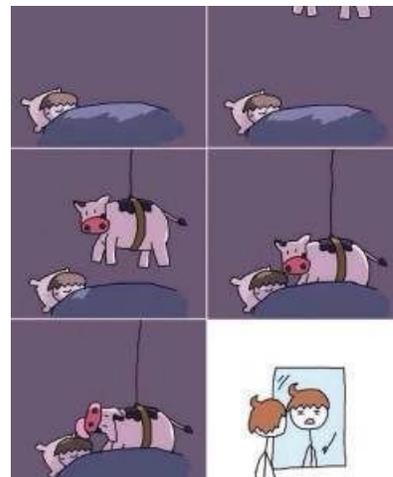
**If you have any questions, comments or feedback about our current extension events or any of our projects, please do not hesitate to give us a call at either PCBFA office.**

**Your input matters to us!**

We are beginning a new 3 year cycle of funding and with your help we have identified several areas in which we will be focusing our research and extension efforts.

- Forages and Livestock Program: *Optimizing Production and Profitability of Livestock and Forage Production in the Peace Country.*
- Environment Program: *Facilitating the Role of Agricultural Producers as Stewards of the Land.*
- Annual and Special Crops Program: *Long Term Profitability of Crop Production through Land Rejuvenation & Sustainability.*

These programs will all work together to improve production and profitability on all operations in the Peace Country with a focus on soil health and restorative, sustainable farming practices.



## Renovate or Rejuvenate? Continued

By: PCBFA Staff

a major issue as well as water infiltration rates. Due to the high compaction ratings, the soil pore spaces are all 'squished' together, allowing only a small amount of water to infiltrate into the soil. This poses a problem in a rain event, as water is more likely to pool on the surface than percolate down through the soil and be made available to plants. Baseline soil samples also indicate that the soil in the pasture is very deficient in nitrogen, potentially due to the lack of legumes in the stand.

This project will test a variety of methods to rejuvenate the productivity of low producing forage stands, while improving the soil conditions under the grazing system. We will also be examining the effects of herbicide applications for brush control in pasture stands, as well as evaluating the economics of various pasture rejuvenation methods on a large-scale.

This project consists of 13 treatments, each replicated three times, giving a total of 39 plots. Each plot is approximately 4 acres in size, making this project a total of just over 150 acres.

Treatments include:

- 1) Check (control) - Grazed as usual. No other treatments will be imposed. This treatment will be completed on the remainder of the pasture not being utilized for the project.
- 2) Summer rest—One year summer rest, no grazing for a year (2016)
- 3) Fertilization—Fertilize with dry inorganic fertilizer in spring according to soil test recommendations (Spring 2016)
- 4) Complete renovation—Plow under, cultivate, and reseed with a legume—grass mixture in the spring (Spring 2016)
- 5) Spray Roundup® herbicide in spring, direct seed forage mixture into (Spring 2016)
- 6) Spray Grazon® herbicide in spring (Spring 2016)
- 7) Spray with herbicide in fall, cultivate & seed following spring (Fall 2016, Spring 2017)
- 8) Spray with herbicide in fall & direct seed following spring (Fall 2016, Spring 2017)
- 9) Aerate in spring (Spring 2016)
- 10) Aerate in fall (Fall 2016)
- 11) Broadcast seed & aerate in spring (Spring 2016)
- 12) Broadcast seed & aerate in fall (Fall 2016)
- 13) Subsoil to a depth of 9-12" in the fall (Fall 2016)
- 14) Subsoil to a depth of 9-12" in the fall & direct seed following spring (Fall 2016, Spring 2017)



Spring treatments began June 6th, 2016. Photo by PCBFA Staff

*Continued on Page 4*

### Follow Us!



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[www.peacecountrybeef.ca](http://www.peacecountrybeef.ca)

## Renovate or Rejuvenate? Continued

Spring 2016 treatments were implemented on June 6-8th 2016 by PCBFA Staff. All treatments are a one-time treatment. For treatments that are seeded, no grazing will take place during the seeding year to ensure proper establishment of the stand after seeding. Seeded treatments have been and will be seeded at a rate of 15lbs/acre—10lbs grass, 5lbs legume.

This project is a three-year project. Over the three year project term, we will be monitoring a number of parameters including; soil & environmental components, forage data, livestock palatability, and economics. We will be taking yearly soil samples to 18" to monitor soil quality and health. Soil compaction, carbon sequestration, and water infiltration rates will also be monitored. On a forage perspective, we will be closely monitoring each treatment for stand establishment, plant population, and types of plants growing will be recorded. In addition, we will be taking forage yield measurements and testing samples for the nutritional value of the forage. With the feed test results from each plot, we will be able to analyze needs for additional ration requirements for cattle grazing each stand. Subsequent years into this project, cattle will again be allowed to graze the project site. We will closely monitor for cattle preference of the plots, if any. Finally, economic analysis of each treatment method will determine the most cost-effective method of rejuvenation as well as the method with the greatest return on investment.

Pasture rejuvenation is a very complex and costly challenge for Alberta producers. What works for one area, may not work in another. We are confident that at the completion of this project, we will have determined a number of methods for pasture rejuvenation that are practical for Alberta producers. Be sure to follow our progress with this project, and if you have any questions, please feel free to give us a call or stop by the office!

Watch for our  
Project Field Day at  
Wanham Grazing  
Reserve!  
Summer 2018!

PCBFA would like to thank

the following for their assistance in  
implementing our Spring 2016 Treatments for this Project:

Wanham Grazing Association—Project Collaborator  
Rocky Mountain Equipment, Grande Prairie—Use of Tractor  
James Bozarth, La Glace—Use of No-Till Drill & Time  
Soames & Lara Smith, Rycroft—Cultivation Equipment & Time  
MD of Fairview: Use of Sprayer

This project is made possible by collaboration with:



## BSE Surveillance—Doing our Part to Keep Markets Open

By Kaitlin McLachlan

PAGE 5

Did you know that BSE testing is still alive and well? Did you also know that it is more important than ever to be testing animals for BSE? The Canada and Alberta BSE Surveillance Program is a tool used to measure the effectiveness of actions in place to control BSE. With ongoing BSE surveillance, we can demonstrate to the rest of the world that we have a strong monitoring program in Canada.

Canada is now considered a “controlled BSE risk” country by the World Organization for Animal Health (OIE). Canada as a whole needs to be testing 30,000 cattle a year for BSE. Out of this number, Alberta needs to test 10,500 animals. Animals being tested for BSE has been on a steady decline since 2011. In 2015, only 26,284 animals were tested nationwide according to the CFIA. The smaller numbers of animals being tested is a big concern. If we are not meeting our target number for BSE surveillance a year, we are at risk of losing our status with the OIE and losing market access to a number of countries.

How can we as producers help to keep our markets open? It’s easy! All we need to do is test eligible animals. The surveillance program accepts animals over 30 months of age that fall into one of the following high-risk categories: dead, down, diseased, distressed, or showing neurological symptoms. Currently, the program is voluntary and producers are reimbursed \$75 per sampled animal. The program also pays for a program certified veterinarian to visit your farm to assess the animal, and to collect a sample if eligible.

One of the major complaints about the program is the decrease in the reimbursement payments to \$75. Some producers say that this is not a proper reimbursement considering the current price of cattle. However, those producers don’t realize that the good moment that the industry is going through, is bit part the result of all the efforts placed to eradicate BSE and to show its reduction by means of a strong BSE surveillance. Also, where this program shines, is if you have a dead cows and you have no idea why she died, you can call your vet and they will come take a sample for BSE testing, as well as do a post-mortem free of charge to determine the cause of death. You can’t sell a dead cow, but you can get your \$75 BSE sampling reimbursement and know why she died and if it is an issue that you should be worried about.

Most of our local large animal veterinarians in the Peace Country are certified to complete BSE testing. If you have a dead, down, diseased, or suspect animal, call your local vet promptly to discuss your options for BSE sampling. It is ideal for the animal to still be alive when you call your vet. This increases the chances of collecting a good sample as well as valuable clinical information on the case. Producers do need to provide some information to the vet when they come to take the sample. Information such as the age of the animal, history, basic health records, CCIA tags, ID tags and tattoos. If it is a purchased animal and date of birth is unknown, the vet will assess age by dentition. It is also the producer’s responsibility to retain the carcass of the animal until the results of the BSE test are available. Test results are typically available within a few days. When a negative result comes back, the animal can be disposed of.

By participating in BSE surveillance, we as beef producers can help to maintain our access to domestic and international markets for both live cattle and beef products.

BSE Surveillance is Everyone’s Responsibility: Do your Part



Test me for  
**BSE**

Help keep Alberta beef markets open  
by supporting BSE surveillance.

Contact your veterinarian to assess  
and collect samples from eligible cattle  
for BSE testing.



Call 310-FARM (3276) [www.agriculture.alberta.ca/bse](http://www.agriculture.alberta.ca/bse)

Photo via: [www.agriculture.alberta.ca/bse](http://www.agriculture.alberta.ca/bse)

Growing Forward 2 

A federal-provincial-territorial initiative

Alberta  
Government

Canada

## “Soil Health Matters” - Jay Fuhrer

By: Jen Allen

Since growing up on a small grain and livestock farm, Jay Fuhrer has been studying, practicing, and advocating soil health for over 20 years. Currently, Jay is a district conservationist with the Natural Resources Conservation Service (NRCS) in Bismarck, North Dakota. According to Jay, soil health is the foundation for our overall quality of life, including cropping systems, grazing systems, cover crops, soil biology, pollinators, insects, and wildlife. Fuhrer recognizes that a key to building soil health is to identify what is missing, “you read the signs of poor soil health, and design a crop and livestock system that will give you what you don’t have in your current operation.” Jay is also a true believer that restoring diversity and soil health in the landscape can achieve conservation,

Jay has worked with and assisted several farmers and ranchers in his area of Burleigh County to build complete systems. The results from increasing diversity (such as introducing cocktail cover crops) within those operations are all positively noticed, whether it be increasing soil organic matter, water holding capacity, carbon sequestration, and useable nitrogen or improving the overall soil structure. The benefits of a highly diversified system becomes especially prevalent in drier seasons, where monocultures have been shown to perform poorly, and multi-species systems have been seen to prosper. This is something to consider here in the Peace Country, as dry seasons are unfortunately becoming more prominent. With Fuhrer’s research and findings, he concludes that cocktail cover crops can enhance soil health and efficiency and further reduce working with artificial fertilizers. Jay Fuhrer has also done work on integrating livestock into cropping systems for sustainability and soil health on ranches. (USDA, NRCS)

### Jay’s keys to farming or ranching systems that build soil health:

- \* Minimize soil disturbance.
- \* Provide soil armor (cover).
- \* Always have live roots growing in the soil.
- \* Use diverse plants, rotations and (where possible) animals.

*“The principles of building healthy soils are the same everywhere – you have to stop tilling the soil and switch from a monoculture crop to a diversity of crops and rotations. But the path to soil health is different on each farm. Cover crop and cash crop selections and sequences are chosen to fit the farmer’s resource concerns and priorities, and the means available at that farm.”*



Photo via: <http://www.conservationwebinars.net/webinars/integrating-livestock-into-a-cropping-system>

Would you like to learn more about what Jay has to reveal on building soil health?  
Don’t miss our **Soil Health Workshop with Jay Fuhrer on August 18th!**

For more details on events, please see page 12 & 13, call the PCBFA office, or visit our website!

## Be BearSmart

Provided by Courtney Hughes from AEP



Late May through to July marks breeding season for both grizzly and black bears. So in addition to bears looking for food – they can eat up to 20,000 calories a day – they are also looking for a mate! Extra precautions are required at this time for those that live, work or recreate in bear country. Being safe in bear country means managing attractants. This includes human food sources, pet food, garbage, composting and more.



Some helpful tips to avoid bear encounters if you live, work and recreate in bear country include:

- Securely store pet food indoors or in bear-proof containers. Same goes for garbage, recycling, or dead livestock – these can attract bears around your home or farm.
- Keep your BBQ clean – bears will smell food residues left behind
- Carry your bear spray and make noise! This includes when you're out checking on calves or fence lines, bee yards, camping in the backcountry, or at forestry or industry work sites.
- Keep your eyes open and pay attention to bear sign – tracks, scat, scratched logs and trees, or upturned earth. Be calm and cautious if you see these signs, get your bear spray ready, and leave the area IMMEDIATELY.
- If hiking or biking, avoid thick bush, tight corners and blind hills to reduce the chance of surprising a bear.
- If walking with children, keep them close at all times and make sure they know what to do if you encounter a bear. Practice a "bear safety drill" with them ahead of time.
- Keep your dog on leash – dogs can trigger unwanted and negative encounters with bears
- Keep your work or campsite clean – store food in airtight containers and cook meals at least 100m away from your main living area. Also pack out all garbage from sites as these can attract bears in.
- Use electric fencing to help protect calving grounds, bee colonies or other farm site areas. Electric fencing can also be used at camping grounds or work sites.
- Remember: bears are curious, intelligent animals – once they learn about a new food source, even if left there unintentionally, they will return to it again. Keeping a clean site at your home, while camping or working will reduce encounters with bears, keeping both people and bears safe!

### DID YOU KNOW?

Simple changes in your behaviour can reduce human-bear encounters and prevent potentially dangerous situations.

Most bear encounters can be prevented. It's up to us to decide how we will keep ourselves safe, and keep wild bears from becoming habituated, problem bears.

For more information on bears and Alberta BearSmart, visit:

<http://aep.alberta.ca/recreation-public-use/alberta-bear-smart/default.aspx>

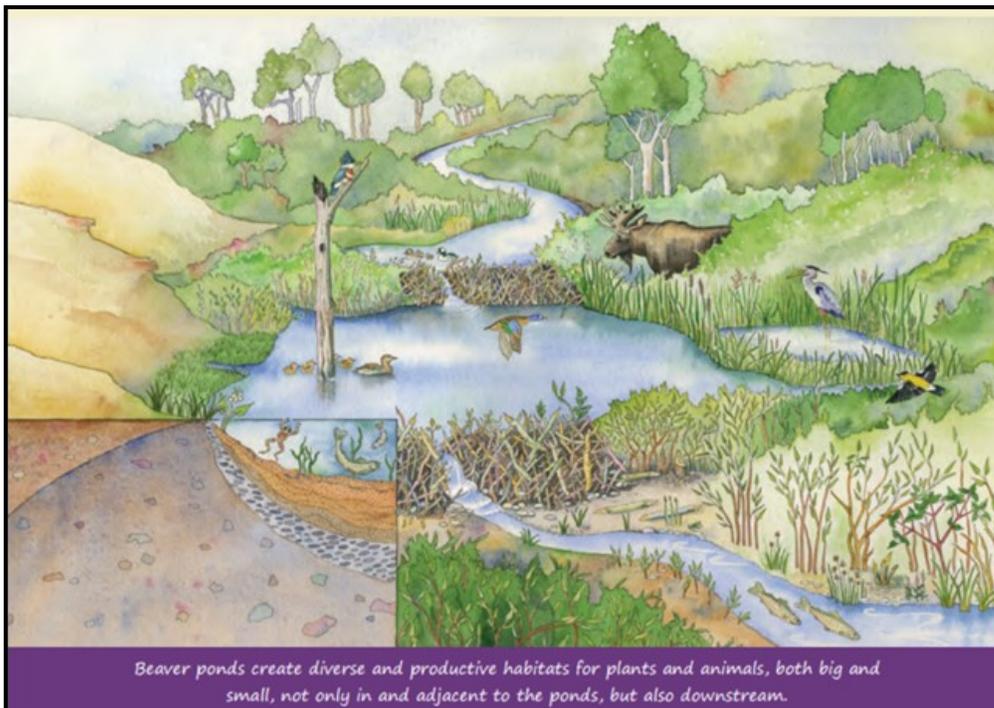
## Beavers: Pest or Protector of Water Resources

By: *Cows and Fish*

Water ... we can't live without it. No substitute exists for this precious and beautiful resource, which has been scarce in Alberta. In the future, the availability of water may decline as we face more variability in weather and precipitation patterns, along with more demands, as our population increases. With growing uncertainty about less snowpack in the mountains, earlier spring melting and runoff, and diminishing stream flow earlier in the summer, by late summer when we need water the most, it may be in short supply. Many people believe that water will be the new gold of the future.

As the reality of the impacts to our water becomes ever more apparent, we will need to catch and store water more effectively. We've given water lots of advice on this issue, in the form of expensive dams and big reservoirs, but is that always the best solution? Have we overlooked a natural ally in our efforts to conserve and manage water? Maybe. Consider our Canadian icon, the beaver!

For more than 10,000 years, beaver have been building dams and storing water across the landscape. Historically, tens of millions of beaver were busy in nearly every watershed across the North American continent. The cumulative effect of their ponds on water storage, both above and below ground, was enormous. In simple terms, more beaver on the landscape means more water supply. University of Alberta biologist, researcher and author of the *Beaver Manifesto* Glynnis Hood, found that by scanning historical records of beaver populations and climate data, ponds with active beaver lodges had 9 times more water during droughts than ponds without dams. "In times of drought they [beavers] may be one of the most effective ways to mitigate wetland loss," said Hood. "Some people believe climate is driving everything, but the presence of beaver has a dramatic effect on the availability of open water in an area. Beaver are helping to keep water in areas that would otherwise be dry." The study, published recently in the online edition of *Biological Conservation* journal, also found that temperature, precipitation and other climate variables were much less important than beaver in maintaining open water areas in the wetlands of the mixed-wood boreal forest in Alberta.



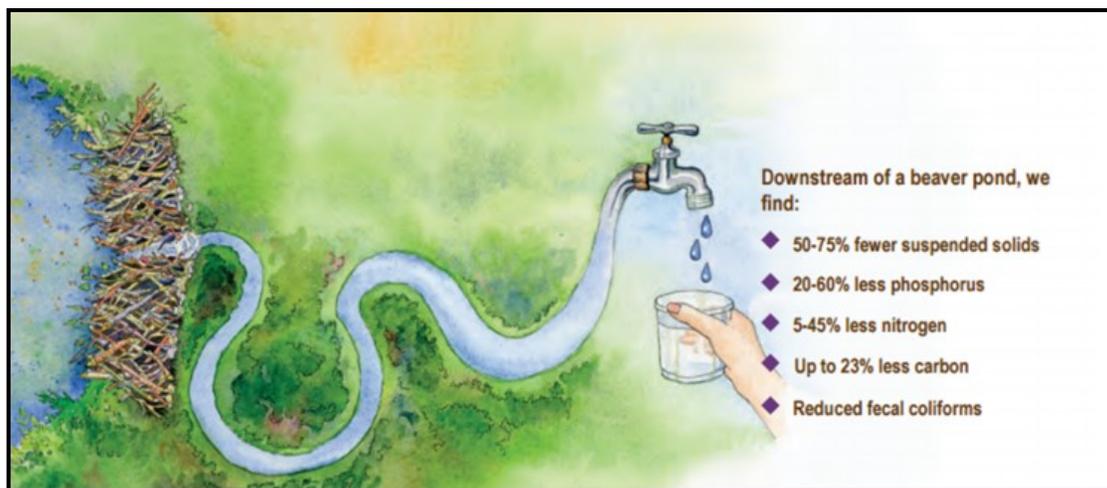
In addition to impacting water quantity, beaver ponds contribute to an impressive list of valuable goods and services for humans - including cleaner sources of domestic water, more reliable water for irrigation and livestock, forage, opportunities for watching wildlife, hunting and fishing. Ponds trap and store tons of sediment which improves water quality downstream for people and livestock alike. This natural filtering and buffering of possible contaminants and recycling of excess nutrients (like phosphorus) assure cleaner water for all. And lastly, their ponds create diverse, productive and unique habitats for creatures great and small. This can enhance the biodiversity and connectivity of the overall landscape.

Beaver dams and ponds check the velocity of streams and dissipate water energy laterally, creating speed bumps for streams. This decreases the risk (and costs) of major flooding and slows erosion. Sediment captured by beaver ponds broadens stream valleys over time with rich deposits of soil and higher water tables to build productive riparian zones, wetlands, and meadows. The diverse mosaic of vegetation, particularly willows, in these areas, protect and stabilize stream banks. Beaver ponds store surface water and re-charge ground water. This increases water supply and releases water more steadily throughout the year - especially vital during droughts. Much of the stream water captured by ponds is stored underground in shallow aquifers and may re-enter the channel downstream. This keeps water temperatures cooler in summer and warmer in winter to the benefit of sport fish such as trout.

In the 1800s, European fashion prized beaver pelts for hats, which spurred a westward wave of exploration as trappers searched for beaver. Excessive trapping eliminated beaver from most areas by the early 1900s. This was followed by intensive use of the land and drained watersheds. Without beavers, streams cut downward and some dried up, water tables dropped, woody vegetation disappeared and wildlife declined. The impacts on us have been considerable - including uncertain water flow, higher costs for water treatment and increased likelihood of erosion and flooding.

Thanks to improved management and recolonization, beaver populations have rebounded over the past 50 years but only to 10-20% of their original numbers. Full recovery has been stymied ... partly because we have not understood and appreciated the many services provided by beaver and the benefits for us.

Life is all about water - a substance more precious than gold and likely more scarce as we move into a climatically uncertain future with more people needing water. With their ponds serving as natural water reservoirs, beaver can help us but only if we accommodate their activity and find a balance between the work of this sometimes pesky bucktoothed rodent and our land-use to sustain both on the land. Will we partner with nature's engineer to help store more water for free? The health of our watersheds, from headwaters to drinking tap, depends on our answer.



For more information on beavers, visit <http://cowsandfish.org/publications/management.html> for the publication called 'Beaver Our Watershed Partner' and [http://cowsandfish.org/publications/fact\\_sheets.html](http://cowsandfish.org/publications/fact_sheets.html) for fact-sheets such as 'Beaver Factsheet' and 'A Pond of Gold – Storing Water Naturally'.

For more information on the Cows and Fish program visit [www.cowsandfish.org](http://www.cowsandfish.org)





**The PCBFA Board of Directors and Staff meet once every 2 months to go over the happenings with PCBFA. Our AGM is held each February, where new board members are elected For more information on becoming a board member, please give us a shout in Fairview at 780-835-6799 ext 2 or High Prairie at 780-523-4033!**

### Environmental Farm Plans on Alberta Operations

Many Alberta producers are wondering if they need a current Environmental Farm Plan (EFP). The EFP is meant to be reviewed and upgraded regularly for each operation. It's simple to do. The program is coordinated by the Agricultural Research and Extension Council of Alberta (ARECA) and EFP technicians are available across the province. A completed EFP is required for the On-Farm Stewardship categories of the Growing Forward 2 program. Stewardship is being tied to business opportunities and it is good to be prepared. There are many other reasons to complete an EFP too, including having a hard copy record of the environmental status of your operation, becoming more aware for the rules and regulations concerning the environmental impacts on farms including protecting water resources and air quality. EFPs can also contribute to the environmental sustainability of crop and livestock operations. Updating your EFP shows your commitment to being good stewards of the land and your commitment to meeting consumer expectations and food safety. By establishing that food is produced in an environmentally sustainable way in Alberta, also positions Alberta to be competitive in world markets.

Producers can use an online workbook. This workbook carries data entered to all areas of the plan where it is needed, provides quick access to information sources, ensures each section is complete prior to moving to the next and allows the EFP technician to see what is completed, answer questions and assist with finishing the plan.

To get started contact the ARECA office at 780-612-9712 or [info@albertaefp.com](mailto:info@albertaefp.com). You will then be matched to an available EFP

### Why Develop an EFP

- ◆ Improve farm health and safety
- ◆ To protect water resources, air quality.
- ◆ To preserve soil and biodiversity
- ◆ Building acceptance of the operation among neighbours and the public
- ◆ Increasing personal satisfaction and knowledge
- ◆ Adding value to the farm property
- ◆ Agricultural sustainability
- ◆ To reduce farm inputs and decrease storage time of herbicides, insecticides, fertilizers and fuel
- ◆ To demonstrate to the public, governments, regulators, lenders and/or investors that you are managing your environmental risks
- ◆ To increase your understanding of your legal requirements related to environmental issues.
- ◆ To identify what you are already doing well and pinpoint where improvements could be made.



### Peace Region EFP Technicians

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***Check Out Our Website For More Details on Our Projects,  
Events and Past Publications:  
[www.peacecountrybeef.ca](http://www.peacecountrybeef.ca)***

**For more information about any of our field tours, workshops or project sites please  
call either Peace Country Beef and Forage Association Office.  
Fairview 780-835-6799 or High Prairie 780-523-4033**

# Upcoming P

<b>Event</b>	<b>Date &amp; Time</b>	<b>Location</b>
<b>Field Day at the Research Farm</b>	Wed, July 20th	M.D of Fairview Research Farm 2 miles west, 1 mile north of Fairview
<b>Sanfoin/Pasture Walk with Kelly Sidoryk &amp; Karin Lindquist</b>	Tues, July 26th	Meet at Fourth Creek Hall Dolen Land & Cattle
<b>Pasture Walk with Kelly Sidoryk &amp; Karin Lindquist</b>	Wed, July 27th	Meet at Grimshaw Legion Faron Steffen's
<b>Pasture Walk with Kelly Sidoryk &amp; Karin Lindquist</b>	Thurs, July 28th	Scott & Kerri Mulligan's Valleyview
<b>Whole Farm Water Planning with Jesse Lemieux</b>	August 3rd & 4th	Aug. 3rd: Woking Aug. 4th: Clear Hills County
<b>Soil Health Workshop with Jay Fuhrer</b>	Thurs, Aug. 18th	Manning
<b>Watering Systems Day</b>	TBA	High Prairie
<b>Peace Beef Cattle Day</b>	Wed, Dec. 7th	DMI in Fairview
<b>Study Tour to Denver</b>	January 10th-17th, 2017	Denver, Colorado



**Up to Date Information can be Found on our Website!**  
[www.peacecountrybeef.ca](http://www.peacecountrybeef.ca)

# CBFA Events



Cost	Contact	In Collaboration With
Free!	Kaitlin with PCBFA @ 780-835-6799	  
Free!	Kaitlin with PCBFA @ 780-835-6799	  
Free!	Kaitlin with PCBFA @ 780-835-6799	  
Free!	Kaitlin with PCBFA @ 780-835-6799	  
\$15 members \$25 non-members	Kaitlin or Jen with PCBFA @ 780-835-6799	   
TBA	Kaitlin or Jen with PCBFA @ 780-835-6799	 
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By Kaitlin McLachlan



Swath grazing trials at the Lacombe Research Station. Photo via: argic.gc.ca

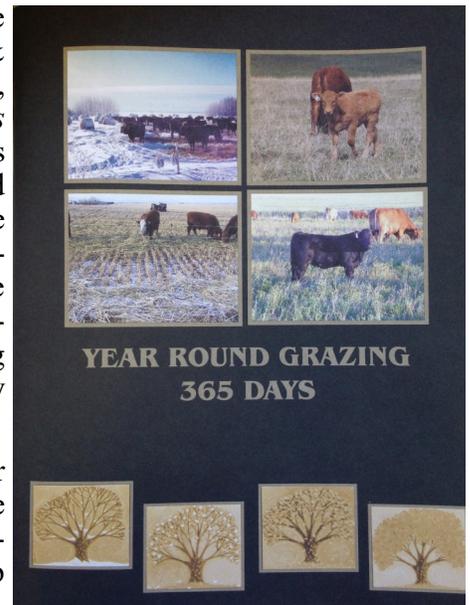
2016 has proven that Mother Nature is a quite a fickle girl. Starting out the first half of the year with extreme dry had many of us losing sleep at night worrying about what this year may hold for grazing and feed – especially after last year’s feed scarcity left feed yards empty and pastures pretty beat up. Then May Long weekend came and brought a good blanket of snow to many parts of the Peace Region. Some have called it our “Million Dollar Snow” and much-needed, regular rains in much of the region have followed.

Pastures and crops have gone crazy with the rain, with good yields being projected for much of the area. However, some have said that the moisture may have come too late for many hay crops in the area. Due to flowering time, many legumes were already entering the maturing stage and putting energy towards making seed and growing roots rather than foliage. This may still leave some in a pinch for winter feed. Fortunately, there are many other options for feeding cattle into the winter without having to feed hay!

Back in 2006, in the midst of the BSE crisis, producers were desperate for ways to decrease their cost of production. Peace Country Beef & Forage Association, along with five other ARECA Associations, produced a guide for year-round grazing. *Year Round Grazing 365 Days* involved cooperators from across the province, all using various means of extended grazing systems, and analyzed their operations. Feed quality, forage yield, and economics were analyzed and various tips are also included in the guide. Traditionally, producers have put up feed during the summer, then gone on to feed cattle after snow has covered the ground or pastures have been depleted for upwards of 200 days on average. This system is time, labour, and machinery intensive. By extending the grazing season, we can stretch our grazing season up to a 300+ day season, and decrease the hours we are spending in a tractor!

Opportunity presents itself this year as the hay crops are looking poorer than we’d like to see them and grass and grain crops are looking quite good. There are many options for extending the grazing season including: bale grazing, swath grazing, corn grazing, stockpiled forages, crop residues, the list is seemingly endless! In place of traditional hay bales, this year may be the time to try grazing annual crop land in the form of swath grazing or residue, or perhaps stockpiling pasture land will help to get us into the winter months.

Swath grazing is exactly what it sounds like—we let the cows graze a crop in the swath. Oats, barley, triticale and cocktail crops are ideal for a swath grazing system. It is important to time swathing the crop correctly. As with swathing a crop for greenfeed, crops intended for swath grazing should be swathed when the grain is at the soft dough—mid dough stage. At this time, crops like oats and barley are at the peak of feed quality, with a green leafy stalk and plenty of energy in the grain kernel. Late maturing varieties are great for swath grazing, as we can put off swathing until later in the season, closer to the cattle going out on it. Nitrates can be an issue however if the field has a history of high nitrogen soil tests or if we get an early frost. Early frosts are nothing new here in the Peace. If an early frost occurs, Alberta Agriculture & Forestry



Copies of *Year Round Grazing 356 Days* are available at PCBFA Offices.

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*Continued from page 15...*

recommends swathing the crop within a day of the frost to stop the accumulation of nitrates in the plant. The highest rate of nitrate accumulation occurs in the 2 or 3 days following a frost. If the crop gets to this stage, it is recommended to let the crop stand for 10-14 days after the frost to allow the nitrates to leave the plant again before cutting.

When swath grazing, it is recommended to limit the amount of ground cattle can have. An electric wire, moved every couple of days is recommended as a best management practice to decrease wastage and reduce the risk of bloat. Cows catch on to swath grazing quite fast, especially if it is started before or shortly after the first snow and can reach swaths through up to 2 feet of fluffy snow.

Stockpiled forages, crop residues or regrowth is also a great way to stretch the grazing season late into the fall and early winter. Cattle will graze off hardened, dormant pasture without doing significant harm to the plants for the following spring. This year with the pastures being plentiful and good regrowth after cattle are moved off, this can be a good option for many after a killing frost. Crop residues such as chaff piles, or crop regrowth are also great to graze off on annual crop land. Grazing crop land gives the opportunity to spread some manure over the field as well as the cattle will be able to work in some stubble through their hoof action, incorporating organic matter back into the soil.



Grazing stockpiled forages stretches the grazing season into early winter. Photo via: producer.com

Water is a major consideration for extending your grazing system. If snow is fluffy and plentiful, cattle can get by on eating snow. However, a nearby water source is a good backup. Dugouts should be fenced off or have very limited access to avoid cattle walking on the ice and falling through. There are a variety of energy-free and winter watering systems available to purchase. For more information on winter watering systems, please feel free to give PCBFA a call and be on the watch for our annual Winter

Watering Systems Tour at the end of January.



Keep your eyes open for our annual Winter Watering Systems Tour! Photo by: Nick Harter

Wildlife is also a major issue for extending the grazing season. Elk, deer, and moose can wreak havoc on electric fences and feed sources. Herds of elk or deer may also move into a field slated for swath grazing and have the crop ate or destroyed before the cattle can reach it. Wildlife damage can be mitigated by carefully choosing fields away from known herd habitats or close to a yard where there is lots of activity.

Forages and crops left out in the field can have losses in yield and quality due to weathering. In a swath grazing system, the later the crop can be left standing the better to avoid quality and yield loss. It is important to have feed meant for extended grazing tested for nutrients before turning cattle out. A PCBFA Membership comes with 2 free feed samples. Turn around times in the fall are typically 10 days to 2 weeks. With feed test results, mineral and feed supplements can be correctly provided.

When using extended grazing, management is more important than in a traditional feeding system. A contingency plan, or a Plan B is a must-have. Unexpected heavy snowfalls, freezing rain, drifting, and other bad winter weather can severely alter a grazing plan. Closely monitor cattle for changes in feed intake and condition. In nasty weather, cattle may need to be supplemented, or switched to a more traditional feeding scenario. It is also recommended to run two herds. Younger, inexperienced and older, weaker animals are more likely to do poorly in some extended grazing systems. These animals may need some extra supplementation and less competition to make it through the winter in good condition.

Extended grazing is an opportunity in many cases. If you would like to look more into your options for extending the grazing season or would like assistance in coming up with a winter ration for your herd, please feel free to stop by or call one of our PCBFA Offices!

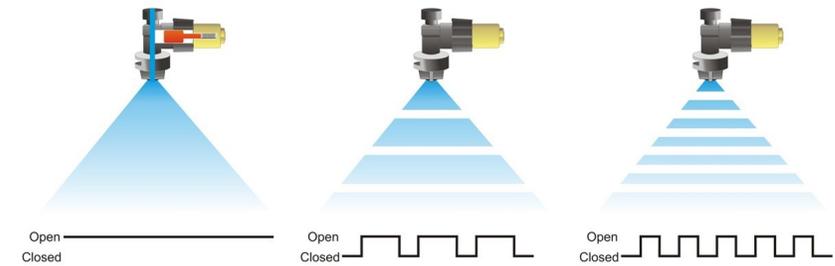
## Variable Rate Spraying

By: Kaitlin McLachlan

Variable rate spraying has been receiving a lot of attention lately with our increased ability to farm in accordance to prescription maps. In juxtaposition to dry fertilizer and seed, which is relatively easy to meter out in a variable rate scenario, chemical and liquid fertilizer is a bit trickier.

In conventional liquid metering on sprayers, the liquid is forced through a metering mechanism in-line. This mechanism can be a plate for liquid fertilizer or a fan nozzle for pesticides. Rate is controlled by adjusting the spray pressure – usually changing a nozzle or plate. This is impractical to be doing in a variable rate scenario as we need to take into consideration the square root relationship between spray pressure and flow rate. Depending on the nozzle being used, there are limitations that pressure can be too low for uniform distribution, or too high for the pump or plumbing on the sprayer. Therefore, spray pressure alone does not provide enough options for use in a variable rate system.

There are however new products coming on the market that can expand the flow rate range, and help us to achieve variable rate spraying. Nozzles, assemblies, pulse width modulation, dual boom systems and direct injection pumps can all be retrofitted onto most sprayers on the market. A complete list of variable rate retrofits and the pros and cons of each, as described by sprayer guru Tom Wolf, can be found online at [sprayers101.com/variable-rate-spraying](http://sprayers101.com/variable-rate-spraying).



A breakdown of a pulse modulation mechanism. Photo via: [sprayers101.com/variable-rate-spraying](http://sprayers101.com/variable-rate-spraying)

If you are looking into retrofitting your sprayer to fit into a variable rate spraying system, be sure to check out Growing Forward 2 for opportunities through their On-Farm Stewardship program. Under the On-Farm Stewardship program Crop Input Management section, you can apply for 50% up to \$10,000 for some of these retrofits and upgrades. Items covered by the program include; sectional control operating systems, pulse modulating systems and sprayer curtains or shrouds. This program will even apply to new sprayers with sectional control systems that require an unlock code from the manufacturer.

A requirement for this program is that the applicant has a completed Environmental Farm Plan. The staff at PCBFA set you up and help you out with completing your EFP. The application itself is quite simple and all the information needed is how the retrofit or upgrade will help you to improve your on-farm environmental stewardship and a breakdown of the project costs.

This application is unique in that if you are going to be buying sectional control for your sprayer regardless if you are getting funding or not, you can fill out the application, send it in, and go buy your upgrade, as long as the application is sent in before you purchase. PCBFA staff can help with filling out the GF2 applications as well.



For more information on Growing Forward 2 programs, or completing your EFP please feel free to contact PCBFA and visit the GF2 website: [www.growingforward.alberta.ca](http://www.growingforward.alberta.ca)

## Bringing Soils to Life in the Peace Country with Nicole Masters

By: Jen Allen

This June, PCBFA was privileged to kick-start our soil health programming for the summer with a warm visit from Nicole Masters. As an agro-ecologist, Nicole has over 17 years of experience in regenerative/biological farming practices. Nicole is currently working on her Masters in Science at Auckland University focusing on ‘The Agro-ecological Entrepreneurs’. She is also the director of Integrity Soils out of Auckland, New Zealand. As a whole, Integrity Soils has been involved in the biological agriculture industry for over a decade and offers “professional services across the agricultural sector, leads workshops, facilitation, professional speaking engagements and workshops for groups or more focussed one-on-one sessions.”



Due to some last minute changes, we were fortunate enough to have Nicole in the Peace Country for not only one day as planned, but three! The two days leading up to the big event on June 22<sup>nd</sup> in Rycroft, we spent some time with Nicole at some of our local producers’ properties in an effort to get Nicole familiar with our region. Over all three days, attendees were able to spend time learning from Nicole’s passion for and expertise on soils. We learnt a lot from Nicole, both in the field and during her presentation on June 22<sup>nd</sup> at the ‘Soil Health: The Bottom Lines’ event. Nicole touched on many topics regarding the significance of healthy soils, including: the soil food web, how soil health can affect our production costs and success, tools to regenerate soils, visual soil assessments, and the important balance of the biological relationships within soils, such as soil bacteria and soil fungi. Here is a summary of some key points that we picked up from Nicole:

- ◆ Bacteria, fungi, and algae form the base of the food web triangle.
- ◆ Calcium provides many benefits to our soil systems, such as: balancing minerals in soils and plants (resistance to many weeds), lifts pH, improves water movement, reduces salinity, and creates cell wall strength (which leads to resistance to pests and disease).
- ◆ Contrary to popular belief, weeds act as “doctors of the soil.” Weeds protect bare/disturbed soil, have low organic matter, balance minerals, improve microbial imbalances, and act as a safety valve for toxins.
- ◆ The main pathway for stable organic carbon into soil is through root exudates.
- ◆ Microbiology (the science of microorganisms – bacteria and fungi) is the “currency of the planet” – we are much ‘richer’ with healthy, proper functioning soils than without.
- ◆ Tillage reduces mycorrhizae fungi; less mycorrhizae = less plant nutrients, as mycorrhizae forms a relationship with our plants and makes unavailable nutrients available.
- ◆ The number one limiting factor for yield is air (soil compaction); you need to maintain soil microbes in order to maintain healthy soil structure and avoid compaction.
- ◆ If your soils are healthy and microbiology is stimulated, soil temperatures will be higher in the spring, lower in late summer, and more moderate over all.
- ◆ Five tools to regenerate soils: (1) use livestock: optimize grazing, (2) avoid bare ground and overgrazing at any cost, (3) improve plant root systems through species selection and above-ground management, (4) feed your underground force, and (5) provide biological foods with any fertilizer/herbicide applications
- ◆ Diversity is crucial. Promoting diversity provides a variety of benefits including but not limited to secondary metabolites, health properties, beneficial insects/animals, weed competition, mycorrhizal associations, access to water, soil microbes, nutrients exchange, etc.
- ◆ Different organisms indicate different conditions (i.e. dandelions indicate low fertility, potassium, and phosphorus).
- ◆ Changes in the soil happen before you see above-ground changes, therefore visual soil assessments (VSAs) are a key player in monitoring soil health. Using the *VSA Field Guide* book is a quick and simple way to do an assessment and can be applied by anyone. Be sure to do VSA during active growth periods of the year (early summer). For a free download of the *VSA Field Guide*, visit <http://www.fao.org/docrep/010/i0007e/i0007e00.htm>

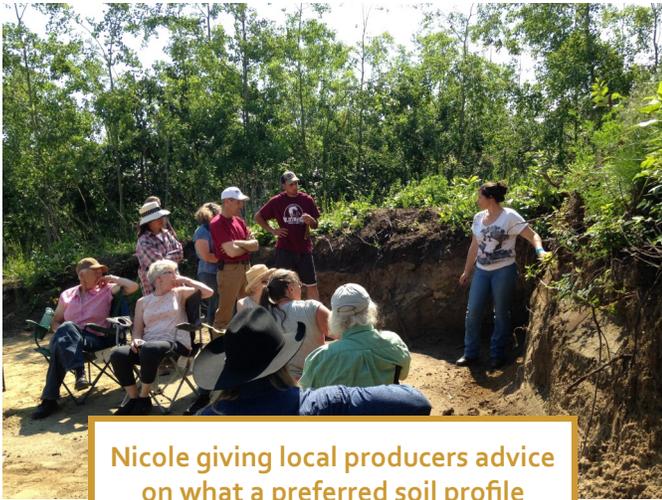
Nicole’s desire, charisma, interdisciplinary teaching skills, and ability to get the audience engaged throughout the three days really added to the success of her visit. All participants seemed to be able to get involved in both classroom and field settings and learn something new from the experiences. We were very pleased with Nicole’s time spent here in the Peace! Tentative plans are being made to bring Nicole back for a longer workshop in the fall of 2016. Details will be sent out as details can be confirmed, so stay tuned!



PCBFA Staff touring the Fairview Research Farm with Nicole



Local producers getting Nicole's input on the health of their land



Nicole giving local producers advice on what a preferred soil profile should look like



Akim, PCBFA Research Coordinator, and Nicole demonstrating soil infiltration tests



Interactive learning!



Nicole explaining the steps on how to complete VSAs



PCBFA Staff photo, featuring Nicole Masters

'Soil Health: The Bottom Lines' event brought to you in collaboration with:



## The Heart River Watershed Restoration Project

By Adam Norris (MPWA) & Jen Allen (PCBFA)

When several organizations get together to work on an issue, it often indicates how important it is. The Heart River Watershed, which is the geographical area that drains into the Heart River, is a special place with some challenges, but certainly has potential for improvements. Striving to achieve such improvements at the watershed level, a diverse group of organizations has come together as a team and established the Heart River Watershed Restoration Project (HWRP).

The HWRP Team is a collaboration between AEP (Fish and Wildlife), Cows and Fish, Mighty Peace Watershed Alliance (MPWA), Northern Sunrise County, Peace Country Beef and Forage Association (PCBFA), Smoky Applied Research and Demonstration Association (SARDA), and the Village of Nampa. As a group, our main goal is to work at improving fish habitat through watershed management within the Heart River Watershed. What this boils down to is that everything we do on the landscape has the potential to affect the quality and quantity of water that is in our rivers and lakes. The common thread is then improving how we use the surrounding landscape of the watershed, to result in a robust water. The Heart River Watershed shares its water resource with us all, in some way or another, so how people operate on the land affects the water resource for everyone as a whole.



Figure 1. Aerial view of the Heart River  
Photo provided by Heart River Watershed Group

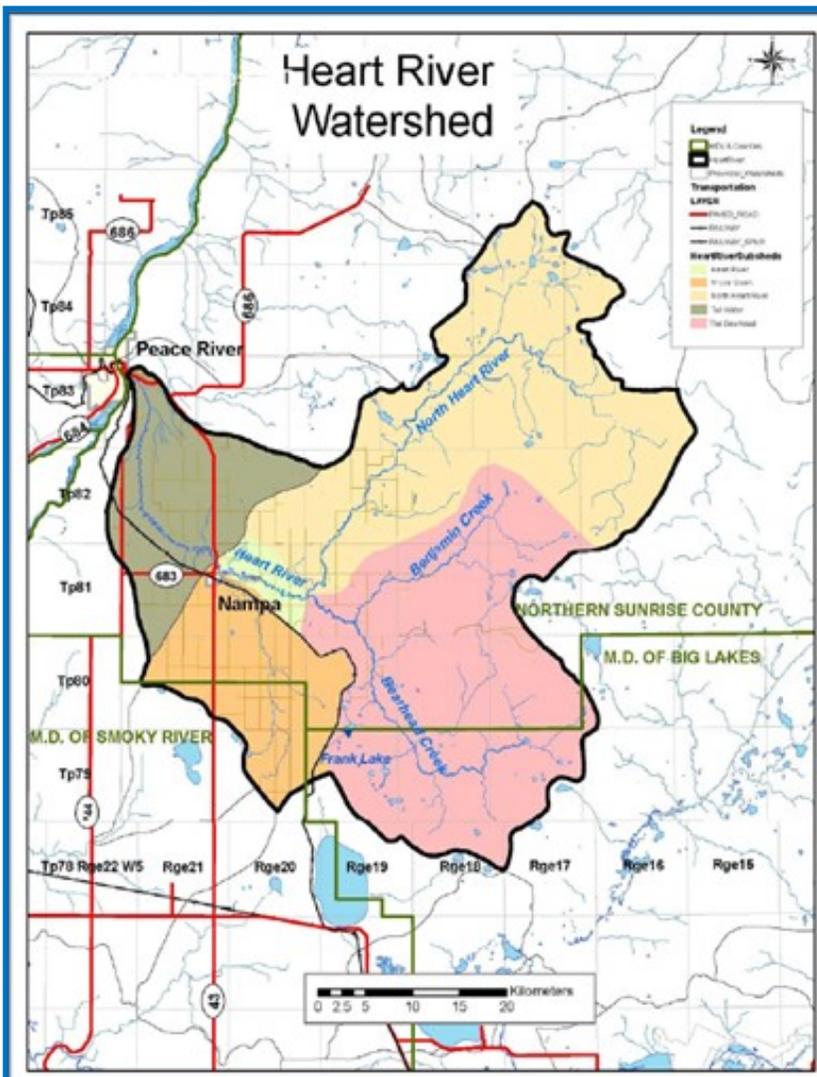


Figure 2. The Heart River Watershed and Planning Area (provided by PFRA, 2007)

People live in this watershed, people work in this watershed and people play in this watershed—all of these aspects combine together and make the Heart River Watershed a shared and special place. Consequently, we have created a Life and Times presentation to help get the discussion going about how the Heart River Watershed truly is a special place to us all, and demonstrate the importance to maintain a healthy relationship with it. This presentation has already been presented twice in the Peace Country, and will eventually be available digitally. As well, what we have to do to have the watershed we want.

A restoration plan has just been completed by the Heart River Watershed Restoration Project Team. Please go to <http://www.mightypeacewatershedalliance.org/projects/heart-river-watershed/> to view this document. Essentially, this plan provides a roadmap for how the different organizations can work together and most effectively use the resources that we have. This plan identifies 6 prioritized restoration activities that we would like to undertake. They are:

- 1) riparian vegetation improvement
- 2) farm water management planning
- 3) culvert improvement
- 4) streambank fencing/bank erosion prevention or mitigation
- 5) livestock management
- 6) setback from crop land

Committed landowners and the HRWP Team will be working together this summer to start improving practices in these above areas.

For more information on the HWRP, please follow us on Twitter (@HeartRivProject), Facebook (search Heart River Watershed Restoration Project) or visit the website link above. Also, feel free to contact the MPWA (Adam Norris would be happy to take your call or email) at 780-324-3355 or [mpwa.coordinator@telus.net](mailto:mpwa.coordinator@telus.net).

*A huge thank you to our supporters of this year's projects!*



Alberta Barley



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Programs Accepting Applications

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- \* Agri Processing Automation and Efficiency - Livestock
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- \* Confined Feeding Operation Stewardship
- \* Food Safety Systems Delivery Agent
- \* Food Safety Systems Processor
- \* Irrigation Efficiency
- \* Livestock Welfare Processor
- \* On-Farm Energy Management
- \* On-Farm Stewardship
- \* On-Farm Water Management
- \* Regional Water Supply
- \* Traceability Pilot
- \* Traceability Technology Adoption
- \* Traceability Training

- \* Agri Processing Automation and Efficiency - Crop
- \* Agri Processing Product and Market Development - Crop
- \* Animal Health Biosecurity Producer
- \* Food Safety Systems Producer
- \* Livestock Welfare Delivery Agent
- \* Livestock Welfare Producer

Growing Forward 2 Programs are continuously updated and changes are made to the programs. All information on GF2 programs can be found at [www.growingforward.alberta.ca](http://www.growingforward.alberta.ca)

The best way to stay up to date on all things GF2 is to subscribe to the programs that you are interested in. The subscribe function can be found on the right side of the GF2 home screen.

PCBFA staff would be happy to help with your GF2 applications, so give us a call!

# Thank you to all our Funding Agencies



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