

# FORAGE FIRST

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Sixty-Ninth Edition

Winter 2016

\$10

## Forage AGM Draws Diversity & New Faces



*Photo caption: AGM participants discuss what makes a soil resilient to weather extremes. From L to R: Christina Irvine, Sandra Burton, Freddy Schneider, Marika Cameron, Jim Chramosta, Stan Smithard & Deryle Griffith. Photo credit: Ann Grover.*

This winter issue introduces you to our new director Heather Fossum. You can also find updates about our R & D projects, past events and future workshops. Remember as a paid up member, this is your newsletter. The Communications Group welcomes your feedback anytime through their contacts below.

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Lori Vickers, BC Ministry of Agriculture	784 2559

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Re-vegetation Project: Bill Wilson  
Communications, Soils & Resiliency Project: Sandra Burton  
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Visit our website at [www.peaceforage.bc.ca](http://www.peaceforage.bc.ca)

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Forage Fact # 79, # 91-94  
R & D Projects Update  
South Peace Grain Ad

### Inserts: (for renewing members)

2016 Membership Renewal Notice  
South Peace Grain Ad

## Meet Our New Director

by Sandra Burton



Back row: Alyse, Ryan, Heather & Haley. In front: Ethan.

**Heather Fossum** agreed to let her name stand for nomination at the recent AGM of the Peace River Forage Association and was elected. Many of you readers know Heather as a past Forage Technician, but I thought you would enjoy finding out what she has been doing in the last 15 years.

### Heather, how did you first hear of the Forage Association?

I worked as a summer student for 2 or 3 summers for the BCFC/ PRFA of BC in the late 1990s as a Forage Technician. I have always thought this association was doing interesting and relevant work, so I have maintained my membership no matter where I have lived or worked.

### Tell us where you grew up and about your background. Tell us about your family.

I grew up on a ranch west of Dawson Creek with my parents Lary and Diane Fossum and my 2 brothers. Since high school, I have built up a small herd which I keep on shares with my parents herd.

After graduating from U of A and summer work with the Peace River Forage Association, I accepted a job offer to be a Grazing Reserve Agrologist in Fairview with the AB Sustainable Resource Development Branch and worked there for 8 years.

In 2009, I married Ryan Frost. Several months later we thought wouldn't it be fun to try living in the same home. So I retired from my job and moved to Fort McMurray. We have been kept very busy and hopping, raising a family. We have Ethan (6 yr), Alyse (3 yr) and Haley (1 yr). Sometimes we feel and I'm sure we look like "chickens running around with their heads cut off".

### What brings you back to the BC Peace?

We wanted a country home for ourselves and our children, so we recently bought a quarter section east of Dawson Creek, north of Briar Ridge. We have our horses there and as fences and facilities get built, we hope to bring our cows from my parents place, at least for summer grazing. We look forward to growing grass, a bigger garden and adding all sorts of other animals to the farm.

### What do you hope to do during your term as a director?

I am excited about becoming more involved with projects and events. I hope to glean more about how soils and forages interact, and regret missing the seminars over the last 2 years. There are so many aspects to this: soil fertility, soil water interactions, and healthy soil organisms. I look forward to being a part of anything where I can gain more insight into soil and forage interactions.



# Intensively Managed Grazing in the Kiskatinaw Valley

by Talon Gauthier & Michael Nimitz



Aiming to improve the productivity of his soil, forage plants and heifers, Michael Nimitz of the **Kiskatinaw River Ranch**, set out to intensively manage three quarter sections of land with rotational grazing. Historically this parcel of land have received minimal inputs and attention, having been horse and cattle pastures for 20+ years.

In the spring of 2015, Michael and 3 ranch hands subdivided this 480 ac parcel with 6 paddocks into 22 paddocks! They started building fences April 25th and finished construction May 26th, investing a total of ~18 full days into the project. The fences were built with permanent wooden posts on corners & gates, and powerflex posts along fence lines. The perimeters consist of old barbwire fences while the interior paddocks are single strand high tensile smooth wire. On May 17th, 97 heifers and 10 cow/ calf pairs (predominantly twins) were turned onto the paddocks.

To help Michael measure the value of his effort, the Healthy and Vigorous Forage Stands project set up a number of monitoring sites to represent the productivity range of the 22 paddocks. Michael identified three key areas in the 480 acres:

- ⇒ High productivity
- ⇒ Medium productivity
- ⇒ Low productivity

Grazing cages (*pictured on the right*) were constructed and three were placed in each productivity area (for a total of 9). These cages were used to measure how much forage would grow in each area if no grazing occurred.

Throughout the summer, photos were taken of the cages (ungrazed site) and of a nearby grazed site before and after the heifers grazed. At the end of the growing season (when plants were no longer actively growing), assessments were done to determine the Grazing Response Index (GRI) scores for each paddock with a grazing cage. The GRI is a tool primarily used to assess grazing of native rangelands in the US, however AAFC is conducting a study to see if it can be applied to agronomic pastures. We had an intense evening in the field with Mahesh Khadka (*an author of GRI research paper listed pg 4*). After reviewing the tool's potential for ranchers to do quick grazing scoring, we decided more work was needed before applying the index directly to agronomic forages.

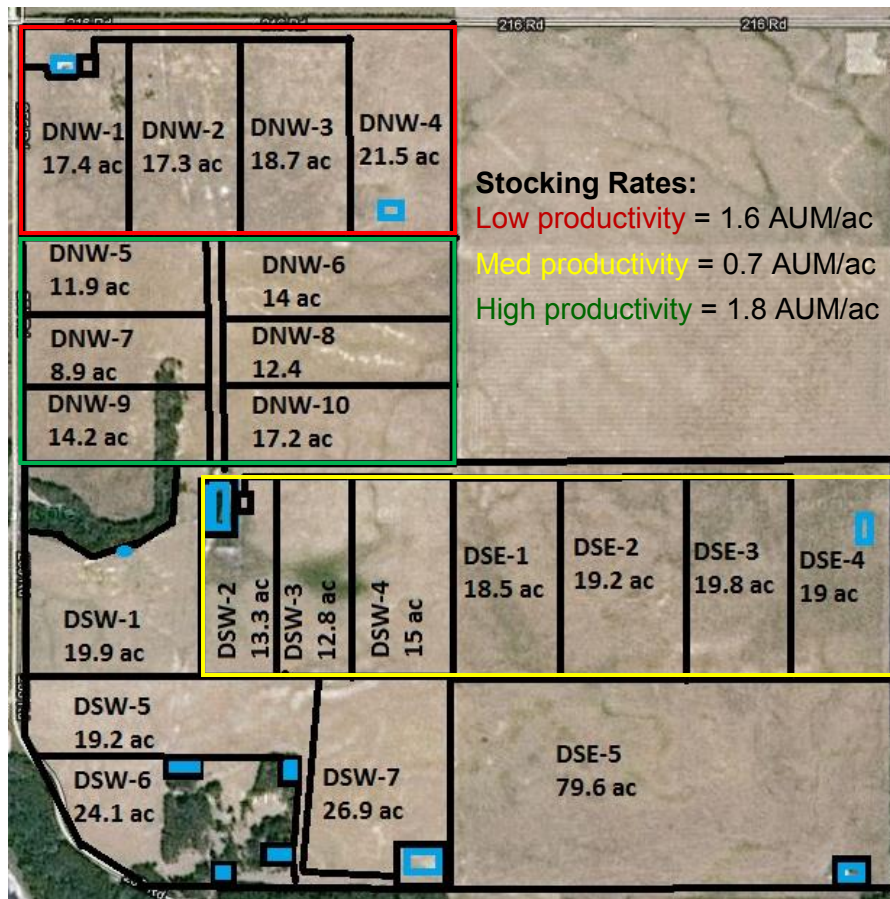
Matthias Loeseken, Blackbird Environmental, was contracted to fly the quarter containing high and low producing areas to measure photosynthetic activity (which translates to productivity). These images will help Michael identify the lowest and

highest photosynthetic spots so he can manage grazing in those areas. The maps Matthias produces are geo-referenced so that areas of interest can be ground truthed by locating yourself on the map and then going to the area identified.



# Intensively Managed Grazing *cont'd*

by Talon Gauthier & Michael Nimitz



The image to the left illustrates the productivity areas identified throughout the 480 acres. The days cattle were in each paddock were tracked from May 17th to November 2nd and converted into stocking rates or Animal Unit Months per acre (AUMs/ac). The **low** producing area consists of forage species like Kentucky bluegrass, alsike clover, dandelions, rosebushes and strawberries. The **medium** producing areas consist of timothy, Kentucky bluegrass, alsike clover, American vetch and dandelions. The **high** producing areas have smooth brome grass, Kentucky bluegrass, quackgrass, alsike clover and dandelions. In terms of stocking rate (number of animal units per month per unit area) the **highest** forage producing area had the best stocking rate with the ability to sustain 1.8 animal units a month per acre. Surprisingly, the low producing areas also had a high stocking rate of 1.6 AUMs per acre. This could be contributed to timing of grazing as this was hit first and then given a long rest period (82 days) before regrazing. The medium areas were only grazed once due to dry conditions resulting in a low AUM/ac.

Aerial photo of Michael's paddock setup with labels, size and productivity areas.

## Do Grasses & Legumes Respond Differently to Grazing?

Managing grass and legume growth patterns with grazing is more of a science than many anticipate. The growing points on **grasses** remain low in the plant until it becomes reproductive (seed head emerges). By remaining in the crown these points are protected from grazing and can continue initiating new leaves. Once the plant becomes reproductive the growing point changes and becomes the seed head, no longer initiating leafy growth. Regrowth now comes from tillers. By managing grazing, grasses can be kept in a vegetative state and will continue producing leaves. A rule of thumb is to take half and leave half so enough leaf material is left for photosynthesis. This allows the plant to continue growing without utilizing excess nutrient reserves from the root which happens when overgrazing occurs. **Legumes**, on the other hand, become reproductive quickly and their growing points (called buds) are on the tips of the stems. These buds develop into the flowers and later seed heads. When grazing legumes it is important to leave some lower stem buds intact so the plant can keep growing leafy material. If all of the buds are grazed off the plant has to undergo the energy expensive process of initiating new stems from the crown. Adequate time is also needed before regrazing so energy reserves in the roots can be replenished.

### References:

- AB Ag & Food. 2007. *Using the Animal Unit Month (AUM) Effectively*.
- Barnhart, S. 1999. *How Pasture Plants Grow*. Iowa State University. USDA.
- Gardner, W., M. Khadka and V. Volpatti. 2013. *The Grazing Response Index Project*. AAFC. Kelowna, BC: Thompson Rivers University, 39 pp.

### Funding for Healthy & Vigorous Forages provided by:

Peace River Agriculture Development Fund (PRAD),  
Murphy Oil Corp,  
Peace River Regional District



# Canadian Forage & Grasslands Conference

by Talon Gauthier, Fred & Liz Schneider

Doug Wray, Chair of the Canadian Forage & Grassland Association kicked off their **6th Annual Conference** with this statement - "If given a choice between good cattle and poor grass or poor cattle and good grass I would pick the latter every time because I know I can pull the value I need out of the grass time and time again"

The preliminary tour on November 17th included thorough excursions of:

1. The Rayner Dairy Research & Teaching Facility at the University of Saskatchewan,
2. The Canadian Light Source Inc "Synchrotron" - particles are sped up to 99.9% the speed of light and different wavelengths are used to see the atomic structure of matter.
3. New Holland's Manufacturing Facility where headers, seeders and air tanks are built.

Then on November 18th, world renowned soil scientist Jill Clapperton started off by leading us through the concept of "stitching" pastures together. This can be done by increasing plant diversity which in turn increases fungal and microbe diversity in the soil. And with that the tone for the conference was set: diversity is the key to improving the overall health of our soils, plants and livestock.

The biggest take home messages for Fred & Liz Schneider were:

1. With good pasture management like long rest periods and short grazing times, it is possible to improve the soil quickly, as long as moisture and heat are available.
2. A cover crop with a cocktail mix can improve soil as well as produce a lot of biomass.



The newly complete Rayner Dairy Research Facility at the U of S has a viewing area above the cows where the public can walk around and see a functioning dairy facility.

The biggest take home messages for Talon Gauthier were:

1. Forage Brassicas are extremely resilient as they are able to go dormant (will not wilt) for 30-35 days in a drought.
2. "When you add legumes, you slap a slow pasture/ grassland in the face" - Jill Clapperton
3. Red/pink nodules = effective, cream nodules = ineffective.

Overall, the Canadian Forage & Grassland Assoc. put on an excellent conference that got the Peace Region delegates thinking about future research and demonstration ideas in the areas of:

- ⇒ Sweet forages - High correlation between average daily gain and plant sugar content.
- ⇒ Cocktail cover crops - By including C4 (warm season) plants in the mix, there is better conversion of CO<sub>2</sub> to organic matter.



Contingent from Peace River Forage Association.  
L to R: Fred Schneider, Talon Gauthier & Liz Schneider



Graeme Finn & the Cocktail Cover Crop Revolution - a topic he will discuss at the PRFA Winter Seminar Jan 28, 2016!

# Cowbytes & Sheepbytes in the Peace

by Lori Vickers & Talon Gauthier

## Cowbytes

### "Can cattle balance their own rations?"

Participants of the November 23rd, 2015 Cowbytes seminar at South Peace Grain were posed this question. Lori Vickers, Regional Agrologist with BC Ministry of Agriculture (who previously worked in the livestock feed industry) went on to explain that in today's management systems cattle would be challenged to balance own diets. They will have a craving for salt, but aside from that it is up to us to ensure their nutritional needs are met.

For the first half of the seminar, Lori led us through some basics of cattle nutrition including:

- ⇒ Different forms of energy & which numbers to use
- ⇒ Different forms of protein & what the animal can access
- ⇒ Importance of macro & micro minerals - using 1:1 or 2:1 mineral supplements
- ⇒ Vitamins
- ⇒ Forage quality and the benefits of feed sampling
- ⇒ Understanding feed analysis results
- ⇒ Benefits of grouping cattle and feeding accordingly
- ⇒ Factors that affect feed intake

(see 2 slides from presentation to the right)

The second half of the seminar consisted of using the Cowbytes feed rationing program. This involved teaching participants how to enter animal & climate specific information, how to enter feed test results, where to find reports, calculate yardage and so on.

### 2015 Cowbytes Graduates

Brian & Deanne Stratuliak  
Monte Bentley  
Gordon Lazinchuk  
Shaun Grant



Liebig's law of the minimum where growth is not controlled by the total amount of the available resources, but rather by the most limiting resource.

<https://www.southernstates.com/articles/one-missing-nutrient-limit-winning-season.aspx>

### Partners & Sponsors:

South Peace Grain - facility rental & refreshments  
BC Ministry of Agriculture - Lori Vicker's time & resources  
Bill Wilson - assisting producers with Cowbytes

Healthy Forages Project - Peace River Agriculture Development Fund, Murphy Oil Corp, Peace River Regional District

### Poor nutrition = poor performance

↓ reproduction  
↓ conception  
↓ production  
↓ health

↑ time to return to heat  
↑ calving periods

## SheepBytes Ration Balancer



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

### Sheepbytes Rationing

A Sheepbytes nutrition & ration balancing seminar is planned for Jan or Feb 2016.

Contact Talon (250) 219 3944 or  
Lori (250) 784 2559 to register!



# Kathy Voth Stimulates the Forage AGM

*by Kari Bondaroff & Lori Vickers (with photos by Ann Grover)*

Cows eat what? WEEDS! Hard to believe? Well, at this year's 2015 annual general meeting (AGM) and forum, we hosted Kathy Voth of Livestock for Landscapes, as our guest speaker. Kathy's enthusiasm for livestock eating weeds was exciting, refreshing, and entertaining. Her devotion to integrating nutritious invasive plants into livestock diets shone through her video's, research results, and general attitude towards weeds. Kathy walked us through her straightforward approach to training livestock to eat weeds by using animal behavior techniques. Kathy discussed the nutritional benefits to livestock eating Canada thistle (Canada thistle is about equivalent to alfalfa in terms of nutritional value!), and the potential for livestock to eat many of the different invaders listed in the Peace River Regional Districts Invasive Plant Strategic Plan and Profile. She also eased concerns raised about cattle getting too adventurous and starting to eat toxic plants.



Sandra Burton, Kari Bondaroff & Lori Vickers with our dynamic guest speaker Kathy Voth (third from the left).

Following Kathy's vibrant presentation, breakout groups were formed to allow members to circulate through the findings of the four main research topics in 2015. Of course, Kathy joined Lori Vickers and Kari Bondaroff at the "Teaching Livestock to Eat Weeds" table where the discussion revolved around the cooperators' experiences from the pilot project of teaching livestock to graze thistle, ways to adapt protocols to work on other farms and the potential to continue on with this project in 2016.

Other stations stimulated discussion in small groups. Talon Gauthier highlighted results from the Healthy Pastures project with pictures and data. Bill Wilson brought samples to illustrate key findings from the Re-vegetating Disturbed Lands project. Sandra Burton and Ron Buchanan engaged listeners in aspects of the Resiliency project. All in all it was a great day filled with thought provoking discussion and an opportunity to network.



Bill Wilson & Cali Seater discussing native & agronomic seeds.



Julie Robinson & Marilyn Carroll trying Kari's unusual treats.



Ben Hansen, Ron Buchanan & Art Seidl discussing plots.

# Readings, Browsings & A Walk Through History

**John Kendrew** suggested we bring back our column for good reads that might be of interest to forage members. John's pick for this issue was **Out of the Earth** by Louis Bromfield. John enjoyed the author's insights into improving agriculture that were written in 1948 and still seem very relevant for us today.

**Richard Kabzems** enjoyed **The Oregon Trail, A New American Journey** by Rinker Buck. 2015. This book describes travelling the length of the Oregon Trail the old fashioned way, in a covered wagon with a team of mules. Rick especially loved reading the rich descriptions of the places they travelled, the history and the people they met along the way.

**Sandra Burton** enjoyed **Crown Lands, A History of Survey Methods** by W.A. Taylor. The report was first printed in 1975, with many reprints up to 2014. While at first this appeared to be a dry, boring report that needed to be read to complete a forage fact, it turned out to be laced with Taylor's sense of humor. Here are 2 excerpts of his writing and research into over 9 survey methods used in British Columbia, that made me laugh out loud.

Taylor writes: An example of a method of surveying that has not been used as yet in this province, (but it may be an improvement on some that have), was written up in the "New Zealand Surveyor", Vol. XXVII, of June 1974:

## **Rope, Pig and Compass Traverse**

*"Sir, -- Further to my letter which you published in Survey Review No. 165 my attention has been drawn to a modification of the well-known Rope, Pig and Compass Traverse which was used in jungle areas. For those unfamiliar with the technique the system was to tie the rope of known length to the tail of a pig and drive it off into the bush so that when the rope became taut one knew the distance to the pig and since this made the unfortunate animal squeal, one could take a compass bearing on the noise and hence derive the bearing and distance to the pig. I am reliably informed that a modification of this technique was developed using specially bred pigs, such that when the rope became taut not only did the pig squeal but it also left behind a monument marking its position. I am sure that this technique must have proved a great time-saver.*

*Yours faithfully, Peter F. Dale."*

In a chapter on the District Lot System which was used to survey land near Prespatou and Montney, Taylor again writes:

This **District Lot system** is unrestricted and allows a certain amount of opportunity for a surveyor to demonstrate his sense of values as he frequently has only to "close" on his own work and not onto some overall pattern. This is beautifully illustrated by the following quote from the autobiography of an understanding old gentleman:

*"In the matter of the survey of the ranches in the Alberni Valley, it would have saved a great deal of worry and considerable hardship if the land had been surveyed before the settlers took it up. Sometimes a man lost just the piece of alder or maple land he wanted. I remember a very bad quarter of an hour I had when surveying a quarter section for a rancher. The day before I had passed the log house and they were showing me the garden his wife and the children had cleared and planted around the house. One very big stump took them three weeks to burn out. Her hands were scarred and rough, but they were small and nicely shaped. Now, unless one had actually done clearing, they can have no idea of the work it is to dig out even one of those big fir stumps. Well, we had started at the corner post and had run around three sides and were on the last line. In looking through the transit I noticed a long way off a peculiar brown-looking patch. It did not look quite like a stump. Suddenly a thin wisp of smoke began to rise. I knew then it was the chimney in the centre of the shack. I closed up the business for the day and went back to camp. Something had to be done to get that narrow strip of extra land. To get this strip they were up against a whole lot: the Laws of the Medes and Persians, i.e. the B. C. Land Act, the Settlement Act, and God knows how much red tape. However, next day we finished the survey. Just why there were one hundred and sixty-four acres instead of the orthodox one hundred and sixty in that quarter section was never explained--but the great Coal Baron who owned the land, and who had a kind heart, if he had known, would not have had it different. It was a regrettable error, the chainman's fault of course, or it might even have been put down by some to "a poor brand of Scotch". Ah! what did it matter, the kiddies got their garden."*

Source: Autobiography of Geo. A. Smith, B.C.L.S. - Proceedings of the Corporation of B. C. Land Surveyors, 1935.



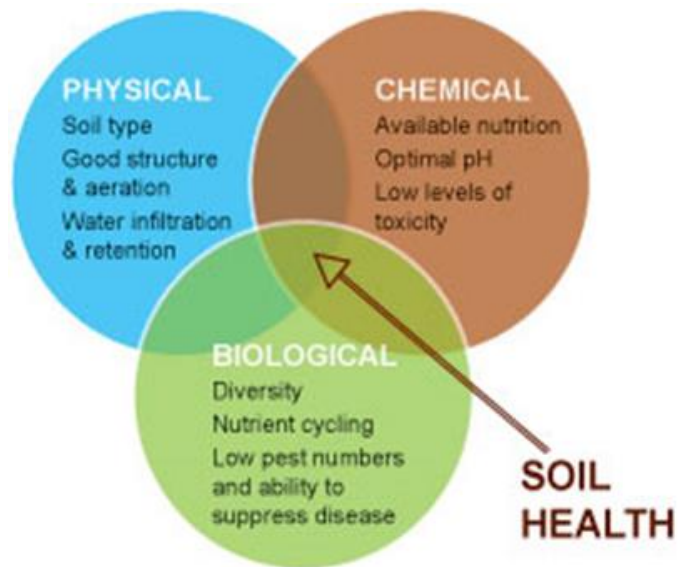
# Canadian Soil Quality Conference

by Julie Robinson, Tara Holmes & Ben Harrington

A great event was held in Edmonton to wrap up the International Year of the Soil for Western Canada, with many sought after speakers including Jill Clapperton, Gabe Brown and Neil Dennis, to name a few. The Peace River Forage Association of BC was well represented at the conference, where more than 450 participants gathered, by Kristin Kendrew, Sandra Burton, Bill Wilson, Tara Holmes, Ben Harrington and Julie Robinson.

Highlights from the event include the concept of looking at soil health as an integrated system (as presented in the circles to the right). Bill Wilson mentioned how we all spend a lot of time looking at these components individually, but this conference reminded us how much soil health relies on them all working together in the overlap.

Sandra Burton was enthusiastic after hearing the first 2 speakers discuss soil quality and the properties that are critical to monitor. Many of these properties are the same ones that can be measured in the field with the new Soil Quality Field Kits that she and Bill McGill have been working with over the last year. But in our field testing so far, we haven't been as creative as Blake Vince.

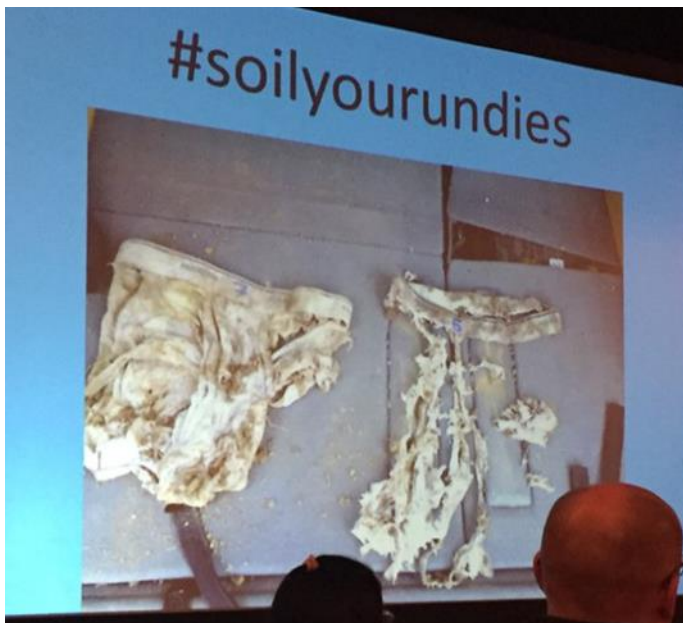


Blake Vince had an interesting idea for a fun way to measure soil health. He talked about putting a pair of 100% cotton underwear in each of two different fields to compare competing producers' soils against one another, dig up the underwear a set time later (for example, one month) and see who has the least cotton left. The image on the lower left shows how this might turn out.

Several speakers at the conference described the benefits of species diversity over monocultures. The roots of a diverse stand enhance the soil health. Jill Clapperton talked about the value of C4 plants (such as millet and corn) as they are able to sequester more carbon than the cool season grasses (such as brome and timothy).

Clapperton recommended if you get a chance to watch the Jack Schultz Ted Talk below, that it would give you lots of food for thought on how plants respond to their environment. Another recommended resource was the e-book listed below.

One of the highlights for Robinson was the putting a dollar value on organic matter and starting to quantify the benefits of good soil organic matter! Dr. Martin Entz from the University of Manitoba and Dr. Mike Schellenberg from the University of Saskatchewan gave great thought provoking presentations that were some of the highlights for Wilson, Burton and Robinson.



Buried cotton underwear to compare soil microbial health.

**Clapperton's Recommended Resources:** 1. Jack Schultz on a recorded Ted Talk at <http://tedxtalks.ted.com/video/TEDxMU-Jack-Schultz-Eavesdroppi> 2. free e-book called Building Soils for Better Crops: Sustainable Soil Management by Fred Magdoff and Harold Van Es, available at <http://www.sare.org/Learning-Center/Books/Building-Soils-for-Better-Crops-3rd-Edition>.



Photo showing the importance of earthworm activity.  
Source: <http://www.abundantnature.com/2011/10/what-do-earthworms-eat.html>

Tara Holmes also enjoyed hearing how Neil Dennis, from SE Sask, had done a calculation of the CO<sub>2</sub> sequestered on his farm. He figured it was equivalent to the CO<sub>2</sub> emissions of over 60 people living in the city. Meat production seems more sustainable that we are led to belief by the media.

Neil Dennis's photo to the right depicts the overarching message of the soil quality conference!



## Soil Quality Conference *cont'd*

Hearing about Dr. Mike Schellenberg's research was also a highlight for Ben Harrington. It showed that planting a variety of species in a field plot gives higher productivity than the monoculture crop. Ben says "This gives us the confidence to plant a variety of crops in our pastures and hay fields." He enjoyed learning from a study with gps tracking of cattle that found that if left to their own devices, they used only 39% of their pastures. Ben and Tara would like to develop a higher density grazing plan for their sheep.

We would be remiss if we didn't mention Odette Menard from the Ministry of Agriculture Food and Fisheries in Quebec. She spoke passionately about earthworms and the role they play in healthy soils. Her video of how earth worms build middens showed true determination. Tara remarked "I found the video footage provided by Odette Menard of the worms pulling crop residues into their holes fascinating!"

## Climate Action & Agriculture Conference

*by Sandra Burton*

Bill McGill, Julie Robinson and Sandra Burton were invited to give a presentation at the Climate Action and Agriculture Conference in Kelowna on Dec. 11, 2015. We were asked to share the ingredients of success from our soils and forages course over the last 2 years. The organizers also requested that we share our approach to partnerships, cooperators and technology transfer in our current project called Innovative Practices for Resiliency. Bill McGill summed up our response to both requests by giving our talk the title of "People First and Last and In Between".

This conference attracted researchers, students and consultants working across B.C. Our key messages were well received and many people came up to each of us after our talk for private conversations, more details and future networking. Allen Dobb wants the readers to know "the innovative activities of the Peace River Forage Assoc. could serve as a model for other organizations in the province. Especially in adaptation work to meet the changing growing conditions, your approach for building individual's capacity is key. You are having an impact provincially."



# Forage Website ReDesign in 2015



## Hay & Feed Listings

Regional listing of hay and feed for sale or requested

[View the Listings](#)

## Peace Forage Seeding Tool

An interactive forage seeding database for the Peace Region

[Open the Tool](#)

## Latest Forage Facts

Published Forage Facts straight from the PRFA

[View the Facts](#)

## Forage First Newsletter

View the archive of past Forage First Newsletters from the PRFA

[Open the Archive](#)

## Research & Development

Local innovation and studies conducted by the PRFA

[View the Projects](#)

Frequently Used Buttons

Clearer Layout & Navigating

Easy to Find Links to Forage Videos & Facebook Page

## Events & News

### Sheepbytes Nutrition & Feed Rationing Course

Mid January 2016 (TBA) in Dawson Creek, BC

Pre registration is required:

please call Lori Vickers at 250 784 2559 or Talon Gauthier at 250 219 3944

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### Winter Forage Workshop of the Peace River Forage Association

January 28, 2016 12 noon until 5 pm

Location: Tower Lake Hall, BC

Featuring Graeme Finn from Madden, AB as our guest speaker. Topics will include year round grazing, grazing high legume pastures, intensive rotational grazing and increasing soil health. Plus small group discussions with local leaders in improving healthy and vigorous forage stands.

[Click here for agenda.](#)

For more information please call Talon Gauthier at 250 219 3944 or Sandra Burton or Chris Thomson at 250 789 6885

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## New Website

The new website of the Peace River Forage Association of British Columbia is live. Our goal with the new website was to make information more accessible and easier to find. Check out some of the new features.

### Key Features Include:

**Enhanced Search Capabilities:** Use the search bar at the top right of the page to search the entire site including PDF archives.

**Larger Text and Cleaner Layout:** This allows for easier reading and viewing of the information.

**Simple Navigation:** Allows the user to move around the site more efficiently to find information or explore projects.

\*\*\*\*\*

## New videos on Teaching Livestock to Graze Weeds

[Click here to check out 4 new videos from this summer's activities.](#)

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## Join us on Facebook

The Peace River Forage Association is on Facebook, join our group for the latest information and updates.

# Forage Events in Our Region

Peace River Forage Association  
of British Columbia



*We invite you to join us for a day of learning about*  
**Rejuvenating Pastures, Managing Grazing, Cocktail Crops**  
*With Graeme Finn, Southern Cross Livestock*

**Thursday, January 28th, 2015**

Tower Lake Hall - East on 226 Rd 4 km, Hall on left

## Agenda

12:00 pm - Lunch

1:00 pm - "Taylor Made Pasture & Soil Health"  
(Graeme Finn)

2:00 pm - Learning from Local Producers  
(visit 2 of 4 stations with local producers/industry)

3:00 pm - Coffee break

3:20 pm - "Taylor Made Pasture & Soil Health" *cont'd*  
(Graeme Finn)

4:20 pm - Learning from Local Producers  
(visit last 2 of 4 stations with local producers/industry)

5:20 pm - Final Questions & Wrap-Up

**For more info or to  
register please call:**

Talon at 250.219.3944  
or Sandra & Chris at  
250.789.6885

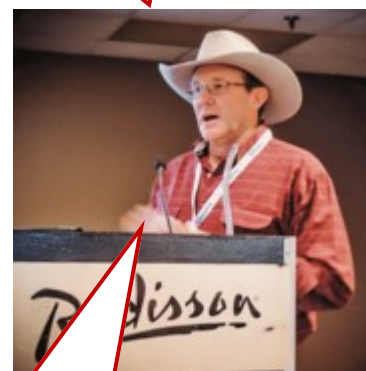
**Event registration  
cost:**

PRFA Members - \$40  
PRFA Member Pair - \$60  
Non PRFA Member - \$75

**Soil Health &  
Diversity**

**Grazing  
Management**

**Cocktail Cover  
Crops ...**



**.. working from the soil  
up to determine the  
most suitable method  
of rejuvenating  
long term pastures...**

## Thank You to Our Partners

**Funds for Grazing  
Weeds Workshop & AGM  
provided in part by:**

Foster's Seed & Feed  
PRRD  
GF2 Strategic Outreach  
Initiative Funding

**Funds for Workshop on  
Rejuvenating Pastures  
provided in part by:**

Peace River Agriculture  
Development Fund,  
Murphy Oil Corp,  
PRRD

**Winter Watering  
Systems Tour  
Jan 30, 2016**

Eaglesham Social Center  
Meet at 9:30 am

Contact Monika Benoit at  
780.523.4033 or email  
mbenoit@gprc.ab.ca



# R & D Report: Current Project Updates

by Glenn Hogberg, Talon Gauthier & Sandra Burton



Do forage turnips taste yummy?  
Jackie Thiessen and Julie Robinson  
taste testing the cocktail cover crop.

## Healthy & Vigorous Forage Stands

Year: 3 of 3

Project Lead: Talon Gauthier

Director Lead: Glenn Hogberg

**Details:** This project focusses on weed control, fertility and plant selection with the aim to build more healthy and vigorous pastures & hay-fields.

Year three has seen an emphasis on grazing management.

Cooperators are either trying alternative forages, combining grazing and soil improvement goals, or are aiming to increase their overall Animal Unit Months (AUMs). Past deliverables include feed testing & ration balancing, dog handlers clinic & the Peace Forage Seeding Tool .

**Funders:** Peace River Agriculture Development Fund, Peace Region Forage Seed Association, Murphy Oil Corporation, Peace River Regional District, Enerplus, Growing Forward 2

### Latest Updates:

Article: Controlling Canada thistle in pastures, *Fall 2015 Forage First* & more articles in 2016.

Updates: Directors Meeting Oct & Station at AGM Dec, 2015.



Chuck & Pat Sutherland with their cows!

Cooperator	Location	Project	Control/Improvement Method
Ducks Unlimited	Doe River	Canada thistle control	Herbicide (Curtail M), fertility and cattle grazing
Bill Wilson	Bonanza	Foxtail barley control	Herbicide (Kerb 50), competition and winter feeding
Bruce Kutschker	Tomslake	Forage radish mix	Managed grazing of forage radishes, kale & oats
Josh & Jackie Thiessen	Buick	Cocktail cover crop	Seeded in newly & previously cleared land
Michael Nimitz	Sunset Valley	Increasing forage growth	Controlled grazing and vegetation monitoring
Chuck & Pat Sutherland	Groundbirch	Soil improvement	Winterfeeding (incorporated spring 2015) vs non
Glenn Hogberg	Groundbirch	Hayfield fertility	Composted manure application (1x, 1.5x & 2x rate)
Gordon & Brenda Lazinchuk	Farmington	Alternative legumes	Feed sampling birdsfoot trefoil hay mixes to examine quality and functionality

## Teaching Livestock to Graze Weeds

Year: 1 of 1 in progress Director Lead: Ron Buchanan

Project Lead: Kari Bondaroff (PRRD) & Lori Vickers (BCAgri) & Sandra Burton (PRFA)

**Details:** pilot project to work with at least 4 cooperators to train livestock to graze invasive weeds such as Canada thistle or spotted knapweed; share in hiring & supervising a part time summer contractor to monitor results.

**Funders:** PRRD, PRAD, BC Ministry of Agriculture

**Updates:** 1 article in Forage First newsletter, 1 Forage Fact (in progress) & 4 videos on YouTube & Forage Facebook.

Updates: Directors Mtg Sept & Station at AGM Dec, 2015.

**Cooperators:** Tess Davidson, Jodi Kendrew, Sarah Davies, Charlie Lasser, Chuck & Pat Sutherland



Cattle at Rainey Ranch learning that thistle is a treat.

# R & D Report *continued*

by Glenn Hogberg, Talon Gauthier & Sandra Burton

## Innovative Management for Resiliency

**Year:** 1 of 2 years, newly started

**Project Lead:** Sandra Burton

**Director Lead:** Darryl Kroeker

**Funding Partners:** UNBC, BCGPA, PRFSA, BC Business Knowledge Fund, BC Farm Innovators Adaptation Fund, Blackbird Environmental, South Peace Grain, Ducks Unlimited.

**Details:** This project uses a farming systems approach to identify nutrient management & cropping practices that are more resilient to extremes of climate change. Three aspects are being evaluated:

- ⇒ on farm nutrient management,
- ⇒ legume production options, and
- ⇒ timing and placement of fertilizer.

A key component to producer adoption of practice is an economic evaluation. The project team is working with [George Geldart](#) to complete a cost benefit analysis of each innovation in the context of the ranching or farming operation.

Another key question is are these innovative practices good for the soils and crops? We are also working with [Bill McGill of UNBC](#) to evaluate a Soil Quality Field Kit. We are also working with [Matthias Loeseken of Blackbird Environmental](#) to map the vegetative response & extent of the practice. A holistic approach will team up farm cooperators with economist & researchers throughout the process.



Above: Julie Robinson, Ron Buchanan & Matthias Loeseken, drone mapping.  
Below: Dosimeters measuring N loss in Rod Strasky's barley field.

Cooperator	Location	Focus	Innovative Practice
Ron & Karen Buchanan	Lower Cache	On farm nutrient management	Fall fertilizing & spring grazing & fall grazing
Andrew & Brian Clarke	Baldonnel	Alternate legume	Birdsfoot trefoil rejuvenating hayland
Arnold & Nelda Bennett	Two Rivers	Alternate legume	Cicer milkvetch & sainfoin rejuvenating hay/pasture
Rod & Kim Strasky	Farmington	Nutrient management	Placed fertilizer with variable rates

**Future Updates:** article or Forage Fact in newsletters, field days, workshops over next 2 years.

**Updates:** at Forage Directors mtg in Nov, station at AGM Dec 1 & talk in Kelowna Dec 11, 2015.



Sandra Burton & Bill McGill leading discussion.

## Soils, Forages & Water Dynamics

**Year:** 2 of 2, almost complete **Director Lead:** John Kendrew  
**Project Lead:** Sandra Burton (PRFA) & Bill McGill (UNBC)

**Details:** PRFA of BC and UNBC have combined forces to develop a series of interactive soil, forage & water courses for UNBC students, forage and livestock producers, as well as forestry, range and reclamation/ environmental professionals.

**Funders:** Shell, UNBC, PRAD, Blackbird Envir., Nor-Kam

**Updates:** article in Forage First Spring & Fall 2015 issues.  
3 Forage Facts in progress & in circulation for collaboration.

**Field Day Hosts:**

- ⇒ Glenn & Ann Hogberg
- ⇒ John & Patt Kendrew
- ⇒ Jennifer Critcher, Encana
- ⇒ Ron & Karen Buchanan
- ⇒ Michael Nimitz
- ⇒ Jim Chramosta, Shell