

FORAGE FIRST

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Opportunities to Expand our Horizons



Photo caption: Alice & Bill McGill, Karen & Ron Buchanan, Bill Wilson & Julie Robinson planning the field day on Oct 4, 2014.

This has been quite a summer for expanding our horizons... from lively field days and a world congress on conservation agriculture... to how we are learning more through our projects. We have tried to share some of the ideas with you in this fall issue of Forage First. We also bring more opportunities for you to get involved in and expand your horizons. We will be hosting another cycle of the soils/ forages and the cowbytes/ rationing courses. We are also organizing opportunities for members to attend 3 conferences: the Canadian Forage and Grassland AGM in Bromont, Quebec on Nov 17-19, the Grow Canada/ SCCC conference in Ottawa on Dec 2 - 4 and the Western Canadian Grazing Conference in Edmonton on Dec 9 - 11. And don't forget to renew your membership and join us for our AGM on Dec 1 ! (see back page).

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Meet the Students

by Brenna Schilds

Alana Duncan:

If you've attended any of the recent forage events you may have noticed Alana Duncan. Alana is a summer student who has worked for the Forage Association, mainly with the Re-vegetation project. You can see her writing in this edition of the newsletter where she wrote the Forage Facts #84 and #85.

Alana is currently in her 4th year of studies at UNBC in Prince George, where she is majoring in Environmental Sciences with a minor in Soil Science. Alana one day hopes to be raising her own cattle on a sustainable farm which will also include some pigs.



Alana Duncan & Alicia Lewis getting ready to seed at Bill Wilson's foxtail barley control plot..

Alicia Lewis:

Alicia was a student for the Forage Association for the first couple months of the summer. During that time she worked with the Re-vegetation project and on the Healthy Forages Project. Alicia cited a desire to work outdoors as to why she wanted a job with the Forage Association, and has an avid interest in Horticulture. She studied at CNC in Prince George and gained a diploma in Environmental Technology. Currently Alicia is travelling across Canada and into the US. Later this winter, she is planning on going backpacking in South America.

Carmen Schneider:

The Forage Association has been lucky to have Carmen as a summer student for the last 3 years. Carmen has been an invaluable addition to the team, contributing to many projects over the last 3 summers. This year her main focus was with the Revegetation Project, but she was also happy to help on other projects when needed. Carmen graduated from the U of A Augustana Campus with a BSc in Biology and a minor in Phys Ed just this past Spring. Her main interests in Agriculture include animal health and pasture maintenance. Look for Carmen's writing in an update on the Re-vegetation Project in this edition of the newsletter.

Brenna Schilds:

Just a few months ago, the Forage Association welcomed Brenna Schilds into their midst. Brenna is a new summer student hired to work with a variety of projects in a variety of roles. During the July 5th field day, she wore many hats, becoming the Duchess of Time (timekeeper), Multimedia Guru (photographer), the Games Master, and the Gopher (runner). She has also contributed an article to this newsletter. Brenna was born and raised in Dawson Creek but now attends school at the U of A Campus Saint Jean. There she is going into her 4th year of study with a major in Crop Science. Her end goal is to gain a degree in Food and Bioproducts Sciences.

Carmen
Schneider
(3rd yr with
PRFA)
&
Brenna
Schilds
(newest
addition)





Photo to left:
Alicia Lewis
looking for
scentless
chamomile in John
& Patt Kendrew's
pasture.

Healthy & Vigorous Forage Stands: Weeds & Fertility

by Talon Johnson

Year two of the **Healthy and Vigorous Forage Stands Project** is in full swing! While weeds are still a high priority, fertility has also been a focus this year. Our cooperators are spread far and wide throughout the Peace Region and they have brought some challenging issues to our attention. Below is a list of each cooperator, where they are located, what project they are working on and what methods they are using for their situation.

Cooperator	Location	Project	Control/ Improvement Method
Ducks Unlimited	Doe River	Canada thistle control	Herbicide (Curtail M), fertility and cattle grazing
Karen Kealy	Cecil Lake	Curly dock control	Cutting down with whipper snipper
John & Patt Kendrew	Pouce Coupe	Scentless chamomile control	Competition and hand rouging
Bill Wilson	Bonanza	Foxtail barley control	Herbicide (Kerb 50), competition and winter feeding
Ron Buchanan	Lower Cache	Greenfeed fertility	Fertilizer vs no fertilizer, winterfeeding area vs non winterfeeding area
Esbern & Heather Hansen	Montney	Hayfield fertility	Fertilizer vs no fertilizer
Glenn Hogberg	Progress	Hayfield fertility	Composted manure application (single & double rate), fertilizer

Project highlights:

- * Launch of **Peace Forage Seeding Tool** in May 2014 at [www. peaceforagetool.ca](http://www.peaceforagetool.ca)
- * John and Patt Kendrew actually considering to hay their pasture because very little scentless chamomile can be found now!
- * Gaining three new cooperators in the North Peace, one of which is a brand new PRFA member!

Project plans this fall/ next spring:

- * Setup new site with cooperator in the south or north Peace.
- * Continued monitoring of current sites.
- * Development of a seed sourcing component in the Peace Forage Seeding Tool.
- * Compiling articles and forage facts about knowledge gained from cooperators and sites in the project.



Talon Johnson counting baby forage plants that have emerged in Esbern & Heather Hansen's hayfield.

Funding Partners of the Healthy and Vigorous Forage Stands Project:

Peace River Agriculture Development Fund
Murphy Oil Corporation
Peace Region Forage Seed Association

Peace River Regional District
Enerplus

Weed Facts and Control Strategies

Foxtail Barley

Cooperator: Bill Wilson

Site Conditions/Challenges:

Winter feeding area and spring pasture for cattle infested with foxtail barley. Minimal other forage species present.

Interesting Facts:

Special adaptations: **salinity & spring flooding tolerant, can grow on all soil types.**

Life cycle: **perennial bunchgrass.**

Mode of reproduction: **seed (wind dispersed) and tillering.**

Seed viability: **3+ years.**

2013 Strategies:

- ◇ Resting: splitting winter feeding area with a fence to allow rest and recovery of desirable forage species.
- ◇ Spraying: Kerb 50 in the fall as conditions cool down (see label).

2014 Strategies:

- ◇ Competition: Broadcasting seed in early spring or on snow in both areas that were sprayed and those that weren't.
- ◇ Winterfeeding: increase moisture retention and spread of desirable seeds and nutrients.

Curly Dock Facts

Cooperator: Karen Kealy

Site Conditions/Challenges

Curly Dock is persistent where water sits for an extended period of time in their pasture.

Interesting Facts:

Seeds per plant: **Up to 30,000.**

Life cycle: **perennial.**

Germination conditions: **Young seeds require high temps (~25°C), as seeds age less heat is required.**

Preferred habitat: **Low lying areas that are moisture abundant (i.e. ditches, meadows, water runs).**

Seed viability: **2 - 50 years.**

2014 Strategies:

- ◇ Mowing: Using a weed eater in wet areas to cut down plants just prior to setting seed. Cutting several times throughout the growing season will deplete the nutrient reserves.
- ◇ Competition: Ensuring there is a good forage stand to compete with this weed by increasing plant population (spread seed) or vigor (fertility).

Top picture: Preparing seed mixes for Bill Wilson's field to outcompete foxtail barley. Forage mix contains meadow brome, creeping red fescue and alfalfa.

Bottom picture: Broadcast seed with a quad spreader.

Night Flowering Catchfly

Night flowering catchfly is a regionally noxious weed in the Peace that has been showing up on many seed certificates of analysis.

Weed Life Cycle:

Seeds per plant: **~2500**

Mode of reproduction: **seed only**

Life cycle: **annual or winter annual**

Seed viability: **3+ years**

Management:

Hand rousing: **Yes - on small infestations.**

Herbicide: **Yes - beware as it has some herbicide resistances (read label or consult professional).**

Mowing: **Yes - mow early and frequently.**

Grazing: **No - unpalatable so grazing will reduce competitiveness of surrounding forage.**

Tillage: **Unclear - may increase germination but kill seedlings.**

Competition: **Yes - keep forage stands 5+ yrs to outlive seeds.**

Biocontrol: **Non identified.**

Resource: A Guide to Weeds in BC, 2002. Night Flowering Catchfly, pp 106-107.



June 14 Interactive Soils & Forages Day

by Sandra Burton & Julie Robinson



The Kendrew family hosted a very thought provoking field day. John, his wife Patt and their 2 daughters, Jodi and Kristin, each provided a unique perspective on their management goals for the land, their forage crops, their grazing, their herd and their family.

Key messages from each station master

Breaking into smaller groups sparked lots of learning and discussions. Here are some key messages.

“Plant roots tell us volumes about what it is like to grow in their world. *(photo to the right)*. But it is also important after we learn from individual plants, to look up and think about the scales of the hard pan or nutrient deficiency we are seeing. Some nutrient deficiencies can also be temporary. For example, phosphorus may be hampered by cool spring temperatures; then as the soil warms up, it can become more available to the plants.”

Iewan Evans and Julie Robinson



Plant roots and soil layers both have their stories to tell us.

“We can get important clues from soil maps, and the soil layers about pH, salinity, gypsum salt crystals and calcium carbonate splotches. *(photo on far right)* These properties can have a huge impact on alfalfa growth, if they occur anywhere within 2 m of the plant roots.” *Sandra Burton*

“There is much better soil moisture and faster water infiltration under the cow patties. Also when we compare soil compaction in these areas with the high traffic areas near gates and waterers, we can measure quite a difference.” *Bill & Alice McGill*

“At my station, we discussed different options for rejuvenating a forage stand. We chatted about cultivation, spraying, directed seeding into the stand, and looked at the effects of bale grazing on the stand. The bale grazing effects really perked a lot of interest especially from the producers in the group. There was good discussion about the information the Kendrew field demonstrated for us.”

Bill Wilson



Iewan Evans & Julie Robinson led a station helping us learn what the plants tell us *(left)*.



June 14 Interactive Soils & Forages cont'd

From **Jodi Kendrew** we learned about aspects of animal health and herd management that are important at this site. We gained insights into when it was important to match the quality of forage to the cycles of breeding and reproducing.



At another station, **John Kendrew** talked about the evolution of his thinking and how their management of this field had changed over the last 15 years. He pointed out their addition infra-structure of electric fencing, stock waterers and handling pens to make their more intensive grazing work effectively. He laughed and told us about all the critters he was now concerned about keeping happy, including the critters or microbes in the soil.

Cowboy Math

The year 2000 was a critical turning point for this field. Kendrews decided to start transitioning from a hay based operation into a grazing based operation. The alfalfa was diseased and dying out and at that time, the field yielded only about $\frac{1}{2}$ ton/ac. Now using rough "cowboy math" to evaluate their new system of very frequent cattle moves (i.e. sometimes once a day), and looking at the number of animals and grazing days, he figures he is getting the equivalent of $1\frac{1}{2}$ to 2 tons/ac. There is a little more alfalfa than the Kendrews would prefer, but they are willing to adapt to what works well for this field, and are getting good gains with not too many wrecks.

Quotes from participants

"We learned so much from the field day last week. We are already trying to apply what we learned at our place."

Tara and Ben Harrington (& little Roy!)

Thank you to our station masters:

Bill McGill, Bill Wilson, John Kendrew, Jodi Kendrew, Iewan Evans, Julie Robinson, Sandra Burton

Thank you to our group mentors:

Darryl Kroeker, Keith Carroll, Carmen Schneider, Richard Kabzems

Photo Credits: Julie Robinson



Forage members of all ages, from Roy the youngest (top of page) to the wisest gathering here we enjoyed learning from each other.





Still smiling after long days travelling together.

Going to Winnipeg!

In mid June, a delegation from the Forage Association set off for Winnipeg to attend the World Congress of Conservation Agriculture. Bill Wilson flew there as he had some organizing responsibilities. That left the fearless foursome above to drive there in 3 days.



Rouleau, SK the setting for Corner Gas show.

Touring Through Saskatchewan

By Julie Robinson, Sandra Burton, Annie & Dennis Madden

Saskatchewan Highlights

- * Saskatchewan grown hospitality with fresh rhubarb, berry or apple crisps or home made pie.
- * Driving through important tourist places like Diefenbaker Lake, Gardner Dam and Biggar.
- * Seeing Rouleau where Corner Gas was filmed.
- * Driving through a 180 degree view of sky above miles and miles of short grass prairie region with lots of moisture and very green crops.
- * Enjoying the royal welcome treatment by the Wilson family, and hearing stories about Bill as a teenager.
- * Seeing the improvements with Neil Dennis' soil.
- * Learning about Smart Systems that automatically open gates when it is time to move cattle.
- * Hearing how Neil moves large numbers of feeder cattle several times a day.
- * Seeing the setup where Neil trains incoming animals new to electric fencing.
- * Actually making it to Winnipeg with these crazy impulsive ladies was a highlight for Dennis!



New York is Big but this is Biggar !



Neil showing us his automated gate openers and his improved soil.



Lunch with the Wilson family near Carlyle.

From L to R: Dennis, Annie, Julie, Beth (Bill's sister), Jack (Bill's brother), Dianne (Jack's wife), Wayne (Bill's brother) & Tannis (Wayne's wife).

World Congress of Conservation Agriculture

By Bill Wilson, Julie Robinson, Sandra Burton, Annie & Dennis Madden



For 3 days, June 23 to 25, the Peace delegation participated in discussions about conservation farming at the Winnipeg Convention Centre. Over 400 people participated, coming from 39 different countries around the world.

Memorable points from the congress sessions:

- * Livestock session on Wednesday morning was worthwhile. We heard Martin Entz from MB talk of grasses crossed with grains with very good forage value.
- * We were amazed to learn the way stubble was being used for so many other things in other countries (by smaller landowners in developing countries). It was used for fire, heat, and bedding.
- * "The protein values of Russian wild rye and teff grass was interesting and really caught our eye." **Dennis Madden**
- * "It was very interesting that in South Dakota, soil health is the driving force for everything." **Julie Robinson**
- * "We would like to look into setting up some 'Dare to Compare' plots with the Seed Hawk zero till drill with Patrick Beaujot." **Sandra Burton**
- * It was cool how researchers were tracking the flow of nutrients from forestland to pasture fields. **Annie Madden**
- * "If tillage controlled weeds, they would be all gone by now." **Dwayne Beck**
- * The idea of using winter crops and cover crops to have better water and nutrient utilization.
- * Using cover crops as a "catch and release" for nutrients to intercept or catch losses at different depths or timings, then release at a good time for the desired crop.
- * Dave Lobb's comment made us think about out how our preconceived ideas can get in the way. While travelling, he saw a farmer seeding at what appeared to be down the slope, and jumping to conclusions. Dave got out to talk with the farmer, and discovered he was actually seeding at an angle, deliberately managing how water flowed and controlling erosion.

World Congress Hosts:

Conservation Agriculture
Systems Alliance or CASA =
Soil Conservation
Council of Canada or SCCC
+
Conservation Technology
Information Center or CTIC

Countries at WCCC:

Algeria, Australia,
Bangladesh, Belgium, Brazil,
Canada, Chile,
China, Cuba, Ethiopia,
France, Germany,
Ghana, India, Ireland, Italy,
Jordan, Kenya,
Lao People's Democratic
Republic, Mexico,
Morocco, Mozambique,
Nepal, New Zealand,
Portugal, Saudi Arabia,
South Africa,
South Georgia and the
South Sandwich Islands,
Spain, Switzerland,
Tanzania, Tunisia,
Turkey, Uganda,
United Kingdom,
United States,
Uzbekistan,
& Zimbabwe.

39 Countries in total !



World Congress cont'd



Sandra meeting Nirmal Gadal from Nepal and John Dixon, from Australia.

Final thoughts about the World Congress from each of us

Sandra Burton: "I heard 2 great quotes that are short but speak volumes about different approaches. I want to expand on these in future articles or discussions with forage members."

- * "We need to get the E out of ET and the T out of CANT."
- * "Why farmers don't do what we tell them and why this is actually a good thing." *Watch for future articles on these topics.*

Dennis Madden: "It was interesting to see how other people in other countries do things. There may be big differences in our scales of farming, but we are not a lot different in our objectives. We want to save soil, fuel and money. But we all do it a little differently."

Julie Robinson: "It was sure cool to connect with other people doing research plots and demonstrations and compare notes and methods. I have lots of ideas for new projects!"



Don Flaten (Univ of Manitoba) and John Heard (Manitoba Agriculture) discussing the nitrous emissions research plots.



Julie Robinson & Bill Wilson plotting new partnerships for future projects.

People from around the world

- * The highlights of attending the world congress were definitely the people we met.
- * We enjoyed the panel discussions much more than the lecture style speeches.
- * Meeting new people, old friends and the networking during the breaks, the meals and the poster sessions was amazing during the congress.
- * "I really had fun meeting and talking with Pauline Mele, a soil microbial ecologist from Victoria, Australia." **Annie Madden**
- * "I enjoyed the evening we spent with Sandra's friends, Don Flaten and Dennis Bulani. In fact I got more out of those discussions about soil fertility than from some of the presenters." **Bill Wilson**

Bill Wilson: "The last day with the session about using livestock in conservation farming was the best. But I really came away feeling like the Forage Association are leaders in the world with their R & D work in this area."

And the last word from

Annie Madden: "In the livestock session, we really enjoyed people refer to *manure as a portable soil*."

CASA Thanks Their Sponsors. **Platinum:** Dow AgroSciences, Howard G. Buffett Foundation, Monsanto, The Mosaic Company and Seed Hawk. **Gold Sponsors:** Agrium; the Food and Agriculture Organization of the United Nations (FAO); Manitoba Agriculture, Food and Rural Development; and Syngenta. **Silver Sponsors:** Alberta Agriculture and Rural Development, Bayer CropScience, CropLife Canada, Farm Credit Canada, Ontario Ministry of Agriculture and Rural Affairs. **Bronze Sponsors:** Canadian Fertilizer Institute; Coalition on Agricultural Greenhouse Gases; Ducks Unlimited; The Farm Foundation, NFP; The Fertilizer Institute; The Nature Conservancy; North Dakota Trade Office; Saskatchewan Ministry of Agriculture; SaskCanola; the USDA's Agricultural Research Service; the USDA's Natural Resources Conservation Service; Richardson International Limited and Ward Laboratories.

Highlights in Manitoba

By Julie Robinson, Sandra Burton, Annie & Dennis Madden

Prairie Originals Native Plant Nursery

- * Tuesday afternoon, we toured a native plant nursery owned by Shirley Froelich. Greenhouses are not used as she feels this spoils the plants. Shirley has found she can get hardier plants for her customers by growing them in beds that are kept under the snow during the winter. The nursery visit was a highlight and we definitely had some "take home items" from there.
- * Plants can be shipped successfully anywhere in Western Canada and can be ordered through the contacts below.

Prairie Originals, Selkirk, MB

Phone/ Fax: (204) 785 9799

Website: www.prairieoriginals.com



Touring through the native plant nursery with Shirley.



Sandra at it again looking at soils

Beasley Ranch

- * Owned and managed by Carl and Louise Beasley, of Boggy Creek, in north western Manitoba.
- * Ranch includes 55 quarters, 800 cows and 100 heifers.
- * Work livestock on this ranch with horses.
- * Saw some new ways to set up waterers, such as piling up soil & building a fence to trap snow and using it to insulate the winter waterer & pipe from freezing temperatures.



Carl Beasley, Annie's brother, was a very interesting man.



... and Julie at it again looking at plants!

Take home from the trip

- * "The best parts of going to Winnipeg and back were the people and the surprises along the way... like owl watching and hot rhubarb crisp with cousin Sally, seeing Biggar, the setting for the show Corner Gas, running into Jack and Dianne Wilson (in Vegreville of all places) and seeing how Neil Dennis had improved his soil." **Julie & Sandra**
- * "We have been watching rotational grazing for some time now, and are quite impressed with the way it has improved the soils and forages for both John Kendrew and Neil Dennis. We would like to try this at our place." **The Maddens**

July 5 Interactive Soils & Forages Day

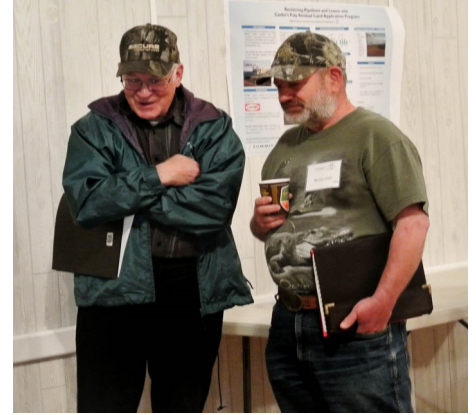
By Brenna Schilds & Sandra Burton



Asenath and Don Herbison enjoying the day's first activity.



Tim Repas, Scott Schilds and Bess Legault enjoy a morning cup of coffee before the course.



Stan Smithard and Murray Clark discussing the upcoming day.

July 5th marked the last day of a 5 day series of Interactive Soils and Forages courses. It was a wonderful success and included over 50 people from diverse backgrounds. These are some of the highlights of the day, which focused on the revegetation of pipelines and leases.

The morning began with everyone being divided into 6 groups. First we all got to know each other by engaging in a fun group activity organised by Sandra Burton, Talon Johnson, and Alana Duncan, which combined some of the knowledge gained in past courses and turned them into fun stations. This was an excellent way to get to know the people in your group, including some of their strengths as industry professionals in soil science, plant science, pipeline management, and many other disciplines.

After a fun start, we all car pooled to the Encana site where we rotated through 3 stations for the rest of the morning. Each station was about 30 minutes

long and presented different topics related to revegetation along pipelines. People really seemed to have fun at Bill McGill's station about soil infiltration, compaction and health indicators. He made it extra interactive by allowing several different people to use his high quality soil testing instruments.

"I found it very interesting to learn about soil infiltration and compaction with Bill McGill. His enthusiasm and love for soil science made for a very interesting and interactive station." Bess Legault

Julie Robinson and Carmen Schneider both encouraged some lively discussions during their station about fall versus spring seeding, grass and legume species and nodulation. Two representatives from Encana, Brian Arnold and Colin Mair, as well as Richard Kabzems gave a talk about what goes into the management of a pipeline including construction and administration.



Carmen Schneider demonstrates nodulation of red clover plants.

Just after lunch we were treated to 3 different stations, just 15 minutes in length. With Richard Kabzems and Sandra Burton we learned about the natural history we can learn from looking at soil landscapes. Talon Johnson talked about an online forage seeding tool. With Arlan Benn we learned about the importance of insect pest monitoring. All 3 stations caused lively and interesting discussions.



Sandra Burton, Xin Yuan, Christina Irvine and Allan Gifford listen at Bill McGill's station.

July 5 Interactive Soils & Forages Day cont'd



Left: Talon Johnson, Hailey Wilson & Robert VanderLinden put the soil samples in order of highest infiltration.

Right: Gino Morrone, Don Herbison, Matthius Loeseken & Art Siedl chatting.



Once we had carpooled back to the field site, we had the pleasure of going through 3 more afternoon stations. Murray Clark opened a lot of eyes with his demonstration of soil erosion and slope. Bill Wilson, Julie Robinson & Carmen Schneider all took us out onto the berm to talk about managing fertility on lease berms. Katarina Glavas and Sandra Burton blew minds while talking about innovative uses for pulp residual as a possible fertilizer. "I had no idea about the pulp residual. It was really interesting to hear about emerging technologies in other industries and novel ways in which we can apply them." Scott Schilds



Lisa Belleville & Deny Chramosta answer questions about Schedule A's and B's.

We all gathered together for a panel discussion about industry practices and issues like Schedule A's, Schedule B's, Certificates of Reclamation, and Alternative Practices. This was led by three panelists, Lisa Belleville, Deny Chramosta and Brian Arnold. It raised a wide variety of questions, ranging from environmental consulting practices to the responsibility of revegetation.

The day ended on a high note with Bill McGill and Bill Wilson. After they summarised what we'd learned at each station, they opened up a discussion for feedback on the entire series. The most consistently positive feedback was that with the diverse group of people, there were many different perspectives. This lent itself to thought provoking discussions, appreciation for other viewpoints, thinking 'outside the box' and new 'take home' ideas.



Murray Clark demonstrates the effect of slope on erosion potential.



Bill Wilson & Bill McGill facilitate a feedback discussion.

Thank you to our funding partners:

UNBC, Shell Canada, Encana, Peace River Agriculture Development Fund, Investment Agriculture Foundation/AAFC

Thank you to our enthused station masters:

Bill McGill, Richard Kabzems, Murray Clark, Bill Wilson, Carmen Schneider, Arlan Benn, Katarina Glavas, Julie Robinson, Sandra Burton

Thank you to our knowledgeable mentors:

Rick Kantz, Korey Green, Darryl Kroeker, Alana Duncan, Talon Johnson

Thank you to our panel discussion participants:

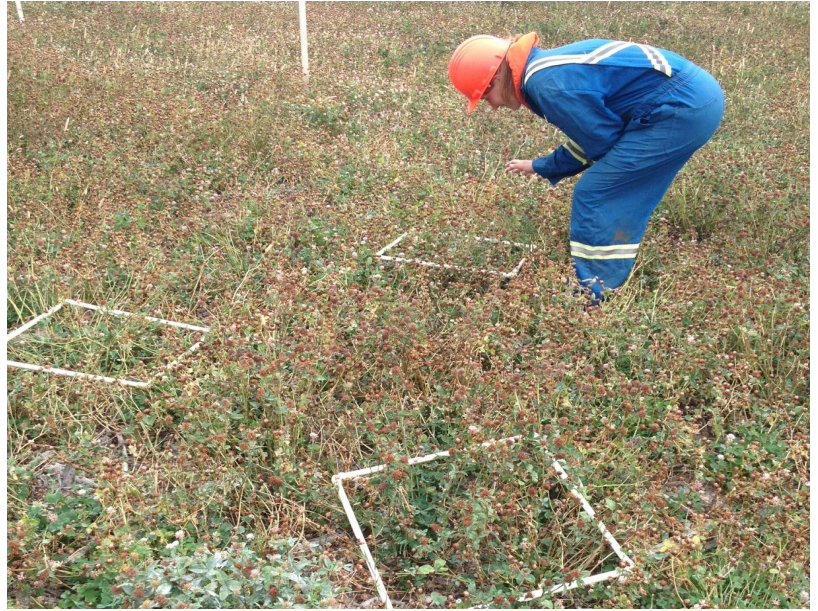
Brian Arnold, Colin Mair, Deny Chramosta, Lisa Belleville

Photo Credits: Brenna Schilds

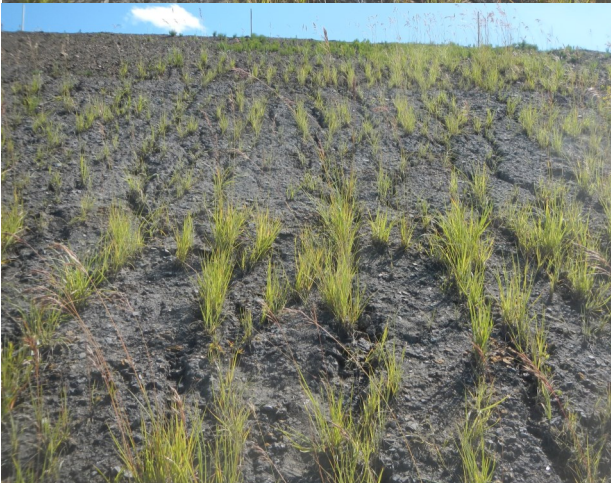
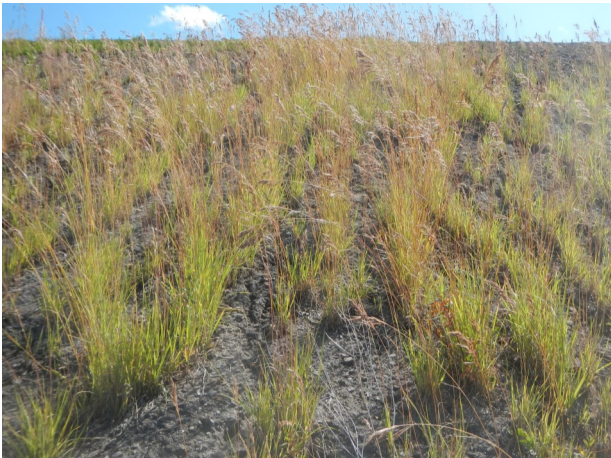
Re-vegetation of Land Disturbed By Oil & Gas Project

by Carmen Schneider

We are now on the last year of our three year Re-vegetation of Lands Disturbed By Oil and Gas Project. We are maintaining up to 13 different sites: 5 are pipelines, 2 are roadways, and 6 are leases. Although we are coming to the end of this project, we haven't slowed down in the hopes of continuing the project, as many questions are still left unanswered. The initial focus of this project was largely on how well different species do. We are still collecting data on species but have also started looking into other aspects of re-vegetation, such as timing of seeding and fertility. One of the main problems we've been dealing with is inconsistent data. This could stem from different soil/ environmental conditions at each site or differences in weather from year to year.



Alana Duncan assessing percent cover on a pipeline near Farmington.



A comparison of meadow brome grass with fertilizer (upper) and without fertilizer (lower) on a cutside of a lease near Farmington.

Main discoveries:

- * Favourite species overall: meadow brome grass, Anik alfalfa, slender wheat grass, creeping red fescue.
- * Favourites in wet sites: fowl bluegrass, timothy, slender wheat grass.
- * Cover crops may not always be a good choice, especially certain types such as fall rye.
- * Fertilizer improves grasses/legumes considerably (see *images to the left*).
- * Have seen positive results with fall seeding (similar results as with spring seeding).
- * Very important to seed as soon as possible as to not let weeds establish and have more moisture available.

Things we want to learn more about:

- * Where does seed stock for natural revegetation come from (especially on cleared land)?
- * Fertility of soil and effects of different blends of fertilizer, as well as its singular elements (i.e. just nitrogen or just potassium)?
- * How can erosion be assessed properly?
- * Differences between fall and spring seeding?
- * What/how to seed best on land with mulched trees in the soil?
- * How to achieve better establishment on slopes that have been cut out of a hillside (*as in image to the left*) ?

Some of these questions have already been incorporated into the project and are currently being looked into.

Funding Partners of the Re-vegetation of Disturbed Areas by Oil & Gas Activities Project:

Peace Region Forage Seed Association, Encana Corporation, Shell Canada, Agriculture & Agri-Food Canada through CAAP delivered by Investment Agriculture Foundation of BC



Josh Dukart: Thinking Regeneratively... Beyond Our Own Borders

Joshua is a Certified Educator of Holistic Management, who speaks and teaches regularly throughout the United States and Canada. Joshua's career path started as an Agricultural & Bio-systems engineer, but has evolved into a professional role of educator, facilitator, and mentor. Through this progression was born a consulting business that works with land managers, families, and organizations in assisting them with achieving sustainable balance of people, finances, and resources.

Greg Johnson: I'm Just a Tornado Hunter

Greg Johnson, one of North America's professional storm chasers, is also an accomplished photographer, speaker, author and workshop leader. Having graduated from Canada's renowned Acadia University, and after founding and building a leading successful communications, marketing and advertising firm from the ground up, Greg decided it was time to devote himself full-time to pursuing his passion for capturing nature's most beautiful and deadly displays of severe weather. Using sophisticated weather-tracking technology, his ability to read severe weather patterns and a team of dedicated sidekicks, Greg has put over 200,000 kms on his 'Tornado Truck', documenting hundreds of storms across the United States and Canada since 2011 alone. A firm believer in the 'Bucket List' philosophy, Greg's mission is to inspire others to chase their own passions, while sharing and teaching the lessons he has learned from pursuing his.



Great Grazing Speakers

Compiled by Brenna Schilds



Judith D. Schwartz: Cows Save the Planet

In "Cows Save the Planet", journalist Judith Schwartz looks at soil as a crucible for our many overlapping environmental, economic, and social crises. Schwartz reveals that for many of these problems (climate change, desertification, biodiversity loss, droughts, floods, wildfires, rural poverty, malnutrition, and obesity) our ability to turn these crises into opportunities depends on how we treat the soil. Judith Schwartz is a longtime freelance writer with wide ranging experience with books, magazines, newspapers, and a variety of writing and editing clients. She's written articles for women's magazines, co-and ghost-written books with therapists and doctors as well as a couple of her own.

Dr. Diane Knight: How Legumes Feed the Soil

Diane is a Saskatchewan Ministry of Agriculture co-chair of the Strategic Research Program (SRP) in Soil Biological Processes. The overall focus of the program is to develop innovative solutions to the problems facing today's producers. This involves focusing on biological aspects of the soil/water/plant continuum as they relate to nutrient cycling and the efficient use of nutrients by plants. Diane earned her B.Sc degree from the University of Calgary and her M.Sc. and Ph.D. degrees from the University of Saskatchewan.

*The **Peace River Forage Association**
invites you to travel together to the
Western Canadian Grazing Conference*

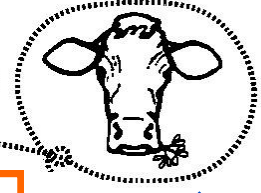
**For more details call
Sandra or Chris at 250 789 6885
OR Talon at 250 219 3944**

Upcoming Events

UNBC

In partnership with

Peace River Forage Association
of British Columbia



Soils, Forages & Water Dynamics Course

Involving Real People with Real Issues

All activities
hands on &
interactive !

Sat
Sept 13
2014

Can we make
pipelines disappear
or blend into the
landscape?

Credits
available for
UNBC, CCA
or P.Ag PD

Sat Oct 4, 2014
8 am to 5 pm

Can we make
forages last forever
without starting
over?

Feb 7,
2015

What are the tools & constraints
for establishing forages &
reclamation?

June 6, 2015
8 to 5 pm

What role do manure &
nutrients play in happy forages
lasting forever?

July
4,
2015

How can we control
erosion on lease sites?

To Register:

In the Peace:
Sandra Burton at
250 789 6885

sburton@xplornet.com

For university credits:

Bill McGill at
250 960 5308 or
mcgill@unbc.ca

*Thank you to our
funding partners
Shell Canada
& PRAD*

Registration Costs:

Including coffee & lunch
\$90 / day non members

\$50 for existing & long term
Forage Association members

10% discount for anyone
registering for complete course

More Upcoming Forage Events

Mark Your Calendar!

*The Peace River Forage Association
Invites you to join them for their*

Controlling Weeds & Annual General Meeting

**Monday, Dec 1, 2014
1:00 to 9:00 pm**



**Taylor Community Church,
Taylor, BC**

1 to 2 pm: Guest Speaker: Fertilizing, Spraying & Grazing Strategies
to Control Canada Thistle

*Dr. Edward Bork, Rangeland Ecology & Management,
Univ of Alberta, Edmonton, AB*

2 to 3 pm: Rotate through 2 of the 4 stations

- ⇒ Weed ID Game: Kari Bondaroff, PRRD
- ⇒ Cowbytes/ Rationing Demo: Lori Vickers, BCM Ag
- ⇒ Healthy & Vigorous Forages Project: Talon Johnson
- ⇒ Forage Seeding Webtool Demo: Sandra Burton

3 to 3:30 pm: Coffee break

3:30 to 4:30 pm: Rotate through 2 more stations

4:30 to 5:30 pm: Panel Discussion: Who's Winning, the Weeds or Us?

*Dr. Edward Bork, Kari Bondaroff, Talon Johnson
& Cooperators of Healthy & Vigorous Forages Project*

6 to 7 pm: Hot Supper

7 to 9 pm: Annual General Meeting of Peace River Forage Association

**Contact Sandra / Chris/ Talon @ 250 789 6885
to ensure we have supper for you**

*Thank you to PRAD for the funding partnership that enables our association
to send a delegation to the World Congress of Conservation Agriculture,
to host the Interactive Soils & Forages Courses,
& to manage the Healthy & Vigorous Forages Project.*