Forage First

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The New Summer Edition

Social distancing sounds a lot like calving season!

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Interseeding to Improve Forage Project: Julie Robinson, Rachel Juell

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Introducing Your New Events Planner

by Samantha Dilworth

Samantha Dilworth & Horton

Becoming part of the Peace River Forage Association in the winter of 2017 ignited a passion I never knew I had. I am unsure how, but I had become part of a young or new to farming program through the Peace River Forage Association. Mark, my amazing and supportive husband, was on shift during every event, so I attended each event in solo. After every event, I would arrive home filled with excitement with all the new and thrilling information I had learned about how to improve our little horse and forage farm. This newly ignited passion grew along with some amazing new friendships. I had a vision of what I wanted our farm to become and the Peace River Forage Association's events have given me the opportunity to learn and become more knowledgeable in the field of agriculture.

As for a background in agriculture I have none. I grew up in the little mining town of Tumbler Ridge. I had a love for horses beyond your average little girl who wants a pony. My parents had no horse experience at all, but they took the leap and bought our first horse when I was 10 years old. Horses gave me opportunity, commitment, road apples and my first love "Toad". At this time, I had a dream to live in a place where there were open fields for my horses to graze.

Mark Dilworth, my amazing husband, made this dream come true. Mark is a born and raised Dawson Creek farm kid. Bob and Maxine Dilworth started as grain farmers and began to diversify into cattle in the early to mid 1990's. Mark, our two children (Dakota and Devyn) and I now operate Iddy Biddy Farm and Exceptional Equine on our newly developed estate in Farmington BC. We are on the original deeded quarter section that Mark's Grandpa Ernest Dilworth was given after the war.

Our 20+ horses now graze in fields of forage and they eat lush green hay from our own fields in the winter. We own 320 acres and lease 320 acres. We are practicing regenerative agriculture to improve our soil quality, depth, and infiltration. We have plans to integrate cattle into our operation this year as well. Exceptional Equine has turned from a hobby farm and horse training business into an established equine assisted learning program, progressive riding lesson program, equine training and development program and performance horse breeding business.

Never quit dreaming and never quit learning. "Knowledge is power", with this quote in mind I want to thank the Peace River Forage Association for sharing the power of knowledge with me and all the other members. I am excited for the opportunity to be able to pay this knowledge forward as the new Event Planner for the Peace River Forage Association this summer and winter. There are many challenges as they say "this is our new normal" but I know from my experiences in life as a farmer, there is no such thing as normal. It is about joining together and figuring out what we can do and learn from what we can't.

More Changes & Moving Forward

by Sandra Burton

Regrettably, **Carolyn Derfler** has moved on to new challenges. She finds her roles as preschool Strong Start Coordinator at Parkland School and grain farmer's wife expanding. We already miss her consistent cheerfulness, organizing skills and willingness to learn new skills to try a new task.

Starting in July, **Heather Fossum** will join my home business First Resource to deliver Communications for the Peace River Forage Association. Years ago she was a summer student, more recently a director and a long time loyal member. We welcome her and she will introduce herself in a future newsletter.

On another note, thank you **Chris Thomson**! Chris has revamped the membership list to assist those of you that ask us ***"Is my membership paid up? I sure don't want to get your hot pink reminder!"*** Look in the top right corner of your mailing label to find the date when you need to renew. If there is a "N" on your label, we need your feedback. Even if you are a paid up member (we do appreciate this) **please turn over the membership form and take just a few minutes to answer the questions.** This will really help the new enthusiastic people working for you set new directions and serve you better as members. Plus you get a set of **Forage ID cards**!

Meet Your New Summer Student

by Rachel Juell

Rachel Juell helping her family seed with their Bourgault air drill in the spring of 2020.

Hello, my name is Rachel Juell. I am pleased to be introducing myself to the Forage Association members as a summer technician working with Julie Robinson and Forage Friendly Enterprises. I will primarily be working on the *Interseeding to Improve Forage Project* with the Peace River Forage Association of BC this summer.

I grew up on a cattle and grain farm just north of Rolla. I helped on the farm by doing chores like running the combine or feeding and moving cattle. While growing up, my main hobbies were playing soccer and riding horses. I have ridden horses for about ten years and competed in the equestrian sport show jumping. One of my biggest accomplishments was competing at the Rocky Mountain Show Jumping Stadium in Calgary and winning Reserve Champion in the 2.6 ft division. I played soccer for 12 years at the local League in Dawson Creek before playing for the Fort St. John's Women's Travel Team during my senior year of high school. I graduated from high school in 2016.

I moved the following summer to Prince George where I started a bachelor's in science at the College of New Caledonia. In the fall of 2018, I moved to Kamloops to finish my degree at Thompson River University.

However, I changed routes. I am currently studying to become a Respiratory Therapist, and have completed my first year in the profession. Since most people don't know what a Respiratory Therapist does as a medical professional, here are a couple of their roles: managing mechanical ventilation systems, managing artificial airways, monitoring equipment related to cardiopulmonary therapy, analyzing levels of oxygen and other gasses in blood, and administering aerosol based medications.

During my employment working with the Peace River Forage Association of BC, I will be participating in the *Interseeding to Improve Forage Project* by seeding, managing and collecting data from the plots. So far this summer I have established one hayfield plot in the Silver Valley area and I am currently working on another pasture improvement plot in the Rolla area. Both plots will compare two different seeding techniques including broadcasting and zero till drilling. The Silver Valley plot will also look at the forage yield and quality of using fertilizer. Where the Rolla plot will demonstrate the outcome of heavy grazing to enable the new seedling to compete. The drill has also been used this spring by Dave Armstrong to interseed an alfalfa and brome seed mix into hayfield in the Rolla area. We will set up 2 more plots this spring and monitor last year plots.

Covid-19 allowing, we might have some smaller field days this summer to look at the results of these interseeding plots.

Rachel & her horse Nosey Boy competing in the Hunters & Show Jumping ring at the South Peace Horse Club.

Rachel with her brother's calves that were born in January, 2020.

Interseeding to Improve Forages Project Update

by Julie Robinson & Rachel Juell

The Vredo zero till drill has a V-shaped disc that create a slit in the soil to allow the seed to be planted.

Project Timeline:
April 1, 2019 to March 31, 2022

Project Partners: Peace Region Forage Seed Association, South Peace Grain Cleaning Co-op, Agroworks/ Trevor O'Dwyer, Shell Canada, AAFC Beaverlodge Research/ Dr.Nitya Khanal.

The Goals of this project are to:

⇒demonstrate if forage quality can be improved by seeding into existing stands & by exploring which species of legumes & grasses have the greatest potential for success in interseeding.

⇒demonstrate if forage yield or carrying capacity can be improved by seeding into an existing stand & by exploring species & timing.

⇒determine if the new Vredo drill can seed into existing forage stands & if the success can be improved by improved management practices such as intensive grazing, or herbicide use.

⇒develop extension material, knowledge & resource people to provide strategic support to delivering on farm climate adaptation practices & to improve & enhance forage networks to enable a more resilient forage industry into the future.

Cooperators & Sites: Mickey Zunti, Murdale (North of Fort St John); Shell Canada, km 11 on Sanataa Road (Braden Road); Bill Wilson, Silver Valley; Trevor O'Dwyer, Rolla; Dave Armstrong, Rolla.

Progress to Date:
2019 Season:

1. Set up demo plot with Mickey Zunti in Murdale showing 10 conventional rejuvenation plots compared to interseeding 15 species which included smooth bromegrass, orchardgrass, festulolium, alfalfa, birdsfoot trefoil, cicer milkvetch and sainfoin.
2. Organized plot seeding of 5 different mixes in cooperation with Shell Canada on crown grazing 11 km off the Braden Road on the Sanataa.

2020 Season:

⇒Set up hayfield plots in Silver Valley with:
Plot 1 control;
Plot 2 & 3 broadcast & drill mix 1 (birdsfoot trefoil + orchardgrass);
Plot 4 & 5 broadcast & drill mix 2 (red clover + smooth bromegrass);
Plot 6 & 7 broadcast & drill mix 3 (red clover + birdsfoot trefoil + festolium);
Peachey plot had 46-0-0 fertilizer spread over 50% of plot.

⇒Set up pasture plots in Rolla with:
Plot 1 control;
Plot 2 & 3 broadcast & drill mix 1 (birdsfoot trefoil + orchardgrass + festolium hykor);
Plot 4 & 5 broadcast & drill mix 2 (red clover + meadow bromegrass + creeping red fescue);
Plot 6 & 7 broadcast & drill mix 3 (alsike clover + cicer milkvetch + hybrid bromegrass + tall fescue).

⇒Each plot will be heavily grazed to eliminate competition of other species.

⇒Producer also interseeded alfalfa & smooth bromegrass into hayfield to fill in crop loss in swath areas.

The smooth roller closes the slit caused by the opener. The drill seeds anywhere from 2 to 30 lb/ac & is easy to calibrate.

Soil Quality Study 2015 - 2020

Peace River Forage Association of British Columbia

Soil Quality Study Overview

The soil quality field kit was initiated by Sandra Burton & Dr. Bill McGill, over 5 years ago as a communication tool during PRFA-UNBC Soils, Forage & Water Dynamics Courses. It was further tested during 2 larger producer innovation based projects: Innovative Management Practices for Resiliency & Improving Productivity & Profitability of Forages. We have enjoyed collaboration with many people, especially Julie Robinson, Matthias Loeseken, Aaron Mackay and the 17 farm cooperators involved in the study.

Initial Questions

1. Is the kit farmer field friendly?
We addressed this in the 2015 season and found that some of the methods were time consuming for a field test. We modified the methods supplied with the kit.

2. Which soil properties are relevant to each on-farm demo?
We selected a core of 7 "must do" soil properties, then added more as requested by the cooperator or relevant to the questions at the on farm demonstrations.

3. Does the field kit assist in dialog with farmers to improve their management practices?
The methods and results were conversation starters at more than a dozen workshops and field days over the last 5 years.

4. Can the field kit help establish benchmarks with cooperators that can be revisited later to measure changes?
This report shares the field work methods and preliminary answers to these questions. To date, 32 pairs or 64 benchmarks each have summary Soil Quality Report Cards, involving 17 cooperators spread across the Peace (primarily in BC).

Soil Quality Improving Practices

The cooperators that came forward with their questions can be grouped into 6 soil quality improving practices. This is a sampling of possible practices to improve soil quality, not a complete list.

1. Adding topsoil, composted manure or pulp residual:
Glenn & Ann Hogberg, Progress area, benchmarks in valley bottom, Devereau soil on lacustrine;
Stan & Shirley Smithard, Sunset Prairie area, benchmark pairs on ridge, Murdale soil on morainal till;
Fred & Liz Schneider, Pouce Coupe, adding topsoil, 1 pair of benchmarks;
Richard Kabzems & Sandra Burton, Kiskatinaw, adding composted residual, 1 pair of benchmarks.

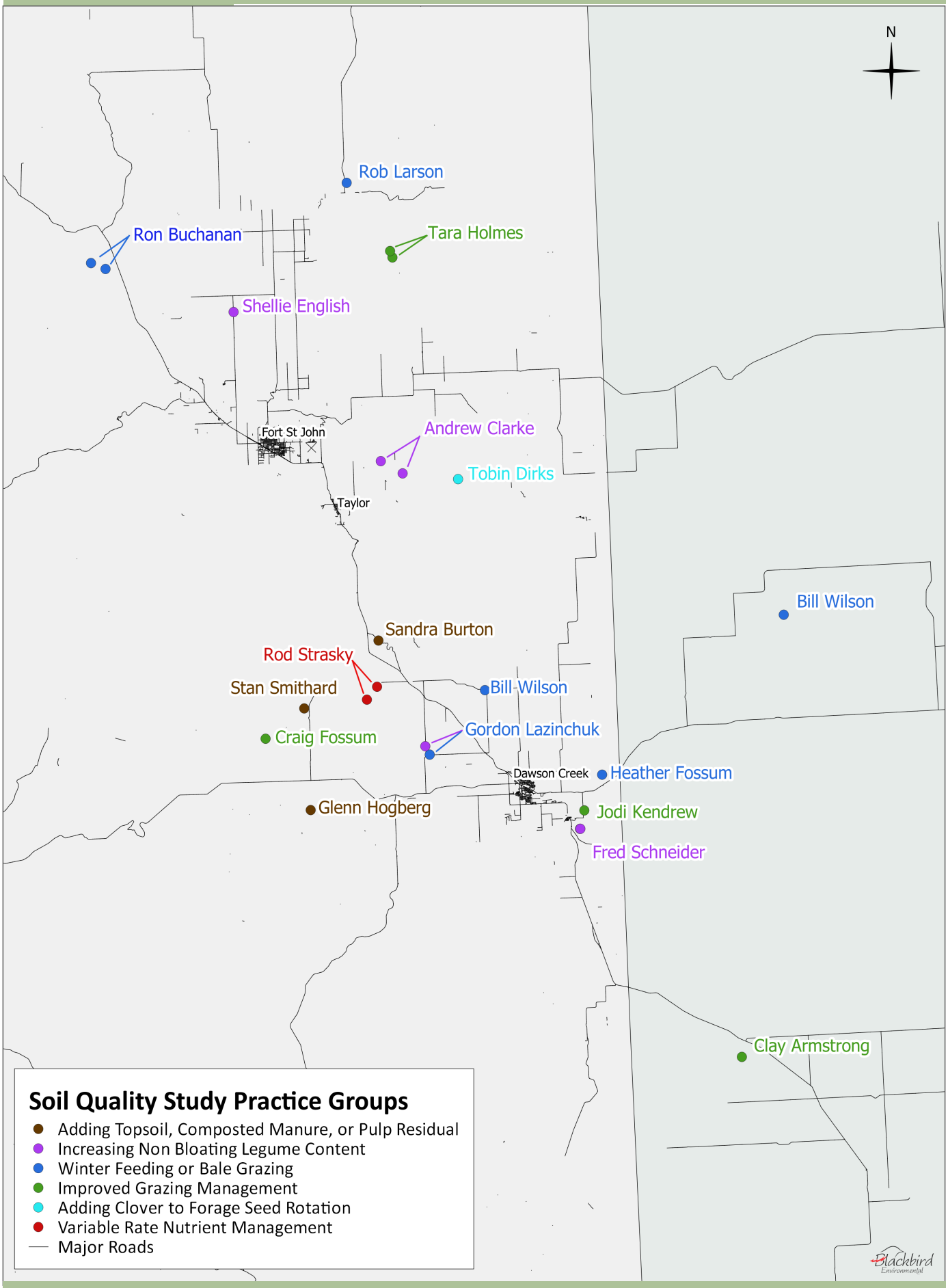
2. Increasing non bloating legume content:
Andrew & Brian Clarke, Baldonnel, birdsfoot trefoil plots & benchmarks on 2 fields, different soils & years;
Gordon & Brenda Lazinchuk, Bessborough, 2 fields of birdsfoot trefoil, different years, 2 x 2 pairs of benchmarks;
Fred & Liz Schneider, Pouce Coupe, sainfoin plot, 2 soil benchmark pairs, monitored plant growth of 2 mixes;
Shellie English, Montney, sainfoin seedings in 3 fields, 3 different methods, with & without a cover crop.

3. Winter feeding or bale grazing:
Ron & Karen Buchanan, Lower Cache, 4 sets of benchmarks with winter feeding of different years & different landscape positions;
Gordon & Brenda Lazinchuk, Bessborough, benchmark pairs with & without bale grazing on 2 different soils;
Rob Larson, Rose Prairie, 2 benchmarks of starting points for 2 fields;
Heather Fossum, Briar Ridge, paired benchmarks representing with & without bale grazing;
Bill Wilson & Julie Robinson, 2 pastures in Sweetwater & Silver Valley; 2 sets of benchmarks.

4. Improved grazing management:
Tara Holmes & Ben Harrington, Siphon Creek, 3 fields, histories & soil types, 3 benchmark pairs;
Clay & Ashley Armstrong, Demmitt, 5 benchmarks;
Jodi Kendrew, Pouce Coupe, 2 soil types, 2 benchmark pairs;
Craig Fossum & Brette Madden, McLeod, 2 benchmarks of starting points for improving soil quality.

5. Adding clover to forage seed rotation:
Tobin Dirks, Flatrock, direct seeding creeping red fescue for seed into clover stand, 1 pair of benchmarks.

6. Variable rate nutrient management:
Rod & Kim Strasky, Farmington, using variable rate nutrient management, 2 fields, 2 sets of soil benchmarks, also monitored nitrogen losses in 2015 & 2016.


N
Rob Larson
Ron Buchanan
Tara Holmes
Shellie English
Fort St John
Andrew Clarke
Tobin Dirks
Taylor
Bill Wilson
Sandra Burton
Rod Strasky
Stan Smithard
Bill Wilson
Craig Fossum
Gordon Lazinchuk
Dawson Creek
Heather Fossum
Glenn Hogberg
Jodi Kendrew
Fred Schneider
Clay Armstrong
Soil Quality Study Practice Groups
Adding Topsoil, Composted Manure, or Pulp Residual
Increasing Non Bloating Legume Content
Winter Feeding or Bale Grazing
Improved Grazing Management
Adding Clover to Forage Seed Rotation
Variable Rate Nutrient Management
Major Roads
Blackbird Environmental

What Did We Learn From The Paired Comparisons?

The highlights from the paired benchmarks of the Soil Quality Study are discussed here for each cooperator.

1. Adding topsoil, composted manure or pulp residual:

Glenn Hogberg created topsoil by turning his manure piles before spreading them onto the field. Adding well rotted manure caused dramatic soil improvements including: lower bulk density, better soil moisture status and higher available water holding capacity. These additions increased the enriched topsoil depth by 1.5" and increased the pH levels by 0.7 *(see Forage Fact #102).*

Stan & Shirley Smithard wanted to know if on-farm nutrients in manure could be captured in better pasture growth and if there were advantages to composting the manure piles before spreading the material. Stan's practices appear to be increasing infiltration rates in his fields. This is likely caused by the increases in organic matter. Soil organic matter can act as a sponge and absorb water at the top of the soil. Organic matter was increased by 5% and infiltration rates were increased by 12 and 32 inches per hour respectively at each benchmark pair between 2017 and 2019. He has also increased the amount of water that the soil can hold by about an inch per foot of soil. Since typically water holding capacities are often only 2-4 inches per foot this is a significant increase and gives plants a buffer between rainfalls *(see Forage Fact #115 for more details).*

Fred Schneider brought in topsoil to increase the soil quality of his field and we found improvements in topsoil depth, soil texture and bulk density. Even more dramatically organic matter increased by over 4% and available water holding capacity increased by 0.6 inches per foot of soil.

Richard Kabzems & Sandra Burton wanted to improve their pasture by composting and incorporating pulp residual from the plant in Taylor. The addition of this soil amendment dramatically improved the topsoil, rooting depth and the soil respiration.

2. Increasing non bloating legume content:

Andrew & Brian Clarke wanted to know if the birdsfoot trefoil out preformed the alfalfa due to a higher soil quality, but this was not the case at either of their demo plots.

Gordon & Brenda Lazinchuk wanted to compare the lower poorly drained areas with higher better drained areas to see if the birdsfoot trefoil had a preference. It did not seem to at either of the pairs in the 2 different fields.

Fred & Liz Schneider's sainfoin demo plots had one area of the field where the sainfoin established really well. The fertility samplings showed no differences but when the total soil quality was assessed, there were differences.

Shellie English wants to improve a field that has been "mined" resulting in very poor soil quality. We established a pair of "starting point" benchmarks so that she can monitor her success.

3. Winter feeding or bale grazing:

Ron Buchanan's initial question was "Can feeding, grazing and nutrient management be effective alternatives to tilling and seeding to rejuvenate a hayfield?" He was looking at their nutrient flows on a whole farm basis. In total 4 pairs of benchmarks were compared with winter feeding in different years and on different landscape positions. In each set of comparisons, pH saw significant increases (which would have a ripple effect on nutrient availability). Soil respiration rates were as much as 10 times those of the control areas.

Where **Gordon Lazinchuk** bale grazed to improve his soil, his soil had much higher organic matter and pH especially on the poorer soil. There was increased soil respiration and biological activity. He also got gold stars for improved spring moisture and dramatically improved available water holding capacity. *(see Forage Fact #107 for detail on soil water relationships).*

Rob Larson's questions were: is there an alternative to ploughing to rejuvenate my pastures and control rose bush? Will bale grazing increase the bacterial activity and the plant rooting depth and preserve the protective organic layer on the soil? We set up 2 benchmarks as starting points to monitor again in a few years *(see Forage Fact #116).*

Heather Fossum wanted to compare soil quality changes after winterfeeding with bales. Heather fed bales to the horses on a very poor area next to the road in the 2017/ 2018 winter. There were dramatic improvements. Under the bale grazing there was less compaction (i.e. lower bulk density) and better structure. Infiltration rates for the soil increased by 3 fold (which can be very significant during a rainfall event). In terms of soil fertility, organic matter levels increased for both the 0-6" and 6-12" layers. The pH was improved as well. The upper topsoil (including fine thatch layer under bale residue) was increased as well as the rooting depths. These improvements resulted in higher biological activity (i.e. soil respiration) in the soil that had been winter fed and manured on compared to the area without feeding. *(see Forage Fact #116).*

Bill Wilson had been bale grazing at Price's pasture for five winters. when the soil sampling was done. The impact of Bill's practices on this field include: the organic matter levels improved by 2.5% and pH levels increased by 0.8. Soil moisture status on the day of sampling in the fall of 2017 was also 0.5 higher where Bill had bale grazed his herd. **Bill Wilson & Julie Robinson** are also implementing practices to improve their home quarter near Silver Valley. A pair of benchmarks was established as starting point to monitor soil health in the future.

4. Improved grazing management:

Tara Holmes & Ben Harrington's goals for their land are to increase organic matter and the quality of their soil with improved rotational grazing practices on the "20 Year Pasture". They saw significant improvements in many areas when comparing the newly (and brutally) cleared Frank's Field. In the 20 Year Pasture soil structure was considerably better; infiltration dramatically increased by about 100 times. Bulk density improved (i.e. decreased by 0.2 g/ $cm^{3)}$. The depth of topsoil was 4 times the depth of topsoil in the harshly cleared Frank's Field (i.e. organic material stripped and burned). Both areas showed an excellent pH for growing legumes.

Comparing the Chamomile Pen to the Clearcut Pen there were some similar trends with better management. Both pens had relatively thin topsoil (5 & 6 inches respectively). There was a drastic increase in organic matter (over 15%) was shown in the Clear cut Pen vs the Chamomile Pen. There was actually getting to be more organic matter and thatch than was optimal in the Clearcut Pen. In contrast, the Chamomile Pen was at the opposite end of the spectrum with lots of exposed bare surface. Rotational grazing had improved soil respiration and bulk density in the Clearcut Pen with rotational grazing. Additionally the Clearcut Pen had double the water holding capacity per foot of topsoil. Infiltration was remarkably better in the Clearcut Pen. In the Chamomile Pen very slow infiltration coupled with the high bulk density and more clayey soil texture could lead to too much water in this pen for extended periods of time hampering healthy pasture growth *(see Forage Fact #119).*

Clay & Ashley Armstrong have 40 laying hens and 300 meat birds in mobile cages so the birds can be moved regularly. The health of the soil, forages and ultimately the birds have all improved under this system. Clay had always wanted to raise cattle and was keen to try more intensively managed rotational grazing in the summer and bale grazing in the winter to improve his soil quality. Our results showed that Clay's 65 cow/ calf pairs had dramatically improved the infiltration and the soil bulk density. However Ashley's "Gypsy Chicks" improved soil respiration and biological activity even more than Clay's cattle.

Jodi Kendrew wondered why an area of her pasture produced more grazing days than another area. When we took a closer look at soil health, we found the better area had double the organic matter in the topsoil horizon (i.e. upper 6") and 3 inches more rooting depth. This led to double the soil respiration and microbiological activity. Infiltration rates into the better areas were as much as 15 x better than the poorer areas. In this particular case, the dramatic difference may have been a result of both higher organic matter and a more ideal texture.

Craig Fossum & Brette Madden approached us to help them establish benchmarks in a new piece of land they had recently purchased. They wanted to use improved grazing and nutrient management practices to improve their soil, and be able to come back in several years to see what their progress was. Our soil field tests identified a few soil properties that could be improved including infiltration, depth of topsoil and organic matter.

5. Zero tilling fescue into clover:

Tobin Dirks wanted us to test the change in soil quality when he added clover to forage seed rotation. In one field he direct seeded creeping red fescue into the clover stubble with his zero till drill. Having the clover added to the rotation improved bulk density by 0.1 g/cm3, increased the organic matter by 3%, and increased rooting depth by 2 inches. The clover in the rotation also significantly improved the respiration rate, showing a higher biological activity. One area that could continue to be improved would be the infiltration rate which was very low at both benchmark locations.

6. Variable rate nutrient management:

Rod Strasky wanted us to use our soil quality field kit to help him understand why certain areas of his fields consistently yielded better or poorer than others *(refer to Forage Fact #98 page 3 to the map with the good and poor power or yield zones).* The results indicated that soil health was a reason for this. In the good power/ yield zone benchmarks, infiltration was 3 to 10 times higher, soil moisture was 0.7 to 1.1 more inches per foot of soil. There was 1 to 3 % more organic matter and the depth to a root restricting layer was 1.5 in. deeper.

Summary

Even tiny changes in indicators can have ripple effects and huge impacts on soil health, crop productivity and ultimately profitability. The 64 benchmarks established during this study can be revisited to monitor changes in soil quality after improving management practices. The soil quality field kit was a great tool for discussing soil health with farmers at field days or with students during soils courses.







A Soil Biologist at AAFC Beaverlodge Research Farm

by Bharat Shrestha

Hello and Namaste. I am a newly hired Biology Study Lead for Soil Health and Fertility Development in the Peace River region. I joined the position in late January 2020, and am located at the Beaverlodge Research Farm of Agriculture and Agri-Food Canada. I have been communicating with research associations and producers in the region to identify future research to harness the opportunities that climate change is bringing to this region, especially in the agriculture sector.

Originally I am from Nepal, a beautiful mountainous country in South Asia and the country of Mount Everest. I completed my undergraduate in Forestry from Tribhuvan University in 1995. Then I worked at the same university as an instructor for five years. In addition to teaching students in the classroom and field schools, I began my research career by documenting medicinal plants. That led me to do a thesis on ethno-medico-botanical knowledge for my master's degree in sociology.

Later in 2000, I won a Norwegian scholarship to study an MSc in Management of Natural Resources and Sustainable Agriculture. My professor motivated me to do research on how land use changes impacted carbon dynamics and climate change. It was my starting point of professional research in agriculture and soil science. I evaluated soils from natural forest, grazing lands, irrigated lands, and rain fed uplands. I published two scientific papers reporting the effects of land use changes in carbon sequestration in soil aggregates and greenhouse gas emissions. It immediately opened up a door to pursue a Ph.D. in Soil Science in the same university. My Ph.D. research took me south to New Zealand, and north to Iceland, along with several European countries and the United States of America to present my findings.

In 2005, I had the opportunity to study at Ohio State University with the world renowned soil scientist, Dr. Rattan Lal. I conducted an experiment that produced an excellent paper and was published in the Soil Science Society of America Journal. It was a breakthrough paper that evaluated the role of farmyard manure in soil health improvement through better aggregation and carbon sequestration in the micro-aggregates. I published a total of seven scientific papers from my M.Sc. and Ph.D. research.

Editors note: *During my work overseas in the early1980's and again during my Master's study in the late 1980's I often referred to Dr. Rattan Lal's research. I dreamed of meeting him in person so I could ask him all the questions accumulating in my head. I am so excited to have a new soil scientist in the Peace and doubly so because he brings a whole respected network of expertise with him to our region.*

After completing my Ph.D., I won an Ontario Government postdoctoral scholarship at Lakehead University in Thunder Bay. During my two year tenure from 2008 to 2010, I evaluated the effects of clearcut harvesting and forest fires in carbon dynamics, soil aggregation and associated carbons in forest stands. I found that the difference between two types of disturbances in terms of soil carbon persists for a decade, and only then do they merge.

In 2010, I won an NSERC fellowship to join the Agri-Environment Research Team led by Dr. Ray Desjardins at the Ottawa Research Centre of Agriculture and Agri-Food Canada. During my three year tenure from 2010 to 2013, I worked in four different projects to evaluate the effects of cropping and land management on regional climates and soil organic carbon dynamics (SOC). I found the changes in SOC are not visible until a decade later in arid soils and long term continuous cropping builds more SOC in the future warmer climatic scenario as well. The carbon footprint of canola production in recent time has reduced significantly compared to the 1980s mainly due to technological advancement and beneficial management practices in the Prairie Provinces. However, the frequency and severity of extreme weather events have increased in recent decades. This is attributed to continuous cropping practices which put more moisture into the atmosphere from transpiration.

My most recent engagement was with the University of Alberta, where I was a team lead for measuring field emissions of greenhouse gases in different grazing practices at different geographical locations within Alberta *(see photo above)*. Preliminary results are showing that the adaptive multi-paddock grazing system benefits in mitigating effects of climate change by emitting less greenhouse gases and sequestering more carbon into the soils compared to conventional grazing. The research team is analyzing collected data to integrate the other factors of ranch management with those contributing to soil health and productivity.

A Soil Biologist at AAFC *continued*

by Bharat Shrestha

My wife Kalpana holds a Master's degree in Chemistry from the Tribhuvan University in Nepal and another Master's degree in Aquaculture from the Norwegian University of Life Sciences. Here in Canada, she updated her education in the health sector and is currently working in that field of training. She devoted her whole time raising our two sons and let me free to go wherever my profession takes me. Now, our older son is a fourth year student of Computer Engineering at the University of Waterloo in Ontario and the younger is starting his study in Computer Science at Queen's University this fall. *(See photos of my family to left.)*

We love to travel to different countries to enjoy a different culture and tradition. We have visited many European countries including England, Germany, Iceland and Scandinavian countries. When we came to Canada we visited most of the Canadian cities, from Quebec to British Columbia, and US cities such as Minneapolis, Saint Paul, and New York. We love nature and go together hiking when time permits, the only way to take a break from the digital world. My wife loves gardening during her free time. Occasionally, we will grow organic vegetables at home garden, practicing integrated farming.

Editor's note: *The AAFC Research Team from Beaverlodge Research Farm have asked the Peace River Forage Association to partner on research and technology transfer projects. Currently, Dr. Nitya Khanal is collaborating with Project Lead Julie Robinson on the Interseeding to Improve Forages Project (described earlier in this newsletter). Now Dr. Bharat Shrestha seeks our partnership to examine soil health, carbon dynamics and land use management. Currently, we are in dialog with both AAFC and NLC to explore possibilities for collaborating on future projects.*

President's Message

by Neil Ward

Wow! In the last 48 hours we had just shy of 5" of rain! Don't get me wrong; I am not complaining… where I grew up in southern Alberta that might be all we'd get for a whole growing season. But that much rain does mean I am dealing with a whole list of new tasks this week.

With all this rain and moisture, we are going to have an incredible season with great growing conditions. I stood in one of our alfalfa fields today where the soil was gravelly and the alfalfa plants were up to my hip bone. Our pastures are growing fast, and I am moving our cattle often.

But these are challenging times and we wonder as livestock and hay producers about the uncertainties of the marketplace this fall.

I am excited about the prospects of working with **Dr. Bharat Shrestha** and other researchers at the Beaverlodge Research Farm of Agriculture and Agri-Food Canada. We are having conversations and conference calls to explore the possibilities.

The Peace River Forage Association was successful in getting a project approved by the BC Hydro Agriculture Compensation Fund. From a choice of many good candidates, the Board has offered the position of Events & Extension Coordinator to **Samantha Dilworth.** She introduces herself earlier in this newsletter.

We look forward to working with Samantha to plan events and figure out new ways to share information with you as members, within the challenges of Covid-19 pandemic. Please watch the website and facebook for updates on this.

You can also let us know by **filling out the feedback form** included in this package. If you prefer other methods of us contacting you about updates, just let us know. Your feedback is important so that the new people working for this association can serve you better as members.

Forage U-Pick Launched

By Julie MacKenzie

Saskatchewan Forage Council
Box 71 | Dilke, SK | S0G 1C0
306-731-7610
office@saskforage.ca

For immediate release: June 8th, 2020
New and interactive forage selection tool launched for Western Canada

The Saskatchewan Forage Council is excited to announce the launch of Forage U-Pick, a new interactive forage species selection tool for Western Canada. Designed to provide users with information for forage selection, seeding rates, and weed management, Forage U-Pick is a mobile-friendly tool offering timely and efficient advice.

Forages for hay and pasture are essential for beef production. Ensuring that forage species are well-suited to growing conditions improves establishment rates, yield, vigour and quality. The Forage U-Pick tool provides information that can help to reduce costs, improve utilization and number of grazing days, and increase profitability.

“Forage U-Pick has been a massive undertaking,” says SFC President Tamara Carter. “The Saskatchewan Forage Council is delighted with the collaborative efforts of all the contributors, and project manager Julie MacKenzie, for bringing our vision for a western Canadian forage tool to fruition.”

Forage U-Pick is an intuitive and easy-to-use platform:

- ◊ *Forages Suited to My Field* allows users to choose their province, soil zone or a regional zone and provides a list of forage species that are suited to the selected zone.
- ◊ *The Seeding Rate Calculator* is used once users have selected the forages they want to seed, ensuring that the right amount of seed is put into the ground to have the best possible chance for a good stand.
- ◊ *The Forage Weed Management* area of the tool touches on how the economic success in forages can increase with proper weed control.

“This project is a collaboration of more than a dozen organizations, across four provinces,” says Carter. “Through their contributions of time, expertise and funding, all of these groups came together to build one great tool for producers.”

Forage U-Pick, launching June 8th, can be found on the SFC website www.saskforage.ca and at www.upick.beefresearch.ca.

Funding for Forage U-Pick was provided by the Beef Cattle Research Council, Alberta Beef, Forage and Grazing Centre, Saskatchewan Forage Council, and the Government of British Columbia and Government of Canada through the Canadian Agricultural Partnership.

Technical collaborators on this project included: Agriculture and Agri-Food Canada, Alberta Agriculture and Forestry, Alberta Beef Producers, Alberta Beef, Forage & Grazing Centre, BC Ministry of Agriculture, Chinook Applied Research Association, Ducks Unlimited Canada, Manitoba Agriculture and Resource Development, Northern Peace Applied Research Association, Peace River Forage Association, Peace River Forage Seed Association, Saskatchewan Forage Council and Saskatchewan Ministry of Agriculture

For more information, contact:

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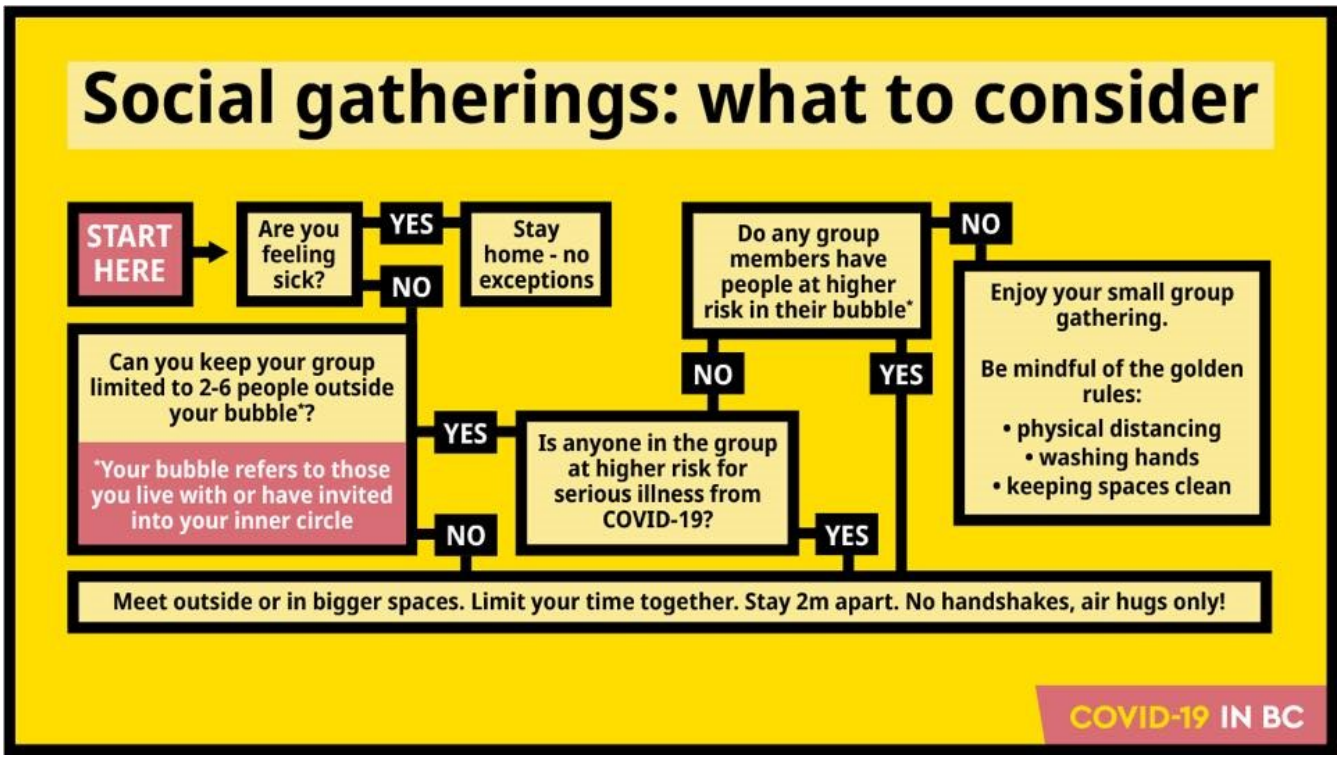
Note from Julie MacKenzie: I really want to add to the comments for your readers how your association and your support made success so much easier. Learning and growing from your wonderful seeding tool was very much appreciated. It’s the vision people have to grow projects onward that continues to make the forage industry grow in success. Thank you so much for your input- highly valued. And by the way folks up there speak of you and your group, you’re their top resource to turn to!

Upcoming Forage Events in BC



Please Note:

This year's summer tour is cancelled due to current COVID-19 concerns.

However, as restrictions change, we may be able to host smaller events such as our summer & fall pasture walks.

Hosts, Dates & Locations To Be Announced Soon by Our Newly Hired Events & Extension Planner Samantha Dilworth

In the meantime, we will be exploring alternate & virtual ways of sharing info with you.

For more info: Follow updates on our website www.peaceforage.bc.ca
OR follow us on Facebook
OR email prfaevent@gmail.com

You too can be a Friend of Forage !
The newsletter advertising rates are:

$75	business card
$125	1/4 page
$200	1/2 page
$300	full page
$500	full 2 pages

You can also be a Friend of Forage by buying coffee or a meal at one of our events. Or call us with your idea at 250.789.6885 or by emailing coordinator@peaceforage.bc.ca

Please Note:

This year's PRFA of BC AGM will be held on December 1, 2020

Location To Be Announced

For more info: Follow updates on our website www.peaceforage.bc.ca
OR follow us on Facebook
OR email prfaevent@gmail.com

Peace River Forage Association
of British Columbia

SECOND NOTICE
2020 Annual Membership Fee: $50.00
Membership year is April 1, 2020 to March 31, 2021

Contact Information:
Family Name: _____

First Names: _____

Company/Ranch Name: _____

Mailing Address: _____

_____

Postal Code: _____

Phone: _____ Fax: _____

Email: _____

Preferred Method of PRFA of BC contacting you: _____

PRFA of BC is subject to the Freedom of Information & Protection of Privacy Act. Therefore this office will not release information to anyone other than those involved in PRFA of BC business, events & information sharing.

◊ **Please check here** if you authorize us to use your information to contact you about events , sharing knowledge & other PRFA of BC business.

Fellow Forage Enthusiasts please note:
This $50 membership fee provides you with 3 to 4 newsletter & information packages mailed out per year (Forage First), copies of our Forage Facts from our research projects, special pricing at our events & member pricing when using our rental equipment.

Multi-Year Membership:
Some members have suggested we give you this option.
Please check if you would like to purchase your membership for more than one year & make your cheque out accordingly:

_____ # of years x $50 per year = $_____

Please make your cheque payable to:
Peace River Forage Association of BC
(PRFA of BC)
& mail to:
Box 955,
Dawson Creek, BC V1G 4H9
or
bring this form & your cheque
to one of our events.

Thank you for your support !

Main Enterprise & Interest

Please check one or more that apply to you:

- Beef
- Dairy
- Sheep
- Bison
- Horse
- Game
- Seeds
- Hay
- Grazing
- Agribusiness
- Resource Agency
- Forage Enthusiast
- Association Projects
- Industry
- Other

Please turn to the other side & give us your feedback about:

What events & topics & speakers should we organize next?

How should we share information?

What would you like to see in a future R & D project?

Thank you for your time in making the Peace River Forage Association of BC a member driven organization !

Your input matters

Feedback From Members of the Peace River Forage Association of BC

If you would prefer person to person please call Sandra at 250 789 6885 or email coordinator@peaceforage.bc.ca with your ideas & feedback.

Events:

What events have helped you in your operation or business?

◊ tours ◊ workshops ◊ podcasts ◊ other

◊ field days ◊ seminars ◊ webinars _____

What events or topics or resource people should we organize next?

What have we done well? What could we improve on?

Sharing Information:

How would you like to hear about events?

◊ mail ◊ newsletter ◊ texts ◊ phone

◊ website ◊ facebook ◊ other _____

How do you like getting information & results from R & D projects?

◊ mail ◊ newsletter ◊ texts ◊ other

◊ website ◊ facebook ◊ factsheets _____

How often do you want to get information from PRFA of BC?

◊ 3-4 x yr ◊ monthly ◊ weekly ◊ daily

R & D Projects:

What would you like to see in a future R & D project?

◊ grazing ◊ rejuvenating ◊ soil health ◊ forage sp

◊ fencing ◊ weed control ◊ other _____

What R & D projects or topics have improved your operation or business?

Why were they worthwhile?

Your ideas will be compiled for the Board of Directors as they develop their next 5 year strategic plan.

Thank you for your time in making the Peace River Forage Association of BC truly a member driven organization !

Peace River Forage Association of British Columbia

JD 569 Baler
2014, 5600 Bales
Twine, Net & Silage Special

CASE 430
2006, Open ROPS
2355 Hours

McHALE BALER
2019
5'x5' Bales

KUHN WHEEL RAKES
2020
10 & 12 Wheel Rakes

NH BR7090 BALER
2012, Specialty Crop, 7500 bls
Twine & Net, Large Tires

JBS MANURE SPREADER
2020 Various Models
360 - 600 cu ft Capacity

KUHN DISCBINES
2020
13' - 14' 6"

KUHN GA 7501
24' Rotary Rake
Centre Delivery

Give us a call, stop in, or head on over to our website for more information on any of our lines.

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250.719.7470
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