

# Peace Country Beef & Forage Association

The Peace Country Beef & Forage Association was founded in 1982 by livestock producers in the Fairview and Hines Creek area for the purpose of demonstrating new forage varieties and technology. The PCBFA in a non-profit, producer drive, unbiased applied research association, focusing primarily on forage and beef research. We are currently made up of 10 directors, 3 staff and 140 members from across the Peace Region.

### **Mission:**

"Forages and Beef; Partners in Profits"

### Mandate:

The Peace Country Beef & Forage Association believes that the sustainability of rural communities in the Peace River region will be dependent upon a strong agricultural economy with livestock production as its foundation.

# Goal:

Our goal is to improve the profitability and sustainability of the forage / beef industry in the Peace region through the transfer of leading edge forage and beef technology to producers, students and industry representative through innovative extension activities and initiatives. By providing forage / beef producers with the management tools needed to manage their unit cost of production, production and marketing risk and environmental liability.

# **Our Region:**

PCBFA works with producers in an **area stretching from High Prairie to the B.C. border and from Manning to Valleyview.** Our focus area **has 1.9 million acres** of pasture land and **180,000 breeding cows.** 



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### **MESSAGE FROM THE PRESIDENT**

# Ryan Leiske

The Peace Country Beef and Forage Association had had an exciting year. Some of the projects this year, just to name a few, included corn grazing trials at GPRC—Fairview Campus, Bud Williams Marketing course in Grande Prairie and a couple of pasture walks.

The ongoing success of this dynamic association is due to the commitment of our staff. Jaime Borduzak-Semple is our manager, she has an amazing ability to source funds and organize projects. Akim Omokanye is our research coordinator. He has been doing some very interesting research with forage and feed crops. Our newest member is Morgan Hobin and her role is extension coordinator. Morgan joined us in June after a two year work experience in Australia and took over Alison Frixel's role. She has brought with her a lot of enthusiasm and great new ideas. Morgan also has a lot of experience in ruminant nutrition and putting together extension material.

The PCBFA board meets four or five times a year to discuss and help with the development of new and existing projects. We have ten directors on our board that represent the area from North Star to Teepee Creek and from the BC Border to High Prairie. The board members represent their area and try to suggest projects and seminars that are of interest to producers.

Through these meetings and from the workshops held over the past year, PCBFA was able to put together a new 3-year program for funding through the Agriculture Opportunity Fund (AOF). This program will be implemented April 1, 2012. We are very much looking forward to getting the projects and workshops started. We hope and think that it will impact all Peace region farmers in a productive and profitable way.

I wish you all the best for the 2012 season and hope to see you out at many of the PCBFA events!

Ryan Leiske

### **MANAGER'S REPORT**

### Jaime Borduzak-Semple

The 2010-2011 season has come and gone and the Forage Association has succeeded in achieving another prosperous year. This year was the final year of our program "Building a Sustainable Farming Future". This program was focused on the business management side of the farm, understanding break evens, knowing your cost of production, how to change, and how to find profits in every enterprise. Along with a business management program we also carry out an extensive program in both cattle and many forage varieties.

The funding for our program is sourced primarily from three sources AOF-Agriculture Opportunities Fund, ASB Agriculture Service Board environmental program, and 8 municipalities: MD of Fairview, MD of Peace, Clear Hills County, Saddle Hills County, MD of Spirit River, Birch Hills County, MD of Big Lakes & MD of Greenview. We also apply for many project specific grants throughout the year. We operated on a budget of approximately \$400,000.00 in accumulated grants. This year we have applied for even more and hope to add part time summer staff to our organization. This year we were also able to make an overdue purchase of a new used truck. This will assist in all of our summer projects and winter extension programs. We appreciate all the support the municipalities have provided for us without their support our program would not be possible. I hope we can continue to work together and increase our partnerships in years to come. This year we have made our transition changes from the AESA program to the ASB environment program, we are now running 3 programs in 7 municipalities. One in the North Peace with MD's of Fairview, Clear Hills and Peace, second in Central Peace with the Counties of Saddle Hills, Birch Hills and Spirit River and the third in the MD of Big Lakes. With this program we were also able to contract some environmental sustainable crop production work with PARDA, our neighbor association.

Staffing At the association now consists of three full time employees; Research Program Coordinator Akim Omokanye and ASB/AESA Technician and Extension Coordinator Morgan Hobin, who are both working out of the Fairview office. The second office location is in High Prairie where I am located. It has been operating successfully for 6 years. There are a number of new members from this region and many new and innovative project ideas coming from these members. We are currently looking to hire summer staff this year and we are also looking for full time Project Coordinator for the High Prairie Office. For those of you who are not aware I will be going on maternity leave March 1 of this year.

We are still producing the monthly forage facts newsletter which has become a huge success. We also publish a semi-annual magazine call Peace Country Applied Research Update, with the other applied research groups in the Peace. We are also continuing to create a summer edition of Forage Country our yearly magazine which outlines most of the year's projects and summer workshops. We receive many phone calls about our findings and are always looking for new ideas or ways of doing things. This year we continued with an Annual report which received great reviews from last year. We hope you find the information from our projects, trials and extension workshops useful and exciting. We appreciate any comments from our members and are always welcome to a challenge or even a conversation.

As we look back on the 2011 beef industry we reflect about the many changes that have occurred. We refer to the producers who are continuing in the beef industry as the survivors. <u>"The SURVIVORS"</u> in terms those who survived the BSE, cattle price crash, inflated oil and fuel, unhinged grain markets and severe drought to severe flood. Those producers who are still in this business truly are the survivors of their time. Now that cattle prices have begun a rapid climb I hope to see many of the survivors in our offices to discuss optimal ways to capture some of the profits in this ever changing agriculture industry. And hopefully our new program examining the farm as a whole, and how each individual enterprise works with one another, will help benefit those of you who are career farmers and who we will continue to work with year after year.

The last six years have been a great experience for me, as a I move forward with my family I would like Thank you all for the opportunity to expand my knowledge and career, I look forward to working with you again in the future.

#### Jaime Borduzak-Semple

#### 2011 BOARD OF DIRECTORS

President:	Ryan Leiske	Silver Valley					
Vice President:	Chris Roy	Fairview					
Treasurer:	Grant Gaschnitz	High Prairie					
Secretary:	Corey Beck	Sexsmith					
Directors:	Garth Shaw	Fairview					
	Steve Johnson	Fairview					
	Elton Kauffman	Bluesky					
	Lawrence Andruchiw	Spirit River					
	Denis Bouvier	Guy					
	Guy L'Heureux	Joussard					
	<u>Alberta Agricu</u>	lture Advisory					
Calvin Yoder, Forage	e Specialist—Alberta Agricul	ture	Spirit River				
Freeman Iwasiuk, Be	eef Business Development–	-Alberta Agriculture	High Prairie				
	Staff and Conta	ct Information					
High Prairie (	Office	Fairview Office					
Manager: Jaime Boi	rduzak-Semple	Research Coordina	tor: Akim Omokanye				
jborduzak@ŧ	gprc.ab.ca	aomokanye@gprc.ab.ca					
High Prairie I	Provincial Building	Extension Coordina	ator: Morgan Hobin				
Box 2803		mhobin@gprc.ab.ca					
High Prairie,	AB TOG 1E0						
Phone: 780 5	523 4033	Rm. 134 Animal Science Building, GPRC					
Fax: 780 523	6569	Box 3000					
Cell: 780 835	0381	Fairview, AB TOH 1L0					
		Phone: 780 835 6799					
		Fax: 780 835 6626					
	<b>Municipalities</b>	and Counties					
MD o	f Fairview No. 136	MD of Spirit River,	No. 133				
MD o	f Peace, No. 135	Birch Hills County					
Clear	Hills County, No. 21	MD of Big Lakes					
Sadd	e Hills County	MD of Greenview, No. 16					

# The Agricultural Research and Extension Council of Alberta (ARECA)

In response to changing needs and the AAFRD funding structure, the applied and forage associations came together to form the Agricultural Research and Extension Council of Alberta (ARECA) in 2003. It is a not-for-profit organization working with producers to enhance and improve their operations through access to field research and new technology. It is dedicated to enhancing the sustainability and profitability of agriculture in Alberta.

Made up of 14 member organizations focused on both applied research and the forage industry, ARECA acts as a strong, united voice for producers by speaking on their behalf to industry leaders and government representatives. Each member association delivers programs and develops projects that address the concerns and priorities of producers in their specific regions.

In addition to the work don in each of the regions, ARECA oversees province-wide initiatives including the Sustainable Grazing Mentorship Program, Regional Variety Trials, Integrated Pest Management and Risk Management Strategies in Wheat and Other Cereals, the GPS Industrial Site Monitoring Project and the Alberta Forage Industry Network. ARECA and its member associations participate in and organize a wide variety of conferences and information sessions for producers. Some of the include: Western Canadian Grazing Conference, Forage Agronomy Update, workshops and various farm and field tours at location throughout Alberta.

ARECA Member Organizations:

- Battle River Research Group (BRRG)
- Chinook Applied Research Association (CARA)
- Foothills Forage & Grazing Association (FFGA)
- Gateway Research Organization (GRO)
- Grey Wooded Forage Association (GWFA)
- Lakeland Agricultural Research Association (LARA)
- Mackenzie Applied Research Association (MARA)
- North Peace Applied Research Association (NPARA)
- Peace Agriculture Research and Demonstration Association (PARDA)
- Peace Country Beef & Forage Association (PCBFA)
- Smoky Applied Research and Demonstration Association (SARDA)
- South Alberta Conservation Association (SACA)
- Southern Applied Research Association (SARA)
- West Central Forage Association (WCFA)



Agricultural Research and Extension Council of Alberta



### ARECA & PCBFA Website

Our umbrella organization, ARECA, has a section on their website for applied research associations. Our website can be found by going on <u>www.areca.ab.ca</u> and then going to the Members menu. Under that menu, find PCBFA and there you will find our page. We update this page all the time with monthly news-letters, ongoing projects and upcoming events. The ARECA website is a great source of information about what is happening all over the province, as well as with other applied research associations in the Peace region. You can also join our group on Facebook at <u>http://www.facebook.com/?ref=tn\_tnmn#!/groups/pcbfa/</u>.

# A YEAR IN REVIEW...

# Message from the Executive Director

2011 provided significant challenges for excess moisture but then the tap was turned off for a dry harvest. Marketing of barley and wheat poses uncertainty for Alberta producers but will likely offer opportunities for consideration of a new way of business. There has been change within the ARECA member Associations with the loss of Central Peace Conservation Society as a member of ARECA and merger of Southern Alberta Conservation Society and Southern Applied Research Association into Farming Smarter.

For **ARECA**, a strategic planning workshop in July offered the ARECA Board, Association Managers and ARECA representatives an opportunity to discuss where do we go from here. Four areas were highlighted and they include communication, financial training and administration. The **ARECA Board** of Directors convened for three Board meetings plus five being conference calls. Discussion has been about dispersement of Association equipment to other Associations, strategic planning, training fund, participation in FarmTech and membership fees.

A website Committee under the chair of Laura Gibney provided direction for refreshment of the **ARECA website**. Those revisions are being implemented with support from the Associations in terms of content and graphics. Our readership has continued to grow especially since it includes important announcements from Associations.



**Regional Variety Trials** are under the coordination of Alex Fedko with Alberta Agriculture and Rural Development (ARD) who replaced Gayah Sieusahai this spring. Alex works with ARECA and Associations to ensure the delivery of these trials throughout Alberta. This has ensured that producers can access unbiased, agronomic information for different cereal and pulse cultivars.

This is the last year for the **Regional Silage Variety Trial** with six Associations (Meghan Elsen coordinated the project) reporting on the nutritional value of annual crops for feed (silage, greenfeed and swath grazing). Six nutritional categories are reported including Crude Protein and Total Digestible Nutrients for different cereal cultivars – the information is available in the Alberta Seed Guide (seed.ab.ca). The project has been funded by the Alberta Beef Producers (ABP) and a request for continued funding from ABP is in progress.

**ARECA and WCFA partnered with Canadian Rangeland Bison and Spring Creek Ranch** to develop a 'made in Alberta solution' by the creation of a branded program that verifies environmental sustainability, animal welfare and food safety using a third party external audit system. With funding from ALMA, this project will review options to develop a system that is an all-encompassing, third party audited system with a consumer recognized brand or seal. This system will provide consumers assurance that issues such as wildlife habitat,

rangeland health, riparian habitat, and manure are being managed in a responsible manner and animals are treated humanely from birth to slaughter. This system will also assure customers that food safety is paramount at every step of production. The project consists of 3 phases with the first phase to be complete by spring, 2012.

The **Energy Conservation and Energy Efficiency** project set out to examine energy use on Alberta grain farms. Two studies examined the relationship of tillage practices and energy consumption. The reports explore Energy Intensity Measures, Energy Output/Energy Input Ratios and Less Tillage Indices. These studies reveal a trend of increasing energy efficiency and related reductions in energy intensity in recent years. These trends are felt to indicate that the economic, environmental and sustainability benefits of energy efficiency are shaping producer decisions.

The potential for variable rate technology (VRT) to impact fertilizer use efficiency was studied on 6 farms in 2009 and 2010. The reports include an economic analysis of the impact of this technology on yield and fertilizer applications. Although the short run economic benefits of VRT are challenging, there are opportunities for gaining economic benefits in the long run. These will come from continuously improving knowledge of how fertilizer performance varies across a given field (under different environmental conditions) and continuously developing capabilities to vary crop inputs according to the specific needs of each unique zone. Funding for this project was provided by the Alberta Government.

ARECA is hosting the first **"PRECISION AG 2.0: The Next Generation"** Conference at the Deerfoot Inn & Casino in Calgary, February 22-23 2012. As GPS and GIS is now everywhere, the next level is to understand how we can use this technology to make a profit and grow the industry. Topics covered will include increased profitability and sustainability, protecting the environment, optimizing your use of agricultural inputs, data management, on-farm research and more. The conference will feature...



• 2 full days with over 30 speakers & interactive breakout sessions

• Current information on practices and technologies being adopted by progressive farmers in Western Canada and abroad

- Topics for all skill levels and experience
- 35 tradeshow booths dedicated to precision agriculture
- Meet with progressive and innovative practitioners of precision agriculture

ARECA and Associations were involved in planning workshops such as Cow-Calf Economics, Advanced Agronomy Conference and Forage Agronomy Workshop. Additionally, funding applications were developed for swath grazing, data tools for precision ag and field efficiency and obstructions.

With sustainable and effective member associations, ARECA and Associations are respected leaders in applied agriculture research and extension. Our mission is to collaborate with member associations and partners to enhance delivery of reliable and unbiased applied agricultural research and extension. As we go forward in 2012, I wish to thank everyone for their contributions and efforts in 2011 - may we continue to build on our vision.

Ty Faechner, Executive Director

### ACKNOWLEDGEMENTS

PCBFA greatly appreciates the following contributors for helping us deliver important extension programs and conduct essential projects in 2011:

#### Funders

Agricultural Opportunity Fund (AOF) Agricultural Research and Extension Council of Alberta (ARECA) Alberta Agriculture and Rural Development (AARD) Alberta & Agri-Food Canada (AAFC) Alberta Environmental Farm Plan (EFP)

#### **Municipal Districts & Counties**

MD of Fairview, No. 136 MD of Peace, No. 135 Clear Hills County, No. 21 Saddle Hills County MD of Spirit River, No. 133 Birch Hills County MD of Big Lakes MD of Greenview, No. 16

#### **Agri-Business & Collaborators**

Brett Young Seeds Pioneer Viterra Champion Feeds Keddies PickSeed Dynamic Seeds Ltd - Fairview Sustainable Soil Solutions Peace River Seed Co-op Ltd– Sexsmith Nature's Way Farm - Grimshaw Golden Acre Seeds - Fairview GPRC Growing Forward.

#### **Co-operators**

Odell & Lillian Raymond John & Jean Milne Garry & Trudy Gurtler Grant & Audry Gaschnitz Guy & Cathy L'herueux Paul & Lori Kinnee Lawrence & Lori Andrunchiw Tim McGrath Rolland & Faye Calliau Three Creeks Grazing Reserve Whitemud Grazing Association Wally & Christen Lentz John Prinse Garth & Rhonda Shaw Elton & Esther Kauffman

#### Partners

SARDA PARDA NPARA MARA High Prairie Riparian Action Team Lesser Slave Watershed Council Cows and Fish

### SERVICES PROVIDED BY PEACE COUNTRY BEEF & FORAGE ASSOCIATION

- Feed Testing and Ration Balancing
  - Ongoing throughout the winter
- CowBytes "Kitchen" Courses-
  - Set one up at your kitchen table with some neighbours
    - Use your feed analysis and end up with a balanced ration for your operation
    - Cost \$25 per farm unit
- Soil Testing and Fertilizer Analysis
- Livestock Water Quality Testing
- Age Verification and Traceability Concerns
- Environmental Farm Plan Assistance and Workshops
- Growing Forward, Water Management Planning Assistance
- Nutrient Management Analysis and Assistance
  - Informing producers on the benefits of manure as a fertilizer source
  - Proper manure testing techniques
- Peace Country Beef School
  - To inform and educate producers on beef fabrication and marketing of beef (gate to plate)
  - Hands on learning involving live and slaughtered carcass evaluation
- Gallgher Portable Scale and an Electronic Tag Reader for Rent (\$25/day or \$40/day for both)
- 320 bushel Creep Feeder Available for Use
- Portable Solar Watering System Available for Use

# 2011 IN REVIEW

# **AESA AND EXTENSION HIGHLIGHTS**

Extension Activities for Every Producer



We deliver extension all over the Peace. Our direction is taken from our Board Members, a group of elected producers from the Peace Region.

### PLOT TOUR & PASTURE WALK — HIGH PRAIRIE

On June 21<sup>st</sup>, we hosted our first summer event. The weather cooperated and we had a lovely sunny day, which was a definitely welcomed after the preceding weeks of rain. Representatives from Sundog Solar and Scott Miller from Sustainable Soil Solutions joined us for the day, where we were able to discuss improving soil structure, subsequent forage quality increases and using portable solar watering systems. We began the day at the High Prairie forage plots located at the airport and after a great BBQ we made our way to the "Banana Belt" and visited Tim McGrath's for a pasture walk. During the pasture walk we had a look at Tim's solar watering set up, his location for the new dugout and a few of his pastures, which had quite a bit of material available for grazing and discussed how he was going to fit them into his grazing strategy this year.

### DYLAN BIGGS CATTLE HANDLING CLINICS—GRIMSHAW & VALLEYVIEW

We partnered with NPARA to hold two cattle handling clinics over four days in Grimshaw and Valleyview on July 7<sup>th</sup> & 8<sup>th</sup> and July 9<sup>th</sup> & 10<sup>th</sup>, respectively. The Grimshaw clinic was held at Michael Scott's and the Valleyview clinic was based at Faye & Roland Cailliau's. Weather wasn't on the side of the Grimshaw clinic and found most of the two days inside discussing the handling principles, whereas in Valleyview the weather held and participants had an equal opportunity to discuss the principles and then put them into practice in the pasture. Dylan demonstrated how to move a herd of cattle with a limited number of calm and collected peo-



ple and how positioning and persistence is key. He also demonstrated how to separate cow/calf pairs from the herd and in a pen situation. Producers that attended were either able to observe or participate over the two days. They were enthusiastic students and learned many techniques that could be taken home and implemented on each individual farm.

### **PASTURE WALKS—DEBOLT & THREE CREEKS**

Over two days at the end of July, the 27<sup>th</sup> and 28<sup>th</sup>, producers were joined by Rob Davidson from Powerflex to have a look at a few pastures in the Peace. Once again, we had great weather for both days, which for many saw an opportunity to get some much needed haying done! On the 27<sup>th</sup>, we had a tour of Shelley Morrison and her dad Everett's pasture land in the morning and an extensive tour of the Goodwin Grazing Reserve, just



down the road, in the afternoon. During the first day we discussed using a high stocking rate to rejuvenate pastures as an alternative to reseeding, ripping it up etc. Grazing in the bush was also talked about and what some of the best strategies are in order to go about doing so with minimal impact on tree growth, which is essential for shelter. Watering systems were also looked at and fields that had been reseeded and thriving due to the recently received moisture. On the 28<sup>th</sup>, we travelled to the Three Creeks Grazing Reserve, where pastures treated with Grazon were seen to affect bush and legume growth. In addition, watering systems and setups were viewed. We also received an in depth understanding on how the reserve was set up and how grazing rotations were developed.

#### FORAGE PLOT TOUR & SOD SEEDING DEMO SITES—WORSLEY

Forage crop specialist, Michel Tremblay, with the Saskatchewan Ministry of Agriculture was our guest speaker for our plot tour in Worsley on August 16<sup>th</sup>, in which we partnered with PARDA. He gave a bit of background on the agronomic practices of sod seeding and how to be sure that this technique is successful and joined us for a look at the plots seeded near the MD office. Producers were able to see stands of annual crops for forage and seed that included barley, oats, canola, wheat and millet. The site for the fall *vs* spring seeding trial was also looked and discussed.



### CORN & WARM SEASON ANNUALS FIELD DAY—PEACE RIVER

On August 23<sup>rd</sup>, producers were treated to a full day of new information and speakers from across western Canada and Utah State University. Reynald Gauthier, the "Millet King", from Manitoba spoke on growing millet from seeding to grazing and everything in between. He was able to use the proso and german millet varieties that were present at Odell and Lillian Raymond's to demonstrate the characteristics of each. Pioneer's Richard Lussier and PCBFAs, Akim Omokanye, discussed the corn varieties that were also being grown at the site. It was incredible to stand amidst the corn and think that a place so north could grow this great crop to be utilized to extend the grazing season of a cow/calf operation. In addition to the millet and corn, the Raymond's were also growing forage sorghum, oats and turnips. Following an informative morning session, producers retreated to the shed for an amazing beef-on-a-bun lunch. Beth Burritt, from Utah State University, had the opportunity to speak for the afternoon on how to promote or train cattle to eat less desirable or unfavorable forages. This was quite an interesting session and many producers took home the tricks of the trade on how to get their animals to eat thistles and many other weeds that happen to be present in Peace region pastures.



Peace Country Beef & Forage Association 2011 Annual Report

#### FORAGE PLOT and WARM SEASON ANNUALS TOUR — FAIRVIEW

Following the day in Peace River, we had the Millet King join us for a morning session at the Fairview plots. The warm season annuals and corn did so well this year with all of the moisture and heat that we couldn't pass up the opportunity to show them to area producers. Like the High Prairie plot tour, the legume and grass varieties were also looked at, with the focus being on the recovery of specific sections relating to the project looking at timing of hay cutting. Forage yields, quality and quantities were also measured. We also began sampling 5



common species for selenium, which will be a future project for PCBFA and producer's who are interested in the selenium levels in the Peace region.

# 2011 CAPTURING FEED GRAIN & FORAGE OPPORTUNITIES CONFERENCE: "Feeding is a Changing Game" — STRATHMORE

Close to 150 participants, including PCBFA staff and a few members (Corey Beck, Grant Gaschnitz and Bev Wieben), travelled to Strathmore to attend a two day conference from November 22<sup>nd</sup> & 23<sup>rd</sup>. Over the two days, participants listened to beef & forage specialists, nutritionists and western Canadian beef producers on techniques and tools that can be implemented in a winter feeding program. Speakers included beef and forage specialists and researchers Barry Yaremcio, Duane McCartney, Don Flaten and John McKinnon, just to name a few. Producer speakers also included Doug Wray, Leam Craig and John Beasley. Topics discussed ranged from wintering site management to feed related issues to producer perspectives on wintering systems. The keynote speaker for the banquet on the first evening was beef market analyst, Debbie McMillian, who discussed marketing and diversification strategies. Attendees were also able to visit tradeshow booths that were set up in the conference room. The PCBFA staff have been actively involved in the planning of the "Feed & Fodder" conference for a number of years. We find it extremely beneficial to interact with producers, researchers and industry representatives from across western Canada. This opportunity gives us a lot of the knowledge needed for us to continue to provide cutting edge research and demonstration projects for our members. If you are interested in learning more about this event, please speak to any of us who attended.

### ENVIRONMENTAL FARM PLAN WORKSHOP—DEBOLT

In partnership with SARDA, & Country of Grande Prairie we held an EFP workshop on November 25<sup>th</sup> for any producers in the DeBolt region that either wanted to get a plan started, finished or updated. Perry Phillips from Agriculture and Rural Development (ARD) joined us to ensure the producers were on the right track and to finish training any technicians in the area that needed to be done. The purpose of the EFP is to identify and address any potential risks that a producer's current farming strategy imposes on the surrounding environment. It also is a requirement for any producer wishing to apply for funding through the Growing Forward Program.

We have been contacted by many producers in the Peace region, not only to do Environmental Farm Plans, but to also help with filling in forms for grants that are available through Growing Forward. Some of these forms are only available through organizations such as ours. We always take time to help producers fill out these grant applications and give them tips on the best way to do so. Our staff is available to help with these forms and/or complete an EFP. We are also always on the lookout for information to provide to producers on any available programs and help them identify what projects qualify and which do not.

#### MARKET MORE BEEF WITH INCREASED NUTRITION WORKSHOPS—HIGH PRAIRIE & FAIRVIEW

Two marketing and nutrition workshops were held in High Prairie and Fairview on November 29<sup>th</sup> and November 30<sup>th</sup>, respectively. Producers that attended were treated to full day that addressed marketing and nutrition issues. Wayne Forbes, co-owner of Jubilee Feedlot in Westlock, talked about what feedlots are looking for in animals this fall and what they look for when purchasing cattle. Sheldon Wilcox, manager of Direct Livestock Marketing Systems (DLMS) also based in Westlock, discussed how online auctions worked and the steps producers go through in order to be involved in this type of marketing strategy.



Both speakers were very forthcoming with their information and spoke candidly on any question that was brought up from the audience. During the afternoon session, which focused on nutrition, producers were able to listen to information on corn grazing from a producer, industry and PCBFA perspective. In addition, the new version of CowBytes and nutritional requirements of beef cattle was presented. Doing double duty was ARD's Paul Jungnitsch, who shared his master's thesis on winter feeding strategies (bale grazing, bale processing) and the subsequent nutrient distribution. He also gave an update on the carbon credit program. All in all, feedback from the day was extremely positive!

### COW-CALF ECONOMICS WORKSHOP: "Managing the Opportunity" — GRANDE PRAIRIE

On December 5<sup>th</sup>, Alberta Agriculture and Rural Development, held a one day workshop, as part of a province -wide series, focusing on global markets, the value of calves, calving season, insurance programs, pasture productivity, knowing your yardage and nutrition. Presenters included Anne Dunford, Bruce Viney, Shannon Scott, Stuart McKie and Freeman Iwasiuk. PCBFA staff member, Morgan Hobin, also presented on behalf of ARDs beef/forage specialist, Barry Yaremcio, on the importance of understanding cow body condition score, nutrient requirements and how the new version of CowBytes can be of assistance in developing rations. The association trade booth was also on display with numerous publications available for attendees.

### FIGURING OUT FINANCIALS WORKSHOPS—VALLEYVIEW, SPIRIT RIVER & GRIMSHAW

Over the course of three evening sessions, held on December 13<sup>th</sup> in Valleyview, December 14<sup>th</sup> in Spirit River and December 15<sup>th</sup> in Grimshaw, we hosted workshops focusing on understanding farm income and expenses; the programs AgriStability and AgriInvest; operational structuring and succession planning. These sessions were presented by MNP representatives Mark Derenisky, Duane Peters and Craig Smith. The evening, that included supper, was a snapshot of many of the topics relating to farm financials, what some of the traps are and what to watch out for.



Attendees all received a comprehensive information package from MNP and gained a bit more insight into their own businesses. Stuart McKie from AFSC also attended each workshop and provided information on the cattle price insurance program. The evenings were topped off by drawing for door prizes that were so graciously donated by AFSC.



#### NEWSLETTERS

The Forage Facts newsletter is a monthly publication containing information about what events are coming up, projects we are working on and timely information about the beef and forage industry. These are mailed out to the membership, including our participating municipal districts and counties. The newsletter is an invaluable way to communicate information to our members, as well as inform them of new ideas on the horizon.

#### Forage Country Spring/ Summer Magazine

The association also producers a annual magazine during the spring summer months to highlight past project, new Projects, Hot topics, current events and Summer workshop. This publication also includes field maps to the seasons projects. Look for it this year as we will have some new and exciting information. This publication goes to 5000 rural mail boxes in our partnering municipalities.

### Peace Country Research & Extension Update,

The Peace Country Strategy was formed between all of the applied research groups in the peace region. We created a strategy to work together in areas to improve the quality of work being done in the Peace region. With this strategy we share communication plans and extension ideas, as well as research ideas and even some equipment. We publish an annual winter magazine which is distributes across the Peace 7500 copies are printed.

# **PLOT TRIALS & PROJECTS**



### On-Farm Evaluation of Corn, Millet and Sorghum for Yield, Quality and Grazing

Collaborating Producer: Odell & Lillian Raymond

There has been considerable interest in testing the grazing potential of warm season annual crops for their suitability in extending the grazing season in parts of the Peace. Reports from Peace region producers that have experience with grazing warm season crops, such as corn, have indicated that grazing cattle on corn can lower winter feed costs, reduce operating expenses and save time, as no harvesting is required and winter supplemental feeding is limited. In addition to these benefits, warm season crops like Proso and German millets can provide a high-yielding alternative to barley and oats, that can be utilized for greenfeed and swath grazing. Although, there are higher costs related to grazing season should still be considered an alternative low-cost method. The objectives of this trial were to evaluate warm season annual crop varieties for forage yield and quality and to examine the production cost of corn for grazing as a standing crop.

#### Methods

The trial took place at Odell and Lillian Raymond's farm, north of Peace River. Prior to seeding, the site had been a timothy-alfalfa pasture for 6 years and was used to winter cows for 2 years. In the fall of 2010, the site was Agrowplowed to a depth of 10 inches. Just before seeding, a broadcast fertilizer application of 75 lb N + 20 lb P/acre was done and the site cultivated with a vibra shank cultivator. Eight Pioneer Round Up Ready corn varieties (39F44, P7213R, 39V05, P8107HR, P7443R, X70B144R1, X70B140R, 39M26), 2 millet varieties (Proso & German) and a forage sorghum variety (CFS30) were seeded. The corn varieties seeded had corn heat units (CHUs) varying from 2000 to 2400 (see Figure 1). The corn varieties occupied 30 acres of land, while Proso millet, German millet and forage sorghum occupied 1 acre each. All the crops were seeded on May 26, 2011. Corn was seeded with a 12-row corn planter at 32,000 kernels/acre. The corn planter was set

at a spacing of 22 inches between rows. Millets and sorghum were seeded at 15 lb/acre. For corn, weeds were controlled with Roundup @ 400ml/ac and for millet and forage sorghum, 2,4-D amine was used 1 month after seeding.

#### **Results & Discussion**

#### Forage Dry Matter Yield

All the corn varieties tested out yielded the two millet and the sorghum varieties (Figure 1). Generally, corn forage DM yields were over 12 t/acre, with the top four (P7213, 39V05, P7443R and X70B144R1) yielding over 16 t DM/acre. German millet had the least DM yield (3.9 t DM/acre). The DM yield of individual corn plant parts was not determined here, but reports have shown that at least 60 per cent of the dry matter yield of corn comes from the cob, grain and husk, while the leaf, stalk and tassel provide less than 40 per cent of the dry matter yield.











### Forage Quality

The CP content of the crops varied from 7% for corn variety P7213R to 17% for the German millet variety (Figure 2). Corn varieties generally had a lower CP content than those of millet and sorghum. Levels of protein and energy (TDN) for all corn varieties were within the recommended values required to maintain or provide gains for cows in mid and late pregnancy under normal winter conditions. The levels of CP obtained for millet and sorghum were either adequate or more than adequate for cows after calving. The energy levels of millet and sorghum varieties obtained in this study were only adequate for cows in the mid pregnancy state.



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### Cost of Production Comparison

The cost comparison of seeding corn compared to oats is provided below in Table 1. Total direct (input) cost was lower for oats (\$71.10) and higher for corn (\$200.00), giving a difference of \$128.90/acre between the two crops. This is expected because of the higher cost associated with corn seed and fertility. Corn has a high fertilizer requirement, but costs may be lower if manure is applied. Soil analysis may also help further reduce fertilizer cost. In this study, the producer was able to save 25 lb N + 20 lb P/acre in fertilizer by soil testing. The savings were due to the fact that the site had been grazed for 6 years and used to winter cows for 2 years prior to seeding the warm season crops.

Input Cost (\$)/acre	Oats	Corn
Cost of seed	12.00	86.88
Cost of seeding	20.00	25.00
Fertility (fertilizer + application)	30.00	73.50
Herbicide + application	9.10	14.62
Total input costs (TIC)	\$71.1	\$200.00
Total acres (#)		30
Total Cost (TIC x # of acres)		\$6000.00
Grazing Cost Calculation		
# of cow grazing days per acre		180
Total acres		30
Total cow grazing days available		5400
# of cows (1400lbs) available		108
# of grazing days for cow herd		50
Total cost per cow per day		\$0.56/cow/day
Additional costs (machinery,		
labour) if:		
Swathed for grazing	yes	no
Swathed & baled	yes	no
Feeding	yes	no

### Table 1. Cost comparison, oats vs corn

Cow grazing days per acre and cost per cow per day are closely related to the maturity and yield potential of a corn crop. A mature corn crop with good yield potential will result in a higher number of cow grazing days and a lower cost per cow per day. In the present study, we estimated a cost of \$0.56 per cow per day. This is a huge savings considering the fact that it costs a cow-calf producer an average of \$0.90/cow/day in feed during the winter months.

Grazing corn, like swath grazing, cuts down on machinery costs. There is no expensive harvest equipment and no feeding equipment required, just a low cost electric fence and limited yardage costs. Our collaborating producer feels that feeding corn is worthwhile for their farm and will be increasing the number of corn acreage in the future.

# Sod Seeding of Perennial Forages into Strips

Collaborating Producer: Garry and Trudy Gurtler

In recent years, many farmers have found that grazing on productive pastures can be very profitable. However, many pastures are not as productive as they could be, as the amount and quality of forage do not meet the needs of the growing livestock. Adding new forage species to a pasture can improve its productivity. In particular, adding a legume such as alfalfa can increase the yield and nutritional quality of the forage and add nitrogen to the soil. There are many ways to add new species to a forage stand. One effective method includes terminating the existing pasture and seeding a new forage stand by direct seeding (sod seeding). In sod seeding, machinery and fuel costs tend to be lower compared to a conventional tillage system. By decreasing the amount of fuel used, farmers can lower energy costs, boost the efficiency of farm operations and decrease the amount of harmful emissions released into the environment. The objective of this project was to examine the establishment of forages and fuel savings of seeding perennial forages back into sod without tillage.

#### Methods

The site located near North Star, AB, was used strictly for pasture for many years. It was sprayed in the fall of 2010 using glyphosate @ 1liter/acre. Soil samples were taken to determine nutrient levels.

48 acres									24 ad	cres								
Mix 3 – mixtures of 10 forage species & varieties seeded with Xena barley	Beaver alfalfa	Promesse timothy	AC Knowles hybrid brome & Beaver alfalfa	4020 alfalfa & Promesse timothy	Cicer milkvetch	Kura clover	Hipro Orchard grass & Cicer milkvetch	Cicer milkvetch	AC Knowles hybrid brome & Cicer milkvetch	Kura clover & Orchard grass	Cicer milkvetch	Manchar smooth brome grass	Kura clover	AC Knowles hybrid brome	Hybrid 2410 alfalfa	Hybrid brome success	Mix 1-PasturePro mix - Pick seed	Mix 2 - Cicer milkvetch & 3 brome grass varieties

Figure 1. Forage species & varieties seeded in strips into 24 acres and in mixtures into 48 acres of Xena barley.

### Forage Species, Seeding Techniques and Date:

A total of 11 different perennial forages were seeded either individually or as mixtures into 72 acres of land on May 16, 2011. Fertilizer application was 50lbs/acre of 30N-40P-10K. A pre-seed burnoff application of glyphosate @ ½ a litre/acre was done on May 16, 2011, just before seeding. A 20-ft Haybuster drill was used for seeding.

### Results

### Fuel Consumption

Total fuel used in the fall for spraying 40 acres of land with glyphosate was 29.7 L. Fuel used for seeding 72 acres was 100.6 L, an average of 1.40 L/acre. Speed at seeding was 3-4 mph. When compared to the traditional plow down average fuel requirement of 15.76 L/acre (*ARECA 2010*), fuel savings in the present study was 14.36 L/acre for sod seeding. That's a fuel savings of 91% using sod seeding to rejuvenate pastures. Understanding and improving fuel efficiency in sod management will have a significant impact on fuel use on producer's farms. As mentioned earlier, another economic benefit is the difference in machine labor requirements. In Alberta, studies by Reduced Tillage Linkages have shown that direct seeding into sod may save as many as 80 hours of labour compared to plowing, discing, cultivating and harrowing a quarter section in preparation for conventional seeding.

### Days to Emergence & Plant Counts

Seedling emergence was very slow. Only a few forage species had emerged by 40 days after seeding. Seedling emergence count was on average 151plants/m<sup>2</sup> 60 days after seeding. But for the forage mix + Xena barley section of the land, more seedling emergence (181plants/m<sup>2</sup>) was recorded (see pictures below).



### Weed Counts

Generally, the 40 acres of the trial site, which was sprayed in the fall, had substantial amounts of regrowth and some weed infestation. Random, weed counts averaged 61 weed plants/m<sup>2</sup> 60 days after seeding.

### Discussion

If improving the fertility status of the stand is not likely to improve its productivity, then it may be time to reseed. Plant densities may have become too low and/or perennial weeds too numerous. Re-seeding is also one way to introduce more legumes into a grass stand. It is well established that grass-legume mixtures will produce more dry matter than grasses alone. The difference is most pronounced during drier seasons. The deep-rooted legumes such as alfalfa are able to take advantage of sub-soil moisture reserves. The quality of the forage will increase relative to the proportion of alfalfa in the stand.

# Sod Seeding of Annual Crops into Strips for Greenfeed

Collaborating Producer: John & Jean Milne

Sod seeding is a no-till method that when compared to intensive tillage, offers a variety of benefits. These include increased moisture availability at seeding time, reduced risk from wind and water erosion and reduced soil carbon losses that are associated with intensive tillage practices. Direct seeding into sod further improves economics by decreasing labour and equipment requirements. Following termination of a pasture, hay or grass seed stand, an annual crop is sometimes grown for one or more years before perennial forages are then re-established.

With sod seeding, farmers are able to implement a number of fuel-saving measures that will not only reduce fuel consumption, but also prolong the life of the tractor. By decreasing the amount of fuel used, farmers can lower energy costs, boost the efficiency of farm operations and decrease the amount of harmful emissions released into the environment. The objectives of this study were (i) to evaluate the forage yield and nutritive value potential of annual crop combinations in a strip-intercrop system using sod-seeding and (ii) to examine fuel savings of removing perennial forage from rotation and growing annual replacement crops without tillage (sod seeding).

#### Methods

The project was located at John & Jean Milne's Ranch (NW 27 T80 R3 W6), in Fairview. The designated area for the trial was 10 acres. We had the soil fertility analyzed for the intended crops and fertilized accordingly. Before the trial commenced in 2010, the site had been sown to mixtures of alfalfa & meadow brome 10 years before but was later dominated mainly by quackgrass and some fescue & timothy. It was used strictly for pasture and had declined in productivity over the years.

The treatments were randomized and replicated twice. Four annual crops consisting of 2 cereals, 1 legume and an oil seed crop were seeded in the following 5 treatments combinations (Figure 1): (1) Barley – Peas - Oats, (2) Barley – Peas – Canola, (3)Barley – Canola – Oats, (4) Barley – Canola and (5) Oats – Canola.

Table 1. Crop varieties and seeding information

Crop	Variety	Seed rate (lb/ac)	Seeding depth
Barley	Cowboy	102	1.5-2.0"
Oats	Mustang	108	1.5-2.0"
Peas	Eclipse	204	1.5-2.0"
Canola	Pioneer 45H29	5.6	0.5-0.75"

#### Figure 1. Crop arrangement:

**Notes:** The vertical arrow shows the direction of strips of crops in a particular treatment. The horizontal arrow shows how cutting across the strips of crops was carried out to create forage blends.



The crops within each treatment were strip-intercropped (sequential seeding). Each crop strip was 20-ft wide and 700-ft long in size. Plot sizes were 60ft x 700ft (for treatments 1-3) and 40ft x 700ft (for treatments 4-5). The crops were seeded at 102 lb/acre (Cowboy barley), 108 lb/acre (Mustang oats), 204 lb/acre (Eclipse peas) and 5.6 lb/acre (Invigor canola). CDC Cowboy, a 2 row forage barley, is an excellent dual purpose barley that is well adapted to a low input management system, lighter soils or drought conditions. Seeding and fertilizer application were carried out on May 24, 2011 with a 10-ft Agrowdrill (AD 100 Series) drawn by a 108 HP John Deere tractor. Fertilizer blend (28:26:0) was applied at 100lb/ac to all crops. Granular inoculants at 7lb/ac were used for peas at seeding.

At harvest, for forage yield determination, a crop plot combine harvester, which was 49 inches wide, was used to cut the crop across the width of the different crop treatment combinations (see Figure 1 above). All cut materials within a particular crop treatment combination were raked, weighed fresh and sub-sampled, whereby the sub-sampled materials were dried for dry matter yield estimation. Harvest was done for all crop treatment combinations on August 18, 2011. This corresponded to the soft dough stage for the Cowboy barley, late milk/early dough for the Mustang oats and mid-pod for both Invigor canola and Eclipse peas. Each of the four crops was hand-cut individually from two inner rows, 20 ft long, for individual forage DM yield estimation. Samples of each crop, as well as those of the crop treatment combination, were analyzed for forage nutritive value. After forage sampling, the site was swathed and baled for greenfeed by the collaborating producer. Other observations/measurements included notes taken on the level of soil disturbance before and after seeding, seedling emergence/plant counts, weed counts and assessment of crop health (data not shown).



#### **Results & Discussion**

### Fuel Savings

Understanding and improving fuel efficiency in sod management will have a significant impact on fuel use on producers farms. No detailed fuel usage data is available from the present study, but a report on data collected across Alberta on the Energy Conservation and Energy Efficiency Project (ECEE) by ARECA shows that fuel savings on the sod seeded fields is dramatic. The traditional plow down required 15.76L/acre compared to only 2.51 L/acre when the farmer seeded the crop directly into sod. That's a fuel savings of 84%. Another economic benefit is the difference in machine labor requirements. In Alberta, studies by Reduced Tillage Linkages have shown that direct seeding into sod may save as many as 80 hours of labour compared to plowing, discing, cultivating and harrowing a quarter section in preparation for conventional seeding.

### Forage Yield

Figure 2 shows forage DM yields from the strip-intercrop crop combinations (treatments 1-5), as well as those of the individual annual crops used for the trial. The treatments with three annual crop combinations (treatments 1-3) all produced >6000 lb/acre forage DM. Forage DM yield was highest with 6943 lb/acre for the barley-peas-canola combination (treatment 2) and lowest for the barley-canola strip-intercrop crop combination (treatments 4), which had 5702 lb/acre. Forage DM yields for the individual annual crops were in the order of peas > canola > oats > barley. Higher forage DM yields recorded for treatments 1 and 2 than those of



treatments 3-5 resulted from the inclusion of peas in the crop combinations. Based on the individual crop forage DM yield (Figure 2), we estimated that peas contributed to about 40% of the total forage DM yield in both treatments 1 and 2. Across the strip-intercrop crop combinations and the individual crops, mean forage DM yields were similar (6237 vs 6344 lb/acre).

# Forage Quality

Forage nutritive value can be expected to vary, depending on crop variety, agronomic practices, environmental conditions during growth and the proportion of legume in the intercrop mixtures. In the present study, all crop combinations gave more than 10% crude protein content, but the highest was obtained for the barley-

canola-oat strip-intercrop with 12.53% CP (Figure 3). Considering the protein requirements for beef cows from the second trimester through to the third trimester, to post calving, all strip-intercrop treatment combinations were well above the 7 -9% CP requirement of pregnant beef cows, and within the 10-11% CP recommended after calving.



For the individual crops, both oats and barley had lower than 9% CP, while peas and canola had 14% and 16 % CP, respectively. Had the individual crops been swathed and baled for hay or utilized as swath grazing, both the barley and oat crops would require some form of protein supplement to be fed to the cows post calving.

Protein is a building block and energy facilitates the use of these building blocks for growth and other productive purposes. For the strip-intercrop crop combinations,



the barley-canola combination had the most total digestible nutrients (TDN) (Figure 4). As it has been established, for a mature beef cow to maintain her body condition score (BCS) through the winter, the ration must have a TDN energy level of 55% in mid pregnancy, 60% in late pregnancy and 65% after calving. Based on the 55.7% to 59.6% TDN obtained in the strip-intercrop crop combinations, some form of energy supplementation would be necessary, depending on the state of the cows. This also applies to all individual crops. Energy can be monitored in the beef cow by watching BCS; low energy rations result in a loss of BCS.

Forage mineral and detergent fiber contents are shown in Table 2. Inclusion of canola in some of the stripintercrop crop combinations (treatments 2-4) seemed to have some positive effects on the forage calcium (Ca) content, compared to when canola was not included (treatment 1). Peas on its own had the highest Ca content of all the individual crops, but did not have any significant effect when it was present in the crop combinations (treatments 1-2). Forage phosphorus (P) content, on the other hand, seemed to be slightly favored by the inclusion of oats in the crop combinations of treatments 1, 3 & 5. It is important to note that

strip-intercrop crop combinations improved the forage P content and in all cases the levels were sufficient for the requirements of mature beef cows regardless of their physiological state. For the individual crops, barley and peas were short of meeting the P requirement of mature beef cows. The Ca:P ratio for a mature beef cow should be within the range of 2:1 and 7:1, assuming actual required grams of each are adequate. But in the present study, Ca:P was generally low (1.23:1 to 1.96:1) for all strip-intercrop crop combinations. For the individual crops, peas and can-



ola, respectively, they had 6.0:1 and 4.08:1 Ca:P. Acid detergent fiber (ADF) is the fraction of indigestible plant material present in a forage and it is a useful predictor of the energy and digestibility of a forage. The neutral detergent fiber (NDF) of a forage is inversely related to the amount that a cow or calf is able to consume. Therefore, forages with a low NDF will have higher intakes than those with a high NDF content. Looking at the forage ADF and NDF contents in the present study (Table 2), barley-canola strip-intercrop (treatment 4) had lower forage ADF and NDF contents than other strip-intercrop crop combinations. For the individual crops, peas had lower ADF and NDF contents than the other three crops.

Crop combinations	% Ca	% P	% ADF	% NDF
Barley – Peas - Oat	0.37	0.30	44.95	67.82
Barley – Peas – Canola	0.45	0.26	41.72	62.64
Barley – Canola – Oat	0.59	0.30	43.20	64.03
Barley – Canola	0.53	0.27	37.02	55.88
Oats – Canola	0.48	0.30	42.16	65.46
Mean	0.48	0.29	41.81	63.17
Individual crops				
Barley	0.18	0.19	36.24	60.70
Oat	0.13	0.22	44.24	69.97
Peas	1.08	0.18	33.94	45.55
Canola	0.98	0.24	40.38	54.27
Mean	0.59	0.21	38.70	57.62

Table 2. Forage Ca, P & detergent fiber contents (%DM) of strip-intercrop crop combinations

### Conclusion

When strip-intercrop crop combinations were compared with individual crop (monoculture) systems, there were no apparent forage yield advantages of the strips. However, the resulting forage quality indicates, that in every respect, nutritive value was significantly improved by the strip-intercropping systems compared to the individual or monoculture system. The best crop combination tested in this trial was the barley-peas-canola combination. Strip-intercropping with common annual crops is feasible and is likely to produce quality feed for a greenfeed system. Producers are required to make sure that the strips are of equal width to accommodate this rotation scheme and use a strip width compatible with their equipment. Different varieties of the component crops and other agronomic practices, such as changing varying fertility and seeding rates in a strip-intercropping system, could be tested to see if these factors have the ability to improve forage yield, when compared to a monoculture system.

# Evaluation of Warm Season Cereal Crops for Forage & Feed Value

Winter feed is very costly for cow-calf operations. To reduce feed costs and the overall yearly cost of production, producers are exploring various options in lengthening the grazing season. For years, options such as swath grazing of annual crops, stockpiling of perennial forages, bale grazing and bale processing have been common practises for extending grazing season. However, in recent years in parts of the Peace, there is a gradual increase in the number of producers wanting to explore the potential and suitability of warm season crops (particularly corn) in extending the grazing season.

Warm season plants require higher soil temperatures for germination in spring. The optimum growing temperature is 18 - 24°C for cool season plants and 32 - 35°C for warm season plants. Temperatures below 10°C at night will slow the growth of warm season plants. The objective of this project was to evaluate warm season cereal crops (corn, millet and forage sorghum) for forage yield and feed value.

#### Methods

#### Trial Site: Fairview (Fairview Research Farm (RR #35))

Seeding and Management: For this project, 9 corn varieties, 2 millet varieties (Proso & German millet), 1 sorghum variety (CFS30) and 2 forage oat varieties (CDC Baler & CDC SO-I) as checks were seeded. Both Proso and German millets are two of the most commonly grown millet varieties in western Canada. CDC SO-I (CDC Super Oats, variety number one) is a new forage/feed oat variety. The corn heat units (CHUs) for corn varie-

ties varied from 2000 to 2400. The seeded corn varieties were: P7213R (2050 CHU), 39F44 (2000 CHU), P8107HR (2350 CHU), X70B140R (2000 CHU), P7443R (2100 CHU), X70B144R1 (2000 CHU), 39M26 (2100 CHU), 39F60 (2250 CHU) and 39V05 (2350 CHU). The CHUs rating is an indicator of how many heat units is required for the grain to reach maturity. Less CHUs are required for corn grazing or silage. The crops were seeded into small plots measuring 2.5m x 10m and



replicated twice. Seeding was done on May 18, 2011 at the rate of 32,000 kernels/acre for corn; 20 pounds/ acre for Proso & German millet, and CFS30 (Sorghum). Oats were seeded at 2.5 bushels/acre. A plot seed drill was used for seeding. Fertilizer was broadcast at 50lb N + 20 lb P/acre prior to seeding. Roundup at 400ml/acre was used to control weeds in the corn plots one month after seeding. For millet, sorghum and oats, Basagran forte was used.

#### **Results & Discussion**

#### Forage Dry Matter (DM) Yield

Generally, forage DM yields were far higher for corn varieties than for millet, sorghum or oat varieties (Figure 1). The order of forage DM yield was corn > oats > sorghum > millets. Forage DM yield varied from 2.8 t/acre

for German millet to 15 t/acre for corn variety 39M26. Four corn varieties had up to 11.70 t/acre and above. Both oat varieties out yielded the two millet varieties. Forage DM yield of forage sorghum wasn't far off those of CDC Baler or CDC SO-I oats. We observed that German millet was slow to establish and remained green longer into the season. Although, Proso millet yielded low, it has the advantage that, if an earlier seeded crop such as oat or barley for greenfeed or swath grazing has failed, its rapid maturity will make it an excellent emergency forage crop.

#### Forage Quality

In most cases, the crude protein (CP) content of the corn varieties were below 10%. German millet and forage sorghum had protein levels that were well above all corn and oat varieties. as well as that of proso millet (Figure The protein requirements for beef cows, on a dry matter basis, are 7% in the second trimester, 8-9% percent in the third trimester and 10 to 11% post calving. Except for forage sorghum, German and Proso millets, corn and oats tended to be marginal for protein content. As a result, pregnant beef cows may need to be supplemented as they approach calving, particularly for corn varieties 39F44 and X70B140R.







Looking at total digestible nutrients (TDN), the two millet varieties (Proso & German), forage sorghum and corn variety P8107HR all had less than 60% TDN. All other corn and oat varieties had above 60% TDN (Figure 3) and will result into some savings if a hard winter comes our way.

Of all the corn, millet and oat varieties examined, SO-I oat had the least ADF (30.88%) and NDF (50.96%) contents (Table 1). Both millet varieties (Proso & German) had higher ADF contents than other crop varieties. For the NDF content, this was higher for Proso millet and forage sorghum DF (about 65%) than other crop varieties tested.

Crop variety	% DM	% Ca	% P	% ADF	% NDF
Corn P7213R	25.08	0.27	0.11	34.55	55.04
Corn 39F44	22.17	0.33	0.17	33.24	58.39
Corn P8107HR	24.07	0.33	0.16	38.74	63.05
Corn X70B140R	22.16	0.40	0.17	35.21	63.41
Corn P7443R	26.18	0.35	0.13	33.86	61.52
Corn X70B144R1	25.76	0.40	0.19	34.44	62.00
Corn 39M26	25.18	0.37	0.14	34.99	61.66
Corn 39F60	25.88	0.31	0.11	32.00	56.40
Corn 39V05	24.17	0.33	0.12	33.99	59.64
Proso millet	28.83	0.24	0.20	43.05	65.46
German millet	23.82	0.39	0.27	42.70	61.69
Forage sorghum (CFS30)	28.30	0.26	0.23	39.63	65.03
CDC Baler oat	35.05	0.21	0.17	33.26	53.53
CDC SO-I oat	34.15	0.30	0.17	30.88	50.96

Table 1: Forage quality (% DM) of warm & cool season cereals

Out of the 14 crop varieties tested, only 4 crop varieties (corn P7213R, Proso millet, forage sorghum and CDC Baler oat) did not have sufficient forage Ca content that is required by beef cattle for optimum production. With the exception of German millet and forage sorghum, forage P content was low for all the crop varieties tested and not sufficient for what is required by dry pregnant cows through to post calving.

# Observations/notes:

As expected, warm season crops (corn, millet and sorghum) were affected to some extent by a soft frost in early June compared to those of the cool season crops (oats). No stand loss was recorded after a few weeks and they later started to show new leaves. The crops eventually survived and recovered very well. It is important to note that yield loss to early season frost damage in corn is related primarily to the degree of stand loss, not to the degree of leaf damage.

No lodging was observed with any of the corn, German millet, forage sorghum and SO-I oats. Both Proso millet and CDC Baler oats had some lodged stands, but it was very minimal. German millet did not head out throughout the growing season and that probably explains why it had the highest CP content, as it was very green at harvest and still in the active vegetative growth stage when it was harvested in September.

# GSR Ca and Compost Tea on Forage Yield & Quality

Collaborating Producer: Grant and Audry Gaschnitz, High Prairie

Calcium (Ca), in various forms, has long been the go to mineral when adjusting for pH, but it also performs other functions in the soil and plants. It is the tour guide and referee to nutrients in the soil, as it can lower the conductivity of the soil, and with a lower conductivity, minerals that were previously locked up are now available for the plant's use. Genesis Soil Rite (GSR) Ca from Sustainable Soil Solutions (http:// www.ssscinc.com/gsr.html) is a proprietary blend of lime, limestone and all natural minerals, herbs and spices for the soil. The term "Compost Tea" specifically describes the watery solution obtained by soaking compost in water in the presence of nutrients such as molasses, kelp, humic acid and fresh fish fertilizer. Compost tea (CT) is a readily available form of compost that will affect the plant more quickly than compost mixed with soil. Different types of compost can be used to create the tea depending on what factors you would like to affect in your soil, such as better fungal growth or bacterial or both. The following report highlights the results of a trial on the assessment of forage yield and quality following GSR Ca and compost tea applications.

#### Methods

The trial commenced in 2010 on a declining pasture located in High Prairie. The pre-inoculation of compost (compost activation) should begin 5 days before brewing and this involves measuring a predetermined amount of compost ingredients (Alaska humus, worm castings, humic acid, fish fertilizer, oat flour), mixed thoroughly and allowed to stay for 5 days. The brewing (tea making) process involves placing the active compost into a large water permeable teabag (800um) along with an aerator stone. This is placed into a 650L non-chlorinated water filled tank and some more additives such as humic acid, kelpgrow and fish fertilizer added for microbes to feed on. Another aerator stone is placed inside the water tank for ample aeration. The brew is aerated for 24 hours before application. The water to be used would have to be put in the tank 24 hours before brewing to bring the temperature of water up to air temperature. The brew time allows time for the water to become inundated with fine particulate matter, microbes and soluble chemical components of compost. Well oxygenated water at the correct temperature allows for the living organisms and nutrients in the compost to migrate to the water and become active.

In our study, we imposed three treatments and these consisted of: (1) application of GSR Ca alone, (2) application of GSR Ca + Compost Tea (CT), (3) application of CT alone, and (4) check plots. Both the GSR Ca and CT



Worm castings





Compost tea brewing in progress

were sprayed into the desired treatment plots. Each plot measured 2 acres. The goal with the GSR Ca and CT was to create better soils, both in structure and in microbial activity, as well as healthier plants, by increasing protein and improving forage

digestibility. Following 24 hours of brewing, the tea is transferred into a sprayer. The tea is then sprayed (foliar sprays) into the desired treatments (GSR Ca + CT and CT) at 50 L/ac. A boomless sprayer nozzle is used so that the brew is not forced through a small space and this also prevents clogging of sprayer nozzles. The whole process of compost activation and brewing was repeated two more times and sprayed into the desired treatments. We sprayed the tea in the spring, summer & fall of 2011. More information on compost tea ingredients, activation, brewing and application process can be found in PCBFA Annual Report 2010, ARECA website (www.areca/members/Pcbfa.html) and Peace River Forage Association of B.C. (http:// www.peaceforage.bc.ca/). Grazing cages were randomly placed in each paddock and the forage within each cage was cut to enable DM yield estimation. Forage was cut on June 22 and August 26, 2011.

### Forage Yield and Quality

When cut in June, forage DM yield increases of treatments with GSR Ca alone, CT + GSR Ca and CT alone over the check plot were respectively 15, 131 and 107% (Figure 1). August cut produced lower yield differences– 106% for GSR Ca alone, 116% for CT +GSR Ca and 99% for CT alone. Total forage DM yield (June + August cuts) increases were 110, 123 and 102% respectively GSR Ca alone, CT + GSR Ca and CT alone over the check



plot. Generally, there was no significant improvement in forage DM following GSR Ca and CT applications.

Table 1 shows protein, Ca and P contents of forages harvested in June and August. There was no clear pattern in forage protein and P contents irrespective of treatments imposed. However, with regards to Ca content, application of GSR Ca alone or in combination with CT seemed to have favored higher Ca contents of forages harvested at both dates (June & August). Compared to both check and CT alone treatments, forage Ca contents of plots with GSR Ca alone and CT + GSR Ca met and even far exceeded Ca requirements of for all classes of beef cattle. Table 1. Crude protein, Ca & P contents (% DM) of forages harvested in June & August.

ADF, NDF and TDN were all very similar for all the treatments (data not shown).

	% CP				% Ca		% P			
Treatments	June	Aug	Mean	June	Aug	Mean	June	Aug	Mean	
GSR Ca	9.74	11.32	10.53	0.37	0.43	0.40	0.20	0.21	0.21	
CT+GSR Ca	11.85	9.09	10.47	0.59	0.39	0.49	0.24	0.21	0.23	
Check	11.28	8.63	9.96	0.30	0.21	0.26	0.24	0.17	0.21	
СТ	10.67	9.68	10.18	0.28	0.25	0.27	0.20	0.17	0.19	

Compost tea is not designed as a quick fix solu-

tion and several applications a year for some years may be needed to bring the microbial biomass back to where it should be. Then the microbes can often release nutrients bound in the soil making them more readily available to plants and the soils will have better decomposition of organic matter and soil structure, making nutrients more available to the plant thus giving greater forage productivity. Next spring we will complete a soil biology test to see if any improvement have been made to the soil microbes.

# Forage Yield and Quality from Turnips, Oats and Turnips-Oats Intercrop

### Collaborating Producer: Odell & Lillian Raymond

Many livestock producers try to extend the grazing season to reduce feed costs. Grazing annual forages is another such way to not only graze livestock longer into the fall or early winter, but also provide potentially higher quality forages. Brassicas, such as turnips, are one example of an annual forage that can be grazed effectively by cows. Turnips are high quality, high yielding, fast growing crops that are particularly suitable for grazing by livestock in the fall. Both tops (stems plus leaves) and roots (tubers) can be grazed and are very nutritious. Turnips produce forage of exceptionally high (often 85-95%) digestibility and the roots are rich in carbohydrates. Turnips tolerate temperatures down to -8 degrees C. Turnips require several days of temperatures continually below freezing to be killed. The objective of this study was to examine the production of turnips grown with or without oats.

#### Methods

The trial took place at Odell and Lillian Raymond's farm, north of Peace River. A total of 90 acres was used for the trial. Land preparation consisted of deep tillage on oat stubble in the fall and cultivation in the spring. There were 3 treatments consisting of turnips alone (30 acres), turnips-oats intercrop (25 acres) and oats alone (35 acres). The variety of turnips used was Purple top and this was seeded at 2.5 lb/acre using a field cultivator with a Valmar on May 23, 2011 (for turnips alone field) and May 20 (for turnips-oats intercrop and oats alone fields). Purple top is a common turnip variety used for grazing. The oat variety used was Derby and this was seeded at 2.5 bushels/acre for the turnips-oats intercrop and oats alone fields. A hoe drill with a 7-inch spacing was used for seeding oats after turnips. Each treatment received 50 lb/acre N. No herbicide was applied to any of the treatments. All the crops were sampled for dry matter yield determination on September 1, 2011.



### Dry Matter Yield and Feed Value

Forage DM yield was highest for the oats alone field (9678 lb/acre) and lowest for the turnips alone field (5569 lb/acre) (Table 1). For the turnips, the roots (tubers) formed the bulk of the total DM yield. The CP content of the crops was in the order of: turnips > turnips – oats intercrop > oats (Table 1). The high CP content obtained from the turnips (whole plant) resulted from the leaf component of the plant, which on its own had 23% CP compared to 12.17% CP from the tuber. Generally, oats alone forage consistently had low-

er mineral (Ca & P) and higher detergent fibre (ADF & NDF) contents than the turnips – oats intercrop or turnips alone.

Crop treatment	DM yield	CP %	Са	Р	ADF	NDF	TDN
	(lb/acre)				%	%	%
Turnips (whole plant)	5569	19.05	1.22	0.40	19.89	28.75	68.24
Turnips - Oat intercrop	8401	12.89	0.41	0.34	30.42	50.47	62.27
Oats	9678	9.55	0.21	0.24	33.10	52.16	61.63
Turnip leaves	1662	23.49	2.52	0.32	20.27	32.89	68.05
Turnip tubers	3907	12.17	0.36	0.45	15.10	28.70	70.63

Table 1. Dry matter yield and feed quality of turnips alone, oat alone and turnips-oat intercrop.

The oats alone forage had insufficient amounts of Ca and P to meet the suggested beef cattle requirements



for both minerals. Though, turnip – oat intercrop had lower DM yield than the oats alone, in terms of quality, the turnip – oat intercrop was of higher nutritional quality. Cows eating the turnip – oat intercrop would have adequate amounts of CP, Ca and P needed for any stage of production.

Generally, turnips had excellent nutritional value with a high energy content (leaves have 68% total digestible nutrients; roots have 71% total digestible nutrients), and good protein levels (leaves have 23% crude

protein; roots have 12% crude protein). In addition, the turnip – oat intercropped forage would have the tendency to be preferred and consumed more than the oats alone because of the lower NDF value. Their digestibility is also likely to be higher than those of the oats alone material, going by the ADF values. Earlier studies elsewhere have shown that turnips retain their nutrients late into the fall and are good in providing high quality and quantity forage for grazing livestock in the fall. Livestock eat the leaves and roots of turnip plants. Cattle will also dig the turnips up out of the ground. However, it is important to note the growth performance of turnips was not impressive in the turnips—oat intercrop. The turnip leaves and roots were small and in most cases, their roots were substantially smaller than those of the turnips alone field.

### Grazing

Cattle (108 cows, 98 calves, 7 yearlings & 4 bulls) were given 3/4 of an acre per day in the turnip—oat intercrop field, which resulted in approximately 21 days of extended grazing time. When placed in the turnips only field, animals were given 1 acre per day, which should have resulted in approximately 30 days of extra grazing. However, due to excessive moisture, turnip yield was lower, therefore fewer grazing days were actually available. At this feeding and stocking rate, animals were consuming approximately 2.5% of their bodyweight.

# Legume Establishment

### Collaborating Producer: Paul & Lori Kinnee, Brownvale

Legumes play a valuable role in forage-livestock production systems, such as reducing the need for commercial nitrogen fertilizer application on pastures and consistent increases in livestock gains. Sainfoin, bird's foot trefoil, cicer milk-vetch and Anik alfalfa are useful bloat-safe legumes. Sainfoin is an excellent quality and palatable forage legume, it contains condensed tannins which makes it bloat free . Cicer milkvetch is long-lived and has good potential, especially for grazing. The cicer milk-vetch component of a mixed pasture tends to increase as the stand ages, also the plants stays green throughout the growing season providing high quality forage even when bearing mature pods. Leo Bird's foot trefoil has good winter hardiness and moderate drought tolerance. Anik alfalfa is a yellow blossomed Siberian variety of alfalfa, with extreme winter hardiness and pasture longevity. Due to its growth characteristics many cattle producers claim that there are very limited issues with bloat. In 2009, the PCBFA initiated a field scale pasture es-

tablishment project incorporating a set of bloat-safe and bloatreduced legumes (sainfoin, bird's foot trefoil, cicer milk-vetch, anik and red clover). Their forage dry matter yield and quality in 2011 are presented here.

### Methods

The trial was on Paul and Lori Kinnee's farm in Brownvale. Establishment procedures are available in the 2009 PCBFA Annual Report and on the Areca website under PCBFA projects. Grazing cages were randomly placed into each treatment group. The legumes and the check

were sampled 2 times (June 20 & September 7) for forage yield & quality. Each area sampled was only cut once, that is no repeated cutting was carried out in a particular spot.

### Results

### Forage DM yield

When the forages were sampled in June, forage DM yield was highest for cicer milk-vetch and lowest for red clover (Figure 1). Interestingly, in September, red clover produced the highest DM yield followed by sainfoin and then the fleet meadow brome grass, bird's foot trefoil, Anik alfalfa and cicer milk-vetch in that order. The resulting total DM yield from both June and September harvests was highest for the brome grass, followed closely by red clover and cicer milk-



vetch. As expected, we observed that cicer milk-vetch had an initial slow establishment between 2009 and early in the spring of 2011 but the plant stands became better as the season progressed in 2011. In addition to the section of the paddock devoted to the fleet meadow brome grass, it should be noted that the fleet meadow brome grass was present to some extent across the entire field.



When cut in June, crude protein contents (DM basis) of the forages were between 10.2% for Anik alfalfa and 15.92% for cicer milk-vetch and between 7.54% for sainfoin and 14.04% for Anik alfalfa for September cut (Figure 2). Across forages, mean protein content was similar for both June and September cuts. As shown in Table 1, regardless of when cutting was done, the forages had sufficient amounts of Ca but inadequate amount of P for beef cows. How ever were a lot lower than industry standard



for their variety. Cicer milk-vetch had the least forage ADF and NDF contents at each cutting stage. Cicer milk-vetch had the most energy content at each cutting.

		Ca			Р			ADF			NDF			TDN		
Forage	Jun	Sep	stan	Jun	Sep	stan	Jun	Sep	stan	Jun	Sep	stan	Jun	Sep	stan	
Totage			dard			dard			dard			dard			dard	
Sainfoin	0.75	0.92		0.21	0.16		42	45		59	57		57	56		
Birdsfoot	0.45	0.68	1.70	0.11	0.17	0.23	41	44	36	69	60	48	58	56	59	
Trefoil																
Red clover	0.78	1.30	1.38	0.13	0.18	0.24	45	45	36	62	54	47	56	56	55	
Cicer Milk	0.61	1.44	1 26	0.20	0.15	0.24	31	34		44	48	10	63	61	57	
vetch			1.50			0.54						40				
Anik alfalfa	1.07	1.07	1.40	0.15	0.16	0.29	42	39	34	61	56	44	57	59	54	
Fleet meadow	0.29	0.48	0.20	0.11	0.13	0.20	41	41	26	68	65	EQ	58	58	56	
bromegrass			0.29			0.28			36			58				

\* Standards from Nutrient requirements of Beef Cattle 1996.

#### Some observations on cicer milk-vetch

Cicer milk-vetch is readily eaten by all classes of livestock as either hay or pasture. This nature of cicer milk-vetch, its ability to compete with grasses and bloat-free characteristics makes it suitable for planting in mixtures in pasture and hay stands. The sodding characteristic of cicer milk-vetch resists damage from overgrazing. Although it has many desirable qualities, cicer milk-vetch has not been widely adopted because most believe this crop is difficult to establish taking about 3 years to produce a good stand. Many factors affect slow establishment of this crop. High proportion of seed with impermeable (hard) seed coat, relatively slow growth at seedling stage (poor seedling vigor), and inability to emerge from deep seeding have been recognized as reasons for slow stand establishment. Improved genetics and a new agronomic package devised at the Lethbridge Research Center in Alberta have slashed establishment time dramatically. This has enabled farmers to establish vigorous stands of cicer milk-vetch in one season. Planting an improved variety such as AC Oxley II and Veldt and using freshly inoculated, newly scarified seed will improve cicer establishment. Future research will allow us to measure what happen to each stand after grazing pressure is executed through out the season.

# Forage Yield and Quality of Forage Oat Varieties Harvested at Two Stages of Maturity

Beef cattle producers commonly use annual cereals for silage, greenfeed and swath grazing. In Alberta, oats account for more than 40% of total annual greenfeed production. Annual crops can provide emergency or supplementary forage in all parts of the Peace. They are easy to seed, establish quickly and can provide pasture later in the growing season when perennial production is decreasing and demand is at its highest. The objective of this project is to examine the effects of maturity of forage yield and quality of forage oat varieties.

#### Methods

The trial was done in collaboration with SARDA. The plots were located at Fevang Farms near High Prairie on canola stubble. Prior to seeding, the plots got a pre-seed weed control operation. The treatments were replicated 4 times, using a randomized complete block design to lay out the small plots (10 m long, 6 rows at 9 inch spacing). Nine forage oat varieties were seeded on May 20, 2011 with a plot drill. The site was harrowed in the spring and each variety seeded at 250 plants/m<sup>2</sup> (actual weight based on thousand kernel weight and germination). Fertilizer was applied at 50 lb N/ac, 30 lb P<sub>2</sub>O<sub>5</sub>/ac, 20 lb K<sub>2</sub>O/ac, 30 lb S/ac (using seed placed 11-52-0, and side banded 46-0-0, 20-0-024, and 0-0-60). Herbicide application: June 22, 0.18 L/ac Prestige A + 0.8 L/ac Prestige B.

The nine forage oat varieties seeded were:

CDC Baler – forage oat, very leafy.

Everleaf – new forage oat, extremely wide leaves.

Foothills – older forage type variety, finer stemmed, tall growing, high palatability.

AC Jordan – new feed/milling/forage oat, high silage and grain yield, large seed size.

AC Morgan – high yielding, later maturing milling oat, commonly used for silage or greenfeed.

AC Mustang – feed oat.

Murphy – forage oat, high silage yield, stands tall.

Waldern – feed oat, high silage yield.

SO1 – bred in Saskatchewan, SO-I (CDC Super Oats, variety number one) is a new forage/feed oat variety. It is excellent feed oat for backgrounding cattle, very digestible, high fat content, does not need to be rolled.



In order to determine the maturity stage at harvest that optimizes the yield and quality of the oat varieties for swath grazing or greenfeed systems, the oats were harvested at two maturity stages (late milk and dough). For forage DM yield estimation and feed quality tests, the late milk stage, forage was harvested August 5, and for the dough stage, harvesting was done August 26.

#### Results

#### Forage Yield

The forage DM yields of all oat varieties increased as cutting was delayed from the late milk stage until the dough stage (Figure 1). The mean forage DM yields across the nine oat varieties were respectively 7586 and 8572 lb/acre for late milk and dough stages. When cut at the late milk stage, forage DM yields were similar and

highest for both Foothills and Warden (>8000 lb/acre) and lowest for Everleaf (6654 lb/ acre). For the dough stage, DM yields were higher for Warden, Foothills and Mustang (>9000 lb/acre) and least for Jordan (7490 lb/acre). When pooled across the two stages of maturity at cutting, the average forage DM yield was in the following order: Warden> Foothills > Mustang > SO-I > Murphy > Baler > Morgan > Everleaf > Jordan.

#### Forage Quality

Forage quality values of oats harvested at different maturity stages are presented in Figures 2 & 3 and Table 1. Winter fed crude protein is an incurred and expensive cost by producers for the maintenance, health, and production of their cows. Information on oats producing forage/feed and their quality would be important in







determining the value of oats greenfeed or silage and could be used in the calculation of winter feed protein supplements. When averaged across the 9 oat varieties, forage CP content of was significantly higher at the late milk stage (9.17%) than at the dough stage (5.66%). For the late milk stage, SO-I oat had the highest CP (10.55%) and Jordan oat had the least CP with 7.24% (Figure 2). When harvesting was delayed till the dough stage, Everleaf had the most CP (7.20%), while Mustang had the least CP (4.54%).

Considering the suggested Ca and P mineral allowances for beef cattle, all forage oat varieties were generally in allowable Ca and P contents regardless of stages of maturity at cutting. The mean TDN was higher for the dough stage (61.94%) than the late milk stage (55.49%). Generally, for each oat variety, cutting at the late milk stage gave slightly lower TDN (3-8%

less energy) than cutting at the dough stage (Figure 3). At the late milk stage, TDN varied from 52.78% for Murphy to 57.97% for SO-I. But for the dough stage, TDN values varied from 59.52 % for Baler to 64.61% for Jordan.

For all the forage oat varieties examined, the dough stage had lower ADF and NDF contents than the late milk stage (Table 1). At both stages of maturity, SO-I oats consistently had a lower ADF content.

	Са		Р		ADI	:	NDF		
	Late milk	Dough							
Baler	0.26	0.22	0.18	0.10	42.71	37.32	68.15	57.18	
Everleaf	0.25	0.21	0.17	0.14	47.97	39.59	71.34	60.36	
Foothills	0.27	0.21	0.19	0.17	47.45	33.58	70.27	50.51	
Jordan	0.18	0.16	0.17	0.19	42.20	27.15	67.01	47.58	
Morgan	0.25	0.19	0.20	0.20	43.48	30.98	67.23	49.75	
Mustang	0.23	0.22	0.18	0.14	46.81	34.97	72.29	55.04	
Murphy	0.28	0.17	0.19	0.14	50.80	33.86	75.37	52.46	
Warden	0.28	0.21	0.19	0.15	46.94	31.16	70.35	50.55	
SO-I	0.24	0.19	0.18	0.17	40.42	27.71	65.95	47.02	
Mean	0.25	0.20	0.18	0.16	45.42	32.92	69.77	52.27	

Table 1. Forage Ca, P, ADF & NDF contents (%DM) of forage oat varieties harvested at two stages of maturity.

What effect does harvesting time have on forage yield and quality?

As with most forage crops, there is a yield – quality trade off as small grains mature from boot to dough maturity stages. Timing of the cereal forage harvest is critical to obtain the desired forage quality. The window for harvest is often small for any given stage of maturity and desired forage quality.

In the present study, the highest quality was when the harvested forage oat was in the late milk stage, but higher forage DM yields and energy harvested per acre occurred at the dough stage.

# **Perennial Forage Demonstration**

# **Fairview: Observations Following Cutting Treatments**

Thirty two perennial forage species and varieties were established in June 2010 (Table 1). The number was increased to 42 species and varieties in June 2011. Establishment procedures and progress on those established in 2010 were presented in the PCBFA 2010 Annual Report and are also available on the ARECA website.

The perennial forage demonstration plots are being used to showcase new forage species and varieties in parts of the Peace region. The forage varieties are being observed for adaptation, tolerance to drought, winter hardiness, recovery after cutting and potential for multiple cuts, over a 5-year period. With this trial, farmers will be able to appraise for themselves both traditionally grown and new forage species that have been developed and released in recent years. This report outlines the second year's progress, with focus on forage DM yield and quality following different cutting dates.

#### Methods

In Fairview, the forage demonstration site is located at the Fairview Research Farm (RR #35). Early in spring of 2011, notes were taken on winter kill and the site was fertilized with 50 lb N + 20 lb P.

Seeded June 2010	Seeded June 2011	Table 1. Seeded forages and number of entries in Fair-
Grasses	Grasses	view.
Timothy – 3	Slender wheat grass	
Meadow Brome – 1	Promesse timothy	Each forage variety plot was divided into 3 sections,
Smooth Brome – 2	Potamac orchard grass	each measuring 2.5m x 6m. Sections 1, 2 and 3 were
Hybrid Bromegrass – 1	Success SMB grass	respectively cut in June (1 cut only), June & August
Tall Fescue – 2	Hipro orchard grass	cuts (2 cuts—first cut in June and then the regrowth
Creeping Red Fescue –1	Manchar SMB grass	cut in August) and August cut (1 cut only - delayed
Perennial Ryegrass – 1		from each cut. Forage quality of 7-8 top yielding forage
Reed Canary – 1	Legumes	es for the year was determined. Selenium content for
Orchard Grass – 1	Sainfoin	some forages were also analyzed.
Crested Wheatgrass – 2	Rambler alfalfa	
	Kura clover	
Legumes	Rangelander alfalfa	
Alfalfa – 13	Hybrid alfalfa 2410	
Cicer milkvetch – 2		FALFA Z410
Clover – Alsike – 1		
Red – 1		

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#### **Results and Discussion**

### Forage DM yield

In most cases, June only cut, produced greater forage DM yields than June & August double cuts or August only cut (Figure 1). Crested wheatgrass (Kirk), Hybrid bromegrass (AC Knowles), Reed canary grass (Palaton) and Meadow bromegrass (Fleet) all produced higher forage yield (>4000 lb DM yield/acre) than other forages when cut in June. The regrowth forage DM yield







was greater for Reed ca-(Palaton), narv grass Smooth Bromegrass (AC Rocket), Timothy (Grindstad) with well over 2000 lb/acre. The least favoured regrowth was Meadow bromegrass (Fleet), which had 1173 lb/ acre. However, when looking for grasses for double cuts potential, Crested wheatgrass (Goliath), Smooth **Bromegrass** (Carlton), Smooth Bromegrass (AC Rocket), Crested wheatgrass (kirk), Meadow bromegrass (fleet), Hybrid bromegrass (AC Knowles) and Reed canary grass (Palaton) seemed to have the potential for this purpose. They all produced between 5620 and 7111 lb/ acre/year. August only cut seemed to favour Crested wheatgrass (Goliath) and Smooth Bromegrass (Carlton) more than other

grasses. Across all the grasses, June cut produced the higher average forage DM yield, followed by August harvest and then the June regrowth.









In most cases, forage DM yield from June & August double cuts was more than twice the yields of either June or August only cut. (Figure 2). For August only cut, only Matrix alfalfa produced higher than 4000 lb/acre, while other legumes produced between 2505 and 3879 lb/acre. Across all the legumes examined, cutting the June regrowth in August (double cuts) favoured estimated DM yield than either single cut in June or August.

### Forage Quality

Generally, delaying forage cut until August reduced crude protein contents of selected grasses and legumes. The regrowth following June cut had higher mean protein contents than those cut once (June or August only) for both grasses and legumes. Taking into consideration the 7-9-11 % requirements for dry pregnant beef cows through to post calving, all the grasses and legumes met and even far exceeded these amounts (11-22% CP for legumes). The only exceptions for the grasses are - Grindstad timothy (8.78% CP) and Fleet meadow bromegrass (8.26% CP), which resulted from delaying cutting till August.

Table 1 shows mineral (Ca & P), detergent fibre and energy contents of selected forages in Fairview. For the grasses, regrowth from June cut consistently favoured forage mean Ca and P contents than just June or August only harvest. NDF seemed to be slightly better also with the regrowth. For the legumes, except for the August only single cut which

	Са		Р			ADF %			NDF %			TDN %			
Grasses	Jun	J&A	Aug	Jun	J&A	Aug	Jun	J&A	Aug	Jun	J&A	Aug	Jun	J&A	Aug
Goliath Crested	0.34	0.28	0.39	0.18	0.15	0.19	40	43	44	70	69	69	58	57	56
wheatgrass															
AC Rocket Smooth	0.36	0.42	0.36	0.17	0.30	0.16	39	41	44	63	66	68	58	58	56
Bromegrass															
Grindstad Timothy	0.21	0.27	0.18	0.16	0.22	0.12	40	39	39	64	59	64	58	59	59
Carlton Smooth	0.18	0.18	0.13	0.15	0.17	0.15	40	39	43	68	65	73	58	59	57
Bromegrass															
Kirk Crested wheat-	0.27	0.27	0.29	0.17	0.20	0.15	41	41	40	67	38	66	58	58	58
grass															
Fleet Meadow	0.39	0.36	0.27	0.20	0.19	0.17	37	42	41	62	69	67	60	57	58
bromegrass															
AC Knowles Hybrid	0.34	0.46	0.35	0.21	0.27	0.19	41	41	42	66	68	67	57	58	57
bromegrass															
Palaton Reed ca-	0.24	0.38	0.20	0.19	0.17	0.19	35	33	38	61	57	63	61	62	59
nary grass															
Mean	0.29	0.33	0.27	0.18	0.21	0.17	39	39	41	65	61	67	59	58	58
Legumes															
Windsor cicer	0.99	0.93	0.89	0.24	0.23	0.24	35	37	37	44	47	47	61	60	60
milkvetch															
Oxley II cicer	0.87	0.91	0.99	0.20	0.32	0.23	32	30	31	40	38	40	62	63	63
milkvetch															
53V52 alfalfa	1.35	1.79	1.48	0.26	0.29	0.21	40	38	43	53	48	55	58	59	57
Anik alfalfa	1.8	2.3	2.12	0.24	0.22	0.22	36	35	36	46	43	44	60	61	60
AC Blue J alfalfa	1.99	1.75	1.36	0.2	0.26	0.24	32	36	42	38	45	53	63	60	57
Algonquin alfalfa	1.63	1.18	2.00	0.27	0.24	0.25	41	42	35	50	54	55	58	57	61
Matrix alfalfa	1.68	1.61	1.91	0.27	0.35	0.24	40	35	39	51	44	51	58	61	59
Mean	1.47	1.50	1.54	0.24	0.27	0.23	36	36	37	46	46	49	60	60	59

Table 1. Mineral, detergent fibre and energy contents of forage grasses and legumes in Fairview.

The requirements for macro-minerals such Ca and P vary depending on the class of animal, and the level and state of production. The P requirements for dry pregnant and lactating cows (0.22-0.25% P) could not be met by most grasses regardless of when cutting was done. Only a few number of grasses met the Ca content requirements at any point. All legumes met and exceeded the Ca and P contents requirements of dry pregnant and lactating cows.

#### **Forage Selenium Content**

The selenium (Se) requirement of beef cattle is 0.10 mg/kg of diet dry matter. Formulating diets to contain 0.2 mg/kg is recommended. The Se content of feeds grown in Alberta is quite variable. According to the information on the ARD website, approximately 20% of legume and grass-legume forages, and 50% of grass and cereal forages do not contain the required concentration of Se. About 55% of cereal grains are deficient in this element. The majority of the feed grown in the northern and western parts of the province contain less than the required concentrations of Se.

Selenium is required for catalysing the destruction of toxic oxygen molecules produced during metabolism, thereby protecting the cells from damage and helps with the absorption of fat, including vitamin A and vitamin E, and in proper sperm formation. Deficiency symptoms include unthriftiness and reduced growth. Impaired immune response also occurs, which makes the animals more susceptible to disease.

A few forage samples from our demonstration plots in Fairview were analysed for Se content. Regardless of when they where cut, the 3 forages analysed for Se satisfactorily met the suggested range of 0.1-0.2 ppm (mg/kg) of diet dry matter, except for the June regrowth of Anik alfalfa (Table 3).

		Harvest dates	S
	Jun	Jun & Aug	Aug
Carlton Smooth Bromegrass	0.16	0.15	0.15
Anik alfalfa	0.12	0.07	0.10
Algonquin alfalfa	0.12	0.11	0.12
Mean	0.13	0.11	0.12

Table 3. Se content ppm (DM basis) of selected forages in Fairview

### **General Observations:**

For the grasses, Tall fescue (Pradel Meadow), Tall fescue (Climax), Crested wheatgrass (Kirk), Meadow bromegrass (Fleet), Timothy (Derby), Reed canary grass (Palaton), Grindstad timothy and Creeping red fescue (Boreal) were less affected by winter kill than other grasses. Perennial ryegrass (BG 34) died out after one year.

For the legumes, Anik alfalfa was the least affected by winter kill, while Alsike clover (Aurora) was the most affected by winter kill. In early spring of 2011, both cicer milkvetch varieties were still slow to establish even one year after seeding, but seedling stands and plant growth improved significantly with time.

# **Perennial Forage Demonstration**

# **High Prairie: Observations Following Cutting Treatments**

Thirty two perennial forage species and varieties were established in June 2010 (Table 1). Establishment procedures and progress were presented in the PCBFA 2010 Annual Report and are also available on the ARECA website www.areca/members/PCBFA.html. The perennial forage demonstration plots are being used for assessing new forage varieties for adaptation to parts of the Peace, tolerance to drought, winter hardiness, recovery after cutting and potential for multiple cuts, over a 5-year period. With this trial, farmers will be able to appraise for themselves both traditionally grown and new forage species that have been developed and released in recent years. This report outlines the second year's progress, with focus on forage DM yield and quality following different cutting dates.

### Methods

Grasses	Legumes	Table 1. Seeded forages and number of entries in High Prai-
Timothy – 3	Alfalfa – 13	rie.
Meadow Brome – 1	Cicer milkvetch – 2	Each forage variety plot was divided into 3 sections, each
Smooth Brome – 2	Clover – Alsike – 1	measuring 2.5m x 6m. Sections 1, 2 and 3 were respectively
Hybrid Bromegrass – 1	Red – 1	cut in June (1 cut only), June & August cuts (2 cuts—first cut
Tall Fescue – 2		(1 cut only - delayed cutting till August). Forage DM vields
Creeping Red Fescue –1		were estimated from each cut. Forage quality of 7-8 top
Perennial Ryegrass – 1		yielding forages for the year was
Reed Canary – 1		determined. Selenium content for some forages were also
Orchard Grass – 1		analyzed.
Crested Wheatgrass – 2		Forage DM yield
		— Generally for the grasses, June single cut (1st Cut) produced

The demonstration plots are located at the High Prairie Airport. The varieties were observed for winter kill early in the spring. The grasses received 75 lb N using urea.

fairly higher mean forage DM yield than June & August double harvest (2nd cut) or August single cuts. Nine out of the 15 grasses tested had higher yields in June single cut than other cutting dates. However, when cut in both June & August (double harvests), Carlton smooth brome grass produced exceptionally higher DM yields compared to other grasses. Except for the perennial ryegrass (BG 34), all grasses produced lower yields when cutting was delayed until August (August only single cut). Overall, perennial ryegrass was the least impressive in terms of early cut, regrowth after cut, winter hardiness and ground cover .

For the legumes, when cut in June, only Algonquin and Spredor 4 alfalfa produced higher than 2500lb/ac. Other legumes produced 930-2400lb/ac. For June and August cuts, AC Caribou produced higher yield (>3500lb/ac) than other legumes. But when cut was delayed to August, yield was generally low and only Algonquin and Spredor 4 alfalfa produced >1000lb/acre. Cutting both in June and August (double cuts) seemed to slightly increase DM yield than either single cut scenarios. Overall, Windsor cicer milkvetch was the least



impressive irrespective of when cutting was done.

#### Forage Quality

The crude protein contents of the grasses were mostly in the order of June & August cut (2nd cut) > June single cut > August single cut (Figure 3). A few of the grasses selected for feed tests, did not meet protein requirements of 7-11 % CP for pregnant and post calving beef cows, particularly when cutting was delayed until the August single cut. However, regardless of when cutting was carried out, all legumes tested for quality was well above 11% CP (Figure 4). For both grasses and legumes, the protein contents of the forage



Peace Country Beef & Forage Association 2011 Annual Report

were higher with the regrowth from June harvest (2nd cut) than the single June or single August cut.

For the legumes, when cut in June, only Algonquin and Spredor 4 alfalfa produced higher than 2500lb/acre. Other legumes produced 930-2400lb/acre. For June and August cuts, AC Caribou produced higher yield (>3500lb/acre) than other legumes. But when cutting was delayed to August, yield was generally low and only Algonquin and Spredor 4 alfalfa produced >1000lb/acre. Cutting both in June and August (double cuts) seemed to slightly increase DM yield than either June or August only cut. Overall, Windsor cicer milk-vetch was the least impressive irrespective of when cutting was done.

	Са			Р			ADF %			NDF %			TDN %		
Grasses	Jun	J&A	Aug	Jun	J&A	Aug	Jun	J&A	Aug	Jun	J&A	Au	Ju	J&A	Aug
												g	n		
Timothy	0.19	0.29	0.18	0.16	0.23	0.16	39	41	40	62	63	63	59	58	58
(Grindstad)															
Carton SMB grass	0.21	0.25	0.17	0.15	0.20	0.08	43	44	43	67	69	66	57	56	57
Tall fescue	0.35	0.43	0.47	0.14	0.17	0.16	39	34	46	62	54	69	59	61	55
(Pradel)															
Tall fescue	0.17	0.24	0.17	0.15	0.19	0.11	36	38	39	57	58	60	60	59	59
(Climax)															
Crested wheat-	0.14	0.18	0.16	0.09	0.10	0.09	40	41	39	65	69	63	58	58	59
grass															
Timothy (Derby)	0.25	0.21	0.26	0.20	0.25	0.23	36	38	40	60	60	64	60	59	58
Reed canary grass	0.23	0.31	0.17	0.17	0.16	0.19	38	34	40	62	57	65	59	61	58
Mean	0.22	0.27	0.23	0.15	0.19	0.15	39	39	41	62	61	64	59	59	58
Legumes															
Alfalfa (Peace)	0.86	1.16	1.32	0.15	0.21	0.15	45	40	40	56	48	51	56	58	58
Alfalfa (ST Tower)	1.13	1.50	1.80	0.13	0.27	0.16	48	35	40	59	42	51	54	61	58
Alfalfa (Ac Cari-	1.15	1.14	1.09	0.19	0.24	0.18	41	37	42	52	44	51	58	60	57
bou)															
Alsike clover	0.84	1.03	0.81	0.18	0.25	0.22	37	30	38	48	41	46	60	63	59
(Aurora)															
Alfalfa (Algonquin)	1.58	1.18	1.11	0.18	0.16	0.15	37	42	44	46	55	53	60	57	56
Alfalfa (Spredor 4)	1.37	1.66	1.33	0.14	0.23	0.16	41	36	45	54	43	55	58	60	56
Alfalfa (Blend	2.17	1.86	1.75	0.22	0.31	0.22	36	34	37	44	46	49	60	61	60
2220)															
Mean	1.30	1.36	1.32	0.17	0.24	0.18	41	36	41	51	46	51	58	60	58

Table 2. Mineral, detergent fibre and energy contents of forage grasses and legumes in High Prairie

Table 2 shows mineral, detergent fibre and energy contents of selected forages in High Prairie. Except for Pradel tall fescue and Reed canary grass, which met the Ca requirements for beef cows through pregnancy to post calving, all other grasses were short of meeting the Ca requirements. P requirements were also not met by the majority of the grasses. However, all the legumes were satisfactory in meeting both Ca and P requirements regardless of when the forage was cut.

### Forage Selenium Content

Selenium (Se) is a very important trace mineral. Reproductive problems, retained placentas, white muscle disease and an inadequate immune system (leading to mastitis and metritis) may result when selenium is deficient in a livestock ration. Selenium is required for catalysing the destruction of toxic oxygen molecules produced during metabolism, thereby protecting the cells from damage and helps with the absorption of fat, including vitamin A and vitamin E, and in proper sperm formation. Deficiency symptoms include unthriftiness and reduced growth. Impaired immune response also occurs, which makes the animals more susceptible to disease.

Despite its importance, selenium analysis is not routinely done on forages due to the high cost (\$55/ sample). Because of this, the status of selenium in forages is not well documented. The selenium (Se) requirement of beef cattle is 0.10 mg/kg (0.10 ppm) of diet dry matter. Formulating diets to contain 0.20 mg/kg (0.20 ppm) is recommended.

	Cutting dates						
Foragos	Jun	Jun regrowth	Aug				
Folages		(cut in Aug)					
Carlton Smooth Bromegrass	0.10	0.11	0.06				
Algonquin alfalfa	0.04	0.08	0.05				
Mean	0.07	0.10	0.06				

Table 4. Se content ppm (DM basis) of selected forages in High Prairie

We analysed two samples (Carlton smooth bromegrass and Algonquin alfalfa) for Se content from the forage demonstration plots in High Prairie. The results are shown in Table 2. Although

sample size was small, this preliminary test is necessary in order to have an idea of what the Se levels could be in some of our forages. Algonquin alfalfa regardless of when cutting was done was consistently lower in Se content than the suggested Se requirements for beef cows. Carlton smooth bromegrass was also lower than the suggested amount but only when cutting was delayed till August (August only cut).

### **General Observation**

The following grasses were the least affected by winter kill: Crested wheatgrass (Kirk), Timothy (Derby), Reed canary grass (Palaton), Smooth Bromegrass (Carlton), Tall fescue (Pradel Meadow), Hybrid bromegrass (AC Knowles), Creeping red fescue (Boreal) and Tall fescue (Climax). Compared to the grasses, the legumes did well and Anik alfalfa was the least affected by winter kill. Early in the spring, Alsike clover (Aurora) Alfalfa (hybrid force 400) and Matrix alfalfa had earlier better growth and good ground cover than the other legumes. In High Prairie, throughout the year, the two cicer milkvetch varieties

were not as impressive as those in Fairview.



Peace Country Beef & Forage Association 2011 Annual Report

# **MUNICIPAL DISTRICT & COUNTY REPORTS**





### SADDLE HILLS COUNTY REPORT

Saddle Hills County has 754 resident farmers within its boundaries as of the last census. Of the 590,683 farmed acres in the County, 314,181 acres (53%) are in cultivated crops, 76,286 acres (13%) are improved pasture and 90,984 acres (15%) is native pasture. The County has cattle, bison, elk and other livestock producers, the most numerous livestock being cattle, with a herd size of 36,193.

The County works with the Peace Country Beef & Forage Association (PCBFA) to fulfill its commitment for soil and water conservation and, with this organization's help, are gaining knowledge on year-round and riparian pasture management and how they fit into the region's agriculture with its ever-changing needs.

The County has partnership with the Peace Country Beef & Forage Association (PCBFA) in the past, to hold demonstrations and conduct experiments on soil and water conservation activities in both crop and livestock production systems. PCBFA was invited to our annual BBQ in 2011, Jaime Borduzak-Semple was the representative and she spoke on Livestock and Forage Research Projects.

This organization has always invited us to their workshops or seminars which we find very informative along with their up-to-date new letter. The Manager of Rural Development was invited to one of the seminars that was held on Wednesday November 30 at Fairview College under the topic "Market More Beef with Increase Nutrition.

Dave Thompson Manager of Rural Development

# MD of BIG LAKES REPORT

The Peace Country Beef & Forage Association would like to welcome

Suzanne Cailliau aboard as the new Agricultural Fieldman for the MD of Big Lakes.

We look forward to working with her in the 2012-2013 production season. Welcome Suzanne!



### **MD of GREENVIEW REPORT**

2011 presented some challenges to area producers, with extremely dry conditions in the early spring, followed by excessive moisture throughout June and early July. By the end of the summer season, some had benefited from the extra moisture and crop and forage yields were excellent. For others, the moisture caused crop losses and in the fall, intermittent showers slowed harvest. It is hoped that 2012 will offer a better growing season for crop and forage production.

For some producers, the moisture delayed or prevented crop spraying, and this resulted in a flush of weeds that were left uncontrolled. We saw a noticeable increase in the abundance of some weeds (especially Canada Thistle and Perennial Sowthistle) throughout the season. Our inspectors tried to be lenient and excused some producers from mandatory weed control requirements because of the high moisture conditions. But, landowners need to give serious thought to control options in the spring of 2012, if they were unable to take action in 2011. Unfortunately, Noxious weeds tend to spread very rapidly and can easily out-compete native vegetation and agricultural crops; therefore, yield losses in 2012 could be significant unless control action is taken. We remind everyone that "Himalayan Balsam" is a Prohibited Noxious weed that has sometimes been grown as an ornamental plant. And, while it is quite beautiful in bloom, Himalayan Balsam is very invasive and represents a serious threat to wetlands and riparian areas. Under existing Alberta legislation (Weed Control Act) it has been designated as "Prohibited Noxious" and *must* be destroyed.

The M.D. sprays roadsides for noxious weed control on a 3-year rotation. The vegetation management contractor sprayed selective herbicide along 600 miles of roadways in the New Fish Creek, Sunset House and Sweathouse areas. The planned weed management and herbicide application areas for 2012 will be DeBolt, Paskwaskau and Little Smoky (and work will be done on some roadways that were not completed on the 2011 rotation due to weather delays). Spray Exemption applications are due by April 1, 2012 to ensure properties are mapped for exemption.

Shelterbelt tree applications are again being accepted for the Prairie and Alberta Shelterbelt programs. The deadline for applications is 15 March 2012, but *early* applications are the best assurance of availability. Trees will be distributed from the M.D. yard in May when they arrive. Recipients will be notified of the distribution date.

M.D. residents are reminded that Agricultural Services has a small fleet of equipment available for rental from the MD Field Services yard, with additional rental agents in Crooked Creek and Grovedale. Booking ahead is the best assurance that the item will be available at the scheduled pick-up time.

Throughout the year, we were fortunate to have a number of activities and projects in our municipality sponsored and organized by the Peace Country Beef and Forage Association. They included a Cattle Handling Clinic in Valleyview (July 2011), Financials Workshop in Valleyview, the PCBFA Summer Tour in Valleyview area (July 2011), Pasture Walk (DeBolt), Environmental Farm Plan Workshop in DeBolt (November 2011) and a newly established Forage plot site in Valleyview. We are excited to have the Peace Country Beef and Forages Association as a collaborative partner in our area, and look forward to a number of informative events in our municipality in 2012.

In 2011, there were some changes to the Greenview municipal Council: Reeve - Janis Simpkins, Deputy Reeve – Lesley Vandemark. Membership of the M.D. Agricultural Service Board remained unchanged, with Chairman duties now in the hands of Lesley Vandemark, and Dale Gervais serving as Deputy Chairman. Also in 2011, the Agricultural Services department welcomed a new Assistant Manager of Agricultural Services (Amanda Nepstad) who came to us with a lengthy agricultural and ASB history. With this additional support, it is anticipated that the Agriculture department will continue to provide a high level of service to our ratepayers and agricultural community.

For information and details regarding all Agricultural Services programs, please contact us at: 780-524-7602

Dave Berry – Manager of Agricultural Services	Email:	David.Berry@mdgreenview.ab.ca
Amanda Nepstad – Assistant Agricultural Fieldman	Email:	Amanda.Nepstad@mdgreenview.ab.ca

# **MD of FAIRVIEW REPORT**

The first part of our winter was very bearable but today, January 17<sup>th</sup>, while I am writing this, it has been very cold! It almost came too suddenly as I believe none of us were able to get "seasoned" for the days we have had and the ones we are suppose to have for the next few days. Anyway, it won't be long before another growing season is upon us. As the days grow longer and your "to do" list gets longer also, remember that there are a few things you can do now to help your field stay clean of weeds and diseases later in the season.

When preparing for seeding this spring, remember the importance of using good quality seed, free of weeds and many diseases plaguing southern Alberta. Be cautious if importing seed into the M.D.. One thing to consider is having your seed tested for fusarium free of charge at the Fairview Seed Cleaning Plant.

We here at the M.D. of Fairview #136 are proud to support Peace Country Beef and Forage Association, (PCBFA), and Jaime Borduzak-Semple, manager of the association, along with Morgan Hobin, extension coordinator and AESA technician, in their efforts to supply valuable information to the producers here in the Peace Country. Information they gather through demonstrations, research trials and extension work is and has been available to all our local producers. When you become a member, which is very affordable for the value of the information received, you receive mail-outs and newsletters and can attend workshops or informational venues and get information for yourself, first hand. PCBFA works in conjunction with other research groups in the Peace Country who also have a wealth of knowledge, experience and information available to you as producers. So take advantage of becoming a member and gain good information from the various venues they offer throughout the year to help you make good, sound decisions in the future of your beef and forage business. The M.D. of Fairview Agricultural Service Board and Council look forward in continuing our relationship with PCBFA who supply beneficial information to our producers.

On another note, the M.D. of Fairview would like to congratulate Peggy Johnson, newly elected Council member. She will also be sitting on the Agricultural Service Board. Congratulations Peggy and welcome aboard.

The 2012 year also brings the Agricultural Service Board and the M.D. of Fairview producers to nominate a Farm Family. The criteria for the award; select a family that is active both in agriculture and the community with the farm being the major source of income. If you know of a farm family that has not been previously nominated, and fits the criteria, please contact your agricultural fieldman here in Fairview at 780-835-4903.

Fred Sawchuck Agricultural Fieldman

# **MD of PEACE REPORT**

In 2011 the ASB department sprayed approximately 270 miles of road ditch for weed control, and 80 miles of road shoulders with roundup in order to stop the grass from encroaching onto the road surface.

A gardening course was offered this spring, which was enjoyed by all who attended.

The extremely wet, cool conditions this past growing season resulted in many weeds flourishing where there weren't any before. Our Weed Inspector and Agricultural Fieldman discovered several large areas of scent-



less chamomile that had to be picked, then the plants burned. The area was then sprayed. In the coming year, please be on the lookout for scentless chamomile because it is a noxious weed in the Municipality and we have been trying to control its spread.

The M.D. will continue to participate in the V.S.I. program, which will pay 50% of approved veterinary services for cattle, pigs, sheep and goats. If

you have been a resident of the M.D. for at least six months, or you are an M.D. landowner or have grazing lease in the M.D. you are eligible for a V.S.I. card. If you require one, please contact the Municipal Office.

The M.D. continues to have some items available for rent: cattle chute with 6 panels tag reader surveyor's level canner & dehydrator seedling planter skid mount & backpack sprayers ATV sprayer post pounder

15 foot mower

Barbara Johnson Administrative Assistant

# **MD of SPIRIT RIVER REPORT**

The agriculture community in the Municipal District of Spirit River was fortunate to have received the rains of 2011. Although the flooding, which caused infrastructure damage and crop flooding, by two major rain events at the end of June and beginning of July, the end result to the agriculture community was beneficial. Three previous years of drought had left dugouts and pastures longing for any significant moisture events. The grassland and hay fields showed signs of recovery by mid summer but have went into winter with no significant soil moisture reserves. The cereals and oilseed crops benefitted with increased yields never seen before on high land that was not flooded. Two hundred bushel oats, 70-80 bushel wheat and canola yields were being reported. Not all of our crop yields were good. Large areas of peas and canola yielded from zero to 20 bushels per acre. Generally overall, there were a lot of bushels collected in the Municipal District even if the grades may be down for some, the quantity was way higher. We saw a significant amount of bagged storage to deal with high moisture and unexpected quantity.

With the abundance of grass and hay, we saw cattlemen wanting to increase their numbers, but mixed with the increase in cattle prices have really created a dilemma. Does one use the opportunity of abundant reasonably priced hay to grow the operation or sell and take advantages of the higher prices? The recent drought and lack of lower cost grazing and hay land within the municipality has been causing the cattle numbers to steadily decrease in the municipality over the years. The cattle numbers have been getting larger on the peripheral areas of the municipality.

The MD of Spirit River ASB had been partnered with the Central Peace Conservation Society, Saddle Hills County and Birch Hills County from 1988, until the Society decided to wind down when long time coordinator Garry Ropchan moved back to Grimshaw to take up farming fulltime in 2009. The three municipalities agreed that under the Environmental stream of funding for Agriculture Service Boards, to partner with Peace Country Beef and Forage Association, as they have been working with our producers for many years already. PCBFA has also agreed to work with the Peace Applied Research and Demonstration Association (PARDA) on our behalf, to undertake some work that would be more focused towards cereals and oilseed producers. Planning is ongoing and we are looking forward to some of the plans for 2012.

The Municipal District of Spirit River wishes a successful year to all of the agriculture producers and look forward to our partnerships in the future to provide you with the information that you require to be successful.

Kelly Hudson CAO/Ag Fieldman Thanks You to all our funding Partners







**MUNICIPAL DISTRICT & COUNTY** 



