



Oct 2012

Inside this issue:What We've Been up to 2
this Summer....The Early Harvest 3
AdvantageProducer Cars and 3
Grain Dealer Cars in an
Open Market
EnvironmentCrop Residue 4
Collection for Field
Grazing

Will a Hay Shed Pay? 6

How Do Well Managed 7
Forages Create Soils
and Profits?

Mark you Calendar 8

**Manager's Note**

At the time of this issue we have just about completed harvest and it is a most unusual year. For example, our highest pea yields were at our Castor site with yields over 60 bu/acre and lowest at the Viking site with an average yield of 35 bu/acre. Unfortunately in a good crop year like this there have been a lot of hail storms. One of these storms damaged our cereals at Castor in late July, while a couple of miles away our canola and peas were only slightly affected. The cereal plots are harvestable but whether results are publishable we don't know yet.

At harvest time while swathing or combining there is time to contemplate the crop year, about marketing, and planning for next year. Our staff took part in a provincial canola disease again this year. We chose fields at random, with many of course having a lot of Sclerotinia. The humid and

warm July was perfect for this disease; many yields may be lower than expected due to this. Crop rotations do not have much influence on sclerotinia as the spores can be spread by wind for several kilometers. However many fields had infestations of black-leg on their stems and some had infestations of root rot. Narrow rotations increase the risk of both of these diseases. If your Canola crop is diseased, wider rotations are suggested. With better prices for many crops this year there are other choices. And how the changes to the open market affects this remains to be seen. Certainly a lot to think about.

We wish you good luck with harvest with hopefully not too many rainy days or breakdowns.

Alvin Egolfson

Manager & Cereal/Oilseed Agrologist

Bernadette Bendfeld joined BRRG Staff Sept 4

I grew up in Biggar, Saskatchewan, now residing in Forestburg, Alberta, with my husband and two children. My background in Agriculture would include helping my grandparent's on their farm which is located in Arborfield, SK.

When I moved to Alberta, I got a job as an office administrator but then moved into the position of being a Broker for a trucking company. After having children, I then decided to take my certificate in Early Childhood Development. I've worked in the school system for about two years in Camrose, and then moved to Forestburg. Now I am back working in Administration

and very excited to get this opportunity so close to home.

I am currently working on my Agronomy Certificate, which I started in August through Olds College. I am finding it rewarding and challenging at the same time, as I didn't realize there was so much to learn about Agriculture.

I started a Battle River Research Group

beginning of September, and I am looking forward to a great future here with a group of wonderful employees.



Bernadette combining at the Forestburg Plot site

Support for this publication is provided through generous sponsorship from:



Government of Alberta

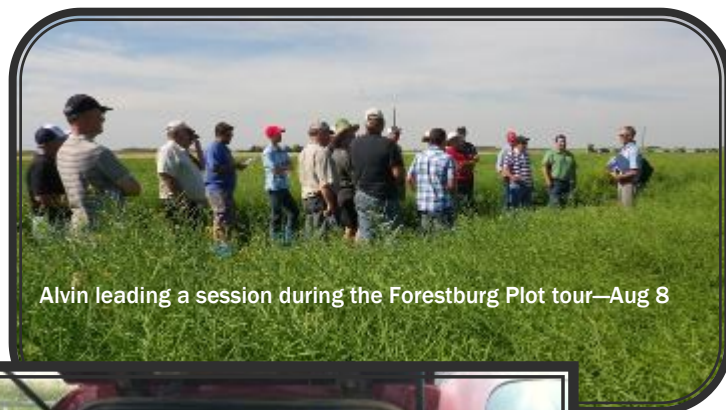


What We've Been up to this Summer....

Picture's taken by Vicki Heidt



Bernadette releasing Stem Mining Weevil in a Canada Thistle patch



Alvin leading a session during the Forestburg Plot tour—Aug 8



Garth, Drew, Ted (dog) and Dylan waiting for the Castor Plot Tour to start—Jul 25



First day of Combining—Alvin, Garth, Dylan and Drew combining Peas at Forestburg Plot—Aug 23



Tillage Radish © from Stettler Plot @ ~56 days



BRRG / McRae Tour at Stettler Plot—Aug 2



Garth forage harvesting barley silage at Stettler Plot

The Early Harvest Advantage

Mark Cutts, Crop Specialist, Ag-Info Centre (ARD)

As harvest continues in a timely manner across the province there will be an opportunity for producers to carry out post-harvest field activities this fall. Some of the activities that could be completed include perennial weed control, soil fertility evaluation and fertilizer application. By completing these activities producers can gain efficiencies in time management and cost of production.

Post-harvest perennial weed control – In fields where perennial weeds are present and a pre-harvest glyphosate application was not performed (eg. malting barley) or producers are rotating to a less-competitive crop (eg. peas), an early harvest will allow producers an opportunity to control these weeds. In order to achieve post-harvest control of perennial weeds, producers need to ensure that (1) the plants are actively growing; (2) there is enough plant growth present to ensure sufficient herbicide up-

take occurs. It is especially important to evaluate active growth once frost events start to occur. Evaluating the presence of active growth is best achieved 1-2 days after a frost event. Effective uptake of the herbicide will occur if the weeds are actively growing and if 60% of the plant material is still green. The amount of plant growth present will also impact the effectiveness of the glyphosate application. For example, in post-harvest situations quack grass plants should have a minimum of 3-4 green leaves in order to achieve control. If a field was swathed, obtaining this amount of growth will likely require a time period of 3-4 weeks. Refer to the Alberta Agriculture Crop Protection 2012 publication or product labels for timing of control for other perennial weeds.

Soil fertility evaluations – Soil testing in the fall is an excellent option for evaluating nutrient levels in the soil. Soil testing

in the fall offers producers several advantages including (1) having more time to collect the samples as compared to spring; (2) allowing more time to plan fertilizer programs for the next cropping season; (3) taking advantage of lower fertilizer prices that may occur. Soil sample collection can occur once soil temperatures are below 70 Celsius. Waiting until soil temperatures are cooler will provide soil nutrient levels that should closely reflect spring nutrient levels. It is also important to ensure sample collection occurs in a consistent manner in representative areas of the field and at the appropriate depths to capture meaningful nutrient information.

Fall fertilizer application – The most common approach for applying fall fertilizer is to band nitrogen either as urea (46-0-0) or anhydrous ammonia (82-0-0). Since nitrogen makes up the biggest volume of applied fertilizer, a fall application will enhance efficiencies during spring seeding.

Fall nitrogen fertilizer applications can be made once soil temperatures are below 10oCelsius. Applying urea or anhydrous ammonia fertilizer at cooler soil temperatures will help maintain nitrogen in the ammonium (NH4+) form. The ammonium form of nitrogen is preferred as it will be protected from losses that can occur as a result of denitrification or leaching. Another potential benefit of fall applied fertilizer is the economic advantage that occurs when fall fertilizer products have a favorable price as compared to spring priced products.

For more information on these topics or other post-harvest field activities please call the Ag Info Centre at 310-FARM.

*“Soil testing in the fall is
an excellent option for
evaluating nutrient levels
in the soil..”*

Producer Cars and Grain Dealer Cars in an Open Market Environment

From the Aug 27, 2012 Issue of Agri-News: [http://www1.agric.gov.ab.ca/\\$department/newslett.nsf/all/agnw19840](http://www1.agric.gov.ab.ca/$department/newslett.nsf/all/agnw19840)

On August 1, 2012, a new era for the grain industry in Western Canada began. For the first time in 69 years, producers in Western Canada have the freedom to market their own wheat and barley for exports and domestic human consumption markets. The open market environment will allow wheat and barley producers to capitalize on market opportunities, as well as facilitate investment for infrastructure/research and development of value-added industries. However, there are concerns with its impact on the transportation system, particularly the access to producer cars.

The use of producer cars remains in the Canada Grain Act. The Canadian Grain Commission (CGC) will

continue to review and approve applications for producer cars. With respect to producer car allocation, the CGC and major railways work in collaboration. One condition required for the application is that producer car shippers must sell the grain and identify a shipping destination, either a domestic/foreign location or a port terminal. The vast majority of grains shipped by producer cars have been board grains, as the former Canadian Wheat Board's access to port facilities helped compliance with this requirement. The removal of CWB single desk may negatively impact the viability of producer cars.

When compared to shipping to local grain elevators, producer cars usually represent lower cost and are used

mostly by short-line railways, inland terminals and certain producer groups. Although only a small proportion of grains (about four per cent) is moved via producer cars, it is a significant issue for producer car shippers. In the new marketing environment, producer car shippers may need to establish partnerships with other industry stakeholders, such as port terminals, to address the issue.

One potential solution is the use of grain dealer cars. Grain dealers are companies licensed by the CGC to buy and sell grain. Many grain dealers do not own grain handling facilities in Canada. Grain dealers usually start with a sale to a destination, often export markets, and then try to source grain in Canada. Grain dealers may purchase

grains from producers directly, a grain company or a local grain broker. As grain dealers, they have the ability to order railcars to a legitimate railcar loading site. A partnership with grain dealers may allow producer car shippers to have access to railcars at their local railcar loading facilities. In addition, the new open market environment will allow producers and other producer car shippers to sell their grain directly to domestic processors/customers and international buyers. Once a sale destination is established and access to a port facility secured, producer cars can remain as a viable option for grain shipping.

Chuanliang (Johnny) Su
Domestic Policy Analyst-ARD
780 422-7807



Wheat field after being combine with a chaff box

"Once a producer has made the decision to grow annual crops for combining, the residue is produced at essentially no extra cost"

Crop Residue Collection for Field Grazing

Adapted from <http://www.agriculture.gov.sk.ca/Default.aspx?DN=556dbdfc-8d9a-4e68-8d3d-b9a73a36497d>

Crop residues (chaff, straw) from annual cereal, pulse and oilseed crops are a source of forage for livestock. After the crop is harvested, the residue can either be grazed in the field where it is produced or it can be packaged and transported to another location for feeding. This publication and the calculator focus on methods and economics of collecting and bunching crop residue for grazing in the field where produced.

Field grazing crop residue during fall and winter has potential economic advantages of reducing feed and yardage costs. Field grazing has potential environmental advantages as well. Research at Western Beef Development Centre at Lanigan,

Saskatchewan, has shown a higher level of nitrogen is recycled back into the soil when livestock are fed (and deposit manure and urine) on a field during winter. This is compared to feeding in confinement and mechanically spreading the manure the following summer.

Crop Residue Economics and Logistics

There are four sources of forage for livestock. They are:

- crop residue (chaff, straw)
- annual crops (oats, barley, millets, corn)
- native rangeland
- tame or seeded perennials (grasses, legumes)

Crop residue is potentially the lowest cost forage for livestock. Once a producer has

made the decision to grow annual crops for combining, the residue is produced at essentially no extra cost.

The challenge, then, is to provide crop residues to the livestock at a low cost. This is a critical step because most crop residues have relatively low feed value. If money is spent on baling, hauling and handling after the combining operation is completed, there may be little economic benefit in using crop residue.

In most cases, in order to be economical, crop residues need to be bunched in some form by the combine and grazed in the field. There needs to be sufficient acres and residue amount to justify the investment cost of the

Continued on Page 5....

....Continued from page 6

and reduced net losses (losses occur in the shed excluded). Future costs and benefits were appropriately discounted.

"The economic analysis, as summarized in the partial budget shown in the following chart, generally supports the notion that large losses may justify building a shed to cover hay stores," says Dale Kaliel, senior production economist with Alberta Agriculture and Rural Development. "Under the baseline 50:50 carry-forward strategy, annual cost savings exceed annualized investment and operating costs associated with a shed by over \$4,000 – equivalent to a net benefit of more than \$16/cow. At this pace, feed cost savings would create a pay back on the shed in 13 to 14 years."

"However, the story doesn't end with the investment in a shed," adds Kaliel. "It's critical for producers to assess their own expected levels of loss, linkages to

feeding systems, feed pricing and hay carry-forward strategies. The partial budget analysis can be used to examine the sensitivity of the "pay-back" to each of these factors, and others."

For example, the profitability of the venture is very sensitive to the carry-forward strategy. The break point for the shed investment, under the scenario's feed price and loss assumptions, is at about a 30 per cent year-end stock. At levels less than this, the shed rapidly becomes an added cost burden that persists for many years. In east central Alberta, where it is common practice to carry the better part of the next year's feed needs in inventory, sheds can easily show a net benefit ranging from \$30 to \$40/cow.

"Sensitivity of the budget-results-to-feed-loss-and-value is mixed," says Kaliel. "Every percentage point difference in weight loss from the stack to the shed gener-

ates a cost savings change of \$2.50 to \$3.00/cow. A one per cent change in feed acceptability, or added wastage, equates to a \$1/cow change in profitability. A one cent per pound change in the value of hay moves the net benefit by about \$2/cow."

In closing, Alberta cow/calf producers have learned, by experience, that cow herds are challenged to cover the cost of depreciable assets. This does not mean they shouldn't have them ... it just means that they need to be justified by dollars and cents additions to profits over the long-term. Each farm is different in terms of whether or not assets, such as a hay shed, are a profitable investment. The answers are a simple budget away.

Contact:

Barry Yaremcioc
310-FARM (3276)

Dale Kaliel
780-427-5390

.....Continued from page 4

bunching equipment. Other investment costs that may or may not be required are: winter watering infrastructure, perimeter fences and portable windbreaks.

Ideally, for low cost field grazing, the cropland parcels will be in a block and/or close to headquarters. This will make perimeter fencing less costly and access for the livestock more convenient. The perimeter fence, and especially the internal fences that limit access to the feed, can be single-strand electric wire. Snow can be used as a water source if an adequate amount is available, and natural shelter may be sufficient for wind protection.

Crop Residue Collection Equipment

Four crop residue collection systems that enable field grazing are listed. Each system collects and bunches either the chaff only, or the chaff and straw together. Producers will need to decide which system best suits their circumstances based on volume of crop residue produced, volume of crop residue required, feed quality needed and desired pile size. For example, a producer with 100 cows and 2,000 acres of annual cropland residue grazing may decide to collect the chaff only. A producer with 100 cows and 200 acres of annual cropland residue grazing is more likely to collect both chaff and straw for the extra volume.

Generally, chaff alone will have higher feed quality than chaff and straw together. There may be situations in which a producer wishes to collect only chaff from some crops, and the chaff and straw together from other crops.

Combines where the chaff and straw exit in separate streams allow the option of chaff-only collection. On combines where the chaff and straw exit in a single stream, only whole-crop residue collection is possible.

An approximate cost for each of the options is listed. This value can be used in the Crop Residue Calculator to determine an annual equipment cost. (crop residue calculator available at <http://www.agriculture.gov.sk.ca/Default.aspx?DN=4bf8b81c-4a3c-4c15-9260-0e1f01d4af1f>)

Crop Residue Utilization

Crop residue utilization is determined by the weight of residue the livestock consume, and the percentage of total feed they leave behind.

The Crop Residue Calculator, below assumes cows will consume crop residue (10 per cent moisture content) at the rate of 2.2 per cent of body weight per day. Therefore, a 1,300 lb. cow will consume approximately 28.6 lb. of crop residue per day. If supplemental feed is provided at an average daily rate of 10 lb. per cow, then crop residue consumption is assumed to be 18.6 lb. per day.

Supplemental feed may be required during crop residue grazing, depending upon the feed quality of the crop residue and the nutritional requirements of the cows. The nutritional requirements of the cows depend on stage of pregnancy, body condition score, air temperatures and whether or not the cows are milking. It is recommended producers feed test their crop residues and consult with a livestock nutritionist to ensure a balanced diet is being provided.

The amount of feed left in the field after grazing can vary significantly. This depends upon how long the livestock are held on an area to clean up remaining feed, and how access to the residue is controlled to limit fouling, trampling and feed loss under drifting snow. With chaff only, the amount of feed left behind or wasted under ideal conditions may be less than 10 per cent. With chaff and straw residue collected together, there

may be cases where feed left behind is greater than 30 per cent. The calculator assumes an average feed waste of 25 per cent for both options of chaff only or chaff and straw combined.

Saskatchewan Agriculture has a Residue Calculator available on their website. www.agriculture.gov.sk.ca under Management/Financial Planning



Crop residue piles
cleaned up after grazing



Home built
chaff box
~\$500



Whole
Buncher®
~\$4,500



Redekop
chaff blower
and wagon



Redekop
MAV and
wagon



"Each farm is different in terms of whether or not assets, such as a hay shed, are a profitable investment. The answers are a simple budget away"

Will a Hay Shed Pay?

From the July 30, 2012 Issue of Agri-News—[http://www1.agric.gov.ab.ca/\\$department/newslett.nsf/all/agnw19724](http://www1.agric.gov.ab.ca/$department/newslett.nsf/all/agnw19724)

In many parts of the province there are stacks and rows of hay bales left over from last year. The mild winter and lower cow numbers have, in part, contributed to this surplus. On the other hand, banking an inventory of hay as feed "insurance" is common practice with year old hay carried over and fed to livestock the next winter.

"Over the course of the winter, these bales weather losing weight and quality compared to when they were made," says Barry Yaremcio, beef/forage specialist with Alberta Agriculture and Rural Development. "This poses a few key questions regarding the potential value lost when storing the bales outside, and how much it would cost to store the bales in a shed. Putting both of these together, if it pays to cover the hay, the next consideration is how long it would take for cost savings to pay for a pole hay shed."

To answer these questions, it must first be determined what the predictable losses are, and how big those losses could be. Research on over-winter bale storage in the Westlock area indicated a 5.7 per cent reduction in bale weight. At this rate a 1,400 pound bale would weigh 1,320 pounds in the spring. At 3 cents per lb., this weight loss effectively pushes the laid-in price from \$42/bale to an equivalent of \$44.55/bale.

"To set a possible range on over-wintering loss, looking across North America, dry matter losses have been reported as high as 18 per cent," says Yaremcio. "Conversely, weight loss for bales stored under a shed is typically 2 per cent.

"Weathering also affects the acceptability of hay to livestock. Cattle eat less of the weather damaged hay, rejecting up to 8 per cent more feed from bales that are stored outdoors compared to indoors. This moves the value of that same bale of hay now from \$44.55/bale to \$48.44/bale."

After weight and waste (acceptability) loss is accounted for, the next area of concern is the loss in quality or feed value. Bales stored outdoors tend to squat or flatten out during storage and the surface area in contact with the ground and exposed to rain increases. Weathering and water damage reduce quality.

"The effects of quality reduction can be observed from different avenues," adds Yaremcio. "Both consumption and digestibility suffer. This is further compounded by losses in protein and energy content. Weathered hay can exhibit 2 to 3 per cent lower protein as well as 20 to 50 per cent reduction in energy. Supplementing with barley and protein supplement over the course of the feeding season can add the

equivalent of up to \$13.42/bale."

Combining the rough estimates of each of these pieces of value lost, the average hay cost climbed from \$42 to \$61.85/bale (\$60 to \$88.40/Ton), about a 50 per cent increase! A move of this magnitude certainly makes it worth a manager's time to put together a quick budget to evaluate the "ifs" and "whens" of putting a shed over hay supplies. The budget will help.

The following scenario illustrates the simple partial budget steps producers can take to determine if mitigating the feed losses will cover the costs and pay for a shed. Key factors:

- feeding 250 (1,400 lb.) cows for 175 days requires 882 tons of hay
- base scenario strategy of a 50 per cent hay inventory carry forward (i.e. this year's hay crop is sufficient to roll over and cover half of next year's needs)
- feed prices: hay - \$0.03/lb.; barley - \$0.10/lb.; protein supplement - \$350/tonne
- investment costs for pole shed to cover the hay of approx. \$85,000, with ongoing repairs and maintenance penciled in at 1 per cent/annum of original cost

Using these numbers, a partial budget was developed, focusing on the annualized added costs

Partial Budget: "Should I build a pole shed for my hay to reduce feed loss?"

Added Costs:		Reduced Costs:	
Annualized Investment Cost	\$7,634	Weight Loss	\$2,764
Annual Repair & Maintenance	850	Waste Loss	1,895
		Quality Loss-late pregnancy	1,384
		Quality Loss-lactation	6,475
Subtotal:	\$8,484	Subtotal:	\$12,517
Net Advantage (Disadvantage):		\$4,033 or \$16.13/cow	

How Do Well Managed Forages Create Soils and Profits?

Grant Lastiwka, Forage / Grazing / Beef Specialist—Alberta Agriculture and Rural Development

At a time of high prices in grains and oilseeds.... forages and grazing may not be seen as a crop, or occupation of choice. Yet when skilled management of grazing systems are used, the Net returns from their use from 2000-2010 show forages is, as profitable or even more profitable than other crops. I am referring to the 2012 analysis done by Arnold Mattson and Carlyle Ross of Agriculture and Agri-Food Canada, for the Alberta Forage Industry Network. Along with forages being equal or better in Net Returns, they also make soil better for future generations in agriculture. The value of an improving soil, while getting higher profits, comes from a wisely carried out soil systems approach to grazing. That is something to get excited about!

On November 27-29, 2012 Alberta's 9th Western Canadian Grazing Conference will take place in Red Deer. This year's theme "Grass Roots of Grazing" focuses on the fact that soils grow forage, but if well managed.... forages grow soils. The rate at which quality soil is created varies with grazing management; the environment; soil type, chemistry, life and added nutrients; plant species and ground cover; animal density; etc.

Vicki Heidt, from the Battle River Research Group and Albert Kuipers, from the Grey Wooded Forage Association, are this year's co-chairs. The Program Planning team, lead by Nora Paulovich of the North Peace Forage Association and Laura Gibney of the Foothills Forage and Grazing Association, have created a program showing and explaining how some of our best graziers are improving soil quality and creating soil. The land they manage is higher in productivity, has longer growing seasons, is more risk averse, and more profitable. These are exciting results of

managing grazing with an understanding of soil systems. I would like to thank Albert Kuipers for allowing me to take this speaker information from his Press Release on the 2012 Western Canadian Grazing Conference.

We will start off on the afternoon of the 27th with a tour of the highly successful extended grazing project at the Lacombe Research Centre.

Vern Baron – Extended Grazing Thinking in Systems

Dr. Vern Baron, is a highly respected researcher who challenges schools of thought in working to gain understanding of how managing plant systems can benefit grazers and the "bottom line". He will show, and then explain how extending grazing system using Spring Triticale and Corn can be more profitable by using less land, cutting animal production costs, recycling nutrients, and creating a higher quality soil.

Some of the speakers In Red Deer on November 28th and 29th are:

Christine Jones - Fundamentals of Soil

Dr Christine Jones, from Australia is an internationally renowned and highly respected groundcover and soils ecologist. She has a wealth of experience working with innovative landholders to implement regenerative land management techniques that enhance biodiversity, increase biological activity, sequester carbon, activate soil nutrient cycles, restore water balance, improve productivity and create new topsoil.

Neil Dennis - Managing Chaos to Improve Soil Health

Neil and Barbara Dennis, Wawota, Saskatchewan are the owner/operators of Sunnysbrae Farms, and a group member of the South East Sask. Holistic Management Club. For the past 25 years Neil Dennis has been exploring new pathways in the science of grazing cattle and creating soil. He has the pictures to prove it!

Glen Rabenberg - Improving Crop Quality for All

President, and CEO of Soil Works LLC. PhosRite, Genesis Soil Rite Calcium and GrowRite Greenhouse. Soil Chemistry, Biology and Physics are all of equal importance. They must work together to build and maintain healthy soil. Rabenberg has spent extensive years researching soil and plant nutrition to cleanse the soil and aid in the production of quality food for all.

Charley Orchard - What Really Counts for Grazing Managers

Fourth generation rancher Charley Orchard, developed what became known as the Land EKG® Monitoring System, a land health monitoring, management information and reporting system. His business, Land EKG Inc., has a constant driving goal: to promote sustainable business and ecological information models for those noble few, stewarding the land and feeding our nation and world.

David Irvine- Working with the Ones You Love: The Human Side of Agriculture."

As the Leader's Navigator™, David is a connector and a communicator. He has dedicated his life to building productive, engaging and vital cultures through authentic leadership. He comes from a farm and spends a lot of his time working with farm families and group.

Although these keynote speakers are highlighted, many other speakers will explain how they are using well thought out grazing systems to profitably produce and market their end products from consuming forages. The producer speakers who share how they carry out their successful grazing businesses will be a real highlight of invaluable information to take home. Not to be forgotten, is the highest evaluated topic at every grazing conference so far..."networking with others" in attendance.

For more information call 780-727-4447, or email westcentralforage@gmail.com
www.westerncanadiangrazingconference.com

"the Net returns from their use from 2000-2010 show forages is, as profitable or even more profitable than other crops"





For more information on anything you have seen in this newsletter or about Battle River Research Group itself, please contact us

4804-43 Ave
Box 339
Forestburg, AB
T0B 1N0

Phone: 780-582-7308
Fax: 780-582-7312

Alvin Eyolfson, P. Ag.
Manager & Cereal/Oilseed
Agrologist
brrgmgr@cciwireless.ca

Vicki Heidt
Forage & Livestock /
Environmental Coordinator
brrgfl@cciwireless.ca

Bernadette Bendfeld
Field/Business Admin
Assistant
brrg@cciwireless.ca

2012-2013

Board of Directors

Greggory Jackson,

President

Dennis Weber, **Vice-**

President

Gerald Kuefler, **Treasurer**
and ARECA Rep

Darrell Holmstrom

Joe Gendre

Mike Kueber

Tony Nibourg

Trent Pawlick

Donna Pope

Steve Saruga

Ron Yarham

Visit us on the web at:

www.areca.ab.ca

Like us on Facebook:



Mark your Calendar!!

Western Canadian Grazing Conference & Trade Show

Grass Roots of Grazing

November 28 & 29, 2012
Sheraton Hotels & Resorts
Red Deer, AB

Optional Field Tour - November 27
Lacombe Research Station - Swath Grazing Trials

Keynote Speakers:

- Neil Dennis** - Managing Chaos to Improve Soil Health
- Charley Orchard** - What Really Counts for Grazing Managers
- Glen Rabenberg** - Improving Crop Quality for All
- Christine Jones** - Fundamentals of Soil

Banquet: **David Irvine** - Working with the Ones You Love:
The Human Side of Agriculture

For more information contact:
West Central Forage Association westcentralforage@gmail.com 780-727-4447
www.westerncanadiangrazingconference.com

Clubroot Awareness Meeting

Ryley Community Hall
November 22, 2012
7:00pm

Working Well Workshop

Borschiw Hall
October 11, 2012
6:30pm



Contact: Beaver
County for more
info
Ph #780.663.3730



Clubroot Meeting

Location: TBA
Date & Time: TBA
Contact: County of
Stettler for more info
Ph #403.742.4441