



Over the **Fence**line

Battle River
Research Group



Fall 2016

We are having a membership drive!

As an independent, grass roots, producer driven applied research association, we realize that maintaining and building our membership base is very important.

To 'drive' our membership drive, we will be giving away two major prizes: 1st prize: 3 day Farm Tech pass 2nd prize: Weber Q1200 Gas Grill. As a thank-you we will also be giving out smaller prizes for every sold membership. If you are already a member, but want to extend your membership to get in on the promotion you are welcome to do so.

See the article on page 5 for more details!

IN THIS ISSUE

- 3 Grazing Crop Re-Growth**
- 4 Post Harvest Weed Control**
- 5 Are you a Member of BRRG??**
- 6 How Hay is Made and Stacked DOES Make a Difference**
- 7 Feed Testing to Stretch Your Feeding Dollars**
- 8 Up Coming Events**

Alberta
Government





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Grazing Crop Regrowth

With the amount of moisture received this summer and fall, there are fields that were cut for greenfeed or silage that have substantial amounts of re-growth. This may also be the case if the crop was haled earlier this summer. Many of these fields have perimeter fence, or can quickly be fenced in with electrified smooth wire. Is it worth putting the cows or cow calf pairs out on this forage and take advantage of the extra feed that is available?

If crop regrowth yields 250 pounds of dry matter per inch of growth; a crop that is 12 inches tall could yield 3,000 pounds per acre. An 80 acre field with this amount of regrowth would have enough forage to feed 100 cows for 40 days (allowing for 15% waste).

Young or immature forage is typically high quality. If the canola or cereal plants are in the early bloom (canola) or flag leaf to heading stage (cereals) it is not uncommon to have 13 to 16% protein - which is comparable to good quality first cut alfalfa grass hay and an energy content of 62 to 65% TDN. The nutrient levels are sufficient for lactating cows, growing calves on the cow, weaned calves and yearlings. This forage is excellent to feed to thin cows that need to put on 100 to 250 pounds before winter.

The comments made below about individual crops are with the assumption that the initial growth of the crop was good to excellent; which would have used up most of the available nitrogen from the soil and that nitrate accumulation is not an issue.

Canola re-growth prior to loss of flowers has the highest nutritional quality. Cows will readily consume this forage. Land that is planted to canola generally has higher levels of sulfur applied. If sulfur levels in the total diet exceed 0.4%, rumen pH drops and the microbes that produce thiamine are destroyed. There is a chance of polio developing in this situation. Experience from the 1988 and 2002 droughts when cows were turned into canola salvage crops, the occurrence of polio was extremely rare.

Flax re-growth should not be used as grazing material. Green flax plants can contain high levels of beta glycosides which are converted into prussic acid by rumen bacteria. Prussic acid is also formed in the plant after a frost. At very low levels, prussic acid can kill animals within minutes.

Concerns when introducing re-growth material:

When moving the cows from their current pasture to the re-growth; ensure that the animals are full before they are turned in. It does not hurt to feed supplemental hay to the herd the morning that the cows are to be moved. Turn the cows into the re-growth in early afternoon. This reduces the risk of digestive related problems. Switching cattle from a dry pasture to lush growth could in a few occasions cause acute bovine pulmonary emphysema and edema in cows 5 to 10 days after moving animals to the lush pasture. Nursing calves are not affected.

Barry Yaremicio
Beef and Forage Specialist
Alberta Ag Info Center (310-Farm)



Post Harvest Weed Control

Harvest is still to be completed but it's not too early to consider post-harvest weed control. Conditions are good this year for some excellent control against perennial and winter annual weeds.

Winter annuals are weeds that germinate in the fall or late fall, go through the winter in a rosette form, and go to seed quickly once spring comes. Common winter annuals include stinkweed, shepherd's purse, scentless chamomile, narrow-leaved hawk'sbeard, bluebur, stork'sbill, ball mustard, peppergrass, downy brome, dog mustard, wormseed mustard, chickweed, flaxweed, knawel, night-flowering catchfly, and common groundsel. They form a few leaves in the fall, and overwinter in that state. These plants develop their own anti-freeze, preventing them from dying. It gives the plants an advantage the following spring as it will send up a seed stalk and go to seed before most other plants get started.

Winter annuals deplete soil moisture and nutrients in the fall and spring. They can be very competitive against fall and spring seeded crops. Often, a spring herbicide application is too late as the plants are already going to flower or seed and are difficult to kill.

Under conventional tillage, these weeds were not a big problem. A late fall tillage operation would control them easily. With the switch to conservation and zero tillage, these weeds are gaining prominence as serious, spring weed problems. Without tillage, other control strategies need to be used and the most effective is a late fall application of herbicide.

The best time for a fall application of herbicide is from late September to mid or late October, depending on the fall and the problem weeds. However, a successful fall weed control program requires the right conditions. Weed control, even after a frost, can still be very effective as long as the weeds have some green, actively growing plant material. Timing of application then is most effective because the plants are small and more susceptible. Also, you get as many weed seeds germinating as possible.

Winter annuals are able to continue growing, even after the first frost, until the ground freezes. Most winter annuals can be controlled in the spring, except for narrow-leaved hawk'sbeard, but control after they bolt is a lot more expensive and less effective.

Herbicide options are very economical in the fall. Chemicals like 2,4-D and MCPA provide good control and, at recommended rates, will be safe for most crops the subsequent spring. It is important to know the problem winter annuals you have so you can pick the best herbicide for it. Glyphosate works well in mixtures, on many winter annuals but it may not be the best one depending on the weed. Other common herbicides used for winter annuals, other than MCPA, 2,4-D and glyphosate, are dicamba, tribenuron-methyl and bromoxynil.

Problem perennial weeds like Canada thistle, quackgrass, dandelion and sow thistle are best controlled by a fall application of herbicide. Once again, the plants need some green leaf material and be actively growing. Dandelion seedlings are easy to control in the fall but, after overwintering, they almost become bulletproof.

With any herbicide with some residual effect, (2,4-D, MCPA, Dicamba) you have to be careful with the following spring's crop. There will be little breakdown of the chemical over winter and there might be some carryover effects on the succeeding crop. When using dicamba, tribenuron-methyl, 2,4-D or MCPA you might want to do a bioassay prior to seeding any non-cereal crop. A bioassay is simple taking some of the soil and trying to grow plants in it prior to actual seeding. If the plants die, don't seed.

Winter annuals are a persistent, increasing problem under reduced tillage. Under the right weather conditions, a late fall spray can repay you handsomely with reduced weed competition next spring. If the weather's right it could be worth your time and effort.

Harry Brook
Crop Specialist- Alberta
Ag Info Centre (310-Farm)

Are you a Member of Battle River Research Group??

The Battle River Research Group is in a rebuilding phase. We have added new staff, new board members and have a new impetus to improve the quality and quantity of the research and extension that we do. Our current mission statement is this: "The Battle River Research Group is a grass roots organization whose focus is agricultural sustainability. We provide credible, unbiased extension information while promoting an integrated approach to research through partnerships with producers, industry and government." The idea of being a grass roots organization and partnering with producers accentuates the importance of our membership base, so we have decided to have a fall membership drive.

Membership has many benefits. As a member you receive or have access to our annual report, members only newsletters, input of tag numbers for age verification, the use of our forage probe/drill and free feed sample shipping, access to all BRRG library materials and expert consultation from BRRG staff. Most of all, your input and participation will help support and expand applied research and extension that is relevant to east central Alberta.

Buy your membership today! An annual membership is \$20, a three year membership is \$50 and an annual corporate membership is \$100. You can purchase online at www.battliverresearch.com/membership or come visit us in Forestburg. As an incentive, we will be giving away a Weber Q1200 Gas Grill and a Farm Tech 2017 three day pass (January 31-February

2, 2017). As a thank-you we will also be giving a BRRG engraved foldable buck knife for a three year membership purchase or your choice of a BRRG rain gauge or seed depth ruler for a one year membership. Current members that want to extend their existing membership can also get in on the promotion by extending their membership.

Join us after harvest has wrapped up for an Oktoberfest themed farmers appreciation night. Come let loose from long hours in the combine and enjoy beer tasting, a variety of German sausages, salads and of course sauerkraut. We promise you will have a goodtime and make new friends. At the event we will draw for our grand prizes to those who bought or renewed their membership this fall. Watch for more information (date, place and time) on our website (www.battliverresearch.com) or watch your mailbox for updates! We hope to see you there!

Thanks again for your support. We anticipate a bright future for applied agricultural research and extension in East-Central Alberta, with your input and partnership. Drop in, call us or go to our membership page, <http://www.battliverresearch.com/membership>, to sign up today!

Sincerely, on behalf of the BRRG board and staff,

Eric Neilson, BSc Ag, BEd

Extension and Environmental Program Coordinator

Our Grand Prizes for the Membership Drive



FarmTech™

1st prize: 3 day pass to Farm Tech
2nd Prize: Portable Weber Grill



How Hay is Made and Stacked DOES Make a Difference

A year's supply of hay has been harvested. Bales are coming into the feed yard for storage. What is the best strategy to stack and store the hay to minimize weather damage, shrink, and nutrient loss? Preventing moisture from migrating into the bales from rain or melting snow reduces bacteria, mold and fungi growth which reduces damage. Three common methods of stacking hay are compared.

The pyramid stack creates the most damage. Moisture that runs down off the top bale migrates into the middle and bottom rows. Damage occurs where the bales touch.

The mushroom stack results in less damage than the pyramid style. Moisture that runs off the top bale migrates into the upper end of the bottom bale creating damage. Increased soil to bale contact allows more moisture to enter the bottom of the lower bale.

Individual bales stacked in a row with 4 to 6 inches space between the bales results in the least amount of damage. Any rain that falls or snow that melts can run off the bale surface minimizing damage.

Barry Yaremcio
Beef & Forage Specialist- Alberta
Ag Info Centre (310-Farm)



Photo Credit: Martina Alder

Feed Testing to Stretch Your Feeding Dollars

I often hear farmers and ranchers say that feed testing is expensive and I know lots of you guys don't feed test. I'd have to say that feed testing and using that information to balance rations for your livestock is a whole lot cheaper than over-feeding or under-feeding them.

Let's take a look at over-feeding. Let's say you're feeding your critters some pretty good looking hay. You're making sure they always have lots in front of them because you don't want to under-feed them for sure.

For example, let's say that hay has a value of \$200/ton if you sell it instead of feeding it. Now let's say that the nutritional value of that hay is about 25% higher than your 1,500 lb. dry, pregnant cows need. That means they could be getting fed 25% more than they actually need. At 2% of body weight, each of your cows would be eating about 30 lbs. of hay per day on a dry matter basis, or about 33 lbs. per day as fed. That works out to about \$3.30/cow/day, or about. If your feeding period is 180 days and you have 100 cows to feed, that's about \$59,400.

Continued on Page 7

Now, if the feed value of your hay is 25% higher than your cows need, then you could consider feeding your cows 25% less. $33 \text{ lbs./day} - 25\% = 24.75 \text{ lbs./cow/day}$. That works out to about \$2.48/cow/day. To feed your 100 cows 25% for 180 days your feeding cost for the winter would be about \$44,550. You would save about \$14,850.

The cows cannot be left without 8.25 pounds of DM intake. There will need to be a filler added – such as straw. There will be a cost associated with feeding the straw. Or.... If they are eating off the bedding pack, there will need to be more straw provided to keep the cows dry and warm.

Now, this is a very simple example to show you how this works. It does not factor in additional feed for cold weather, or the costs a mineral program. The main point is that there are a lot of dollars to be saved by feed testing and ration balancing, especially in a year when feed prices are high. The cost of feed testing won't come anywhere close to what over-feeding can cost you.

Now let's take a look at under-feeding. Let's say the feed value of your hay is 25% worse than you think it is and you're feeding about 2% of your cows' body weight, or about 33 lbs./cow/day. You're going to be shorting your cows 25% of the nutrition they need and more for cold weather. This could result in your cows losing a body condition score, or more over the winter. Those cows would really suffer in cold weather and would actually require considerably more nutrition for maintenance and to gain weight to be at a healthy

body condition score by calving time. A thin cow (BCS 2 vs 3) requires an additional 1400 pounds of hay just to keep warm compared to a cow in good condition. A big expense this year.

Cows receiving 25% less nutrition than they require will deliver calves that are small, weak and with poor immunity to scours and pneumonia just waiting to take advantage of them in those first few day or even months of life. I've seen calf mortality rates of over 20% when cows are nutritionally under-fed. On the other hand, cows receiving well-balanced rations usually have health, decent sized calves with good immunity starting from high quality colostrum. Calf mortality in this case can be 3% or lower. For 100 cows, losing 20% of the calves versus losing 3% of the calves is 17 calves for a loss of \$25,500 for the under-fed cows versus the cows receiving a well-balanced ration. There's no way that your feed testing costs would be that high.

Underfeeding also causes reproductive problems. It can take 20 to 40 days longer for under-condition cows to start cycling compared to cows in good condition. First service conception rates for the thin cows is generally 20 to 30% lower; resulting in more open cows and late calves that are smaller come fall. Less pounds of calf to sell overall.

So, basically, we're talking about a couple hundred dollars, or less to save \$14,850 by reducing over-feeding and \$25,500 by feeding a well-balanced ration to your cows. That sounds to me like a solid management choice compared to what could happen if you don't know your feed values and balance rations.



Photo Credit: Martina Alder

Barry Yaremicio
Beef & Forage Specialist
Alberta Ag Info Centre (310-Farm)

Up Coming Events

Herd Management Seminar

November 17, 2016

Join us for the day as we hear Anne Wasko speak on Cattle Markets, plus presentations on Verified Beef +, and the Beef Information Exchange System and Barry Yaremicio speak on herd management

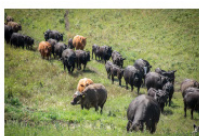
Speakers

Anne Wasko – Marketing Analyst – Gateway Livestock Marketing Inc.
Shannon Argent – Provincial Coordinator – Alberta Verified Beef
Deborah Wilson - Sr. Vice President - BIXSCO Inc.
Barry Yaremicio – Beef/Forage Specialist – Alberta Agriculture and Forestry

Location: Stettler Ag Society
Time: 10am-3:30pm
Cost: \$20 (lunch included)

To Register or for more Information:
Email: events@battliverresearch.com
Phone: 780-582-7308

Website: <http://www.battliverresearch.com/upcoming-events>



Union Forage Pasture Field Day

August 30, 2016

9:00am

Join us for lunch and to expand your knowledge on the following topics:

- Annual cover crop pasture stand
- Legume and grass mix pasture stands
- Pasture improvement methods
- Rotational grazing management
 - Cell Grazing
 - Electric fencing
- Mobile winter silage feeding sites
- Winter grazing management
- Winter watering
- Soft weaning methods

The field day will begin at 9:00am at Cliff Drever's and Ben Stuart's operation south of Hardisty, AB. It will be a whole day of interaction with other producers and learning different grazing management practices.

Directions:

- From Hardisty
- 6km West on Highway 13
- 12km south on Hwy 872, located on the NW corner of the 872 and 608 hwy
- From Hwy 36
- 28km West on Hwy 608
- Till the 872 intersection

Accommodation on the night of the 29th is at the RR INN in Hardisty

- 1 person \$141.46
- 2 person \$152.45

Please let us know if you are coming so we can have an exact number for lunch. Email: graeme@unionforage.com or PH: 403-312-2240

Cowbytes Workshop

Bring your own laptop and join us for a day of hands-on training using the Cowbytes beef ration balancing software with Barry Yaremicio, Agriculture and Forestry Forage/Beef Specialist and Karin Lindquist, Agriculture and Forestry Forage/Beef Specialist. You are encouraged to bring a copy of your feed analysis along with you.

October 26, 2016

Stettler & District Community Adult Learning Council
5221 46 St, Stettler, AB

10:00am- 2:30pm

Cost: \$20 (Lunch Included)

Cowbytes Program Available: \$50 (available at workshop)
Don't have a laptop? Use of a computer can be arranged

To Register or for more Information:
Email: events@battliverresearch.com
Phone: 780-582-7308

Website: <http://www.battliverresearch.com/upcoming-events>

