



Over the Fenceline

Battle River
Research Group



Spring 2019

Mark your Calender! Don't miss out
on our July 9, 2019 Field Day!



BATTLE RIVER RESEARCH GROUP FIELD DAY
JULY 9, 2019

**SAVE THE
DATE!**

Crop/Livestock/Environmental Topics- Research Plot Tour - Food Truck

Forestburg, AB

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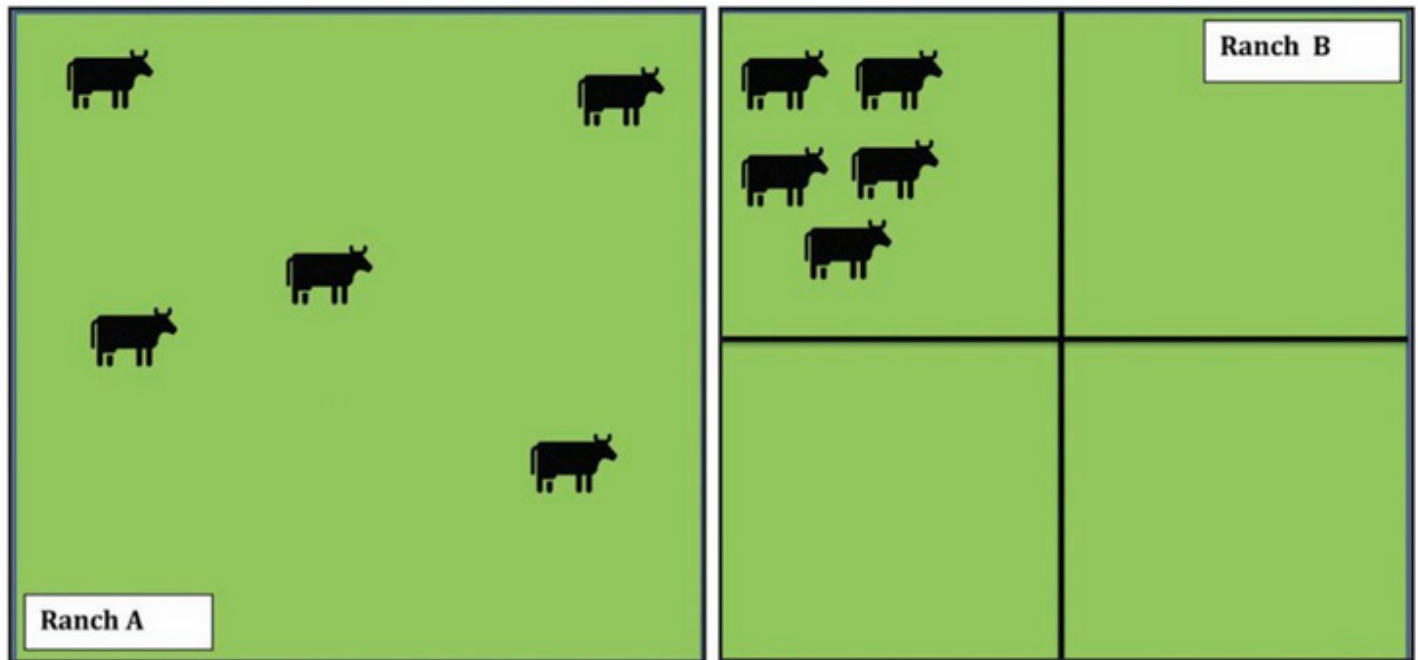


From L to R: (Back) Melvin Thompson, Blair Kuefler, Steven Vincett, Henry Michelson, Elgar Grinde
From L to R: (Front) Brent Christensen, Colin Wager, Rob Sommerville, Dale Pederson, Dave Grover
Missing: Doreen Bluhagen, Ed Lefsrud, Ryan Hallett & Alisa Donnelly

THANK YOU FOR YOUR CONTINUED SUPPORT



WHICH PASTURE IS BETTER FOR GRAZING? A? OR B?



The two diagrams accompanying this article represent two nearly identical ranches. They are the same size and if you count, they have the same number of cows. They even get the same rainfall and are in the same area. However, I would be willing to bet that one of these ranches has a lot more grass than the other. Any guesses which one? Ranch B is the winner of the forage contest, but let's dig into what these two illustrations can show us in our efforts to grow more forage on the same acres.

The first thing you may notice is that Ranch B is fenced into quarters. While four paddocks are not likely an ideal number either, it serves to demonstrate the grazing concepts.

The components

Pasture — I think most of us could identify what a pasture is. It is a slight twist of nomenclature but both Ranch A and Ranch B could be said to be a single pasture. Some might refer to Ranch B as having four pastures and that is fine as well. Sometimes you will hear a pasture referred to as a 'grazing cell.' A 'pasture' generally refers to a continuous block of forage.

Paddock — A paddock is a division in a pasture. In this case Ranch A has one pasture, consisting of one

paddock. Ranch B has one pasture consisting of four paddocks.

Carrying capacity — This is a measure of how much forage is available for animals. In this case, each ranch may have the same carrying capacity.

Stocking rate — This refers to the number of animals carried over time. In this case, both ranches have the same number of cows and we will assume they keep them year-round. The ranches each have the same stocking rate. The stocking rate and the carrying capacity ideally work out to the same value so that the ranch does not waste resources or overuse them.

Stock density — This can be described as the number of animals on a given area at a specific point in time. Each ranch as a whole has the same number of animals but the cows on Ranch A are spread out across the whole ranch. On Ranch B the cattle are grouped into one corner. Ranch B has a much higher stock density (four times more than Ranch A) since the animals only have access to one corner. A good way to visualize stock density is to use the extreme example of when your cows are in a corral (high stock density) versus in a pasture (low stock density).

WHICH PASTURE IS BETTER FOR GRAZING? A? OR B? CONTINUED

Rest — This does not refer to animals. Rest is the time while plants are not grazed. On Ranch A, every plant has a chance of being grazed every day. There is no rest period. On Ranch B, three-quarters of the plants are rested at any point in time, since the cows can only access one quarter of the ranch. This is the first big clue as to why Ranch B might have more grass than Ranch A. On Ranch B each plant has three days to regrow for every day it is grazed. Although it may seem obvious, it is worth stating that letting plants grow produces more forage.

Overgrazing — Grazing a plant before it has fully recovered from the previous grazing event.

Rest is key

These basic ideas are the start of any attempt to grow more forage, but the key to this is resting parts of the ranch. Grazing management is nothing more than creating time for plants to grow (biological time). If you imagine yourself as a plant, cows turned loose on your pasture for extended period means you don't recover from being grazed before being attacked again. This gives the advantage to plants with defence mechanisms such as low growth profiles (short little leaves), poor taste or palatability, thorns or woody stems. Cattle avoid them and over time they can take over a pasture.

There are symptom treatments such as chemicals for these types of problems, but without rectifying the root cause of limited recovery time, the problem can not be solved.

Stock density is also one of the tools to increasing forage production, and often one that people really worry about. What about when they use all the forage in their paddock? Won't it be hard on that paddock? These are common questions and valid concerns. Stock density will absolutely increase if you put your animals into a smaller paddock or subdivide the ranch. However, every other paddock will also be growing without animals taking down that forage. The paddock with higher stock density will likely have more even forage utilization and once it is grazed, it needs to have

the animals removed and be given a chance to regrow.

One of the greatest misconceptions I have run into is that you should start opening gates during drought conditions. In fact, the key is to cut numbers down to the carrying capacity and start building fences so that the grass has more time to recover as it grows slowly without rainfall. This is the idea of biological rather than calendar time.

Over time, higher stock density coupled with longer recovery periods allows Ranch B to increase its forage production relative to Ranch A. Each plant gets a chance to grow, and the animals graze those plants more evenly. This means that Ranch B is likely more profitable as it can either run more animals across the entire ranch or eliminate/reduce costs such as feeding as long in the winter.

Start with a fence

Are you Ranch A or Ranch B and which do you want to be? The next question is what to do about it? Ranch B has four paddocks, but in truth, those paddocks were initiated by the first fence. In other words, the place to start is with the first fence. Pick an easy one to build if you can. One fence, instantly means that half of the pasture is now resting. Mathematically that is infinitely better than none of the pasture resting. Then, divide that half by one-half. Over time the goal should be allowing every plant enough time to recover from grazing before being grazed again.

Every ranch is different, but every ranch is the same. Terrains vary, soil varies, base productivity varies but sunshine, water and the magic ingredient of time can result in more forage on your operation.

Sean McGrath - Contributor
- article sourced from Grainnews

Sean McGrath is a rancher and consultant from Vermilion, Alta. He can be reached at sean@ranchingsystems.com or (780) 853-9673. For additional information visit www.ranchingsystems.com.

Meet our New Summer Staff & Consultant

Nasima Junejo, PhD., PAg

Nasima recently joined BRRG as a consultant; she has been working in the field of Agriculture Research since 2004. She is experienced in agriculture related research projects and laboratory management performing research in soil fertility and plant nutrition with emphasis on soil chemistry, fertilizer use efficiency and soil fertility. Her work includes chemical and physical analysis of soil, plant, organic residues and water analysis.

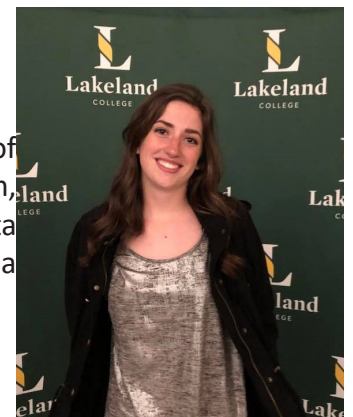
She has worked as a resource person to train extension workers and field officers. Nasima did her Post doctorate from University of Alberta in Soil microbiology and Green house gas emission in 2014 and completed her PhD in soil science with specialization in slow release and coated urea fertilizer. She worked as an international consultant for United Nations Industrial Development Projects (UNIDO) and Guyana Ministry of Agriculture.



Nasima is a member of various Soil science Societies and Agriculture Organizations. She has published more than 30 research publications and a book chapter related to Nitrogen use efficiency and soil fertility.

Caitlyn Antos

Caitlyn joined the Battle River Research Group at the beginning of May as one of our Summer Students. She grew up on a grain and cattle farm just outside of Killam, AB. Caitlyn is going into her third year of a biology degree at University of Alberta Augustana. After completion of her degree she would like to go into research with a focus on ecological studies.



Vineet Singh

Vineet also joined the BRRG as a Summer Student on May 1. Vineet Singh belongs to Agriculture dominated zone of India, he is a dynamic young man having Research Interest in Sustainable Agriculture and Management. He holds a master's degree in agriculture from State Agriculture University of India and a diploma in Agribusiness Management from Lakland College, Vermilion Alberta.

He has working experience with International Maize and Wheat Improvement Centre, CIMMYT with ICAR Project Sustainable Intensification Program (SIP) at CIMMYT, India. Research aptitude is reflected by his research work publication in referred journals and participation in many conferences. He had been conferred with poster presentation awards in conferences. His publications include seven reviewed research papers, five abstracts, and a book chapter and several articles. He is the life member of three professional societies.

Apart from his academic excellence he is very sporty young man and enjoys playing cricket, badminton and watching movies.



Battle River Research Group Annual General Meeting Recap

By: Martina Alder

The Battle River Research Group had their Annual General Meeting & Farmers Appreciation Night in the Holden 4-H Club Complex this year on March 27. It was greatly attended by 45 BRRG members, supporters and staff. The evening began at 4pm starting with the AGM portion of the agenda, we listened to reports from our President Blair Kuefler and then by Staff members Khalil Ahmed and Martina Alder. They reflected on the 2018 season and expressed their excitement for the 2019 field year. Before supper we had Ken Coles (General Manager with Farming Smarter) come up to speak on Precision Planters on the Prairies. We then had a delicious steak dinner prepared for us by the Holden Agriculture Society. Following dinner Gene Hrabec (Deputy Reeve, Beaver County) came to express a few words about the importance of local research and non profit groups alike, in which we were grateful for. After dinner we had Quinton Beaumont (Agriculture Fieldman with the County of Stettler) and Aimee Boese (Agriculture Fieldman with Beaver County) give us an update on Clubroot. Lastly, we had Maury Micklich (Manager, Holden Crop Management Network Inc.) speak on the Evolution of Soil Fertility.

This year we say Goodbye to a long-standing member of our board, Elgar Grinde of Holden, AB. Elgar has served many 6-year terms and has been a great asset to our board all those years. During our AGM we open the floor for nominations for new board members to serve on our board, we were lucky enough to gain two new members who will be great assets to our Board of Directors going into our 2019 season. Ed Lefsrud (Viking, AB) and Alisa Donnelly (Castor, AB) are our two new members, both have already show them selves to be interested and eager to learn what we do at the research group. It was a great evening had by all and the Battle River Research Group Staff would like to thank all those who came out to support our Annual General Meeting.



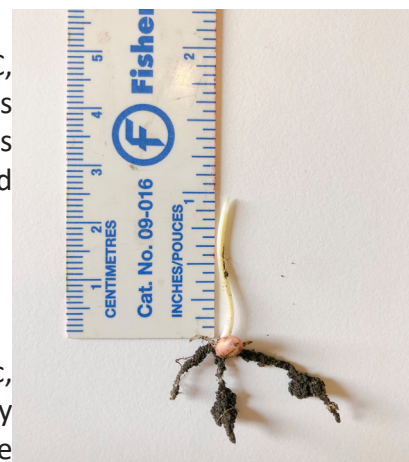
Battle River Research Group 2019 Research Trials

By: Nasima Junejo

Ultra-Early Wheat Seeding:

The Ultra-Early Wheat was seeded on April 13 at a soil temperature of 40C, almost after two weeks, it has not showed up above the ground. Two varieties AAC Brandon and AAC Connery with three different seeding rates tested in this trial. Second seeding date is planned to be seeded during the first or early second week of May. Further results will be communicated with the producers.

Thanks to Alberta Wheat Commission for funding this project.



Ultra-Early Wheat Seeded April 13
Photo taken May 3

Managing malt barley for feed end-use:

The yields of new feed barley cultivars have declined or at best remained static, while malt cultivar yields have been increasing. Therefore a significant opportunity exists to manage high yielding malt cultivars for feed end-use. Lakeland College and Battle River Research Group are conducting this study to generate preliminary data to determine the response of 3 malt cultivars and 3 feed cultivars under 2 nitrogen management strategies: low (80 kg/ha total N targeting traditional malt end-use management) and high (140 kg/ha total N targeting feed end-use management).

Thanks to Alberta Barley Commission for funding this project.

Canola Seeding Rate and Depth Demonstration:

Canola demonstration trial includes four target plant stands of 2, 5, 8, and 11 plants per square foot with two seeding depths. This trial is planned to demonstrate to growers how to use the seeding rate calculator to calculate seeding rates for a target plant stand <https://www.canolacalculator.ca/seeding-rate>

Thanks to Alberta Canola Producers Commission for funding this project.

Regional Variety Trials:

RVT-2019 program contains following number of trials and varieties.

Thanks to Alberta Wheat Commission, Alberta Barley Commission and Alberta Pulse Growers for funding this project.

No.	Name	No. of varieties
1	CWRS & CWHWS Wheat	36
2	CWSP & CWSWS Wheat	7
3	CPSR & CHNR Wheat	9
4	Durum	12
5	Barley	19
6	Triticale	2
7	Oats	11
8	Flax	7
9	Yellow Pea	16
10	Green Pea	7
11	Faba Bean	4

Battle River Research Group 2019 Research Trials Continued from pg. 7

Silages

Silage trial includes Barley, Oats, Triticale, Winter Spring Cereal, Pulse Mixture, Millets and Sorghum.

Special thanks to our co-operators: Vincett Farms and Lee Dechaine for providing their land for research trials.



First day seeding April 13

UP COMING EVENTS

Agenda

Day 1 - Lamont Ag Society Grounds

- Stock Dog Demonstration
- Horse Farrier & Dentistry Demonstration
- Long Table Dinner & Social
- Sustainable Beef

Day 2 - St. Michael Community Hall

- Plant Identification: Learn to identify range & riparian plants found in Central Alberta
- Soil Characteristics
- Cattle Nutrition
- Rural Crime Prevention

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June 11 & 12

Registration Deadline May 31th	Registration Options
Registration Information Linda @ (780) 603-3486 lindagrazingschool@gmail.com	Day 1 Only: \$45
	Day 2 Only: \$45
	Both Days: \$80
	Online Registration www.grazingschool4women.com

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JULY 9, 2019

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Crop/Livestock/Environmental Topics- Research Plot Tour - Food Truck

Forestburg, AB

JIM GERRISH
YEAR ROUND GRAZING

Save the Date!

July 12, 2019
Stettler, AB