BATTLE RIVER RESEARCH GROUP

Over the Fenceline

MEMBERS ONLY INSERT

JULY 2010

Wet conditions across the prairies slowed seeding in 2010

2010 Cereal and Oilseed Research Update

Alvin Eyolfson
Manager/Cereal & Oilseed Agrologist

In the last few days we have been out to look at all of the project sites and have been glad to get some calm days to catch up on spraying. The plots look very good, but all the cool weather means that growth has been slower than usual. The spring heat units to date are very similar to last year, much lower than usual. We will need some warm days this summer!

We made numerous trips with our equipment, especially to the Castor and Killam sites, so we have a number of seeding dates at these sites. In fact, at Killam we have four seeding dates for wheat ranging from May 10th to June 16th. This should be interesting as seeding dates in the area varied, and many were later than usual.

For the **Regional Variety Trials** we have a program very similar to last year. Winter wheat is again seeded at the Killam site. The regional cereals except for barley can be found at the Killam and Castor sites. The barley regional trials are at the Stettler and Viking sites. The field peas can be found at the Viking, Killam, and Castor locations.

You may have heard the Prairie Wide Canola variety testing program has been cancelled this year due to lack of company support. Our board suggested we sow a demonstration of some canola cultivars of interest. You

(Continued on page 3)

2010 Forage Research Update

Kimberly Will A.Ag.
Forage and Livestock Agrologist

Due to several projects completing in 2009 and the vacancy of the position of Forage and Livestock Agrologist, the forage research program is smaller this year than it has been in the past. This has made things easier for me to get up to speed since I started at the end of April. In the future I look forward to increasing the research program and

(Continued on page 3)

INSIDE THIS ISSUE:

Canola Production Protection Using a Call Option

At this time of year, growers are carefully checking their crops for weed control and bugs, watching the skies and hoping for favorable weather, and checking with their buyers to see what new crop prices look like. Many growers will price up to 50% of their crop at this time of year, but always worry about "what happens if I have a crop failure/hail, and can't deliver on my contract?"

Some buyers may give you an "Act of God" clause in a contract, but if it's not available, one way of protecting yourself on a priced contract is through the use of a "**Call Option**". A call option is a market risk management tool avaiable through a commodity broker.

Say you lock in a December canola delivery contract for 1000 bushels @ $9.00/bu. The worst case scenario has:

- You have a total crop failure, and can't deliver.
- Canola prices rally, and December canola is $9.50 at harvest time.
- In this case, no one will deliver against your contract, so you'll have to pay back 1000 bushels @ 50¢/bu difference, or $500. Bummer eh?
- If canola prices fall by delivery time, no problem. You can make arrangements with another grower to deliver against your contract, as you'll get paid your $8.80/bu, while fall prices are some where's below this price level.

But, by using a Market Risk Management Tool, through a commodity broker, you could target that $8.80/bu price, and allow yourself to sleep at night. By using a "**Call Option**", you could lock in a minimum price for your canola, and not worry if you have a crop failure and prices fall. A "**Call Option**" gives you the right, but not the obligation, to buy a future's position back at a strike price (the price you buy your call option at). So, if prices rise, your option becomes more valuable, as you can "buy back your futures' position at the lower "strike price", and can offset any financial loss due to a crop failure and prices increase. However, it may cost you premium monies.

For example:

- Your minimum price for your canola would be $9.00/bu, less cost of premium for a November call option (at the time or writing: an at-the-money November Canola futures call option would be 41 ¢/bu), so your acceptable price would be $9.00 minus 41¢/bu, or $8.59/bu.
- If you have a crop failure and cannot deliver:
  - If prices have fallen, you can still make arrangements for someone to deliver against your contract and pocket the $9.00/bu
  - If prices have risen, you can exercise your option, and make up the difference in the rise in November futures prices
  - As summer rolls along, and the risk of your crop making it to harvest diminishes, you can sell your option prior to expiry and recoup "some, all, or even more" of the original premium you paid (depending upon the movement of November Canola futures)
  - If November canola futures rise, your "Call" option becomes more valuable, if November futures fall, you start losing value in your option. However, you're doing good with your signed priced contract

Under normal growing conditions, with no threat of crop loss, you can probably sell your option in the summer, and recoup premium back. If there has been no futures price movement, you could recoup as much as 80% of your premium, losing only some time value and broker fees in this transaction. But at least you were able to sleep at night!

David Wong
Market Specialist
Alberta Agriculture and Food
Grande Prairie, AB
Ph: 780 538-5289
E-mail: david.k.wong@gov.ab.ca

Emphasis added by Editor

Alvin Eyolfson, P. Ag.
Manager & Cereal/Oilseed Agrologist
brrgmgr@xplornet.com

Kimberly Will, A. Ag.
Forage and Livestock Agrologist
brrgfl@xplornet.com

Jeanne Pearson
Administrative Assistant
brrg@xplornet.com

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2010 Cereal and Oilseed Research Update

(Continued from page 1)

can find demonstrations of fourteen Round Up ready cultivars and four Liberty Link cultivars at Viking and Killam. There is a site at Castor as well, at this time we don't know how much of this plot can be saved as emergence was poorer here.

Regarding **special crops**, we are continuing with a trial sponsored by the Alberta Pulse growers evaluating the potential of Lentils, and Faba beans, compared to field peas. This plot can be found at the Killam location. We also seeded demonstrations of these early maturing lentils at all of our other sites. It will be interesting to see how they mature under these wetter than normal conditions.

As well, you may have heard that the regional Flax variety trials have been cancelled. We have a demonstration of SeCan cultivars at Killam, and some flax varieties are included. These varieties were also sown at the other locations. As late maturity can be a concern it is good to seed this crop each year to give producers an idea of the relative risk.

Camelina continues to be promoted as an early maturing crop that can be marketed for biofuel. We seeded demonstrations of camelina at the project sites, with germination looking variable. The Viking demonstration was damaged by flooding, and seeding may have been too deep at Castor. As it is being promoted as a late seeding choice due to its early maturity we will also sow a late June plot at the Castor site.

There are also a number of **fertility trials** in our program. Some of them are sponsored trials by Cargill Mosaic and Sulphur Solutions. A trial of interest to many of you will be a comparison of phosphate applied banded vs applied in the seed row. The BRRG also independently conducts demonstrations on new products that are promoted as increasing crop growth. In the field this year at Killam there is a project comparing wheat sown with Petroleum Coke at different rates.

You may think of ideas you would like to see in our program from reading the above, or from coming to our tours this summer. We love to receive input, as our applied research program is for local producers.

The Battle River Research Group is an independent, producer driven, applied agricultural research organization that exists to improve agriculture in a sustainable manner. Support for this publication is provided through generous sponsorship from:

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2010 Forage Research Update

(Continued from page 1)

welcome suggestions for future projects.

The **Regional Silage Variety Trials** are now in their second year. Some of you may have seen the preliminary results in the seed guide as well as our own results in our 2009 Annual Report. Once again sites at Stettler and Castor have been seeded to varieties of barley, oats and triticale to measure the forage production potential of the species. Also included in these trials are mixes of cereals and forage peas and four different types of millet. The varieties seeded are the same as in the first year of the trial, with the removal of some older varieties that are no longer available.

This year at Killam and Viking we are doing a **Silage Time of Harvest Trial**. In the past BRRG has looked at time of seeding for forage cereals. In this trial we will be looking at harvest timing for barley, oats and triticale. For each crop there is an ideal time of harvest for silage and greenfeed, however it isn't always possible to get the entire crop off at that time. This trial will look at the effects of harvest timing on forage quality and yield. We will be harvesting each crop at the recommended stage, earlier than recommended and later than recommended.

At the old perennial forage site in Castor, we will be doing a demo on **Taking Perennial Forages Out of Rotation**. The plot will be sprayed out with glyphosate and then direct seeded with an annual crop for silage or greenfeed. Plots will either be sprayed early this spring and seeded to annual crop this year and next, sprayed later in the summer and seeded to an annual crop next spring or sprayed this fall and seeded to an annual crop next spring. We will be looking at the control of the existing stand with each time of chemical application as well as harvest yields with each time of chemical application and seeding.

We also are working on a demonstration project looking at **Rejuvenating Overgrazed Pastures Using Goats for Brush Control.**

Getting the Most From Your Round Baler

Preparation for baling begins with the cutting and windrowing of the hay crop. Windrows should be as heavy as possible to make use of the high capacity of a round baler. This means using a wide windrower when cutting light crops or raking two smaller windrows together. Raking, however, should only be done when hay moisture content is above 40%. Heavy windrows help reduce losses at the pickup and also minimize the time required to form a bale, reducing machine losses.

Use a conditioner with the windrower, if possible. Experience shows that conditioned hay will dry in the windrow just as quickly as unraked mowed hay. Conditioners decrease windrow drying time by crimping coarse stems and leaving a fluffy windrow that allows better air circulation. If the windrow is rained on, don't turn it unless it can be baled before the next rain. Each turning of the windrow shatters additional leaves and contributes to nutrient loss. Additional turning should only be done in specific situations to prevent spoilage.

Bale the hay when it reaches about 18% moisture. Maintain the fastest ground speed possible and avoid baling on very hot dry days. Measurements carried out at PAMI show that total round baler losses can be as low as 5% when proper crop preparation techniques are followed and the baler is used properly. Alternately, losses in excess of 25% have been measured when poor haying procedures were observed. Pick-up losses increase substantially at speeds greater than 5 or 6 mph.

Have the baler and the tractor maintained and properly adjusted before going to the field. Missing pickup teeth must be replaced to minimize pick-up losses. If your tractor has adjustable wheel tread, widen the width between the wheels to at least 1.5 m (5 feet) to prevent losses caused by driving the tractor wheels on the windrow. Read the operator's manual and follow the operating procedures recommended. Both bale quality and baler capacity are dependant on proper baler operation.

And remember safety! Disengage the power take-off before working on the baler, and use the locking devices provided before entering the bale chamber area when the tail-gate is raised. Don't become the guy we hear about on the news tomorrow!

Specialized bale moving equipment adapted to moving round bales is available and recommended. If a front-end loader is used, ensure that the tractor and the loader are rated for handling the load. Special attachments available for front-end loaders are convenient to use and are recommended to prevent bales from roiling back on the cab and operator.

Decide where the bales will be stored well in advance. A well drained area that does not accumulate a large amount of snow during winter is desirable. Bales should be stored without contacting one another to reduce moisture penetration. Bales should not be piled up unless they are to be covered. Use good quality twine and apply 8 or 9 wraps per bale. An increased number of wraps will improve handling ease and weatherability.

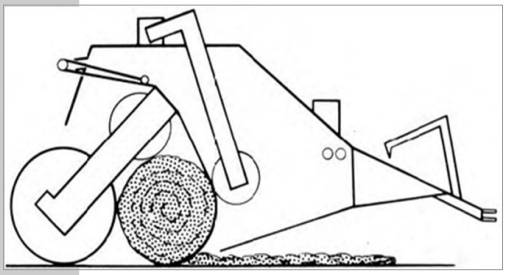

Figure 1. Schematic of a Ground Roll Baler.

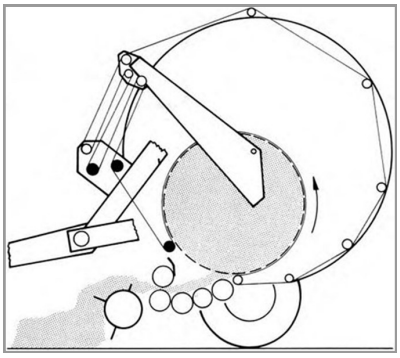

Figure 2. Schematic of an expandable chamber Round Pickup Baler.

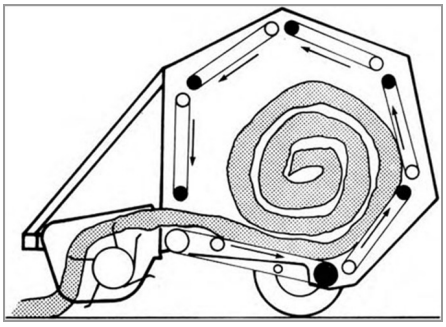

Figure 3. Schematic of a fixed volume Round Pickup Baler.

AN UNCOMMON FOOD PACKS A NUTRITIONAL WALLOP

Canadians are being urged to take advantage of the low-fat content, protein and many other health benefits of pulses. A fairly uncommon grocery item in Canada, pulses are defined as edible seeds of pod-bearing legume crops. Pulses fall under the Meat and Alternatives food group in Canada's Food Guide, and include dry beans, dry peas, lentils and chickpeas.

"Although Canada is one of the world's largest producers of pulses and the leader in world pulse trade, a recent study found that only 60 per cent of Canadians consume pulses one to three times per month," says Sharon Faye, market analyst, Alberta Agriculture and Rural Development. "The study, ***Factors Influencing Pulse Consumption in Canada*** also found that 20 per cent eat pulses on a regular basis (at least once a week) while only 20 per cent don't eat pulses at all. Taste and health benefits are the two most important factors cited by consumers."

"Increasing pulse consumption will diversify markets for producers and increase the health and well-being of Canadians. The findings of this study will help us develop effective marketing tools to increase Canadian pulse consumption," said Sheri Strydhorst, executive director of the Alberta Pulse Growers Commission. "Increasing pulse consumption is a win-win situation."

The most common pulse purchased by Canadians is beans, while lentil varieties are the least common. A factor contributing to low pulse consumption is a lack of awareness or education about pulses; in particular knowing how to prepare pulses and the variety of dishes that can be made.

Consumption also varies by a number of demographic and health factors. Pulse consumption is lower among Canadians aged 18 to 34 or single person households, and typically higher among those with a university education, and two-or-more person households. Ethnicity is also an important factor as pulse consumption is highest among those not born and raised in Canada.

The Ipsos Reid study was commissioned by Alberta Agriculture and Rural Development in partnership with the Alberta Pulse Growers Commission and Pulse Canada, and was funded by Growing Forward, a federal-provincial-territorial initiative. Growing Forward is a federal-provincial-territorial initiative that better positions the agriculture industry for success.

For more information contact Sharon Faye, Market Analyst, Alberta Agriculture
To call toll-free within Alberta dial 310-0000

A Few Facts About Pulse Consumption in Canada

- Pulse consumption is highest for beans and lowest for lentils - two-in-three Canadian adults have consumed beans, either at home or at a restaurant, in the past six months. Half have consumed chickpeas and peas, while only four out of 10 have consumed lentils. One-in-five have not consumed any pulses at all.
- Frequency of consumption at home does not vary by type of pulse - weekly at-home consumption is highest for chickpeas and beans, slightly lower for lentils and peas.
- Canned, dried pulses and soups are the most common forms purchased for home use across all pulse types.
- Curries, chili or stews and soups are the most common bean dishes consumed.
- Soups are the most frequent pea and lentil dishes.
- Hummus or dips and salads are the most common chickpea dishes consumed.
- The diversity of bean and chickpea dishes may contribute to their more frequent consumption at home.
- Light consumers of pulses are generally older than both non-consumers and moderate-to-heavy pulse consumers.
- Pulse consumption increases with the level of education. Just 17 per cent of non-consumers have a university degree, compared to 24 per cent of light consumers and 33 per cent of moderate-to-heavy consumers.
- 27 per cent of non-consumers live alone, 51 per cent of light consumers live in two-person households, 39 per cent of moderate-to-heavy consumers live in households of three or more people.
- The percentage of respondents born and raised in Canada decreases significantly as pulse consumption increases.
- Canadians generally have a positive attitude toward pulses - most like them and recognize their nutritional benefits. Many are concerned about maintaining their health and looking for opportunities to do so.
- Not thinking about including pulses in meal planning or preparation (58 per cent) and not knowing how to cook or prepare pulses (43 per cent) may be the greatest limitations to consumption.
- Three-in-four Canadians like to try out new or different types of food and recipes, and about six-in-ten enjoy eating ethnic foods traditionally high in pulses.

For more information about pulses contact Alberta Pulse Growers at 780-986-9398, toll-free at 1-877-550-9398 or online at www.pulse.ab.ca

Minimize Stored Grain Pest Problems With Bin Preparation and Treatments

How can I keep grain beetles and other insects out of my stored grain?

Producers can minimize potential pest problems by cleaning up in and around grain bins during the summer. Most empty grain bins will have some form of insects or mites surviving on dust or grain. Before binning new grain, these bins need to be swept, or preferably vacuumed, out and debris either buried or burned.

Spilled grain, exposed to environmental moisture, can sustain populations of insects that could migrate into the bin later in the year. Cleaning up and removing any spilled grain can minimize future problems within bins. Grasses and weeds around grain bins can also harbour insect pests, so vegetation control around bins will also help prevent stored grain pest problems. These simple housekeeping practices may not eliminate all pest problems, but they will help reduce the potential threat of pest infestation.

Are there insecticides that can be used in empty grain bins?

Malathion can be sprayed in empty bins to control pests, but this can only be used prior to storing cereal crops and must not be used on bins that will be storing canola or pulses. Empty bins can be treated with diatomaceous earth products like Protect-It ® or Insecto ® prior to storing all grains. Follow product labels to ensure that these crop protection products are used properly.

What insecticides can be applied directly to grain going into storage?

Grain can be treated with either diatomaceous earth or malathion as it is being binned. Diatomaceous earth treatments can either be applied to grain going into storage, to the grain at the top of a bin as a barrier to insect migration after binning, or both to grain as it is being binned and the surface of the grain. Keep in mind that malathion must not be used on stored canola or pulse crops. Some buyers of malt barley and milling oats also do not want grain that has been treated with malathion so it is best to check with potential buyers of these grains before any insecticide application. In all cases where products are applied to grain, it is important to follow label instructions.

How does aeration affect grain pests?

Grain that is binned warm or tough is especially prone to stored grain pest problems. Aeration to cool the grain and remove some moisture is not only good for grain conditioning, but will also reduce the potential for insect problems. Grain that is binned under less than ideal conditions should be monitored regularly during fall and winter for signs of insect infestations

Livestock Distribution: Knowledge Nuggets

Proper livestock distribution over pastures can increase rangeland production. Grazing distribution is spreading grazing animals over a management unit to obtain proper use of all forage resources.

Grazing distribution varies with the kind and class of grazing animal, topography, location of water, salt and mineral placement, forage palatability, vegetation type, forage quality, forage quantity, location of shade and shelter, fencing patterns, pasture size, grazing system, stock density, and prevailing winds. Ideal grazing distribution occurs when the entire pasture is grazed uniformly to an appropriate degree.

Cattle, being creatures of habit, rarely graze uniformly when left alone. They graze convenient areas, especially those near water and easily accessible. Livestock do not graze randomly. They prefer some grazing sites to others. Livestock must be forced or enticed to seldom used areas.

Improving grazing distribution results in higher harvest efficiency because livestock consume a greater proportion of the available forage. Improving grazing distribution also spreads defoliation effects across a greater proportion of available forage plants.

Methods for improving livestock distribution include:

- Managing stock density and/or season of grazing
- Forcing animals to specific locations by fencing
- Using grazing management strategies such as rotational grazing or flash grazing
- Enticing animals to specific locations with water, salt, supplemental feed, or rub and oiler placement
- Using the kind and class of livestock best suited to the terrain and vegetation characteristics

Placement of water developments is probably the most important factor affecting grazing distribution. Water is the central point of grazing activities. Near water, plants are heavily used and forage production drops. Salt and mineral should be placed away from water and used to distribute animals more uniformly.

Topography is the second most important cause of poor grazing distribution. Pastures should be fenced to minimize variability in topography, plant communities, and timing of plant growth.

Reducing pasture size and reducing the distance to water can significantly improve livestock distribution.

What are Riparian Areas and Why Do They Matter?

Riparian areas are the green zones around lakes and wetlands, the emerald threads of vegetation that border rivers and streams and the lush fringe in valleys. When we look at the green zone and what makes it green, there are three clues that help to define "riparian".

1. Lots of water is present, seasonally or regularly and that water is either on the surface or close to the surface.
2. Vegetation is present that responds to, requires and survives in abundant water.
3. Soils have been modified by abundant water, stream or lake processes and by lush, productive vegetation.

Although riparian areas are rarely uniform and show much variation, the common factor is the interaction of water, soil and vegetation.

Riparian areas produce forage, shelter, fish, wildlife and water. These areas are a buffer, an insurance policy especially useful to have when drought or flood occurs. They are part of a healthy, functioning landscape and form part of an extensive watershed. Riparian areas sustain us, our lifestyles and our businesses. The importance and significance of riparian areas is far larger than their size suggest.

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Creep Feeding Calves

Creep feeding is the practice of providing supplemental feed to calves before weaning. Creep feeding helps to supplement mother's milk and pasture. The feed is provided in a facility designed so that adult animals are unable to consume the creep feed. By providing creep feed, it is possible to increase pre-weaning weight gains and weaning weights.

The extra weight gained as a result of creep feeding is variable. The factors affecting the response are:

- supply and quality of pasture
- milk production of the dams
- growth potential of calves
- sex of calves
- age of calf
- type of feed
- length of creep feeding period
- distance travelled to creep feeder

Calves sucking good milking dams on good pasture will gain little from creep feeding, but if milk and/or pasture are poor, weaning weights can be substantially improved by creep feeding. As calves approach weaning, their nutrient requirements increase. This increase is greater in calves with a good growth potential (i.e. male or crossbred calves). If the calves' nutrient requirements are greater than the nutrients supplied by milk and pasture, the calves' growth rate will be restricted.

The dam's milk production depends on her genetic capability, pasture availability, age and previous nutritional history. Lactating beef cows grazing on good pasture early in the season can meet their nutritional needs for optimum milk production. However, by the time a calf is 90 days old, an average milking beef cow may produce enough milk to meet only one-half the nutrients needed by the calf for maximum growth.

Alternative management practices such as early weaning or providing high quality forage to calves can be considered as alternatives to creep feeding. Creep grazing is another method for ensuring the nutrition provided to calves is adequate. In this situation, rotationally grazed pastures are managed so that calves have the ability to graze new paddocks before the cows.

In most cases, pastures become energy deficient later in the grazing season. Using energy-rich creep feeds will result in better growth. In an energy-deficient state, calves will substitute forage on pasture for creep feed, thereby reducing demand on pasture. In situations where cattle are grazing poor quality pasture, protein deficiencies will occur. Using protein-rich creep feeds will result in better growth rates.

A potential disadvantage of creep feeding is that it can increase the fat levels of calves. Excess fat will collect in the mammary tissues of heifer calves causing permanent damage to the heifer's ability to milk as an adult. Creep feeding may also have marketing implications to the calves if they are carrying to much fat at sale time.

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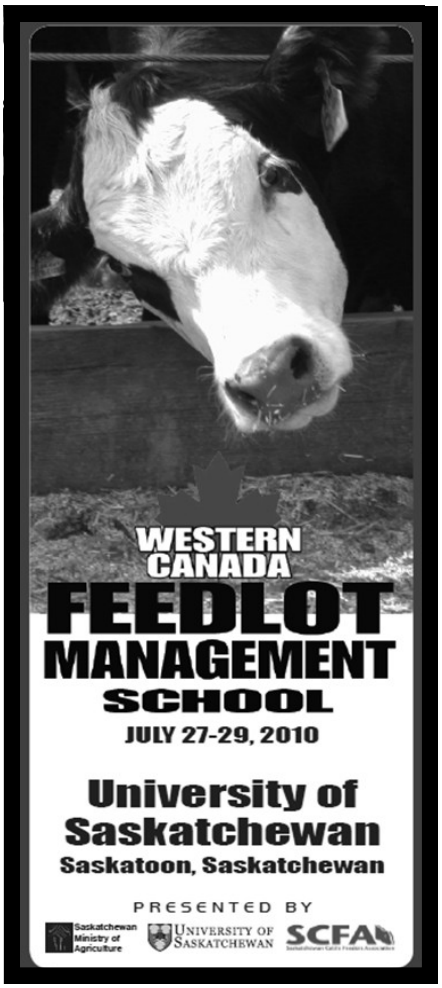
Edited by Kimberly Will A.Ag., BRRG



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- **Pasture Plants**
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- **Training your eye to:**
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  - *Recognize forage quality
- **Principles of Grazing**
  - *Create high yielding/high quality pasture
  - *Energy Flow
  - *Nutrient Cycle
  - *Water Cycle
  - *Plant Succession
  - *Importance of Pasture Rest
- **Pasture Inventory**
  - *How much Grass do I have?
- **Year Round Grazing**
  - *It's the best way to increase profit
- **Grazing Tools**
  - *Electric fencing and how to use it
  - *High Tensile wire and portable fencing

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- **Year Round Grazing Lab**
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