



Alternative Feeding Systems

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Well it's time to write my first Forage Facts; the task seems slightly daunting, but I'm going to start with a topic that's of great interest to me and a place that I had the privilege to work at.

A Little Background:

Dr. Bart Lardner of the Western Beef Development Centre (WBDC) will be one of the speakers at the upcoming Peace Cattle Day (Dec 3). He will be touching on some of the research being done at WBDC involving alternative feeding systems for backgrounding steers and heifer development.

Based outside Lanigan, SK, WBDC is home to a Black Angus herd of 350 and is the base for research "bridging the gap between the lab and the land." Heading up the research are Dr. Bart Lardner, Dr. Paul Jefferson and Kathy Larson (a beef economist) with focus on the management and economics of cow/calf production, grazing management of perennial and annual forages, and sustainable cow/calf production systems.

The ranch is staffed by a manager, assistant manager, research technician, full-time staff, and summer students. I was lucky enough to be a summer student, and part-time help through the winter and calving season in 2012/13. It was a great experience to see research being done and having it be so accessible to producers. They also practice what they preach at WBDC, using the results of their research to develop management practices for the ranch. Cost analysis is part of every project conducted at WBDC, so the systems they are investigating can be assessed on the basis of cost effectiveness in addition to production quality. This is an aspect of their research that is especially beneficial when comparing alternative feeding systems.

Alternative Feeding Systems

In recent years WBDC did a variety of projects centred around the idea of alternative feeding systems. In the Peace, there are already many producers using these strategies to extend their grazing seasons, so the work being done at WBDC is a model for options in the Peace. Common alternatives to conventional drylot feeding systems currently include swath grazing, bale grazing, bale processing and stockpiling pastures for later season grazing. The thing these systems all have in common is that you bring the cows to the feed, instead of bringing the feed to the cows. This also results in the cows delivering the nutrients instead of you! The impact these systems have on cow performance is something important to consider, so things like feed testing are important management considerations.

Corn Grazing

There has been a lot of interest in grazing standing corn as an alternative feeding option. Corn was first looked at by WBDC in 2001, where they compared 9 corn varieties for establishment, input costs, and production and forage quality (source: WBDC 2001 Factsheet Comparison of Corn Grazing Varieties). Since then, WBDC has continued to look at corn as a viable option for extending the grazing season, as it may provide better access for cattle than swath grazing in years with heavy snowfall.

A recent project comparing corn and swath grazing may be something to ask Bart about on Dec 3!

Crop Residue

Turning your cows out into a field after harvest is nothing new; the uncertainty comes with what they are eating while they're out there. Grain blown out the back of the combine, weeds, grass at the fenceline and straw that's been chopped and spread all have varying feed values. Another option for utilizing crop residue as a feed source was explored at WBDC, and involves the use of a whole-buncher (AJ Manufacturing, Calgary AB), which is attached to the combine and collects the crop residue and leaves it in piles. These piles are more readily available to the cows than straw/chaff spread on the ground, and remain available after snowfall.

In a winter feeding systems project at WBDC, this straw/chaff system was compared to swath grazing and bale grazing. Barley was cut at the mid-dough stage for greenfeed bales or swath grazing, and left to mature for the straw/chaff piles. During both winters, there were more days of feed available in the swath and bale grazing systems than in the straw/chaff system. The straw/chaff system also had lower feed quality (50% TDN, 10% CP), so cows were supplemented with a range pellet (78% TDN, 14% CP).

The results of this winter feeding systems project sheds light on cow performance in a variety of alternative feeding systems that are options in the Peace. Animals in the straw/chaff system had the least gain (0.5lbs/d), likely due to the lower quality of the feed. The bale and swath grazing systems had equal rates of gain (0.88 and 0.89 lbs/d respectively). Overall, WBDC found no negative effects on cow performance as a result of any of the more extensive winter feeding systems (source: WBDC Factsheet 2007-02).

EVENTS

**Building Soil-
Generating Land
With Christine Jones**
Nov 3rd, 9:30 am
Rycroft Ag Center

Peace Cattle Day
December 3rd
Fairview
Market Updates,
Genomics, Bix & more!

**Holistic Management
Course with
Don Campbell**
Jan 15-17, 22-24
Fairview

**Peace Agronomy
Update**
January, 15th
Fairview

Cow Calfenomics
January 20th
Grande Prairie

PCBFA AGM
February 6
Fairview

Contact Stacy to RSVP

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Winter Supplement Options

More often than not, the use of alternative feeding systems requires the use of supplements to help reach nutrient requirements of gestating cows. So what are the options when it comes to supplementation? Grains and pellets are what we mostly think of. But what about by-product supplementation? Dried distillers grains (DDGs) and canola meal are good protein and energy sources that are waste products of the ethanol and canola crushing industries. The challenge in producing a useable by-product pellet is consistency in the nutrient composition, therefore these pellets must be blended carefully. There are a number of current projects at WBDC looking at the use of these by-products as supplements for winter feeding programs.

Backgrounding Steers and Replacement Heifers

Wintering steers and replacements in extended grazing systems is growing in popularity for the same reasons wintering cows out of the corral is. With younger animals, supplementation and meeting nutritional requirements becomes a greater concern, and often, at a greater cost. Dr. Lardner and WBDC have looked at supplementing DDGs to weaned calves on summer and fall pasture and winter bale grazing. Calves were supplemented with either DDGs, barley or a 50:50 blend. Rations were designed for each feeding season to target 2lbs/hd/d, and cost of gain was determined for the winter bale grazing season were \$0.74, \$0.75 and \$0.76 per lb for barley, DDGs and 50:50 blend, respectively. In the summer and fall pasture seasons, the rate of gain was higher in calves supplemented with DDGs (100% or 50%) than those supplemented with 100% barley. Indicating, that when priced similarly barley and DDGs (\$150 and \$155/ton respectively at time of project), DDGs provides an advantage in calf gains. (source: WBDC Factsheet 2009-01).

The results of WBDC's extended grazing projects consistently show a decrease in cost of gain when compared to drylot without compromising animal performance. This of course is only true when the costs of growing an annual crop doesn't exceed those of backgrounding in a drylot.

One of WBDC's more recent projects dealt with heifer development systems relating to growth and reproduction. The study looked to compare raising replacement heifers to 55% versus 62% mature body weight and how it impacted reproduction in the first and second calves, as well as looking at the economics of the treatments. This project used both a conventional drylot system and a bale grazing system from after weaning until pasture turnout, and supplement levels were adjusted to target 55% or 62% mature BW. Heifers were summered on pasture, and wintered as bred heifers on barley swaths before being brought in for calving.

The results of this project indicate that there is no negative effect on reproductive abilities when raised to 55% mature BW compared to the more traditional 60-65%. It is not surprising that WBDC also showed a cost benefit to bale grazing compared to the drylot, as well as feeding to 55% compared to 62% (source: WBDC Factsheet 2014-02).

This is very recent project that concluded in 2013, and I'm sure Bart would love to answer any questions you may have!

At the Peace Cattle Day you will also hear from:

2012 Nuffield Scholar, Brenda Schoepp will discuss Agriculture from a Global Perspective and provide a market update. We'll hear an update on Beef InfoXchange System (BIXS 2.0) from Larry Thomas, and Dr. John Basarab from the University of Alberta will present on Feed Efficient Cow Herds.

Joke of the Month

A man is driving down a country road, when he spots a farmer standing in the middle of a huge field of grass. He pulls the car over to the side of the road and notices that the farmer is just standing there, doing nothing, looking at nothing. The man gets out of the car, walks all the way out to the farmer and asks him, "Ah excuse me mister, but what are you doing?"

The farmer replies, "I'm trying to win a Nobel Prize."

"How?" asks the man, puzzled.

"Well, I heard they give the Nobel Prize . . .

to people who are out standing in their field."

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