



Extended Grazing

Fact Sheet 2015

LOCATION: BROOKDALE SITE

START DATE: DECEMBER 2015

STATUS: IN PROGRESS

Extended grazing and extensive wintering of cattle at the Brookdale Farm

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Background

Extended grazing (ie. field feeding) as a winter feeding technique has been growing in popularity in recent years. According to the Western Canadian Cow-Calf Survey (2014)¹, "One-third (33%) of the producers surveyed use bale grazing for part of their winter feeding regimen, 28% roll forage out, 17% swath graze, 18% stockpile graze, 17% use crop residue and 6% use standing corn."

There are a number of reasons why extended grazing through swath, corn or bale grazing is becoming more popular. First, it allows livestock to return most of the nutrients they consume directly to the landscape where they are fed. Although feed costs can be higher due to residue left on the field the yardage, manure removal and feed dispersion costs are lower.² Manure and feed residues contain valuable nutrients that become available to annual or perennial crops on fields that may not otherwise be fertilized. This improves crop productivity and quality and can extend the grazing season and thereby reduce overall feeding costs.

Project Design and Methods

Fifty-five cows were grazed on three types of extended grazing crops at the Brookdale farm over the winter of 2015-2016. In each of the extended grazing sites the residue was measured after the cows grazed. Cattle had access to water throughout the winter extended grazing period from either a traditional heated waterer or a motion sensor activated solar powered watering system. Portable wind breaks were used to provide shelter for the cattle, along with some natural areas. The cattle were weighed before and after moving onto a different form of extended grazing.

The cows started on the swathed millet and were then moved to the standing corn and finally to the bales (10 bales/acre of 98% green feed). Supplements were used to ensure adequate nutrition throughout the



Cows grazing corn in March of 2016.



Cows bale grazing on the Brookdale site in March of 2016.

Objectives

- Ü To create a year-round, extensive cattle management system on the Brookdale site of MBFI;
- Ü To showcase the benefits and challenges associated with different types of extended grazing including; bale grazing, swath grazing and corn grazing;
- Ü To determine how cow production and body condition is affected by extended grazing; and
- Ü To complete an economic comparison between extended grazing and conventional confined winter feeding.



The cows on the swath grazing site during December of 2015.



Bales evenly dispersed at 10 bales/acre throughout a field in preparation for bale grazing in spring of 2016.

Key Messages

The cows retained their body condition score adequately throughout the winter and had the highest average daily gain on the corn grazing.

A warm winter with several freeze/thaws resulted in higher residue left on the corn and swath grazed fields than desired. Improved utilization and reduced residue is important to cut down on cost.

There was no manure removal cost. An economic assessment was not completed in the first year of this study but is planned for future years.

winter. A temporary, single-strand electric fence was used to create small paddocks between 0.5 -6 acres. Using electric fencing is important to control cattle access to the feed, decrease labor required and improve utilization.

Description	Swath Grazing	Corn Grazing	Bale Grazing
Start date	Dec 8, 2015	Feb 19, 2016	Mar 3, 2016
End date	Feb 19, 2016	Mar 4, 2016	May 1, 2016
Total # of days	74	15	58
Area grazed (acres)	35.8	20	15
Supplement/head/day (lbs)	3.7	22.1	5 – 5.5
Average (avg) start weight (lbs)	1304	1316	1335
Avg end weight (lbs)	1316	1335	1349
Avg Start Body Condition Score (BCS)	2.5	2.8	3.1
Avg end BCS	2.8	3.1	2.8
Avg daily gain (lbs)	0.15	1.4	0.23
Avg residue (lbs dry matter/acre)	1966	900	N/A

What did we find?

The cows grazed well on the swaths most of the winter until February when alternating warm and cold temperatures caused the swaths to freeze. As a result the cows had to work harder to access the feed and waste was higher. Similarly, the cows also had difficulty grazing some of the corn due to it being knocked down and frozen to the ground during a time of alternating melting and freezing temperatures. This loss of grazeable corn reduced the days grazing considerably. Overall utilization was lower in the millet, bale grazing and the corn than desired. Forcing the cattle to clean up the feed better before moving will help improve the utilization but care needs to be taken to ensure body condition doesn't drop. Moving the fence and cattle more often every 3-4 days will help prevent trampling and freezing up of swaths and feed. The use of bale rings could decrease the level of residue or waste in the bale grazing sites, especially in spring when temperatures are warmer and conditions are wetter/softer.

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References:

1. 2014 Western Canadian Cow-Calf Survey. Western Beef Development Centre. Accessed August 28, 2016. Available: http://www.wbdc.sk.ca/pdfs/economics/WCCCS_Summary_Overall_Jun2015.pdf
2. Adams, D. C. 1994. Extended grazing systems for improving economic returns from Nebraska Sandhill's cow-calf operations. Journal of Range Management. 47:258-263.