

# Dried Distillers Grains Supplementation in Backgrounding and Stocker Programs

Dr Bart Lardner, Western Beef Development Centre  
Leah Dixon, University of Saskatchewan

## Introduction

To date most research on distillers' byproducts has been focused on feedlot diets. There is an expansion in non-confined or non-conventional backgrounding and stocker programs where supplementation is an important consideration. Efforts to reduce backgrounding costs have led to increased use of forages in backgrounding programs. These types of programs, which may utilize stockpiled pasture or extensive winter systems, require supplementation in order to meet the growing animals' requirements (NRC 1996). Wheat dried distillers grains with solubles (DDGS) is nutritionally dense and high in crude protein. DDGS are also considered high in energy due to their highly digestible fibre and high fat content (Schingoethe 2006).

## Bale Grazing Study

In November 2008, a field study was initiated to evaluate the performance of weaned beef calves in a winter backgrounding program. The study managed crossbred beef calves on a bale-grazing system during the winter months. The calves were supplemented with; (i) 100% processed barley grain (CONTROL); (ii) 100% wheat dried distillers' grains with solubles (DDGS), or (iii) 50% barley: 50% wheat DDGS (BAR\_DDGS). Animals were evaluated for body weight (BW) change and system economics were calculated.



Feed quality (grass-legume hay) was analyzed and rations were formulated for calves to gain 1.8 lb per day over the study period. Supplements were fed at 0.8% BW at start of trial, increasing to 1.0% BW at trial end.

**Effect of supplementation strategy on performance of beef calves in winter bale grazing system**

Item	CONTROL	DDGS	BAR_DDGS
Initial bodyweight, (lb)	483	484	492
Final bodyweight, (lb)	696	707	713
Bodyweight gain, (lb)	213	223	221
Average daily gain, (lb/day)	1.96	2.04	2.03

Calculated cost of gain was \$0.74, \$0.75 and \$0.76 per lb for CONTROL, DDG and BAR\_DDGS supplemented calves, respectively. Barley and DDG priced at \$150 and \$155 tonne, respectively.

**Grazing Spring Pasture**

In May 2009, a study was initiated to evaluate the performance of stockers in a spring backgrounding program. The study is managing crossbred stocker cattle on a grazing system during the summer months. The calves are supplemented with: (i) 100% processed barley grain (CONTROL); (ii) 100% wheat dried distillers grains with solubles (DDGS), or (iii) 50% barley:50% wheat DDGS (BAR\_DDGS). Animals are evaluated for body weight (BW) change and system economics will be evaluated.



Pasture quality (crested wheatgrass) was analyzed and rations were formulated for calves to gain 1.8 lb per day over the study period. Supplements are being fed at 0.5% of body weight.

**Effect of supplementation strategy on pasture performance of beef calves grazing crested wheatgrass**

Item	CONTROL	DDGS	BAR_DDGS
Initial bodyweight, (lb)	797	792	798
16 day bodyweight, (lb)	837	829	848
Bodyweight gain, (lb)	40	37	50
Average daily gain, (lb/day)	2.51	2.34	3.11