



Western Beef Development Centre

THE WESTERN BEEF DEVELOPMENT CENTRE BACKGROUNDING REPORT FOR 2002-2003

Introduction

The WBDC is an organization dedicated to 1) providing relevant information to cattle producers and 2) demonstrating new production and management practices that may benefit the Western Canadian cattle industry. The WBDC leases the Termuende Farm, which is located just east of Lanigan, SK, from the University of Saskatchewan. 300 Black Angus cows, 2000 acres of forage and crop land and a one-time feeding capacity of approximately 1200 head make up the Termuende Farm.

This article focuses on the revenues and expenses the Western Beef Development Centre (WBDC) incurred in the fall and winter of 2002-2003, while backgrounding its 2002 calf crop. This calf crop consisted of approximately 200 Black Angus calves and 100 Black Angus X Gelbvieh calves.

August 2002

In August of 2002 a decision was made by the WBDC to background its yet to be weaned calf crop. This decision was made because it appeared the October price for weaned calves was not going to be profitable. *The expected revenue of \$520/weaned calf was not enough to cover our cowherd cost of production, which at the time was expected to be approximately \$650-\$700/cow/year.* Using 3 previous years of WBDC yardage costs and feed conversions it was decided backgrounding our calves would likely result in 1) "breaking even" while feeding these calves and 2) offsetting some of the operation's overhead costs, which the cowherd would otherwise incur.

In order to arrange financing to feed these calves the WBDC entered into a contract with Pound Maker Agventures Ltd. for March 2003 delivery of its calves. The steers were to weigh 750 lbs/head and were priced at \$110/cwt. while the heifers were to weigh 700 lbs/head and receive a price of \$106/cwt. There was an agreed upon \$3/cwt. slide if the shrunk weight of the calves was less than 850 lbs/head. Any weight above 850 lbs/head was to be paid on \$6/cwt. slide.

The contract agreed upon in August of 2002 was based on the March 2003 CME feeder cattle contract of \$76.10 US. This was coupled with a \$63.58 Canadian dollar contract for March '03, a basis of -\$10/cwt. Cdn. for steers and -\$14/cwt. Cdn. for heifers. *The calculation of the price offered to the WBDC by Pound Maker Agventures Ltd. was as follows:*

Steer Price (750 lbs/head) – Determined in August/'02 for March '03 Delivery

March 2003 Feeder Cattle
Contract Price X Exchange Rate - Basis
= WBDC Steer Price
\$76.10 US X 1.5728 -\$10/cwt.
= \$110/cwt. Cdn.

Heifer Price (700 lbs/head) – Determined in August/'02 for March '03 Delivery

March 2003 Feeder Cattle
Contract Price X Exchange Rate - Basis
= WBDC Heifer Price
\$76.10 US X 1.5728 -\$14/cwt.
= \$106/cwt. Cdn.

October 1st & 2nd 2002 – Weaning of Calves

On October 1st & 2nd 291 calves were weaned at the Termuende Farm. 164 steer calves had an average weaning weight of 493 lbs/head and were valued at \$121/cwt. In addition, 127 heifers weighed 458 lbs/head and were valued at \$112.50/cwt. The actual weaning weights were a surprise given the heifer and steer calves were expected to weigh 450 and 425 lbs/head respectively. The breeding herd had performed better than expected but now the calves could possibly receive price discounts if delivery weights were outside the target of our contract.

Feeding

The weaned calves were sorted into five groups according to sex and weight. From October 1st to November 1st 2002 the calves were fed free choice timothy hay and were supplemented with pellets and tub ground barley green feed.

As of November 1st the calves were put on a ration of 33% pellets and 67% barley greenfeed. By December 10th (71 days on feed) the calves were on a 50% pellet - 50% barely greenfeed ration. On January 18th (110 days on feed) the ration was increased to 50% pellets - 50% good quality alfalfa/meadow brome hay. The goal of our feeding program was for the steers to gain approximately 2.20 lbs/day and the heifers 2.1 lbs/day during the entire feeding period. The ration fed to the calves was reduced very slightly in the month of March (added oat straw and reduced alfalfa/grass hay) to ensure the calves were not too “fleshy” before delivery, given the contract specified light – medium flesh at delivery. For this analysis the feed prices being used are exactly what the WBDC had to pay for feed delivered to the yard (Table 1).

Table 1. Feed Costs	
Feed	\$/Ton
Pellets	152
Barley Greenfeed	65
Oat Straw	45
Timothy	115
Alfalfa/Meadow Brome Hay	85
Bedding Straw	35

February - March 2003 - Sale of Calves

After progressing through the winter the WBDC ended up selling 158 steers (865 lbs/head @ \$106/cwt.) and 127 heifers (819 lbs/head @ \$101.84/cwt.) in February and March 2003. Delivery weights for the calves could have been heavier and resulted in a larger price discount if we had not been allowed to deliver 29 steers (854 lbs/head) and 5 heifers (816 lbs/head) on February 3, 2003 (25 days earlier than our contract specified). There were no additional penalties for this early delivery.

Death loss during the feeding period was 0% for heifers and 3.66% for steers. The heifers and steers were on feed for an average of 169 and 163 days respectively. The average daily gain during the feeding period was 2.22 lbs/day for steers and 2.15 lbs/day for heifers, after a pencil shrink of 3% at both weaning and delivery. The feed conversion (lbs of dry matter feed: 1lb. gain) for steers and heifers was 8.94:1 and 8.55:1. When the calves were put in the lot in October it was expected the feed conversion would have been more efficient that it actually was. The cold snap from mid-January to the end of March was believed to have played a part in the poorer feed conversions.

Could We Have Sold Our Calves For More?

As the year progressed the March 2003 CME feeder cattle contract went much higher than the \$76.10 US price which was used to arrive at our contracted price. When the backgrounded calves were delivered in March the cash price

for 800-900 lb. steers was approximately \$5/cwt. higher than the price received by the WBDC and the 700-800lb. cash price for heifers was approximately \$6/cwt. higher. Had the WBDC locked in its calves at the most opportune time during the winter, the calves could have likely been sold for \$10-\$15/cwt. Cdn. more than the price received at delivery. However, as we all know timing the market is not the easiest thing to do. In our case signing a contract for a guaranteed price was the only way we could arrange financing to feed these calves. *The total cost and returns associated with feeding the steers and heifers are listed in Tables 2 and 3.* Note there are no trucking deductions in this analysis because Pound Maker Agventures Ltd. is located directly across the road from Termuende Farm.

Lessons Learned

The WBDC locked in delivery weights for March 2003 on calves that were not yet weaned. By fall it became apparent the predicted weaning weights of the calves had been underestimated. *Therefore we learned if a cow-calf producer plans on backgrounding his yet to be weaned calves and also enters into a contract such as we did, there must be a clear understanding of what those calves will weigh at weaning. Otherwise, the consequences can be financially painful.*

We also learned feeding 290 calves in a lot which can hold approximately 1200 head is not economical, especially when this was the only turn our lot was used during the year. We still had utility bills, labour costs, machinery and building depreciation, etc., and our feedlot was only at 25% capacity. Thus the overhead for 1200 head was spread over less than 300, and as such our cost of production was not as competitive as it could have been in order to earn a profit feeding these calves.

The Advantages of Having a Cowherd and Backgrounding the Calves Produced

Many would ask how there could ever be any advantage to the WBDC backgrounding calves when it appears to have lost money on every animal it fed. This is a valid question, however there are still advantages to having this enterprise as part of our operation.

The first benefit of backgrounding calves is that **machinery and facility depreciation expenses** (overhead costs) can be spread over both the feedlot and cowherd enterprises. Traditionally the cowherd was wintered in the facilities where the calves were backgrounded. However, many of the WBDC feeding trials are now geared towards minimizing the costs associated with wintering the cowherd. Therefore the cowherd is now wintered in surrounding fields and pastures. If the pen space and associated equipment were not used for backgrounding, much of it would be sitting idle until spring when the cowherd is moved into the yard for calving. Backgrounding these calves has enabled us to use the feedlot and machinery for the entire winter and offset

approximately \$2480 of depreciation costs that would have otherwise been allocated to our cowherd.

The second benefit of backgrounding is that some of the **utility costs** normally allocated to the cowherd are now shared with the feedlot enterprise. For example, if we were not using the feedlot there would still be costs associated with 1) electricity for the lights around the yard and feedlot; 2) heating the water bowls in the feedlot; and 3) heating the shop where machinery used for feeding is stored. Approximately \$290 of the WBDC utility costs charged to the feedlot enterprise (\$1/head), would have been allocated to the cowherd if we did not background these calves.

Reduced **labour costs** for the cowherd are the third benefit of backgrounding calves at the WBDC. If all of the calves

were sold directly off the cow at weaning there would be an excess supply of labour throughout much of the winter. Backgrounding these 290 calves kept the farm staff busy and also transferred approximately \$10,000 of labour costs away from the cowherd.

Conclusion

Combining depreciation (\$2,480), utility (\$290) and labour costs (\$10,000) allocated to the feedlot enterprise results in savings of approximately \$12,770 for the cowherd. Thus from a whole farm analysis the backgrounding enterprise's total loss of \$8,820.23 is offset by the \$12,770 in reduced expenses for the remaining enterprises which comprise the WBDC.

Costs		\$/Head	Total \$	
Value of 164 Steers Entering Feedlot (492.5 lbs/head @ \$121/cwt.)		595.93	97,732.52	A
	\$/Lb. Of Gain	\$/Head	Total \$	
Custom Tub Grinding	0.03	10.67	1,750.64	
Veterinary Supplies and Services	0.04	12.00	1,968.00	
Feed	0.54	185.57	30,433.14	
Bedding	0.01	4.65	762.89	
Labour	0.16	54.88	9,000.55	
Fuel/Utilities	0.03	11.08	1,817.78	
Repairs	0.03	11.41	1,871.24	
Manure Removal	0.03	9.00	1,476.00	
Depreciation	0.02	8.15	1,336.60	
Interest on Feed, Bedding, and Cattle (6%)	0.06	19.45	3,190.23	
Death Loss (3.65 %)				
Cost of Gain	0.96	326.87	53,607.07	B
		\$/Head	Total \$	
Steer Revenue Less Marketing Deductions --158 head -- 865 lbs/hd @ \$106/cwt. - \$3.66/hd			144,438.86	C
Return to Equity		-42.08	-6,900.73	C - B - A
Average Daily Gain (Lbs/Day)	2.22			
Cost/Lb. Of Gain	\$0.96			
Average Days on Feed	163.00			
Feed Conversion (Lbs Dry Matter Feed Intake:Lb. Gain)	8.94			

Table 3. Backgrounding Returns for Heifers on Feed from October 2002 to March 2003				
Costs		\$/Head	Total \$	
Value of 127 Heifers Entering Feedlot (458 lbs/head @ \$112.50/cwt.)		515.25	65,436.75	A
	\$/Lb.			
	of Gain	\$/Head	Total \$	
Custom Tub Grinding	0.03	10.58	1,343.06	
Veterinary Supplies and Services	0.03	12.00	1,524.00	
Feed	0.52	186.93	23,740.14	
Bedding	0.01	4.76	605.11	
Labour	0.16	56.81	7,214.45	
Fuel/Utilities	0.03	11.83	1,502.41	
Repairs	0.03	11.83	1,502.41	
Manure Removal	0.02	9.00	1,143.00	
Depreciation	0.02	8.45	1,073.15	
Interest on Feed, Bedding, and Cattle (6%)	0.05	17.93	2,276.77	
Death Loss (0%)				
Cost of Gain	0.91	330.11	41,924.50	B
		\$/Head	Total \$	
Heifer Revenue Less Marketing Deductions -- 127 head -- 819 lbs/hd @ \$101.84/cwt. - \$3.66/hd			105,441.75	C
Return to Equity		-15.11	-1,919.50	C - B - A
Average Daily Gain (Lbs/day)	2.15			
Cost/Lb. Of Gain	\$0.91			
Average Days on Feed	169.00			
Feed Conversion (Lbs Dry Matter Feed Intake: Lb Gain)	8.55			