



# Western Beef Development Centre

## ARE COW-CALF PROFITS CORRELATED WITH LOWER COSTS OF PRODUCTION?

### **Introduction**

This fact sheet discusses the economics of Saskatchewan cow-calf production. Data was obtained from 53 Saskatchewan producers participating in the Western Beef Development Centre's (WBDC) 2003 cost of production study. Producers have been separated into low, medium and high profit groups. Table 1 details total costs of production and margins earned for each profit group, while Table 2 outlines the differences in yardage (overhead) costs between the three groups.

### **Background**

Total costs of production and margins earned are expressed in both dollars per cow (\$/cow) as well as dollars per pound of calf weaned (\$/lb). Production costs listed in Tables 1 & 2 are for the cowherd enterprise only and do not include the costs associated with growing crops, baling feed, etc. given all feed and bedding was assigned its market value sitting in the bin, stack, pit, etc. The costs of rolling, grinding, processing and transporting feed to the animals are included in the yardage category. Grazing was based on the producer's discretion as to its fair market value. Grazing was valued according to "supervised" market prices, meaning the cost of the grazing day included someone checking the cattle, fences, water, etc.

All production costs associated with the bulls (feed, bedding grazing, etc.) have been included and absorbed by the cowherd. Furthermore, interest payments are included as a production cost, however principal debt payments have not been included.

Breeding stock depreciation was only calculated on the breeding stock culled or determined to be a cull during 2003 (open, stifled, etc.). Obviously the BSE crisis resulted in the Saskatchewan breeding herd devaluing substantially from the beginning to end of 2003. However, the true market devaluation was beyond the scope of this study for a couple of reasons. First, the limited trading of breeding stock in the second half of 2003 resulted in many producers being uncertain as to the value of their breeding stock. Second, the cow culling rate of 5.7-8.8% (depending on profit group) was lower than past years (because of poor cull prices and extended breeding seasons) and thus resulted in the breeding stock depreciation per cow being calculated on a smaller percentage of the herd than normal.

## **Results**

### **Value of Production**

Value of production is simply the value of weaned calves (net of trucking and marketing deductions) less breeding stock depreciation. Weaned calf values ranged from 508 lbs/head @ \$1.08/lb in the low profit herds to 522 lbs/head @ \$1.22/lb in the high profit herds. The volatility of the calf market in the fall of 2003 makes it very difficult to draw any concrete conclusions as to who was a good marketer of calves and who was not.

### **Total Production Costs**

The major difference in total costs of production between the three profit groups centered on 1) total yardage costs and 2) winter feed and bedding costs.

Total yardage costs including unpaid labour varied from \$220/cow (\$0.45/lb) in the low profit herds to \$117/cow (\$0.25/lb) in the high profit herds. Excluding unpaid labour as a production cost resulted in yardage costs ranging from \$146/cow (\$0.30/lb) for low profit producers to \$75/cow (\$0.16/lb) in the high profit herds.

The large difference in winter feed and bedding between low and high profit herds (\$78/cow or \$0.14/lb) has been observed in each year of this study as traditionally the low profit herds do not feed the lowest cost rations, do not balance rations, typically feed their cows for a longer period of time and usually bed their cows excessively during the winter.

### **Margin**

Margins ranged from -\$199/cow (-\$0.41/lb) to +\$43/cow (\$0.09/lb) between the low and high profit groups when unpaid labour was included as an expense. If unpaid labour were not included as an expense the range in margins was from -\$125/cow (-\$0.26/lb) to +\$85/cow (\$0.08/lb).

### **Conclusions**

In 2003, high profit Saskatchewan cowherds were typically larger sized and thus able to spread their yardage (overhead) costs over a larger number of cows and/or pounds of calf produced. High profit herds were also the lowest cost producers, both when unpaid labour was and was not included as a production cost.

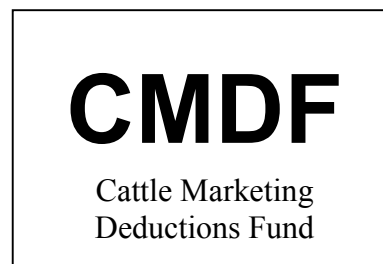
To participate in the WBDC cost of production program (cow-calf and/or feedlot) or to obtain further information regarding this and many other articles pertaining to this topic, contact Tim Highmoor at (306) 966-2627, [www.wbdc.sk.ca](http://www.wbdc.sk.ca) or email [thighmoor@wbdc.sk.ca](mailto:thighmoor@wbdc.sk.ca).

**Table 1. 2003 Saskatchewan Cow-Calf Profit Analysis**

Profit Group	Low	Medium	High			
# of Herds	17	18	18			
Cows Expected to Calve in 2003	124	190	314			
Number of Calves Weaned	117	177	294			
Average Weaning Weight	518	506	496			
Average Winter Feeding Days/Cow	176	168	152			
Average Pasture Grazing Days/Cow	138	177	158			
Average Aftermath Grazing Days/Cow	27	12	37			
Average Swath/Corn Grazing Days/Cow	25	8	19			
Bull Culling Rate	19.20%	14.07%	14.90%			
Cow Culling Rate	6.00%	8.77%	5.70%			
Cow Deaths	1.29%	1.16%	1.17%			
Bull Deaths	3.15%	3.37%	1.18%			
<b>Value of Production</b>	<b>\$/cow</b>	<b>\$/lb</b>	<b>\$/cow</b>	<b>\$/lb</b>	<b>\$/cow</b>	<b>\$/lb</b>
Value of Weaned Calves Less Trucking & Marketing	513.02	1.05	524.41	1.11	567.50	1.22
Breeding Stock Depreciation	-55.53	-0.11	-69.70	-0.15	-55.53	-0.12
<b>Total Value of Production (A)</b>	<b>457.49</b>	<b>0.93</b>	<b>454.71</b>	<b>0.96</b>	<b>511.97</b>	<b>1.10</b>
<b>Production Costs</b>						
Winter Feed & Bedding	246.64	0.50	189.66	0.40	169.10	0.36
Grazing Pasture	110.44	0.23	135.31	0.29	122.65	0.26
Aftermath Grazing Pasture	13.16	0.03	5.15	0.01	12.74	0.03
Swath or Corn Grazing	21.86	0.04	8.14	0.02	16.28	0.04
Veterinary & Medicine	27.33	0.06	22.49	0.05	20.82	0.04
Operating Interest	2.51	0.01	4.04	0.01	2.25	0.00
Capital Interest	13.97	0.03	8.95	0.02	8.32	0.02
Yardage	220.22	0.45	130.23	0.28	116.65	0.25
<b>Total Production Costs (B)</b>	<b>656.13</b>	<b>1.34</b>	<b>503.98</b>	<b>1.07</b>	<b>468.81</b>	<b>1.01</b>
<b>Margin (A - B)</b>	<b>-198.64</b>	<b>-0.41</b>	<b>-49.27</b>	<b>-0.10</b>	<b>43.16</b>	<b>0.09</b>
<b>Total Production Costs Less Unpaid Labour</b>	<b>582.21</b>	<b>1.19</b>	<b>452.38</b>	<b>0.96</b>	<b>426.83</b>	<b>0.92</b>

**Table 2: 2003 Saskatchewan Cow Calf Profit Comparison of Yardage Costs**

<b>Profit Group</b>	<b>Low</b>		<b>Medium</b>		<b>High</b>	
Average Winter Feeding Days/Cow	176		168		152	
Cows Expected to Calve in 2003	124		190		314	
<b>Yardage Costs</b>	<b>\$/cow</b>	<b>\$/lb</b>	<b>\$/cow</b>	<b>\$/lb</b>	<b>\$/cow</b>	<b>\$/lb</b>
Fuel	13.00	0.03	10.66	0.02	9.86	0.02
Repairs - Machinery	14.57	0.03	8.55	0.02	8.31	0.02
Repairs - Buildings	7.56	0.02	4.47	0.01	2.81	0.01
Utilities & Miscellaneous	25.48	0.05	17.47	0.04	12.81	0.03
Custom Work	12.90	0.03	8.57	0.02	3.95	0.01
Paid Labour	29.41	0.06	6.15	0.01	17.05	0.04
Unpaid Labour	73.92	0.15	51.60	0.11	41.98	0.09
Taxes & Insurance	12.64	0.03	3.84	0.01	3.96	0.01
Building & Machinery Depreciation	28.96	0.06	16.54	0.04	14.17	0.03
Machinery Lease Payments	1.78	0.00	2.38	0.01	1.75	0.00
<b>Total Yardage Costs</b>	<b>220.22</b>	<b>0.45</b>	<b>130.23</b>	<b>0.28</b>	<b>116.65</b>	<b>0.25</b>
<b>Total Yardage Costs/Winter Feeding Day</b>	<b>1.25</b>		<b>0.77</b>		<b>0.77</b>	
<b>Total Yardage Costs Less Unpaid Labour</b>	<b>146.30</b>	<b>0.30</b>	<b>78.63</b>	<b>0.17</b>	<b>74.67</b>	<b>0.16</b>
<b>Total Yardage Costs/Winter Feeding Day Less Unpaid Labour</b>	<b>0.83</b>		<b>0.47</b>		<b>0.49</b>	
<b>Cow-Calf Enterprise Investment (\$/cow)</b>						
Buildings	232		151		95	
Machinery	230		136		116	



**This study was funded by the Saskatchewan Cattle Marketing Deductions Fund and Ducks Unlimited Canada.**