

## **Economics of Preconditioning Calves – Outlook for Fall 2005**

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The practice of preconditioning calves after weaning has become more popular in recent years due to numerous trends that are occurring in the beef industry. As with any management practice, producers should evaluate whether or not preconditioning their calves is expected to increase returns relative to selling calves at weaning. This paper provides some example budgets examining the profitability of a 45-day preconditioning program based on prices in the fall of 2005. A more detailed paper on this topic (*Economics of Preconditioning Calves*) can be found at <http://www.agmanager.info/livestock/budgets/production/beef/>. The information in this paper is for a “generic” preconditioning program (i.e., specific practices and products are not identified). However, survey-based information regarding specific preconditioning programs can be found at <http://www.beefstockerusa.org/preconditioning/>.

Table 1 shows the estimated costs and returns for preconditioning a 550 pound beef steer calf for 45 days. The estimated price at weaning is \$128/cwt and based on a 4% shrink this generates a gross revenue of \$676 per head. Thus, if preconditioning is to be profitable, relative to selling calves at weaning, returns after accounting for costs associated with preconditioning will have to exceed \$676/head.

The price received for calves after preconditioning will vary from the weaning price because of seasonal price moves, heavier calves, and other premiums/discounts associated with the calf being fed for 45 days. Based on a 10-year average seasonal price index, prices 45 days post weaning are expected to be \$3.92/cwt higher than prices at weaning (assumed at mid-October). However, the heavier calf (592 lbs vs 528) are expected to be discounted \$7.07/cwt due to the higher weight. Assuming a premium associated with preconditioning of \$4/cwt, the final price for preconditioned calves is projected to be \$128.85/cwt. Thus, after accounting for seasonality, heavier calves, and preconditioning premiums, the price of the heavier preconditioned calves is expected to be comparable to the lighterweight calves at weaning time.

Based on other published studies, costs for the 45-day preconditioning program are estimated to be approximately \$60/head (\$1.41/head/day). This value is likely a conservative estimate (i.e., it is probably on the high end) and thus it is expected that efficient producers likely will be able to precondition calves for a per-head-per day cost of 90¢ to \$1.30. Costs will vary considerably between producers due to number of calves preconditioned, feed ingredients available, etc. and thus it is important for producers to estimate their own costs.

Given a cost of \$63.58/head, preconditioning for 45 days is expected to increase returns about \$23/head compared to selling calves at weaning. The “Alternative scenarios” listed in Table 1 represent sensitivity analyses from the baseline scenario. All scenarios except “ADG (+)” represent poorer conditions relative to the baseline. This is not to infer that only downside risk

exists, but rather to show how returns will be impacted if conditions worsen compared to the baseline. In all sensitivity analysis scenarios considered, returns to preconditioning remained positive. Even if costs increase approximately 20% compared to the baseline or if ADG is only 1.0 (as opposed to 1.33), returns to preconditioning are still over \$10/head better than selling calves at weaning. Even though prices for calves are very strong this year, indicating that cow-calf producers should have a profitable year in 2005, the potential to increase returns further by preconditioning calves this fall exists. However, it should be noted that preconditioning calves does increase risk relative to selling calves at weaning (i.e., you have a live calf and a known price at that time), but current prices suggest that there is a return to this additional risk.

**Table 1. Economic Analysis of Cow-Calf Producer Preconditioning Calves**

A. Traditional Management Income	Baseline	Alternative scenarios			
		ADG (-)	ADG (+)	D.L. (+)	Cost (+)
1 Weaning weight, lbs	550	550	550	550	550
2 Shrink, %	4.0%	4.0%	4.0%	4.0%	4.0%
3 Sale weight, lbs	528.0	528.0	528.0	528.0	528.0
4 Weaning price, \$/cwt	\$128.00	\$128.00	\$128.00	\$128.00	\$128.00
5 Gross revenue, \$/head	\$675.84	\$675.84	\$675.84	\$675.84	\$675.84
<b>B. Preconditioning Management Income</b>					
6 Beginning (weaning) weight, lbs	550	550	550	550	550
7 Days from weaning to marketing	45	45	45	45	45
8 ADG, lbs/day	1.33	1.00	1.67	1.33	1.33
9 Ending weight, lbs	610.0	595.0	625.2	610.0	610.0
10 Shrink, %	3.0%	3.0%	3.0%	3.0%	3.0%
11 Death loss	0.25%	0.25%	0.25%	1.00%	0.25%
12 Sale weight, lbs	591.7	577.2	606.4	591.7	591.7
13 Weaning price, \$/cwt	\$128.00	\$128.00	\$128.00	\$128.00	\$128.00
13a Price adjustment for seasonality, \$/cwt	3.92	3.92	3.92	3.92	3.92
13b Price adjustment for weight, \$/cwt	-7.07	-5.46	-8.70	-7.07	-7.07
13c Price adjustment for fleshiness, \$/cwt	0.00	0.00	0.00	0.00	0.00
13d Preconditioning premium, \$/cwt	4.00	4.00	4.00	4.00	4.00
14 Final price (\$/cwt.)	\$128.85	\$130.47	\$127.22	\$128.85	\$128.85
15 Gross revenue (\$/head)	\$762.41	\$752.98	\$771.45	\$762.41	\$762.41
<b>C. Preconditioning costs, \$/head</b>					
16 Interest (cattle, feed, supplies) @ 8.0%	\$6.97	\$6.97	\$6.97	\$6.97	\$7.04
17 Health supplies and medicine	10.00	10.00	10.00	10.00	15.00
18 Death loss	1.86	1.84	1.88	7.45	1.86
19 Labor and equipment	6.75	6.75	6.75	6.75	6.75
20 Feed, hay, and pasture	35.00	35.00	35.00	35.00	40.00
21 Marketing costs (tags, comm, etc.)	3.00	3.00	3.00	3.00	5.00
22 Total cost	\$63.58	\$63.56	\$63.61	\$69.17	\$75.65
23 Cost per day	\$1.41	\$1.41	\$1.41	\$1.54	\$1.68
24 Cost of gain, \$/cwt	\$99.82	\$129.32	\$81.13	\$108.59	\$118.76
<b>D. Comparison: Traditional vs Preconditioning</b>					
25 Traditional gross revenue, \$/head	\$675.84	\$675.84	\$675.84	\$675.84	\$675.84
26 Preconditioning gross revenue, \$/head	\$762.41	\$752.98	\$771.45	\$762.41	\$762.41
27 Increased revenue, \$/head	\$86.57	\$77.14	\$95.61	\$86.57	\$86.57
28 Less preconditioning costs, \$/head	\$63.58	\$63.56	\$63.61	\$69.17	\$75.65
29 Net return from preconditioning, \$/head	\$22.99	\$13.58	\$32.01	\$17.40	\$10.92
30 Return on costs (line 29 / line 22)	36.2%	21.4%	50.3%	25.2%	14.4%
31 Breakeven price, \$/cwt	\$124.96	\$128.11	\$121.93	\$125.88	\$127.00
32 Breakeven premium, \$/cwt	\$0.11	\$1.64	(\$1.29)	\$1.03	\$2.15