



Drylot Backgrounding of Beef

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Production Level

Costs per unit and net returns in livestock production are highly dependent on production levels. The following estimated budget includes three different production levels. Production levels vary for a number of reasons such as livestock quality/genetics, weather, input levels, and management. The three production levels included in this estimated budget reflect production variability due to weather and management as opposed to the quality of the livestock since livestock values are held constant. Budgeting at multiple production levels can help producers examine the financial risk of a livestock enterprise that is directly related to production risk.

This beef backgrounding budget includes a below average column as well as an above average column for both steer and heifer feeding. Performance varies due to differences in average daily gain and feed conversions. The values assumed are included in Table 1 and are deviations from long term averages.

Variable and Fixed Costs

Variable costs are costs that vary in the short run and can differ on a per head basis from one feeding cycle to the next. The feed requirements used in this budget include additional roughage and grain to allow for waste. Feeding conditions will vary throughout the feeding period which will alter projected weight gain. If poor feeding conditions are encountered, then weight gains will be less than those projected. An allowance for shrink is included in the average daily gain and feed conversion estimates. Cwt. produced is adjusted for death loss and shrink. Average daily gain may vary depending on the breed of the animals, the ration fed, and the time of the year.

Farm Management Association Summary Reports are used as a basis for estimating variable costs such as labor, veterinary, drugs, repairs, fuel, oil, and utilities. These cost items may vary considerably between individual producers. Each column shows interest on one-half the variable cost plus the cost of the purchased animal for the length of the feeding period. Producers who do not rely on borrowed funds should consider the interest charge as an opportunity cost of their own capital.

Fixed costs do not vary from one feeding period to the next, and are incurred by virtue of owning equipment and facilities. Two turnovers of cattle per year are assumed when calculating the per head fixed costs. Building requirements consist primarily of feed storage facilities. Equipment requirements include feeding facilities, corrals, handling equipment, and watering systems. In each column, interest was calculated on one-half the original cost of buildings and equipment.

This budget uses five-year average input and output prices for illustrative purposes. Producers should use their own prices when using this budget. The break-even price is sensitive to changes in feed and feeder prices.

Table 1. Factors Used for Cost-Return Budget

Item	Above Avg. Steer	Below Avg. Steer	Above Avg. Heifer	Below Avg. Heifer
Days on feed	90	111	88	109
Average Daily Gain	2.2	1.8	2.0	1.6
Feed Conversion (As Fed)	18.5	19.5	19.0	20.0

Ration:

81.5% Sorghum Silage, 14.0% Grain Sorghum,
4.5% Supplement*

	Value per head
Investment in Buildings	\$85.00
Life of Buildings	20 yrs
Investment in Equipment	\$103.00
Life of Equipment	10 yrs
Interest Rate on Buildings-Equipment	10.00%
Insurance Rate on Buildings-Equipment	.25%
Tax Rate on Buildings-Equipment	1.50%
Interest Rate on Variable Costs and Purchased Livestock	10.00%
Labor Hours	.75
Labor Price per Hour	\$ 9.00

* Supplement includes soybean meal, vitamins, minerals, and rumensin

COST-RETURN PROJECTION—DRYLOT BACKGROUNDING OF BEEF

	Steers		Heifers		Your Farm
	Above Ave.	Below Ave.	Above Ave.	Below Ave.	
VARIABLE COSTS PER HEAD					
1. Pasture (___ months @ ___ per month)	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____
2. Sorghum Silage (___ lbs. @\$20/ton)	30.16	31.79	27.10	28.53	_____
3. Alfalfa Hay (___ lbs. @\$70/ton)	_____	_____	_____	_____	_____
4. Grain Sorghum (___ lbs. @\$4.20/cwt.)	21.76	22.93	19.55	20.58	_____
5. Corn (___ lbs. @\$2.70/bu.)	_____	_____	_____	_____	_____
6. Supplement (___ lbs. @\$225/ton)	18.73	19.74	16.83	17.72	_____
7.	_____	_____	_____	_____	_____
8. Labor (.75hrs. @ \$9.00 per hr.)	6.75	6.75	6.75	6.75	_____
9. Veterinary, Drugs, Supplies	10.00	10.00	10.00	10.00	_____
10. Marketing Costs	3.00	3.00	3.00	3.00	_____
11. Hauling	_____	_____	_____	_____	_____
12. Utilities, Fuel, Oil	4.50	4.50	4.50	4.50	_____
13. Buildings—Equipment Repairs	6.25	6.25	6.25	6.25	_____
14. Miscellaneous	4.00	4.00	4.00	4.00	_____
15. Interest on Purchased Livestock	_____	_____	_____	_____	_____
+ ½ Variable Costs @ 10%	13.57	16.79	11.07	13.76	_____
A. TOTAL VARIABLE COSTS	\$118.71	\$125.75	\$109.05	\$115.09	_____
FIXED COSTS PER HEAD					
16. Depreciation on Buildings and Equip.	\$ 14.55	\$ 14.55	\$ 14.55	\$ 14.55	_____
17. Interest on Buildings and Equip. ¹ @ 10%	9.40	9.40	9.40	9.40	_____
18. Insurance and Taxes on Buildings and Facilities @ 1.75%	3.29	3.29	3.29	3.29	_____
B. TOTAL FIXED COSTS	\$ 27.24	\$ 27.24	\$ 27.24	\$ 27.24	_____
C. TOTAL COSTS PER HEAD (A+B)	\$145.95	\$152.99	\$136.29	\$142.33	_____
RETURNS PER HEAD					
19. Market Animal:					
Steers: 750 lbs. @ \$81.50 cwt.	\$611.25	\$611.25	_____	_____	_____
Heifers: 650 lbs. @ \$79.00 cwt.	_____	_____	\$513.50	\$513.50	_____
20. Less Cost of Animal:					
Steers: 550 lbs. @ \$90.50 cwt.	−497.75	−497.75	_____	_____	_____
Heifers: 475 lbs. @ \$86.35 cwt.	_____	_____	−410.16	\$410.16	_____
21. Less Death Loss: 1.0% of line 19	−6.11	−6.11	−5.14	−5.14	_____
D. GROSS RETURN PER HEAD	\$107.39	\$107.39	\$ 98.20	\$ 98.20	_____
E. RETURNS OVER VARIABLE COSTS (D − A)	\$−11.32	\$−18.37	\$−10.85	\$−16.88	_____
F. RETURNS OVER TOTAL COSTS (D − C)	\$−38.56	\$−45.61	\$−38.09	\$−44.12	_____
G. AVERAGE SELLING PRICE NEEDED:					
22. To Cover Variable Cost and Feeder (A + 20) ÷ (net selling weight) ²	\$ 83.03	\$ 83.97	\$ 80.69	\$ 81.62	_____
23. To Cover Total Cost and Feeder (C + 20) ÷ (net selling weight)	\$ 86.69	\$ 87.64	\$ 84.92	\$ 85.86	_____
H. TOTAL FEED COST (Lines 1 through 7)	\$ 70.64	\$ 74.46	\$ 63.48	\$ 66.82	_____
24. Cwt. Produced:	1.93	_____	1.68	_____	_____
25. Feed Cost Per Cwt. (H ÷ 24)	\$ 36.60	\$ 38.58	\$ 37.79	\$ 39.78	_____
I. ASSET TURNOVER (D ÷ INVESTMENT) ³	15.66%	15.66%	16.42%	16.42%	_____
J. NET RETURN ON INVESTMENT					
((F + 15 + 17) ÷ INVESTMENT) ³	−2.27%	−2.83%	−2.95%	−3.50%	_____

¹One-half the investment in buildings and equipment at the interest rate shown in Table 1.²Net selling weight equals selling weight minus (death loss % times selling weight).³Investment equals total cost of purchased animal and value of buildings and equipment.**Cooperative Extension Service, Kansas State University, Manhattan**

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