

Drylot Backgrounding of Beef

Department of Agricultural Economics — www.agmanager.info



Kansas State University Agricultural Experiment Station and Cooperative Extension Service

Rodney Jones
Agricultural Economist
Livestock Production

Production Level

Costs per unit and net returns in livestock production are highly dependent on production levels. The following estimated budget includes two production levels. Production levels vary for a number of reasons, including livestock quality or genetics, weather, input levels, and management. The two production levels included in this estimated budget reflect production variability from weather and management as opposed to the quality of the livestock, since livestock values are held constant. Budgeting at multiple production levels helps producers examine the financial risk directly related to production risk of a livestock enterprise.

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.

Costs

Operating costs 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, weight gains will be less than those projected. An allowance for shrink is included in the average daily gain and feed conversion estimates. Hundredweight 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 added to 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.

Some 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 ownership costs. Facility and equipment requirements consist of feed-storage facilities, feeding facilities, corrals, handling equipment, and watering systems. A salvage value of 35 percent is assumed at the end of useful life for facilities and equipment. In each column, interest was calculated on one-half the original cost of facilities and equipment.

This budget uses projected 2008 input and output prices for illustrative purposes. Producers should use their own prices when using this budget. The break-even price is particularly 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	1.6
Feed Conversion (as fed)	18.5	19.5	19	20
Purchase weight	550	550	475	475
Purchase price (\$/cwt)	140.01	140.01	137.725	137.725
Sale weight	750	750	650	650
Sale price (\$/cwt)	117.62	117.62	115.48	115.48

Ration:

81.5% sorghum silage, 14% grain sorghum, 4.5% supplement*

	Value per head
Investment in facilities	\$140.00
Life of facilities	20 yrs
Investment in equipment	\$130.00
Life of equipment	10 yrs
Salvage value on facilities and equipment	35%
Interest rate on facilities and equipment	8.50%
Insurance rate on facilities and equipment	0.25%
Tax rate on facilities and equipment	1.50%
Interest rate on variable costs	
and purchased livestock	8.50%
Labor hours	0.8
Labor price per hour	\$10.80

*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.	
RETURNS PER HEAD					
1. Market animal:					
steers: (See Table 1)	\$ 882.15	\$ 882.15			
heifers: (See Table 1)			\$ 750.62	\$ 750.62	
2. Less cost of animal:					
steers: (See Table 1)	770.06	770.06			
heifers: (See Table 1)			654.19	654.19	
3. Less death loss (1 percent of line 1).....	8.82	8.82	7.51	7.51	
4. Other income.....					
A. GROSS RETURN PER HEAD	\$ 103.27	\$ 103.27	\$ 88.92	\$ 88.92	
COSTS PER HEAD					
5. Pasture.....	\$	\$	\$	\$	
6. Sorghum silage	37.17	39.18	33.40	35.16	
7. Alfalfa hay					
8. Grain sorghum	32.84	34.62	29.51	31.07	
9. Corn					
10. Supplement	23.43	24.69	21.05	22.16	
11. Other feed.....					
12. Labor	8.64	8.64	8.64	8.64	
13. Veterinary, drugs, supplies	15.50	15.50	15.50	15.50	
14. Marketing costs	7.00	7.00	7.00	7.00	
15. Hauling.....					
16. Utilities, fuel, oil	8.00	8.00	8.00	8.00	
17. Facilities and equipment repairs	11.00	11.00	11.00	11.00	
18. Professional fees (legal, accounting, etc.).....	2.00	2.00	2.00	2.00	
19. Miscellaneous	5.00	5.00	5.00	5.00	
20. Depreciation on facilities and equipment	13.00	13.00	13.00	13.00	
21. Interest on facilities and equipment ¹	15.49	15.49	15.49	15.49	
22. Insurance and taxes on facilities and equipment.....	4.73	4.73	4.73	4.73	
B. SUBTOTAL.....	\$ 183.79	\$ 188.84	\$ 174.32	\$ 178.74	
23. Interest on purchased livestock					
+ ½ Operating Costs	17.96	22.22	15.06	18.71	
C. TOTAL COSTS PER HEAD	\$ 201.76	\$ 211.06	\$ 189.38	\$ 197.45	
D. RETURNS OVER TOTAL COSTS (A – C).....	\$ -98.48	\$ -107.79	\$ -100.46	\$ -108.53	
24. Hundredweight produced.....	1.93	1.93	1.69	1.69	
25. Feed cost per hundredweight	48.54	51.16	49.83	52.45	
E. AVERAGE SELLING PRICE NEEDED PER CWT:					
(C + 2) ÷ (net selling weight) ²	\$ 130.88	\$ 132.14	\$ 131.09	\$ 132.35	
F. ASSET TURNOVER ((1 + 4 – 3)) ÷ INVESTMENT) ³	83.97%	83.97%	80.41%	80.41%	
G. NET RETURN ON INVESTMENT					
[(D + 21 + 23) ÷ INVESTMENT] ³	-6.25%	-6.74%	-7.56%	-8.04%	

¹ Original cost of facilities and equipment plus salvage value divided by 2, times a 8.5 percent interest rate.

² Net selling weight = selling weight - (death loss % × selling weight).

³ Investment equals total cost of purchased animal and value of facilities and equipment.

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