



Summer Grazing of Steers in Eastern Kansas

Department of Agricultural Economics



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Cost-Return Budget

This budget estimates costs and returns for a season-long and an early-intensive grazing system. Projected 1998 input and output prices are used for illustrative purposes. Producers should use their own prices when using the budget. Break-even prices are particularly sensitive to changes in average daily gain, pasture rental charge, and feeder cost. The profitability of each system is dependent on many factors including forage mix, pasture costs, type and weight of cattle, and price changes during the grazing season. Therefore, it is important to analyze the feasibility of both systems at the beginning of each grazing season.

Production Level

Costs per unit and net returns in livestock production are highly dependent on production levels. The following estimated budget includes two different 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 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 summer grazing budget includes columns for both below-average and above-average performance for season-long and early-intensive grazing systems. Performance varies due to differences in average daily gain. 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 grazing cycle to the next. Feed requirements for summer grazing systems are minimal. The budgets assume that pasture will be utilized for five months for the season-long and 2.5 months for the

early-intensive program. Each column includes interest on one-half the variable costs plus the cost of the purchase animal for the length of time the animal is being grazed. Producers who do not rely on borrowed funds should consider the interest charge as an opportunity cost of their own capital. An allowance for shrink is included in the average daily gain estimates. Hundredweight produced is adjusted for death loss and shrink. 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.

Fixed costs do not vary from one grazing period to the next and are incurred by virtue of owning equipment and facilities. These capital requirements are minimal for a grazing system.

Table 1. Factors Used for Cost-Return Budget

Item	Season-Long		Early-Intensive	
	Above Avg.	Below Avg.	Above Avg.	Below Avg.
Days on pasture	150	150	75	75
Average daily gain	1.75	1.45	2.20	1.80
Purchase weight	550	550	550	550
Purchase Price (\$/cwt)	82.70	82.70	82.70	82.70
Sale weight	812	767	715	685
Sale price (\$/cwt)	71.18	71.90	73.58	74.78
Value per head				
Investment in buildings	\$20.00		\$10.00	
Life of buildings	20 yrs		20 yrs	
Investment in equipment	\$10.00		\$5.00	
Life of equipment	10 yrs		10 yrs	
Salvage value on buildings and equipment	35%		35%	
Interest rate on buildings and equipment	10.00%		10.00%	
Insurance rate on buildings and equipment	.25%		.25%	
Tax rate on buildings and equipment	1.50%		1.50%	
Interest rate on variable costs and purchased livestock	10.00%		10.00%	
Labor hours	.6		.4	
Labor price per hour	\$10.80		\$10.80	

COST-RETURN PROJECTION — SUMMER GRAZING STEERS IN EASTERN KANSAS

	Season-Long		Early-Intensive		Your Farm
	Above Avg.	Below Avg.	Above Avg.	Below Avg.	
VARIABLE COSTS PER HEAD					
1. Pasture	\$ 58.60	\$ 58.60	\$ 51.00	\$ 51.00	\$
2. Silage					
3. Hay					
4. Grain					
5. Supplement					
6. Mineral—salt	4.40	4.40	2.20	2.20	
7. Feed processing					
8. Labor (____ hrs @ \$10.80/hr)	6.48	6.48	4.32	4.32	
9. Veterinary, drugs, supplies	10.00	10.00	8.00	8.00	
10. Marketing costs	4.20	4.20	4.20	4.20	
11. Hauling					
12. Utilities, fuel, oil	5.50	5.50	3.50	3.50	
13. Buildings and equipment repairs	6.50	6.50	4.30	4.30	
14. Miscellaneous	3.00	3.00	2.00	2.00	
15. Interest on purchased livestock + ½ variable costs @ 10%	21.01	21.01	10.30	10.30	
A. TOTAL VARIABLE COSTS	\$ 119.69	\$ 119.69	\$ 89.82	\$ 89.82	
FIXED COSTS PER HEAD					
16. Depreciation on buildings and equipment	\$ 1.30	\$ 1.30	\$ 0.65	\$ 0.65	
17. Interest on buildings and equipment¹ @ 10% ...	1.50	1.50	0.75	0.75	
18. Insurance and taxes on buildings and facilities @ 1.75%	0.08	0.08	0.04	0.04	
B. TOTAL FIXED COSTS	\$ 2.88	\$ 2.88	\$ 1.44	\$ 1.44	
C. TOTAL COSTS PER HEAD (A+B)	\$ 122.56	\$ 122.56	\$ 91.26	\$ 91.26	
RETURNS PER HEAD					
19. Market steers (see Table 1)	\$ 578.34	\$ 551.83	\$ 526.10	\$ 512.24	
20. Less cost of steer (see Table 1)	−454.85	−454.85	−454.85	−454.85	
21. Less death loss (1.5% of line 19)	−8.68	−8.28	−7.89	−7.68	
D. GROSS RETURN PER HEAD	\$ 114.81	\$ 88.71	\$ 63.36	\$ 49.71	
E. RETURNS OVER VARIABLE COSTS (D − A)	\$ −4.88	\$ −30.98	\$ −26.47	\$ −40.12	
F. RETURNS OVER TOTAL COSTS (D − C)	\$ −7.75	\$ −33.86	\$ −27.91	\$ −41.55	
G. AVERAGE SELLING PRICE NEEDED:					
22. To cover variable cost and feeder (A + 20) ÷ (net selling weight)²	\$ 71.79	\$ 76.00	\$ 77.34	\$ 80.73	
23. To cover total cost and feeder (C + 20) ÷ (net selling weight)²	\$ 72.15	\$ 76.38	\$ 77.54	\$ 80.94	
H. TOTAL FEED COST (lines 1 through 7)	\$ 63.00	\$ 63.00	\$ 53.20	\$ 53.20	
24. Hundredweight produced	2.50	2.06	1.54	1.25	
25. Feed cost per hundredweight (H ÷ 24)	\$ 25.17	\$ 30.58	\$ 34.48	\$ 42.65	
I. ASSET TURNOVER (D ÷ INVESTMENT)³	23.68%	18.30%	13.48%	10.58%	
J. NET RETURN ON INVESTMENT [(F + 15 + 17) ÷ INVESTMENT]³	3.04%	−2.34%	−3.59%	−6.49%	

¹ One-half the investment in buildings and equipment at the interest rate shown in Table 1.

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

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

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