

Finishing Beef

Department of Agricultural Economics — www.agmanager.info



Kansas State University Agricultural Experiment Station and Cooperative Extension Service

Kevin C. Dhuyvetter
Agricultural Economist
Farm Management

Michael Langemeier
Agricultural Economist

Finishing beef in large commercial feedlots is very common in Kansas. This budget represents a producer that buys feeder calves and then finishes them, but it is intended to reflect a typical farmer-feeder type of operation as opposed to a commercial feedlot. There are many different feeding programs/feedstuffs used in finishing operations in Kansas. This budget uses projected 2010 input and output prices for illustrative purposes. Individual producers should use their own prices and costs, and adjust production factors to match their individual situations. The breakeven price is particularly sensitive to changes in feed and feeder prices.

Production Level

Costs per unit and net returns to 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 directly related to production risk of a livestock enterprise.

This beef finishing budget includes a below-average column as well as an above-average column for both steer and heifer finishing. Performance varies due to differences in average daily gain and feed conversions. The values assumed are included in Table 1 and are deviations from averages reported in K-State Research and Extension publications *Seasonal Trends in Steer Feeding Profits, Prices, and Performance*, MF-2547 and *Seasonal Trends in Heifer Feeding Profits, Prices, and Performance*, MF-2546.

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 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.

Ownership 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. Interest cost on facilities and equipment is based on the average investment times an interest rate of 7.5 percent. Depreciation is based on a remaining life of 10 and 8 years for equipment and machinery, respectively, and it is assumed there is no salvage value at the end of the remaining life of facilities and equipment.

Table 1. *Factors Used for Finishing Beef Cost-Return Budget*

	Above Average Steer	Below Average Steer	Above Average Heifer	Below Average Heifer		
Days on feed	142	156	170	188		
Average daily gain	3.35	3.05	3.10	2.80		
Feed conversion (as fed)	7.90	8.70	8.35	9.15		
Purchase weight	750	750	650	650		
Purchase price	\$98.42	\$98.42	\$95.94	\$95.94		
Sale weight, \$/cwt	1,225	1,225	1,175	1,175		
Sale price, \$/cwt	\$86.71	\$86.71	\$86.75	\$86.71		
Labor, hours @ \$13.00/hr	0.70	0.77	0.84	0.92		
Ration:	51.0% corn, 34.0% grain sorghum, 12.0% alfalfa, 3.0% supplement					
	Investment (\$/head)	Useful life (years)	Salvage value, (%)	Interest rate, (%)	Insurance rate, (%)	Tax rate (%)
Buildings and facilities	\$16.09	10	0%	7.50%	0.25%	1.50%
Equipment	\$83.13	8	0%	7.50%	0.25%	0.00%
Interest rate on operating costs and purchased cattle						7.50%

COST-RETURN PROJECTION — FINISHING BEEF

	Steers		Heifers		Your Farm
	Above Avg.	Below Avg.	Above Avg.	Below Avg.	
RETURNS PER HEAD					
1. Market animal (See Table 1)	\$ 1,062.20	\$1,062.20	\$ 1,019.31	\$1,018.84	
2. Less cost of animal (See Table 1)	738.15	738.15	623.61	623.61	
3. Less death loss (1 percent of line 1).....	10.62	10.62	10.19	10.19	
4. Other income.....					
A. GROSS RETURN PER HEAD	\$ 313.43	\$ 313.43	\$ 385.51	\$ 385.04	
COSTS PER HEAD					
5. Summer pasture	\$	\$	\$	\$	
6. Harvested forage	25.97	28.60	30.33	33.24	
7. Grain	230.89	254.27	269.73	295.58	
8. Supplement	17.12	18.85	20.00	21.91	
9. Other feed.....					
10. Labor	9.10	9.97	10.87	12.02	
11. Veterinary, drugs, and supplies	12.00	12.00	12.00	12.00	
12. Marketing costs.....	6.00	6.00	6.00	6.00	
13. Hauling.....					
14. Utilities, fuel, and oil	9.60	10.52	11.46	12.68	
15. Facilities and equipment repairs	9.00	9.00	10.00	10.00	
16. Professional fees (legal, accounting, etc.).....	1.75	1.75	1.75	1.75	
17. Miscellaneous	7.00	7.00	8.00	8.00	
18. Depreciation on facilities and equipment	12.00	12.00	12.00	12.00	
19. Interest on facilities and equipment	3.72	3.72	3.72	3.72	
20. Insurance and taxes on facilities and equipment....	0.49	0.49	0.49	0.49	
B. SUBTOTAL.....	\$ 344.64	\$ 374.17	\$ 396.35	\$ 429.39	
21. Interest on feeder and ½ Operating Costs	26.25	29.22	28.24	31.88	
C. TOTAL COSTS.....	\$ 370.89	\$ 403.38	\$ 424.60	\$ 461.27	
D. RETURNS OVER TOTAL COSTS (A – C).....	\$ -57.47	\$ -89.96	\$ -39.09	\$ -76.23	
22. Hundredweight produced.....	4.63	4.63	5.13	5.13	
23. Feed cost per hundredweight	59.21	65.20	62.36	68.33	
E. BREAKEVEN PRICE, \$/cwt	\$ 91.45	\$ 94.13	\$ 90.11	\$ 93.26	
F. ASSET TURNOVER ((1 + 4 – 3) ÷ INVESTMENT) ¹ ..	125.58%	125.58%	139.61%	139.54%	
G. NET RETURN ON INVESTMENT ((D + 19 + 21) ÷ INVESTMENT) ¹	-3.28%	-6.81%	-0.99%	-5.62%	

¹ Investment equals total value of feeder calf, facilities, and equipment

Publications from Kansas State University are available on the World Wide Web at: www.ksre.ksu.edu.
Contents of this publication may be freely reproduced for educational purposes. All other rights reserved. In each case, credit Kevin C. Dhuyvetter and Michael Langemeier, *Finishing Beef*, Kansas State University, December 2009.

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

MF-592 December 2009

K-State Research and Extension is an equal opportunity provider and employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture Cooperating, Fred A. Cholick, Director.