## Drylot Backgrounding and Finishing Beef

Department of Agricultural Economics — www.agmanager.info



Kansas State University Agricultural Experiment Station and Cooperative Extension Service

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Finishing beef in large commercial feedlots is very common in Kansas. This budget represents a producer that buys calves and then backgrounds and finishes them and thus is more typical a farmer-feeder type of operation as opposed to a commercial feedlot. There are many different feeding programs/feedstuffs used in backgrounding and finishing operations in Kansas. This budget uses projected 2014 input and output prices for illustrative purposes (see MF1013 for details of projected prices). Individual producers should use their own prices and costs, and adjust production factors to match their individual situations. The break-even 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 of a livestock enterprise that is directly related to production risk.

This beef backgrounding and finishing 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

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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. For this budget, steers and heifers are assumed to be backgrounded on a ration consisting of sorghum silage, grain sorghum, and supplement, and switched to a finishing ration consisting of alfalfa, corn, grain sorghum, and supplement. 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.

Kansas Farm Management Association summary reports are used as a basis for estimating variable costs such as labor, veterinary, 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. 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 6.5 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.

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Table 1. Factors Used for Drylot Backgrounding and Finishing Beef Cost-Return Budget

	Above	Below	Above	Below								
	Average	Average	Average	Average								
	Steer	Heifer	Heifer									
Backgrounding Phase					-							
Days on feed	96	120	88	110								
Average daily gain	2.24	1.79 1.99 1.59 10.50 10.00 20.00										
Feed conversion (as fed)	18.50	19.50	19.00	20.00								
Purchase weight	550	550	475	475								
Purchase price	\$181.09	\$181.09										
Ration:	81.5% sorghum silage, 14.0% grain sorghum, 4.5% supplement											
Finishing Phase												
Days on feed	142	156	170	188								
Average daily gain	3.77	3.44	3.54	3.20								
Feed conversion (as fed)	7.90	8.70	8.35	9.15								
Sale weight	1,300	1,300	1,250	1,250								
Sale price	\$129.71	\$129.71	\$129.72	\$129.72								
Ration:	51.0% corn, 3	51.0% corn, 34.0% grain sorghum, 12.0% alfalfa, 3.0% supplement										
Labor, hours @ \$15.00/hr	1.65	1.95	1.70	2.01								
	Investment	Useful life	Salvage	Interest	Insurance	Tax rate						
	(\$/head)	(vears)	value, (%)	rate, (%)	rate, (%)	(%)						
Buildings and facilities	\$20.00	10	0%	6.50%	0.25%	1.50%						
Equipment	\$101.00	8	0%	6.50%	0.25%	0.00%						
Interest rate on operating costs a	nd purchased cattle					6.50%						

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	Steers			Heifers					
	Above Avg.		Below Avg.		Above Avg.		Below Avg.		Your Farm
RETURNS PER HEAD		1 (0( 22		1 (0( 00		4 (04 50		4 (04 50	
1. Market animal (See Table 1)	<u>\$</u>	1,686.23	<u>\$</u>	1,686.23	\$	1,621.50	\$_	1,621.50	
2. Less cost of animal (See Table 1)		996.00	_	996.00		843.93	_	843.93	
3. Less death loss (1.5% of Line 1)		25.29		25.29		24.32		24.32	
4. Other income			_				_		
A. GROSS RETURNS PER HEAD	\$	664.94	\$	664.94	\$_	753.25	\$_	753.25	
COSTS PER HEAD									
5. Summer pasture	\$		\$		\$		\$_		
6. Harvested forage		107.39	_	115.84		109.36	_	117.98	
7. Grain		382.12	_	418.43		435.29	_	475.17	
8. Supplement		71.25	_	76.49		69.88	_	75.07	
9. Other feed			_				_		
10. Labor		24.71	_	29.26	_	25.56	_	30.14	
11. Veterinary, drugs, supplies		20.00	_	20.00		20.00	_	20.00	
12. Marketing costs		12.00		12.00		12.00		12.00	
13. Hauling									
14. Utilities, fuel, and oil		14.47		16.75		15.65	_	18.09	
15. Facilities and equipment repairs		12.00		12.00		13.00		13.00	
16 Professional fees (legal accounting etc.)		2.00	_	2.00		2.00	_	2.00	
17 Miscellaneous		12.00	_	12.00		13.00	_	13.00	
18 Depreciation on facilities and equipment		14.63	_	14.63	_	14.63	_	14.63	
19. Interest on facilities and equipment		7.87	_	7.87		7.87	_	7.87	
20 Insurance and taxes on facilities and equipment		0.60	_	0.60		0.60	_	0.60	
B SUBTOTAL	\$	681.03	\$	737.86	\$	738.84	\$	799.55	
21 Interest on feeder and <sup>1</sup> / <sub>2</sub> Operating Costs	4/	55.92	4P	66.12	Ψ	54.85	Ψ	64.98	
C TOTAL COSTS	\$	736.94	\$	803.98	\$	793.69	¢	864.53	
D RETURNS OVER TOTAL COSTS $(A - C)$	¢	-72.00	¢	-139.04	¢	-40.44	¢	-111 28	
22 Hundredweight produced	Ψ <u></u>	7 31	4 <u>p</u>	7 31	Ψ	7 56	Ψ_	7 56	
22. Find east nor hundred weight		76.76	_	83.61	_	<u> </u>	_	88.36	
25. Feed cost per nundredweight		125.33	<i>a</i>	140 57		133.00		139.76	
E. DREAR-EVEN YKICE, %/CWI	Þ	<u> </u>	₽_	50 5204	⊅_	70 040	_⊄ ∿	70 040	
F. ASSEL I UKNOVEK (A $\div$ INVESTMENT) <sup>1</sup>		%	) _	%		/ 8.06%	0_	/ 8.06%	0
G. NET RETURN ON INVESTMENT $((D + 19 + 21) \div INVESTMENT)^1$		<u>-0.74</u> %	) _	<u>-5.82</u> %	_	2.31%	6_	-3.98%	б

<sup>1</sup> Investment equals total value of feeder calf, facilities, and equipment

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