

2014 Idaho Livestock Costs and Returns Estimate



EBB-FL2-14

Idaho Cattle Feedlot

Yearling to Slaughter; Concentrate Ration

Kathleen Painter & Neil Rimbey

University of Idaho Extension

Agricultural Economics & Rural Sociology

Background and Assumptions

Economic costs are used in the University of Idaho costs and returns estimates. All resources are valued based on market price or opportunity cost. This budget presents both the average costs and returns per head and the total costs and returns for a 5,000-head cattle feedlot operation. Yearling steers come into the program at 800 pounds and are fed through to 1,200 pounds finish weight. Heifers are placed on feed at 680 pounds and fed through to 1,075 pounds.

Estimates of the percentage of steers to heifers placed on feed were obtained through the Idaho Crop and Livestock Reporting Service. Sixty-five percent of animals on feed are steers and 35 percent are heifers. The capacity of the feedlot is 5,000 head but is used at only 65 percent of capacity. The percentage of capacity used represents the utilization only for the period of time cattle are on feed. Cattle are fed throughout the year. The turnover rate is 2.50, meaning that 2.50 groups of cattle are cycled through the feedlot annually, or about 8,125 animals.

Most feedlot operations buy and sell cattle on a regular basis throughout the year. To simplify calculations, we assumed in this budget that feeder cattle are purchased in April and August, then fattened and sold in September and January, respectively.

Machinery and equipment investments include two feed trucks with mixer boxes, two front-end loaders, two 2-ton trucks, and a ½-ton pickup. The farm has 6,000 feet of feed bunk-space, 10,000 feet of fence, a water system (two wells, 6-inch diameter, 100 feet deep with pump), working facilities, feed processing and storage facilities, shop and machinery storage, and office, scales and scale house.

During the feeding program, steers are fed for 124 days and gain an average of 3.29 pounds per day at a cost of about \$0.89 per pound. Average daily gain (ADG) for heifers is approximately 80 percent of ADG by steers, and feed consumed by heifers is approximately 90 percent of feed consumed by steers. The yearlings are fed a 24-day transition diet that starts with a ration averaging about 42% roughages by dry matter

weight, then gradually switches to a diet consisting of about 6% roughages and 90% concentrates for approximately the last 100 days as shown below.

FEED DRY MATTER COMPOSITION BY DAY (LB /HEAD)

Potato waste makes up about 60% of the finish diet by weight as fed, with the rest consisting of mixed mill-run grain and hay (below). Prices on all ration ingredients are estimates for the current crop year. Prices include transportation costs.

DAY:	1-10	11-17	18-24	25-124
Hay	15%	12%	8%	6%
Silage	27%	16%	7%	0%
Potato Waste	12%	17%	22%	26%
Grain	41%	51%	58%	65%
Supplement	5%	4%	4%	4%
Total	100%	100%	100%	100%

FINISH RATON COMPOSITION & COST

Labor for this operation is provided by three full-time and three part-time employees, and valued at \$11.53 and \$10.62 per hour, respectively. Labor is also provided by the owner and valued at \$23.47 per hour. The hired labor rate includes payroll taxes and employee benefits paid by the owner. Veterinary supplies and services include the cost of implants to promote growth.

	Price of Feed	Daily Feed	Cost per day
Commodity	(\$/ton)	(lb/head)	(\$/head)
Hay	\$186	1.00	\$0.09
Potato Waste	\$30	100.00	\$1.50
Grain	\$175	12.00	\$1.05
Silage	\$55	4.00	\$0.11
Supplement	\$590	1.30	\$0.38
Total		118.30	\$3.14

**Table1: Feedlot Budget - 5000 Head
Yearling to Slaughter
Concentrate Ration**

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	Weight Each	Unit	Total Number of Head or Units	Price or Cost/Unit	Total Value	Value or Cost/Head	Your Value
1. Gross Receipts							
Fed Steer	12.00	cwt	5254	154.00	9,709,392.00	1195.00	_____
Fed Heifer	10.75	cwt	2830	153.00	4,654,642.50	572.88	_____
Total Receipts					\$14,364,034.50	\$1767.88	_____
2. Operating Costs							
Feed ration		ton	25,704.17	57.60	1,480,560.08	182.22	_____
Steers		head	5281.00	1520.00	8,027,120.00	987.95	_____
Heifers		head	2844.00	1352.00	3,845,088.00	473.24	_____
Marketing		head	8084.00	28.74	232,334.16	28.59	_____
Age and source verification		head	8084.00	4.00	32,336.00	3.98	_____
Veterinary Medicine	\$		16,900.00	1.00	16,900.00	2.08	_____
Machinery (fuel, lubrication, repair)	\$		10,084.42	1.00	10,084.42	1.24	_____
Vehicles (fuel, repair)	\$		41,360.00	1.00	41,360.00	5.09	_____
Equipment (repair)	\$		0.00	1.00	0.00	0.00	_____
Housing and Improvements (repair)	\$		82,527.50	1.00	82,527.50	10.16	_____
Hired Labor		hour	10,080.00	11.21	112,946.40	13.90	_____
Owner Labor		hour	1920.00	23.47	45,062.40	5.55	_____
Interest on Operating Capital	\$		5,318,175.60	0.05	252,613.34	31.09	_____
Total Operating Costs					\$14,178,932.30	\$1745.10	_____
3. Income Above Operating Costs					\$185,102.20	\$22.78	_____
4. Ownership Costs							
Capital Recovery:							
Purchased Livestock	\$		0.00	1.00	0.00	0.00	_____
Housing and Improvements	\$		100,471.18	1.00	100,471.18	12.37	_____
Machinery	\$		14,015.91	1.00	14,015.91	1.73	_____
Equipment	\$		6416.99	1.00	6416.99	0.79	_____
Vehicles	\$		18,363.36	1.00	18,363.36	2.26	_____
Interest on Retained Livestock	\$		0.00	0.04	0.00	0.00	_____
Taxes and Insurance	\$		6960.00	1.00	6960.00	0.86	_____
Overhead	\$		125,000.00	1.00	125,000.00	15.38	_____
Total Ownership Costs					\$271,227.44	\$33.38	_____
5. Total Costs					\$14,450,159.74	\$1778.48	_____
6. Returns to Risk and Management					-\$86,125.24	-\$10.60	_____

Table 2: Monthly Summary of Returns and Expenses.**EBB-FL2-14**

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Value
Production:													
Fed Steer						4854696				4854696			9709392
Fed Heifer						2327321				2327321			4654643
Total Receipts	0	0	0	0	0	7182017	0	0	0	7182017	0		014364035
Operating Inputs:													
Feed ration		185070	185070	185070	185070	185070	185070	185070	185070				1480560
Steers	4014320					4012800							8027120
Heifers	1922544					1922544							3845088
Marketing							232334						232334
Age and source verification						16168				16168			32336
Veterinary Medicine		8450					8450						16900
Machinery (Fuel,Lube,Repair)	840	840	840	840	840	840	840	840	844	840	840	840	10084
Vehicles (Fuel and Repair)	3445	3445	3445	3445	3445	3445	3445	3445	3462	3445	3445	3445	41360
Equipment (Repair)													0
Housing, Improvements (Repair)	6877	6877	6877	6877	6877	6877	6877	6877	6877	6877	6877	6877	82527
Taxes and Insurance													6960
Hired Labor	9412	9412	9412	9412	9412	9412	9412	9412	9412	9412	9412	9412	112946
Total Costs	5957439	214095	205645	205645	6140989	221813	446429	205645	205665	43703	20575	20575	2057513888217
Net Returns	-5957439	-214095	-205645	-205645	-6140989	6960204	-446429	-205645	-205665	7138314	-20575	-20575	475818

Table 3: Monthly Feed Requirements.

Feed	Units	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Feed ration													
Steers	ton	0	2164	2164	2164	2164	2164	2164	2164	2164	0	0	0
Heifers	ton	0	1049	1049	1049	1049	1049	1049	1049	1049	0	0	0

Table 4: Investment Summary.

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	Purchase Price	Salvage/Cull Value	Livestock Share	Useful Life	Annual Taxes and Insurance	Annual Capital Recovery ¹
Buildings, Improvements and Equipment						
Land for feedlot	\$99,000.00	\$99,000.00	100	100	\$594.00	\$4182.75
Pens and lots	\$342,000.00	\$34,000.00	100	15	\$1128.00	\$29,575.95
Working facilities	\$19,000.00	\$2000.00	100	15	\$63.00	\$1637.65
Buildings	\$131,000.00	\$13,000.00	100	25	\$432.00	\$8283.36
Feed processing/storage	\$633,000.00	\$63,000.00	100	20	\$2088.00	\$45,443.22
Water system	\$19,000.00	\$2000.00	100	20	\$63.00	\$1360.44
Truck and livestock scales	\$99,000.00	\$10,000.00	100	30	\$327.00	\$5710.91
Misc. tools and equipment	\$74,000.00	\$7000.00	100	30	\$243.00	\$4276.91
Miscellaneous	\$74,000.00	\$7000.00	100	15	\$243.00	\$6416.99
Total	\$1,490,000.00				\$5181.00	\$106,888.17
Purchased Livestock						
Total	\$0.00					\$0.00
Retained Livestock						
Total	\$0.00					\$0.00²
Machinery and Vehicles						
Frontend loader	\$169,000.00	\$29,000.00	100	15	\$594.00	\$14,015.91
Feed truck	\$34,000.00	\$7000.00	100	8	\$307.50	\$4571.11
Feed truck	\$34,000.00	\$7000.00	100	8	\$307.50	\$4571.11
Truck 2 ton	\$24,000.00	\$5000.00	100	6	\$217.50	\$3862.32
Truck 2 ton	\$24,000.00	\$5000.00	100	8	\$217.50	\$3219.83
Pickup 1/2 ton 4 X 4	\$14,000.00	\$4000.00	100	6	\$135.00	\$2138.99
Total	\$299,000.00				\$1779.00	\$32,379.27

¹ Annual capital recovery is the method of calculating depreciation and interest recommended by the National Task Force on Commodity Costs and Returns Measurement Methods.

² Interest on average investment.

The Authors - Kathleen Painter is an Extension Ag Economist in the Department of Agricultural Economics and Rural Sociology, Moscow, ID. C. Wilson Gray is District Extension Economist in the Twin Falls Research & Extension Center. Neil R. Rimbey is an Extension Range Economist in the UI Southwest Idaho Research and Extension Center, Caldwell.

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