

2008 Idaho Livestock Costs and Returns Estimate



EBB-CC1-08

Cow Calf budget—250 Cow herd

Summer on Private Range

Winter Feeding Necessary

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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 cow for a 250-head cow-calf operation and total costs and returns for the north Idaho ranch. The forage source is deeded range, with hay feeding necessary in the winter.

Livestock Investment

Livestock investment is 250 cows, 12 bulls, and 2 horses. Cows have a useful life of 5 years after they are placed in the breeding herd. The culling rate is 17 percent and the cow herd has a 2 percent death loss. The ranch buys two-year old bulls and replaces them every 4 years. The weaned calf crop is 90 percent of the number of cows wintered.¹ Of the 58 weaned heifer calves selected from the calf crop as replacements, 10 are culled because of non-breeding or poor quality. This leaves a net replacement of 48 head each year.

Machinery and Equipment

The cow/calf enterprise uses a ¾-ton pickup (4x4), a 1-ton pickup, an 80 HP tractor with a loader, a stock trailer, and a gooseneck trailer. This equipment complement is minimal, but considered adequate to make the ranch operation functional. Values on these investments are calculated at 50 percent of new replacement cost to reflect typically aged but functional ranch equipment.

Haying equipment is not included in this budget as hay production is treated as a separate enterprise. Refer to EBB1-AH-09 for a summary of the costs and returns associated with grass hay production in northern Idaho. Hay and other feeds used as inputs in this cow/calf budget are valued at the market price received by growers FOB the farm.

Buildings and Improvements

The ranch has 35 miles of 4-wire fence, one barn, a hay shed, grain storage, two sets of corrals with working alleys, a squeeze, and a calf cradle and a normal complement of veterinary equipment. Water is supplied from natural sources. Buildings and improvements are valued at 80 percent of new replacement cost.

Management Practices

The majority of cows calve between January 1 and late March, with some calves being born throughout the

	Alfalfa/grass hay	Feed barley	Number
Animals	(lb fed/day)	(lb fed/day)	of days
Replacement heifers	—	2	180
Replacement heifers	13	—	120
Cows	25	—	120
Bulls	28	—	120
Horses	20	—	120

year. From December 1 to March 30, all cattle are fed a mixture of alfalfa and grass hay. Replacement heifers also receive a barley supplement. Monthly herd feed quantities are listed in Table 3 while daily feed quantities per animal are summarized above. In April, the cattle are trucked to private spring pasture where they remain until late May. They are then trucked to private summer pasture and left through October. By November 1, the cattle have been gathered, worked, and those held over are pastured on stubble fields until winter-feeding begins around December 1. Costs are included in the budget for all lands that are grazed.

The top 48 heifer calves will be kept as replacements, while the remaining 65 heifers plus 113 steer calves are sold in November. Cull animals are sold in June, August, and November. The costs of selling cattle include checkoff/brand inspection, sales commissions, and freight/trucking. Checkoff/brand inspection costs pertain to all cattle sold in the enterprise including cull animals. Sales commission and freight costs pertain to cull animals only since they are sold through the sale yard. All steer and heifer calves are sold direct.

Veterinary care for calves includes viral treatments and 7-way vaccinations (given twice during the year), implants and BOSE vaccinations. Heifer calves are also vaccinated for Bangs. Cows and replacement heifers are treated for viral infections, vibrio, leptospirosis, parasites, and pregnancy checked. Bulls are given about the same veterinary treatments as cows and replacements plus a semen/trich test.

Labor is provided by the operator valued at \$11.05 per hour and one part-time person valued at \$7.16 per hour. The labor rate includes payroll taxes and employee benefits paid by the operator.

¹ Percent calf crop = $\frac{\text{number of calves} \times 100}{\text{number of cows wintered}}$

**Table1: Cow-Calf Budget - 250 Cow
Summer on Private Range
Winter Feeding Necessary**

EBB-CC1-08

	Weight Each	Unit	Total Number of Head or Units	Price or Cost/Unit	Total Value	Value or Cost/Head	Your Value
1. Gross Receipts							
Steer calves	5.50	cwt	113	113.80	70,726.70	282.91	_____
Heifer calves	5.00	cwt	55	104.45	28,723.75	114.90	_____
Aged bull	16.50	cwt	3	62.00	3069.00	12.28	_____
Cull cows	11.00	cwt	43	52.46	24,813.58	99.25	_____
Cull replacement heifer	9.00	cwt	10	89.00	8010.00	32.04	_____
Total Receipts					\$135,343.03	\$541.37	_____
2. Operating Costs							
Feed barley		cwt	172.80	6.80	1175.04	4.70	_____
Alfalfa grass hay		ton	434.16	165.00	71,636.40	286.55	_____
Private range		AUM	2133.60	18.00	38,404.80	153.62	_____
Crop aftermath		AUM	303.00	16.00	4848.00	19.39	_____
Salt		lb	5520.00	0.07	386.40	1.55	_____
Checkoff/brand inspection		head	224.00	2.40	537.60	2.15	_____
Commission		head	56.00	8.05	450.80	1.80	_____
Trucking/freight (to market)		head	56.00	7.50	420.00	1.68	_____
Trucking to and from pasture		head	250.00	18.00	4500.00	18.00	_____
Veterinary Medicine		\$	5112.98	1.00	5112.98	20.45	_____
Machinery (fuel, lubrication, repair)		\$	3354.80	1.00	3354.80	13.42	_____
Vehicles (fuel, repair)		\$	8172.86	1.00	8172.86	32.69	_____
Equipment (repair)		\$	758.95	1.00	758.95	3.04	_____
Housing and Improvements (repair)		\$	2904.88	1.00	2904.88	11.62	_____
Hired Labor		hour	1260.00	9.26	11,667.60	46.67	_____
Owner Labor		hour	1000.00	11.05	11,050.00	44.20	_____
Interest on Operating Capital		\$	58,575.65	0.07	4393.17	17.57	_____
Total Operating Costs					\$169,774.28	\$679.10	_____
3. Income Above Operating Costs					-\$34,431.25	-\$137.72	_____
4. Ownership Costs							
Capital Recovery:							
Purchased Livestock		\$	4751.49	1.00	4751.49	19.01	_____
Housing and Improvements		\$	19,204.53	1.00	19,204.53	76.82	_____
Machinery		\$	3153.85	1.00	3153.85	12.62	_____
Equipment		\$	1865.54	1.00	1865.54	7.46	_____
Vehicles		\$	5934.13	1.00	5934.13	23.74	_____
Interest on Retained Livestock		\$	160,050.00	0.07	11,203.50	44.81	_____
Taxes and Insurance		\$	1264.94	1.00	1264.94	5.06	_____
Overhead		\$	2700.00	1.00	2700.00	10.80	_____
Total Ownership Costs					\$50,077.97	\$200.31	_____
5. Total Costs					\$219,852.25	\$879.41	_____
6. Returns to Risk and Management					-\$84,509.22	-\$338.04	_____

Table 4: Forage Balance Table (AUMs per month).

Feed	Units	AUM/Unit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Feed barley	cwt	0.19	5.4	5.4	5.4	5.4							5.4	5.4
Alfalfa grass hay														
Cows	ton	2.50	234.4	234.4	234.4									234.4
Replacement Heifers	ton	2.50	21.6	21.6	21.6									21.6
Bulls	ton	2.50	13.5	13.5	13.5									13.5
Horses	ton	2.50	1.9	1.9	1.9									1.9
Private range														
Cows	AUM	1.00				250.0	250.0	250.0	250.0	250.0	250.0	250.0		
Replacement Heifers	AUM	1.00				38.4	38.4	38.4	38.4	38.4	38.4	38.4		
Bulls	AUM	1.00				14.4	14.4	14.4	14.4	14.4	14.4	14.4		
Horses	AUM	1.00				2.0	2.0	2.0	2.0	2.0	2.0	2.0		
Crop aftermath	AUM	1.00											303.0	
Salt	lb	0.00												
Total AUMs			276.8	276.8	276.8	310.2	304.8	304.8	304.8	304.8	304.8	304.8	308.4	276.8

Table 5: Investment Summary.**EBB-CC1-08**

	Purchase Price	Salvage/Cull Value	Livestock Share	Useful Life	Annual Taxes and Insurance	Annual Capital Recovery ¹
Buildings, Improvements and Equipment						
Fencing	\$139,825.00	\$0.00	100	25	\$419.48	\$11,998.46
Hay shed	\$25,000.00	\$2030.00	100	40	\$81.09	\$1865.06
Grain storage	\$7400.00	\$1500.00	100	30	\$26.70	\$580.46
Working Corrals & Pens	\$20,000.00	\$2860.00	100	30	\$68.58	\$1581.45
Working Corrals & Pens	\$20,000.00	\$2860.00	100	30	\$68.58	\$1581.45
Barn	\$20,000.00	\$1330.00	100	30	\$63.99	\$1597.65
Calf Cradle	\$800.00	\$80.00	100	10	\$2.64	\$108.11
Squeeze	\$2600.00	\$260.00	100	10	\$8.58	\$351.36
Vet equipment	\$1500.00	\$0.00	100	15	\$4.50	\$164.69
Stock trailer	\$3000.00	\$300.00	100	20	\$9.90	\$275.86
Gooseneck trailer	\$10,500.00	\$1050.00	100	20	\$34.65	\$965.51
Total	\$250,625.00				\$788.69	\$21,070.07
Purchased Livestock						
Horses	\$3200.00	\$1200.00	100	10		\$368.76
Bulls	\$24,000.00	\$12,000.00	100	4		\$4382.74
Total	\$27,200.00					\$4751.49
Retained Livestock						
Beef Cows	\$150,000.00	\$112,500.00	100			\$9187.50 ²
Beef replacement heifers	\$33,600.00	\$24,000.00	100			\$2016.00 ²
Total	\$183,600.00					\$11,203.50²
Machinery and Vehicles						
Tractor loader	\$33,500.00	\$6000.00	100	18	\$118.50	\$3153.85
Pickup 4x4 3/4 ton	\$19,500.00	\$3100.00	100	10	\$169.50	\$2551.99
Pickup 4x4 1 ton	\$22,000.00	\$3100.00	100	8	\$188.25	\$3382.14
Total	\$75,000.00				\$476.25	\$9087.98

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.

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