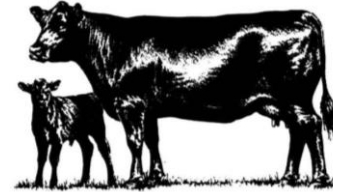


Cow-Calf Budget: 250-head

Northern Idaho

Summer on Private Range, Winter Feeding Necessary

Ben Eborn and Jim Church



Background and Assumptions

University of Idaho costs and returns estimates use economic costs—all resources are valued based on market price or opportunity cost. This budget presents typical costs and returns per cow for a 250-head cow-calf operation plus total costs and returns for a northern Idaho ranch. The forage source is deeded range with some winter hay feeding.

Livestock Investment

The livestock investment consists of 250 cows, 10 bulls, and 2 horses. Cows have a useful life of 6 years after they enter the breeding herd. The culling rate is 17 percent and the cow herd has a 2 percent death loss. The ranch buys 2-year-old bulls and replaces them every 4 years. The weaned calf crop is 90 percent of the number of cows wintered. Of the 58 weaned heifer calves selected from the calf crop as replacements, 10 are culled because of non-breeding or poor quality, leaving an annual net replacement of 48 head.

Machinery and Equipment

The cow/calf enterprise uses a $\frac{3}{4}$ -ton pickup (4x4), a 1-ton pickup, an ATV, an 80 HP tractor with a loader, a stock trailer, and a gooseneck trailer (see Table 4). This equipment complement is minimal but considered adequate. 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. See EBB1-AH-19 for

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 chute, a calf table 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 year. All cattle are fed alfalfa and grass hay from approximately December 1 to March 30. Replacement heifers also receive some supplemental barley.

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, after gathering and working the cattle, they are pastured on stubble fields until winter feeding begins. Costs are included in the budget for all lands that are grazed.

The top 48 heifer calves are 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, freight/trucking, and sales commissions. 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

Veterinary care for calves includes viral treatments and 8-way vaccinations (given twice during the year), implants and selenium supplements. Heifer calves are also vaccinated for brucellosis. Cows, bulls, and replacement heifers receive vaccinations for viral infections, vibriosis and leptospirosis. The herd is treated annually for parasites and the cows are pregnancy checked in the fall. Bulls also receive a breeding soundness evaluation and trichomoniasis test.

Labor Costs

Labor provided by the operator is valued at \$27.00 per hour, based on average wages for agricultural supervisors. Regular livestock labor is valued at \$17.50 per hour. These hourly rates include all applicable payroll taxes and benefits.

Budget Format

In addition to the Background and Assumptions pages, this publication has three tables presenting a variety of costs and returns information.

Table 1 shows both expected revenue and expenses. Expenses are broken into two main

categories: operating and ownership. Operating expenses are those that typically vary with the level of production and involve inputs that are used in a single production cycle. Ownership expenses include a systematic cost recovery over the useful life for inputs used in the production process that have a useful life of more than one year.

Table 2 is a monthly summary of the cash flow of revenues and expenses based on when the operation occurs and when inputs are purchased.

Table 3 is a monthly summary of feed requirements for the different classes of livestock. Daily feed quantities per animal are summarized below.

Table 4 lists the purchase price and salvage value of equipment used in this operation, as well as annual capital recovery and interest on retained livestock.

University of Idaho
Extension

Table 1: Cow-Calf Budget, 250 Cow - 2020

EBB-CC1-20

Summer on Private Range, Winter Feeding Necessary

No. of Cows: 250

	Weight Each	Unit	Total Number of Head or Units	Price or Cost/Unit	Total Value	Value or Cost/Head	Your Value
GROSS RETURNS							
Steer Calves	575	lbs	113	1.65	107,209	428.84	
Heifer Calves	525	lbs	55	1.60	46,200	184.80	
Cull Cows	1200	lbs	43	0.65	33,540	134.16	
Cull Bulls	1800	lbs	3	0.85	4,590	18.36	
Cull Replacement Heifers	900	lbs	10	1.10	9,900	39.60	
TOTAL GROSS RETURNS					\$201,439	\$805.76	
OPERATING COSTS							
Alfalfa/Grass Hay		ton	434	125.00	54,250	217.00	
Feed Barley		cwt	173	13.00	2,249	9.00	
Private Range		AUM	2,134	24.00	51,216	204.86	
Crop Aftermath		AUM	303	18.00	5,454	21.82	
Salt/Mineral		cwt	60	25.00	1,500	6.00	
Veterinary/Medicine		\$	1	6,544.75	6,545	26.18	
Trucking to & from Pasture		head	250	18.00	4,500	18.00	
Trucking to Market		head	56	10.00	560	2.24	
Commission		head	56	21.44	1,201	4.80	
Checkoff/Brand Inspection		head	224	2.96	663	2.65	
Hired Labor		hour	1,260	17.50	22,050	88.20	
Owner Labor		hour	1,000	27.00	27,000	108.00	
Machinery (Fuel, Oil, Repair)		\$	1	3,050.00	3,050	12.20	
Vehicles (Fuel, Repair)		\$	1	7,000.00	7,000	28.00	
Equipment (Repair)		\$	1	900.00	900	3.60	
Buildings & Improvements (Repair)		\$	1	2,700.00	2,700	10.80	
Interest on Operating Capital		\$	47,709	7.00%	3,340	13.36	
TOTAL OPERATING COSTS					\$194,177	\$776.71	
NET RETURNS ABOVE OPERATING COSTS					\$7,262	\$29.05	
OWNERSHIP COSTS							
Capital Recovery:							
Purchased Livestock		\$	1	7,260	7,260	29.04	
Housing & Improvements		\$	1	8,133	8,133	32.53	
Machinery		\$	1	2,489	2,489	9.95	
Equipment		\$	1	1,454	1,454	5.81	
Vehicles		\$	1	5,045	5,045	20.18	
Interest on Retained Livestock		\$	438,600	4.00%	17,544	70.18	
Taxes & Insurance		\$	1	1,147	1,147	4.59	
General Overhead		\$	1	5,000	5,000	20.00	
TOTAL OWNERSHIP COSTS					\$48,071	\$192.28	
TOTAL COSTS					\$242,248	\$968.99	
NET RETURNS ABOVE TOTAL COSTS					(\$40,809)	-\$163.24	

Table 2: Monthly Summary of Returns and Expenses. EBB-CC1-20

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Value
Production:													
Steer Calves											107,209		107,209
Heifer Calves											46,200		46,200
Cull Cows						33,540							33,540
Cull Bulls		2,754						4,590					4,590
Cull Replacement Heifers											9,900		9,900
Total Receipts	0	2,754	0	0	0	33,540	0	4,590	0	0	163,309	0	201,439
Operating Inputs:													
Alfalfa/Grass Hay	13,563	13,563	13,563									13,563	54,250
Feed Barley	375	375	375	375							375	375	2,249
Private Range				7,317	7,317	7,317	7,317	7,317	7,317	7,317			51,216
Crop Aftermath											5,454		5,454
Salt/Mineral	125	125	125	125	125	125	125	125	125	125	125	125	1,500
Veterinary/Medicine	65	327		2,454	65	327		131	720	2,454			6,545
Trucking to & from Pasture				2,250						2,250			4,500
Trucking to Market		19				381		9			151		560
Commission		40				817		20			324		1,201
Checkoff/Brand Inspection		5				103		3			496		663
Hired Labor	3,150	3,150	3,150	3,150						3,150	3,150	3,150	22,050
Owner Labor	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	27,000
Machinery (Fuel, Oil, Repair)	254	254	254	254	254	254	254	254	254	254	254	254	3,050
Vehicles (Fuel, Repair)	583	583	583	583	583	583	583	583	583	583	583	583	7,000
Equipment (Repair)	75	75	75	75	75	75	75	75	75	75	75	75	900
Buildings & Improvements (Repair)	225	225	225	225	225	225	225	225	225	225	225	225	2,700
Interest on Operating Capital												3,340	3,340
Total Costs	20,665	20,991	20,600	19,058	10,895	12,457	10,829	10,992	11,549	18,683	13,463	23,939	194,177
Net Returns	-20,665	-18,237	-20,600	-19,058	-10,895	21,083	-10,829	-6,402	-11,549	-18,683	149,846	-23,939	7,262

Table 3: Monthly Feed Requirements.

Feed	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Feed Barley	cwt	29	29	29	29							29	29
Alfalfa/Grass Hay													
Cows	ton	94	94	94									94
Replacement Heifers	ton	9	9	9									9
Bulls	ton	5	5	5									5
Horses	ton	1	1	1									1
Private Range													
Cows	AUM				250	250	250	250	250	250	250		
Replacement Heifers	AUM				38	38	38	38	38	38	38		
Bulls	AUM				14	14	14	14	14	14	14		
Horses	AUM				2	2	2	2	2	2	2		
Crop Aftermath	AUM											303	
Salt/Mineral	cwt	5	5	5	5	5	5	5	5	5	5	5	5

Daily Feed Requirements		by	
Livestock Category (lb fed/head/day)			
Livestock Category	Alfalfa or Grass Hay (lb)	Feed Barley (lb)	No. of Days
Replacement Heifers		2	180
Replacement Heifers	13		120
Cows	25		120
Bulls	30		120
Horses	25		120

Table 4: Investment Summary.

EBB-CC1-20

	Total Value	Salvage/Cull Value	Livestock Share	Useful Life	Annual Taxes & Insurance	Annual Capital Recovery ¹
Buildings, Improvements and Equipment						
Fencing	70,000	0	100	25	245.00	\$4,480.00
Hay Shed	30,000	5,000	100	40	105.00	\$1,275.00
Grain Storage	8,500	1,500	100	30	29.75	\$406.00
Working Corrals & Pens	20,000	3,000	100	30	70.00	\$986.00
Barn	20,000	3,000	100	30	70.00	\$986.00
Calf Table	1,500	500	100	10	5.25	\$123.00
Squeeze Chute	3,500	1,000	100	10	12.25	\$307.50
Vet Equipment	1,500	0	100	15	5.25	\$135.00
Stock Trailer	5,000	1,000	100	20	17.50	\$296.00
Gooseneck Trailer	12,000	4,000	100	20	42.00	\$592.00
Total	\$172,000				\$602.00	\$9,586.50
Purchased Livestock						
Horses	5,000	1,200	100	10		\$467.40
Bulls	40,000	15,300	100	4		\$6,792.50
Total	\$45,000					\$7,259.90
Retained Livestock						
Beef Replacement Heifers	63,600	54,855	100			\$2,544.00 ²
Beef Cows	375,000	192,500	100			\$15,000.00 ²
Total	\$438,600					\$17,544.00
Machinery and Vehicles						
Tractor Loader	40,000	8,500	100	18	140.00	\$2,488.50
Pickup 4X4 3/4 ton	20,000	5,000	100	10	180.00	\$1,845.00
Pickup 4X4 1 ton	25,000	6,000	100	8	225.00	\$2,831.00
ATV	4,000	1,000	100	10	36.00	\$369.00
Total	\$89,000				\$545.00	\$7,533.50

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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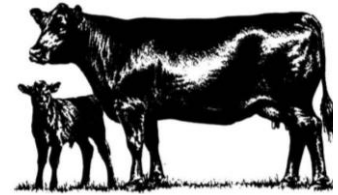
Cow-Calf Budget: 500-head

**Southwestern Idaho – Bruneau/Three Creek Area,
Owyhee County**

Summer on Federal, State & Private Range

Winter on Federal Range

Scott Jensen, Neil Rimbey and Ben Eborn



Background and Assumptions

University of Idaho costs and returns estimates use economic costs—all resources are valued based on market price or opportunity cost. This budget presents typical costs and returns per cow for a 500-head cow-calf operation in the Bruneau/Three Creek area of Owyhee County in southwestern Idaho plus total costs and returns for the ranch. The forage source is federal, state and private range.

Livestock Investment

The livestock investment consists of 500 cows, 25 bulls, and 10 horses. The culling rate is 15 percent and the cow herd has a 1 percent death loss. The ranch buys two-year-old bulls and replaces them every 4-5 years. The weaned calf crop is 87 percent of the number of cows wintered. Of the 88 weaned heifer calves selected from the calf crop as replacements, 10 are culled because of non-breeding or poor quality, leaving an annual net replacement of 80 head.

Machinery and Equipment

The cow/calf enterprise uses two 3/4-ton pickups (4x4), a 2-ton truck, a backhoe, a 160 HP tractor, a feed wagon, stock trailer and a UTV and an ATV (see Table 4). This equipment complement is minimal but considered adequate. 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. 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 25 miles of 4-wire fence, one barn, one set of corrals with working alleys, a set of portable panels, a squeeze chute, a calf table and an assortment of veterinary equipment. Water is supplied from natural sources. Buildings and improvements are valued at 80 percent of new replacement cost.

Management Practices

The cows calve between February 15 and April 15, but some will calve later in the year. The cows graze federal range on winter permits December through February. Replacement heifers are fed alfalfa hay during the winter months.

Cattle are moved from the ranch to federal or state range around March 15 and graze a combination of federal and state rangeland until August 31 (67% federal and 33% state). A grazing association fee is charged for range improvements, salt and range rider labor. On September 1 cattle are moved to private range for grazing through the end of October. After cattle have been gathered and worked, they

are moved to crop aftermath until grazing begins around December 15.

The top 88 heifer calves are kept as replacements, while the remaining 130 heifers and 218 steer calves are sold in November. Calves are weaned and loaded on trucks the same day. All steer and heifer calves are sold direct.

The costs of selling cattle include checkoff/brand inspection, freight/trucking, and sales commissions. 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 in July and December.

Veterinary Care

Veterinary care for calves includes viral treatments and 8-way vaccinations (given twice during the year), implants and selenium supplements. Heifer calves are also vaccinated for brucellosis. Cows, bulls, and replacement heifers receive vaccinations for viral infections, including BVD and bacterial infections such as vibriosis and leptospirosis. The herd is treated annually for parasites and the cows are pregnancy checked in the fall. Bulls also receive a breeding soundness evaluation, fertility and trichomoniasis test in late winter/early spring.

Labor Costs

Labor provided by the operator is valued at \$27.00 per hour, based on average wages for agricultural supervisors. Regular livestock labor is valued at \$17.50 per hour. These hourly rates includes all applicable payroll taxes and benefits.

Budget Format

In addition to the Background and Assumptions pages, this publication has four

tables presenting a variety of costs and returns information.

Table 1 shows both expected revenue and expenses. Expenses are broken into two main categories: operating and ownership. Operating expenses are those that typically vary with the level of production and involve inputs that are used in a single production cycle. Ownership expenses include a systematic cost recovery over the useful life for inputs used in the production process that have a useful life of more than one year.

Table 2 is a monthly summary of the cash flow of revenues and expenses based on when the operation occurs and when inputs are purchased.

Table 3 is a monthly summary of feed requirements for the different classes of livestock. Daily feed quantities per animal are summarized below.

Table 4 lists the purchase price and salvage value of equipment used in this operation, as well as annual capital recovery and interest on retained livestock.

University of Idaho
Extension

Table 1: Cow-Calf Budget - Bruneau/Three Creek Area - Owyhee County, 500 Cow - 2020

EBB-CC7-20

Summer on Federal & State Range, Winter on Federal & Private Range

No. of Cows: 500

	Weight Each	Unit	Total Number of Head or Units	Price or Cost/Unit	Total Value	Value or Cost/Head	Your Value
GROSS RETURNS							
Steer Calves	525	lbs	218	1.70	194,565	389.13	
Heifer Calves	485	lbs	130	1.65	104,033	208.07	
Cull Cows	1200	lbs	75	0.65	58,500	117.00	
Cull Bulls	1800	lbs	5	0.85	7,650	15.30	
Cull Replacement Heifers	1000	lbs	8	0.90	7,200	14.40	
TOTAL GROSS RETURNS					\$371,948	\$743.90	
OPERATING COSTS							
Alfalfa Hay		ton	108	150.00	16,200	32.40	
Meadow Hay		ton	50	110.00	5,500	11.00	
Protein Supplement		cwt	563	16.50	9,290	18.58	
Federal Range		AUM	5,624	1.35	7,592	15.18	
State Range		AUM	432	7.32	3,162	6.32	
Private Range		AUM	1,108	18.00	19,944	39.89	
Salt/Mineral		cwt	125	13.00	1,625	3.25	
Veterinary/Medicine		\$	1	13,047.38	13,047	26.09	
Freight/Trucking to Market		head	88	10.00	880	1.76	
Freight/Trucking to & from Pasture		head	525	4.30	2,258	4.52	
Hired Labor		hour	480	17.50	8,400	16.80	
Owner Labor		hour	2,100	27.00	56,700	113.40	
Commission		head	88	20.84	1,834	3.67	
Checkoff/Brand Inspection		head	436	2.96	1,291	2.58	
Machinery (Fuel, Oil, Repair)		\$	1	5,100.00	5,100	10.20	
Vehicles (Fuel, Repair)		\$	1	10,200.00	10,200	20.40	
Equipment (Repair)		\$	1	2,100.00	2,100	4.20	
Buildings & Improvements (Repair)		\$	1	3,200.00	3,200	6.40	
Interest on Operating Capital		\$	42,081	7.00%	2,946	5.89	
TOTAL OPERATING COSTS					\$171,268	\$342.54	
NET RETURNS ABOVE OPERATING COSTS					\$200,680	\$401.36	
OWNERSHIP COSTS							
Capital Recovery:							
Purchased Livestock		\$	1	25,083	25,083	50.17	
Buildings & Improvements		\$	1	6,052	6,052	12.10	
Machinery		\$	1	3,705	3,705	7.41	
Equipment		\$	1	1,120	1,120	2.24	
Vehicles		\$	1	12,311	12,311	24.62	
Interest on Retained Livestock		\$	746,000	4.00%	29,840	59.68	
Taxes & Insurance		\$	1	1,500	1,500	3.00	
General Overhead		\$	1	8,000	8,000	16.00	
TOTAL OWNERSHIP COSTS					\$87,610	\$175.22	
TOTAL COSTS					\$258,878	\$517.76	
NET RETURNS ABOVE TOTAL COSTS					\$113,069	\$226.14	

Table 2: Monthly Summary of Returns and Expenses. EBB-CC7-20

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Value
Production:													
Steer Calves											194,565		194,565
Heifer Calves											104,033		104,033
Cull Cows							17550					40950	58,500
Cull Bulls							7,650						7,650
Cull Replacement Heifers											7,200		7,200
Total Receipts	0	0	0	0	0	0	25,200	0	0	0	305,798	40,950	371,948
Operating Inputs:													
Alfalfa Hay	4,050	4,050	4,050	2,025								2,025	16,200
Meadow Hay	1,375	1,375	1,375	688								688	5,500
Protein Supplement	3,096										3,096	3,096	9,290
Federal Range			7,592										7,592
State Range			3,162										3,162
Private Range									9,972	9,972			19,944
Salt/Mineral	135	135	135	135	135	135	135	135	135	135	135	135	1,625
Veterinary/Medicine			3,262								9,786		13,047
Freight/Trucking to Market		88						528			264		880
Freight/Trucking to & from Pasture			1,129								1,129		2,258
Hired Labor	420	840	1,680	1,680	840	420	420	420	420	420	420	420	8,400
Owner Labor	4,725	4,725	4,725	4,725	4,725	4,725	4,725	4,725	4,725	4,725	4,725	4,725	56,700
Commission		37									1,559		1,834
Checkoff/Brand Inspection		26						168			1,097		1,291
Machinery (Fuel, Oil, Repair)	425	425	425	425	425	425	425	425	425	425	425	425	5,100
Vehicles (Fuel, Repair)	850	850	850	850	850	850	850	850	850	850	850	850	10,200
Equipment (Repair)	175	175	175	175	175	175	175	175	175	175	175	175	2,100
Buildings & Improvements (Repair)	267	267	267	267	267	267	267	267	267	267	267	267	3,200
Interest on Operating Capital												2,946	2,946
Total Costs	15,519	12,993	28,827	10,970	7,417	6,997	6,997	7,931	16,969	16,969	23,928	15,752	171,268
Net Returns	-15,519	-12,993	-28,827	-10,970	-7,417	-6,997	18,203	-7,931	-16,969	-16,969	281,870	25,198	200,680

Table 3: Monthly Feed Requirements.

Feed	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Alfalfa Hay													
Replacement Heifers	ton	36	36										36
Meadow Hay													
Bulls	ton	9	8	9									
Horses	ton	4	4	4	4							4	4
Federal Range													
Cows	AUM	470	470	470	470	470	470	470	470			470	470
Replacement Heifers	AUM			76	76	76	76	76	76	76	76	76	
Bulls	AUM			30	30	30	30	30	30	30	30		
State Range													
Cows	AUM	30	30	30	30	30	30	30	30	30	30		
Replacement Heifers	AUM			15	15	15	15	15	15	15	15		
Bulls	AUM									6	6		
Private Range													
Cows	AUM									500	500		
Bulls	AUM									24	24		
Horses	AUM					10	10	10	10	10	10		
Protein Supplement													
Cows & Heifers	cwt	96	96	96	93							96	96
Salt/Mineral	cwt	10	10	10	10	10	10	10	10	10	10	10	10

Daily Feed Requirements by Livestock Category
(lb fed/head/day)

Livestock Category	Alfalfa or Grass Hay (lb)	Protein Supplement (lb)	No. of Days
Replacement Heifers	20		90
Replacement Heifers		3	60
Cows	25		30
Cows		3	60
Bulls	30		90
Horses	25		120

Table 4: Investment Summary.

EBB-CC7-20

	Total Value	Salvage/Cull Value	Livestock Share	Useful Life	Annual Taxes & Insurance	Annual Capital Recovery ¹
Buildings, Improvements and Equipment						
Fencing	63,000	0	100	25	220.50	\$4,032.00
Corrals & Pens	26,750	10,700	100	30	93.63	\$930.90
Water System	5,900	0	100	20	20.65	\$436.60
Barn	12,500	1,250	100	30	43.75	\$652.50
Feed Wagon	800	0	100	10	2.80	\$98.40
Squeeze Chute	1,800	180	100	10	6.30	\$199.26
Vet Equipment	650	65	100	15	2.28	\$52.65
Stock Trailer	11,550	1,155	100	20	40.43	\$769.23
Total	\$122,950				\$430.33	\$7,171.54
Purchased Livestock						
Horses	25,000	3,600	100	10		\$2,632.20
Bulls	100,000	18,360	100	4		\$22,451.00
Total	\$125,000					\$25,083.20
Retained Livestock						
Beef Replacement Heifers	96,000	56,700	100			\$3,840.00 ²
Beef Cows	650,000	234,000	100			\$26,000.00 ²
Total	\$746,000					\$29,840.00
Machinery and Vehicles						
Backhoe	30,000	7,100	20	18	105.00	\$1,809.10
150 hpTractor	30,000	6,000	55	18	105.00	\$1,896.00
2 Pickups 4X4 3/4 ton	60,000	5,000	100	10	540.00	\$6,765.00
2 Ton Truck	40,000	10,000	50	10	360.00	\$3,690.00
Car	10,000	2,500	25	8	90.00	\$1,117.50
UTV	7,000	4,000	100	10	63.00	\$369.00
1 ATVs	4,000	1,000	100	10	36.00	\$369.00
Total	\$181,000				\$1,200.00	\$16,015.60

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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Cow-Calf Budget: 250-head

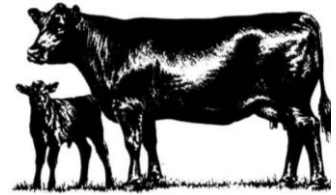
Eastern Idaho

Fall Calving

Summer Private Range & Pasture,

Winter Feeding Necessary

Ben Eborn and Meranda Small



Background and Assumptions

University of Idaho costs and returns estimates use economic costs—all resources are valued based on market price or opportunity cost. This budget presents typical costs and returns per cow for a 250-head cow-calf operation in eastern Idaho plus total costs and returns for the ranch. The forage source is private range. Feeding is necessary in the winter.

Livestock Investment

The livestock investment consists of 250 cows, 10 bulls, and 4 horses. Cows have a useful life of 8 years after they enter the breeding herd. The culling rate is 12 percent and the cow herd has a 3 percent death loss. The ranch buys yearling bulls and replaces them every 4 years. The weaned calf crop is 90 percent of the number of cows wintered. Of the 43 weaned heifer calves selected from the calf crop as replacements, 5 are culled because of non-breeding or poor quality, leaving an annual net replacement of 38 head.

Machinery and Equipment

The cow/calf enterprise uses a 3/4-ton pickup (4x4), a 1-ton pickup (4x4), an 80 HP tractor with a loader, an ATV, a feed wagon and a stock trailer (see Table 4). This equipment complement is minimal but considered adequate. 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. See EBB4-AH-19 (www.uidaho.edu/cals/idaho-agbiz) for costs and returns associated with hay production in Eastern Idaho. Hay and other feeds used as inputs in this cow-calf budget are valued at the market price received by growers.

Buildings and Improvements

The ranch has 10 miles of 4-wire fence, one barn, a calving shed, a hay shed, one set of corrals with working alleys, a set of portable panels, a squeeze chute, a calf table and an assortment of veterinary equipment. Water is supplied from natural sources. Buildings and improvements are valued at 80 percent of new replacement cost.

Management Practices

The cows calve between September 1 and November 15. Cows are fed a protein supplement in October and November to support lactation and additionally begin preparing them for breeding season. In the winter months, cattle are fed alfalfa/grass hay. Replacement heifers are fed alfalfa hay.

Cattle are moved from the ranch to private range around May 1 until the end of August. In September cattle are moved to private pastures and crop aftermath for calving

where they graze until winter-feeding begins around December 1.

The top 43 heifer calves are kept as replacements, while the remaining 67 heifers and 110 steer calves are sold in April. Calves are weaned and loaded on trucks the same day. The costs of selling cattle include checkoff/brand inspection, freight/trucking, and sales commissions. 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

Veterinary care for calves includes viral treatments and 8-way vaccinations (given twice during the year), implants and selenium supplements. Heifer calves are also vaccinated for brucellosis. Cows, bulls, and replacement heifers receive vaccinations for viral infections, including BVD and bacterial infections such as vibriosis and leptospirosis. The herd is treated annually for parasites and the cows are pregnancy checked in the spring. Bulls also receive a breeding soundness evaluation, fertility and trichomoniasis test in late winter/early spring.

Labor Costs

Labor provided by the operator is valued at \$27.00 per hour, based on average wages for agricultural supervisors. Regular livestock labor is valued at \$17.50 per hour. These hourly rates includes all applicable payroll taxes and benefits.

Budget Format

In addition to the Background and Assumptions pages, this publication has three tables presenting a variety of costs and returns information.

Table 1 shows both expected revenue and expenses. Expenses are broken into two main categories: operating and ownership. Operating expenses are those that typically vary with the level of production and involve inputs that are used in a single production cycle. Ownership expenses include a systematic cost recovery over the useful life for inputs used in the production process that have a useful life of more than one year.

Table 2 is a monthly summary of the cash flow of revenues and expenses based on when the operation occurs and when inputs are purchased.

Table 3 is a monthly summary of feed requirements for the different classes of livestock. Daily feed quantities per animal are summarized below.

Table 4 lists the purchase price and salvage value of equipment used in this operation, as well as annual capital recovery and interest on retained livestock.

University of Idaho
Extension

Table 1: Cow-Calf Budget - Eastern Idaho, 250 Cow - 2018

EBB-CC8-20

Fall Calving - Summer on Private Range & Pasture, Winter Feeding Necessary

No. of Cows: 250

	Weight Each	Unit	Total Number of Head or Units	Price or Cost/Unit	Total Value	Value or Cost/Head	Your Value
GROSS RETURNS							
Steer Calves	550	lbs	112	1.75	107,800	431.20	
Heifer Calves	525	lbs	70	1.65	60,638	242.55	
Cull Cows	1300	lbs	38	0.65	32,110	128.44	
Cull Bulls	1800	lbs	3	0.85	4,590	18.36	
Cull Replacement Heifers	850	lbs	5	1.10	4,675	18.70	
TOTAL GROSS RETURNS					\$209,813	\$839.25	
OPERATING COSTS							
Alfalfa Hay		ton	65	150.00	9,750	39.00	
Alfalfa/Grass Hay		ton	695	125.00	86,875	347.50	
Protein Supplement		cwt	450	16.50	7,425	29.70	
Private Pasture		AUM	630	28.00	17,640	70.56	
Private Range		AUM	1,212	24.00	29,088	116.35	
Crop Aftermath		AUM	307	18.00	5,526	22.10	
Salt/Mineral		cwt	55	20.00	1,100	4.40	
Veterinary/Medicine		\$	1	6,335.50	6,336	25.34	
Freight/Trucking		head	250	10.00	2,500	10.00	
Commission		head	46	22.49	1,034	4.14	
Checkoff/Brand Inspection		head	228	2.96	675	2.70	
Hired Labor		hour	625	17.50	10,938	43.75	
Owner Labor		hour	750	27.00	20,250	81.00	
Machinery (Fuel, Oil, Repair)		\$	1	3,000.00	3,000	12.00	
Vehicles (Fuel, Repair)		\$	1	6,800.00	6,800	27.20	
Equipment (Repair)		\$	1	975.00	975	3.90	
Buildings & Improvements (Repair)		\$	1	2,700.00	2,700	10.80	
Interest on Operating Capital		\$	53,153	7.00%	3,721	14.88	
TOTAL OPERATING COSTS					\$216,332	\$865.33	
NET RETURNS ABOVE OPERATING COSTS					(\$6,519)	-\$26.08	
OWNERSHIP COSTS							
Capital Recovery:							
Purchased Livestock		\$	1	7,727	7,727	30.91	
Buildings & Improvements		\$	1	7,346	7,346	29.38	
Machinery		\$	1	2,489	2,489	9.95	
Equipment		\$	1	1,654	1,654	6.62	
Vehicles		\$	1	5,343	5,343	21.37	
Interest on Retained Livestock		\$	426,600	4.00%	17,064	68.26	
Taxes & Insurance		\$	1	991	991	3.97	
General Overhead		\$	1	5,000	5,000	20.00	
TOTAL OWNERSHIP COSTS					\$47,614	\$190.46	
TOTAL COSTS					\$263,946	\$1,055.78	
NET RETURNS ABOVE TOTAL COSTS					(\$54,134)	-\$216.53	

Table 2: Monthly Summary of Returns and Expenses.

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	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Value
Production:													
Steer Calves				107,800									107,800
Heifer Calves				60,638									60,638
Cull Cows					32,110								32,110
Cull Bulls		4,590											4,590
Cull Replacement Heifers		4,675											4,675
Total Receipts	0	9,265	0	168,438	32,110	0	0	0	0	0	0	0	209,813
Operating Inputs:													
Alfalfa Hay	1,950	1,950	1,950	1,950								1,950	9,750
Alfalfa/Grass Hay	17,375	17,375	17,375	17,375								17,375	86,875
Protein Supplement			3,713	3,713									7,425
Private Pasture					17,640								17,640
Private Range					29,088								29,088
Crop Aftermath									5,526				5,526
Salt/Mineral	92	92	92	92	92	92	92	92	92	92	92	92	1,100
Veterinary/Medicine												6,336	6,336
Freight/Trucking	208	208	208	208	208	208	208	208	208	208	208	208	2,500
Commission		207	207								621		1,034
Checkoff/Brand Inspection					337				337				675
Hired Labor	911	911	911	911	911	911	911	911	911	911	911	911	10,938
Owner Labor	1,688	1,688	1,688	1,688	1,688	1,688	1,688	1,688	1,688	1,688	1,688	1,688	20,250
Machinery (Fuel, Oil, Repair)	150	450	450	450	150	150	150	150	150	300	300	150	3,000
Vehicles (Fuel, Repair)	567	567	567	567	567	567	567	567	567	567	567	567	6,800
Equipment (Repair)	56	56	56	56	56	56	56	56	56	56	56	56	975
Buildings & Improvements (Repair)	81	81	81	81	81	81	81	81	81	81	81	81	2,700
Interest on Operating Capital	225	225	225	225	225	225	225	225	225	225	225	225	3,721
Total Costs	23,303	23,810	27,522	27,316	51,044	3,978	3,978	3,978	9,842	4,128	4,749	29,639	216,332
Net Returns	-23,303	-14,545	-27,522	141,122	-18,934	-3,978	-3,978	-3,978	-9,842	-4,128	-4,749	-29,639	-6,519

Table 3: Monthly Feed Requirements.

Feed	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Alfalfa Hay													
Replacement Heifers	ton	13	13	13	13								13
Alfalfa/Grass Hay													
Cows	ton	132	132	132	132								132
Bulls	ton	5	5	5	5								5
Horses	ton	2	2	2	2								2
Protein Supplement													
Cows	cwt										225	225	
Private Range													
Cows	AUM					250	250	250	250				
Replacement Heifers	AUM					43	43	43	43				
Bulls	AUM					10	10	10	10				
Private Pasture													
Cows	AUM									250	250		
Replacement Heifers	AUM									43	43		
Bulls	AUM									10	10		
Horses	AUM					4	4	4	4	4	4		
Crop Aftermath													
Cows	AUM											250	
Replacement Heifers	AUM											43	
Bulls	AUM											10	
Horses	AUM											4	
Salt/Mineral	cwt	5	5	5	5	5	5	5	5	5	5	5	

Daily Feed Requirements		by		
Livestock Category (lb fed/head/day)				
Livestock Category	Alfalfa - Grass Hay (lb)	Alfalfa Hay (lb)	Protein Supplement (lb)	No. of Days
Replacement Heifers		20		150
Cows	35			150
Cows			3	60
Bulls	40			150
Horses	25			150

Table 4: Investment Summary.

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	Total Value	Salvage/Cull Value	Livestock Share	Useful Life	Annual Taxes & Insurance	Annual Capital Recovery ¹
Buildings, Improvements and Equipment						
Fencing	40,000	0	100	25	140.00	\$2,560.00
Working Corrals & Pens	15,000	3,000	100	30	52.50	\$696.00
Pannels	2,000	1,000	100	15	7.00	\$90.00
Barn	20,000	3,000	100	30	70.00	\$986.00
Hay Shed	30,000	5,000	100	30	105.00	\$1,450.00
Feed Wagon	2,000	500	100	10	7.00	\$184.50
Calf Table	1,500	500	100	10	5.25	\$123.00
Squeeze Chute	3,500	1,000	100	10	12.25	\$307.50
Vet Equipment	1,500	0	100	15	5.25	\$135.00
Stock Trailer	12,000	1,000	100	20	42.00	\$814.00
Total	\$127,500				\$446.25	\$7,346.00
Purchased Livestock						
Horses	10,000	2,400	100	10		\$934.80
Bulls	40,000	15,300	100	4		\$6,792.50
Total	\$50,000					\$7,727.30
Retained Livestock						
Beef Replacement Heifers	51,600	40,205	100			\$2,064.00 ²
Beef Cows	375,000	211,250	100			\$15,000.00 ²
Total	\$426,600					\$17,064.00
Machinery and Vehicles						
80 hpTractor with Loader	40,000	8,500	100	18	140.00	2,488.50
Pickup 4X4 3/4 ton	20,000	5,000	100	10	180.00	1,845.00
Pickup 4X4 1 ton	25,000	4,000	100	8	225.00	3,129.00
ATV	4,000	1,000	100	10	36.00	369.00
Total	\$89,000				\$545.00	7,831.50

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 – Meranda Small is an Extension Educator in Bingham, Blackfoot. Ben Eborn is an Extension Ag Economist in Bear Lake, Montpelier.

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