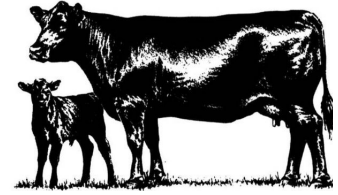


**Cow-Calf Budget: 300-head**  
**Southwestern Idaho – Jordan Valley Area,**  
**Owyhee County**  
*Summer on Federal, State & Private Range*  
*Winter on Harvested Feeds & Crop Aftermath*  
By Sidnee Rose Hill and Kord Killpack



## **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 300-head cow-calf operation in the Jordan Valley area of Owyhee County in southwestern Idaho plus total costs and returns for the ranch. The forage source is federal and state range. Feeding is necessary in the winter.

### **Livestock Investment**

The livestock investment consists of 300 cows, 20 bulls, and 6 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 85 percent of the number of cows wintered. Of the 53 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 48 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, a feed wagon, stock trailer and a UTV and two ATVs (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. In the winter months, cattle are fed meadow hay and a protein supplement. Replacement heifers are fed alfalfa hay.

Cattle are moved from the ranch to federal or state range around April 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 state and private range for grazing through the end of October. After cattle have been gathered and worked, they are moved to crop aftermath until winter-feeding begins around December

15. The total estimated freight/trucking distance is 30 miles at a calculated cost of \$0.125 per cow/per loaded mile.

The top 53 heifer calves are kept as replacements, while the remaining 74 heifers and 128 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. The estimated total freight/trucking for market is 40 miles calculated at \$0.125 per cow/per loaded mile. 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 \$31.12 per hour, based on average wages for Idaho agricultural supervisors. Regular livestock labor is valued at \$18.19 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 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 - Jordan Valley Area - Owyhee County, 300 Cow - 2020

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Summer on Federal, State and Private Range, Winter Feeding Necessary

No. of Cows: 300

	Weight Each	Unit	Total Number of Head or Units	Price or Cost/Unit	Total Value	Value or Cost/Head	Your Value
<b>GROSS RETURNS</b>							
Steer Calves	520	lbs	128	1.67	111,155	370.52	
Heifer Calves	470	lbs	74	1.62	56,344	187.81	
Cull Cows	1100	lbs	45	0.67	33,165	110.55	
Cull Bulls	1800	lbs	5	0.88	7,920	26.40	
Cull Replacement Heifers	800	lbs	5	1.12	4,480	14.93	
<b>TOTAL GROSS RETURNS</b>					<b>\$213,064</b>	<b>\$710.21</b>	
<b>OPERATING COSTS</b>							
Alfalfa Hay		ton	108	180.25	19,467	64.89	
Meadow Hay		ton	557	145.00	80,765	269.22	
Protein Supplement		cwt	590	34.00	20,060	66.87	
Federal Range		AUM	1,776	1.35	2,398	7.99	
State Range		AUM	144	7.32	1,054	3.51	
Crop Aftermath		AUM	668	19.50	13,026	43.42	
Salt/Mineral		cwt	61	11.00	671	2.24	
Veterinary/Medicine		\$	1	8,268.53	8,269	27.56	
Freight/Trucking to Market		head	55	5.00	275	0.92	
Freight/Trucking to & from Pasture		head	312	3.75	1,170	3.90	
Hired Labor		hour	480	18.19	8,731	29.10	
Owner Labor		hour	2,100	31.12	65,352	217.84	
Commission		head	55	20.71	1,139	3.80	
Checkoff/Brand Inspection		head	257	2.96	761	2.54	
Machinery (Fuel, Oil, Repair)		\$	1	4,286.70	4,287	14.29	
Vehicles (Fuel, Repair)		\$	1	7,701.43	7,701	25.67	
Equipment (Repair)		\$	1	1,170.07	1,170	3.90	
Buildings & Improvements (Repair)		\$	1	1,701.92	1,702	5.67	
Interest on Operating Capital		\$	59,499	5.00%	2,975	9.92	
<b>TOTAL OPERATING COSTS</b>					<b>\$240,972</b>	<b>\$803.24</b>	
<b>NET RETURNS ABOVE OPERATING COSTS</b>					<b>(\$27,909)</b>	<b>-\$93.03</b>	
<b>OWNERSHIP COSTS</b>							
<b>Capital Recovery:</b>							
Purchased Livestock		\$	1	18,743	18,743	62.48	
Buildings & Improvements		\$	1	6,725	6,725	22.42	
Machinery		\$	1	4,515	4,515	15.05	
Equipment		\$	1	1,213	1,213	4.04	
Vehicles		\$	1	5,713	5,713	19.04	
Interest on Retained Livestock		\$	462,000	5.06%	23,377	77.92	
Taxes & Insurance		\$	1	1,000	1,000	3.33	
General Overhead		\$	1	5,000	5,000	16.67	
<b>TOTAL OWNERSHIP COSTS</b>					<b>\$66,286</b>	<b>\$220.95</b>	
<b>TOTAL COSTS</b>					<b>\$307,259</b>	<b>\$1,024.20</b>	
<b>NET RETURNS ABOVE TOTAL COSTS</b>					<b>(\$94,195)</b>	<b>-\$313.98</b>	

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
<b>Production:</b>													
Steer Calves											111,155		111,155
Heifer Calves											56,344		56,344
Cull Cows							9,950					23,216	33,165
Cull Bulls							7,920						7,920
Cull Replacement Heifers											4,480		4,480
<b>Total Receipts</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17,870</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>171,979</b>	<b>23,216</b>	<b>213,064</b>
<b>Operating Inputs:</b>													
Alfalfa Hay	4,867	4,867	4,867	2,433								2,433	19,467
Meadow Hay	20,191	20,191	20,191	10,096								10,096	80,765
Protein Supplement	5,015	5,015	5,015	2,508								2,508	20,060
Federal Range				2,398									2,398
State Range				1,054									1,054
Crop Aftermath										3,257	6,513	6,513	13,026
Salt/Mineral	56	56	56	56	56	56	56	56	56	56	56	56	671
Veterinary/Medicine				2,067							6,201		8,269
Freight/Trucking to Market							110				28	138	275
Freight/Trucking to & from Pasture				585						585			1,170
Hired Labor							2,910	2,910	2,910				8,731
Owner Labor	5,446	5,446	5,446	5,446	5,446	5,446	5,446	5,446	5,446	5,446	5,446	5,446	65,352
Commission							456				114	570	1,139
Checkoff/Brand Inspection							304				76	380	761
Machinery (Fuel, Oil, Repair)	357	357	357	357	357	357	357	357	357	357	357	357	4,287
Vehicles (Fuel, Repair)	642	642	642	642	642	642	642	642	642	642	642	642	7,701
Equipment (Repair)	98	98	98	98	98	98	98	98	98	98	98	98	1,170
Buildings & Improvements (Repair)	142	142	142	142	142	142	142	142	142	142	142	142	1,702
Interest on Operating Capital												2,975	2,975
<b>Total Costs</b>	<b>36,813</b>	<b>36,813</b>	<b>36,813</b>	<b>27,881</b>	<b>6,740</b>	<b>6,740</b>	<b>10,521</b>	<b>9,651</b>	<b>9,651</b>	<b>10,582</b>	<b>19,672</b>	<b>32,352</b>	<b>240,972</b>
<b>Net Returns</b>	<b>-36,813</b>	<b>-36,813</b>	<b>-36,813</b>	<b>-27,881</b>	<b>-6,740</b>	<b>-6,740</b>	<b>7,349</b>	<b>-9,651</b>	<b>-9,651</b>	<b>-10,582</b>	<b>152,307</b>	<b>-9,137</b>	<b>-27,909</b>

Table 3: Monthly Feed Requirements.

Feed	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Alfalfa Hay													
Replacement Heifers	ton	20	20	22	22	11							11
Meadow Hay													
Cows	ton	130	118	130	63								65
Bulls	ton	11	10	11	6								6
Horses	ton	2	2	2	1								1
Protein Supplement													
Cows & Bulls	cwt	200										190	200
Federal Range													
Cows	AUM				138	276	276	276	276	276	138		
Bulls	AUM				10	20	20	20	20	20	10		
State Range													
Cows	AUM				12	24	24	24	24	24	12		
Private Range													
Heifers	AUM					24	48	48	48	48	48	24	
Crop Aftermath													
Cows	AUM										150	300	150
Replacement Heifers	AUM										10	20	10
Bulls	AUM										0	14	14
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)	Protein Supplement (lb)	No. of Days
Replacement Heifers	20		120
Replacement Heifers		0.5	180
Cows	25		120
Cows		0.5	75
Bulls	30		75
Horses	20		120

Table 4: Investment Summary.

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	Total Value	Salvage/Cull Value	Livestock Share	Useful Life	Annual Taxes & Insurance	Annual Capital Recovery
<b>Buildings, Improvements and Equipment</b>						
Fencing	63,000	0	100	25	226.80	\$4,473.00
Corrals & Pens	26,750	10700	100	30	96.30	\$1,043.25
Water System	5,900	0	100	20	21.24	\$477.90
Barn	12,500	1,250	100	30	45.00	\$731.25
Feed Wagon	800	0	100	10	2.88	\$104.00
Squeeze Chute	1,800	180	100	10	6.48	\$210.60
Vet Equipment	650	65	100	15	2.34	\$56.75
Stock Trailer	11,550	1,155	100	20	41.58	\$842.00
<b>Total</b>	<b>\$122,950</b>				<b>\$442.62</b>	<b>\$7,938.74</b>
<b>Purchased Livestock</b>						
Horses	15,000	3,600	100	10		\$1,482.00
Bulls	80,000	19,008	100	4		\$17,260.74
<b>Total</b>	<b>\$95,000</b>					<b>\$18,742.74</b>
<b>Retained Livestock</b>						
Beef Replacement Heifers	72,000	56,448	100			\$3,643.20 <sup>2</sup>
Beef Cows	390,000	221,100	100			\$19,734.00 <sup>2</sup>
<b>Total</b>	<b>\$462,000</b>					<b>\$23,377.20</b>
<b>Machinery and Vehicles</b>						
80 hp Tractor with Loader	35,600	7,100	20	18	128.16	\$2,451.00
150 hp Tractor	30,000	6,000	55	18	108.00	\$2,064.00
Pickup 4X4 3/4 ton	30,000	5,000	100	10	282.00	\$3,250.00
Car	10,000	2,500	25	8	94.00	\$1,162.50
UTV	7,000	4,000	100	10	65.80	\$390.00
2 ATVs	8,000	1,000	100	10	75.20	\$910.00
<b>Total</b>	<b>\$120,600</b>				<b>\$612.16</b>	<b>\$10,227.50</b>

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

<sup>2</sup> Interest on average investment.

This updated budget is based on previous budgets created by Ben Eborn, Scott Jensen, and Neil Rimbey.

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