

2014 Idaho Livestock Costs and Returns Estimate



EBB-SR2-14

Sheep - Range

Range lambing; lambs fattened in feedlots

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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 ewe and total costs and returns for a typical 1,000-head sheep range operation. The summer forage source is public range; winter-time feeding is required. Lambs are weaned in mid-September, fattened in a cooperatively owned feedlot in Colorado, and sold in December and January.

LIVESTOCK INVESTMENT

Livestock investment is 1,000 ewes, 30 rams, 2 horses, and 6 dogs. Ewes have a useful life of 5 years after they are placed in the breeding herd. The culling rate is 15 percent and the ewes have a 5 percent death loss. Ewe replacements are raised in one dry band, and 8 percent of them are either culled or die. The ranch purchases rams and replaces them every 4 years. The weaned lamb crop is 110 percent of ewes wintered and the lamb death-loss rate in drylot is 1 percent.

MACHINERY AND EQUIPMENT

Machinery and equipment investment is 60 percent use of a pickup, 30 percent use of a 2-ton water truck, 40 percent use of a tractor and scraper, and 100 percent use of a camp trailer, feed wagon, and miscellaneous equipment and tools. Values on machinery and equipment are calculated at 50 percent of new replacement cost to reflect typically aged, but functional ranch equipment.

BUILDINGS AND IMPROVEMENTS

Buildings and improvements include fencing, feed bunks, water troughs, and grain storage facilities. The sheep enterprise uses about 15 percent of the ranch's water system.

MANAGEMENT PRACTICES

Lambing begins in April on open range and continues through May. In September, lambs are transported to a feedlot in Colorado, at a cost of \$9 per head, for finishing. The fattened lambs are sold through the Mountain States Co-op in two lots,

one in December and one in January.

After weaning, ewes are trailed between the ranch and range. Ewe replacements for 5 bands are raised in one dry band and appear in this budget as a cost. Ewes graze on public range from June 1 until mid-September, when they are brought in to private range in order to wean the lambs. The ewes are on private or public range from October 1 through May 30. They are fed an average of 6 lb of hay per head daily in January, February, March, and half of April. They are fed an additional 0.7 pound of grain per day during lambing in April and 0.42 lb of grain per day in May. Ewes are bred in November. The price on all feed consumed reflects the purchase price plus transportation costs.

Trucking to transport sheep is hired as needed throughout the year. Rams are transported to range in December for breeding. Before breeding, ewe replacements from the dry band are added to the group.

Veterinary care is minimal. Ewes receive a vibrio/EAE vaccination just before lambing, while the lambs are given two vaccinations for treatment of enterotoxemia.

Labor is provided by the owner-operator and one herdsman with the support of additional labor during lambing season. Labor provided by the operator is valued at \$23.47 per hour, based on average wages for agricultural supervisors, from Bureau of Labor Statistics data for 2014. This hourly rate includes all applicable payroll taxes and benefits. This represents an opportunity cost for owners; if they were not working for themselves, then they could be working elsewhere and earning wages. Regular livestock labor, valued at \$11.53 per hour, is based on average earnings for farmworkers who care for farm and ranch animals in Idaho, for 2014 (http://www.bls.gov/oes/current/oes_id.htm). Part-time livestock labor is valued at \$10.62 per hour, based on average earnings for general agricultural workers, from the same source.

Table1: Sheep - Range

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April lambing on open range, with 120% lambing at marking and 110% at weaning.

Lambs are transported to a feedlot in Colorado in Sept., then sold as fat lambs in Dec. & Jan.

	Weight Each	Unit	Total Number of Head or Units	Price or Cost/Unit	Total Value	Value or Cost/Head	Your Value
1. Gross Receipts							
Fat lambs, first batch	145.00	lb	545	1.55	122,488.75	122.49	_____
Cull ewes	175.00	lb	150	0.31	8137.50	8.14	_____
Cull rams	225.00	lb	5	0.54	607.50	0.61	_____
Cull replacement ewes	140.00	lb	16	0.65	1456.00	1.46	_____
Wool - ewe	10.00	lb	1000	1.54	15,400.00	15.40	_____
Wool - ram, fine wool	12.00	lb	15	2.50	450.00	0.45	_____
Wool - ram, meat breed	8.00	lb	15	0.65	78.00	0.08	_____
Fat lambs, second batch	155.00	lb	545	1.47	124,178.25	124.18	_____
Total Receipts					\$272,796.00	\$272.80	_____
2. Operating Costs							
Alfalfa hay		ton	329.40	210.00	69,174.00	69.17	_____
Feed barley		cwt	202.40	10.43	2111.03	2.11	_____
Corn		cwt	135.00	10.35	1397.25	1.40	_____
Salt and minerals		lb	8040.00	0.15	1206.00	1.21	_____
Federal range		AUM	1272.90	1.35	1718.42	1.72	_____
Pasture		AUM	887.10	22.00	19,516.20	19.52	_____
Hauling, herd		head	1000.00	5.00	5000.00	5.00	_____
Marketing, culls		head	20.00	1.50	30.00	0.03	_____
Shearing - ewe		head	1000.00	4.25	4250.00	4.25	_____
Shearing - ram		head	30.00	8.50	255.00	0.26	_____
Wool assessment		head	1000.00	1.03	1030.00	1.03	_____
Camp supplies		head	1000.00	5.25	5250.00	5.25	_____
Dog food		head	3675.00	0.40	1470.00	1.47	_____
Feedlot charges (\$0.85/lb gain)		head	1090.00	42.50	46,325.00	46.33	_____
Marketing, lambs		head	1100.00	1.00	1100.00	1.10	_____
Hauling, lambs		head	1100.00	9.00	9900.00	9.90	_____
ASI checkoff		head	1100.00	1.05	1155.00	1.16	_____
Veterinary Medicine	\$		4367.20	1.00	4367.20	4.37	_____
Machinery (fuel, lubrication, repair)	\$		405.33	1.00	405.33	0.41	_____
Vehicles (fuel, repair)	\$		3486.30	1.00	3486.30	3.49	_____
Equipment (repair)	\$		290.00	1.00	290.00	0.29	_____
Housing and Improvements (repair)	\$		782.50	1.00	782.50	0.78	_____
Hired Labor		hour	2920.00	11.33	33,085.20	33.09	_____
Owner Labor		hour	568.00	23.47	13,330.96	13.33	_____
Interest on Operating Capital	\$		9841.01	0.05	467.45	0.47	_____
Total Operating Costs					\$227,102.84	\$227.10	_____
3. Income Above Operating Costs					\$45,693.16	\$45.69	_____
4. Ownership Costs							
Capital Recovery:							
Purchased Livestock	\$		10,032.89	1.00	10,032.89	10.03	_____
Housing and Improvements	\$		1666.28	1.00	1666.28	1.67	_____
Machinery	\$		370.45	1.00	370.45	0.37	_____
Equipment	\$		2135.88	1.00	2135.88	2.14	_____
Vehicles	\$		1786.64	1.00	1786.64	1.79	_____
Interest on Retained Livestock	\$		136,000.00	0.04	4930.00	4.93	_____
Taxes and Insurance	\$		344.23	1.00	344.23	0.34	_____
Overhead	\$		5600.00	1.00	5600.00	5.60	_____
Total Ownership Costs					\$26,866.36	\$26.87	_____
5. Total Costs					\$253,969.20	\$253.97	_____
6. Returns to Risk and Management					\$18,826.80	\$18.83	_____

Table 2: Monthly Summary of Returns and Expenses.

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	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Value
Production:													
Fat lambs, first batch						122489							122489
Cull ewes												8138	8138
Cull rams												608	608
Cull replacement ewes												1456	1456
Wool - ewe												15400	15400
Wool - ram, fine wool												450	450
Wool - ram, meat breed												78	78
Fat lambs, second batch							124178						124178
Total Receipts	0	0	0	0	0	122489	124178	0	0	0	0	26129	272796
Operating Inputs:													
Alfalfa hay							19908	19908	19908	9450			69174
Feed barley										1314	797		2111
Corn										869	528		1397
Salt and minerals	101	101	101	101	101	101	101	101	101	101	101	101	1206
Federal range	181	278	278			139	278	278		143	143		1718
Pasture	1586			2200	4532	2266				2200	2200	4532	19516
Hauling, herd			5000										5000
Marketing, culls							8				23		30
Shearing - ewe										4250			4250
Shearing - ram										255			255
Wool assessment			1030										1030
Camp supplies	525	525	525	525	525	525	158	158	210	525	525	525	5250
Dog food	100	100	110	120	130	140	140	140	130	130	120	110	1470
Feedlot charges (\$0.85/lb gain)						23163	23163						46325
Marketing, lambs						550	550						1100
Hauling, lambs			9900										9900
ASI checkoff						578	578						1155
Veterinary Medicine									4367				4367
Machinery (Fuel,Lube,Repair)	34	34	34	34	34	34	34	34	34	34	34	34	405
Vehicles (Fuel and Repair)	290	290	290	290	290	292	290	290	290	290	290	290	3486
Equipment (Repair)	24	24	24	24	24	24	24	24	24	24	24	24	290
Housing, Improvements (Repair)	65	65	65	65	65	65	65	65	65	65	65	65	783
Taxes and Insurance							344						344
Hired Labor	2191	2191	2191	2191	2191	2191	3890	3890	3040	3040	3040	3040	33085
Total Costs	5097	3608	19548	5550	7892	30067	49529	24888	28170	22691	7890	8721	213649
Net Returns	-5097	-3608	-19548	-5550	-7892	92422	74649	-24888	-28170	-22691	-7890	17408	59147

Table 3: Monthly Feed Requirements.

Feed	Units	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Alfalfa hay													
Ewes	ton	0	0	0	0	0	0	90	90	90	45	0	0
Rams	ton	0	0	0	0	0	0	4	4	4	0	0	0
Horses	ton	0	0	0	0	0	0	1	1	1	0	0	0
Feed barley													
Ewes	cwt	0	0	0	0	0	0	0	0	0	126	76	0
Corn													
Ewes	cwt	0	0	0	0	0	0	0	0	0	84	51	0
Salt and minerals													
Federal range	lb	670	670	670	670	670	670	670	670	670	670	670	670
Federal range													
Ewes	AUM	130	200	200	0	0	100	200	200	0	100	100	0
Rams	AUM	4	6	6	0	0	3	6	6	0	6	6	0
Pasture													
Rams	AUM	2	0	0	0	6	3	0	0	0	0	0	6
Ewes	AUM	70	0	0	100	200	100	0	0	0	100	100	200

Table 4: Investment Summary.**EBB-SR2-14**

	Purchase Price	Salvage/Cull Value	Livestock Share	Useful Life	Annual Taxes and Insurance	Annual Capital Recovery ¹
Buildings, Improvements and Equipment						
Water system	\$8400.00	\$0.00	100	20	\$25.20	\$630.46
Grain storage	\$14,500.00	\$1600.00	100	20	\$48.30	\$1035.81
Feed wagon	\$1400.00	\$100.00	100	10	\$4.50	\$166.30
Trailer	\$8800.00	\$0.00	100	20	\$26.40	\$660.49
Miscellaneous	\$10,500.00	\$0.00	100	10	\$31.50	\$1309.10
Total	\$43,600.00				\$135.90	\$3802.16
Purchased Livestock						
Ewe replacements, raised	\$38,880.00	\$18,360.00	100	5		\$5226.45
Rams	\$18,000.00	\$3600.00	100	4		\$4062.56
Horses	\$3000.00	\$1200.00	100	10		\$261.30
Dogs, herding	\$900.00	\$0.00	100	8		\$131.61
Dogs, guardian	\$2400.00	\$0.00	100	8		\$350.97
Total	\$63,180.00					\$10,032.89
Retained Livestock						
Ewes	\$180,000.00	\$70,000.00	100			\$4531.25 ²
Co-op shares, Mt States	\$22,000.00	\$0.00	100			\$398.75 ²
Total	\$202,000.00					\$4930.00²
Machinery and Vehicles						
Tractor - 30hp	\$14,000.00	\$3800.00	40	20	\$21.36	\$370.45
Pickup 4x4 3/4 ton	\$22,600.00	\$5100.00	60	16	\$124.65	\$1045.42
Truck 2 ton	\$22,600.00	\$5100.00	30	10	\$62.33	\$741.22
Total	\$59,200.00				\$208.33	\$2157.08

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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