

2014 Idaho Livestock Costs and Returns Estimate



EBB-SR1-14

Sheep - Range

Lambing on Range; Lambs Sold as Feeders in Sept.

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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. Public range is used for about six months of the year, with private range and pasture for the remaining months. Some winter-time feeding is required. Lambs are weaned before the ewes are moved back to private range in early October and sold as feeders.

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 a separate dry band, and occur as a cost in this budget. Of the ewe replacements, 8 percent of them are either culled or die. The ranch also purchases rams and replaces them every 4 years. The lambing rate is 120% at marking and 110% at weaning.

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 water system. Improvements are valued at 80 percent of new replacement cost.

MANAGEMENT PRACTICES

Lambing takes place from April through early June on the open range. Lambs are weaned in

September and sold as feeders. Monthly feed quantities for the herd are listed in Table 3.

Ewes are trailed from the ranch to public range and graze on public range from June 1 to mid-September, when they are brought in to private pasture in order to wean the lambs. Ewes are on public or private range from October 1 through May 30. They are fed an average of 6 pounds of hay per day in January, February, March, and half of April. They are fed 0.7 lb 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. Lambs are transported to market in September, while rams are transported to range in November for breeding. Before breeding, ewe replacements are transported from the dry band to where they will be bred.

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 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, available at http://www.bls.gov/oes/current/oes_id.htm. 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 sold at weaning as feeders**

	Weight Each	Unit	Total Number of Head or Units	Price or Cost/Unit	Total Value	Value or Cost/Head	Your Value
1. Gross Receipts							
Feeder lambs	105.00	lb	1100	1.93	222,915.00	222.91	_____
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	_____
Total Receipts					\$249,044.00	\$249.04	_____
2. Operating Costs							
Alfalfa hay		ton	308.40	210.00	64,764.00	64.76	_____
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	1276.90	1.35	1723.82	1.72	_____
Pasture		AUM	883.10	22.00	19,428.20	19.43	_____
Hauling		head	1000.00	5.00	5000.00	5.00	_____
Marketing		head	1000.00	1.50	1500.00	1.50	_____
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	_____
ASI lamb checkoff		head	1100.00	0.74	814.00	0.81	_____
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)	\$		297.50	1.00	297.50	0.30	_____
Housing and Improvements (repair)	\$		602.50	1.00	602.50	0.60	_____
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		\$	2350.68	0.05	111.66	0.11	_____
Total Operating Costs					\$165,885.95	\$165.89	_____
3. Income Above Operating Costs					\$83,158.05	\$83.16	_____
4. Ownership Costs							
Capital Recovery:							
Purchased Livestock	\$		29,002.96	1.00	29,002.96	29.00	_____
Housing and Improvements	\$		1152.12	1.00	1152.12	1.15	_____
Machinery	\$		374.38	1.00	374.38	0.37	_____
Equipment	\$		2166.64	1.00	2166.64	2.17	_____
Vehicles	\$		1786.64	1.00	1786.64	1.79	_____
Interest on Retained Livestock	\$		0.00	0.04	0.00	0.00	_____
Taxes and Insurance	\$		320.47	1.00	320.47	0.32	_____
Overhead	\$		3000.00	1.00	3000.00	3.00	_____
Total Ownership Costs					\$37,803.22	\$37.80	_____
5. Total Costs					\$203,689.17	\$203.69	_____
6. Returns to Risk and Management					\$45,354.83	\$45.35	_____

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:													
Feeder lambs				222915									222915
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
Total Receipts	0	0	0	222915	0	0	0	0	0	0	0	26129	249044
Operating Inputs:													
Alfalfa hay							18648	18648	18648	8820			64764
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	186	278	278			139	278	278		143	143		1724
Pasture	1498			2200	4532	2266				2200	2200	4532	19428
Hauling		250										4750	5000
Marketing												1500	1500
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
ASI lamb checkoff			814										814
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)	25	25	25	25	25	25	25	25	25	25	25	25	297
Housing, Improvements (Repair)	50	50	50	50	50	50	50	50	50	50	50	50	603
Taxes and Insurance							320						320
Hired Labor	2191	2191	2191	2191	2191	2191	3890	3890	3040	3040	3040	3040	33085
Total Costs	5000	3843	5447	5535	7877	5762	23934	23613	26895	22047	7853	14957	152764
Net Returns	-5000	-3843	-5447	217380	-7877	-5762	-23934	-23613	-26895	-22047	-7853	11172	96280

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	84	84	84	42	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	134	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	66	0	0	100	200	100	0	0	0	100	100	200

Table 4: Investment Summary.**EBB-SR1-14**

	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	\$7300.00	\$800.00	100	20	\$24.30	\$521.66
Feed wagon	\$1400.00	\$0.00	100	10	\$4.20	\$174.55
Trailer	\$9100.00	\$0.00	100	20	\$27.30	\$683.00
Miscellaneous	\$10,500.00	\$0.00	100	10	\$31.50	\$1309.10
Total	\$36,700.00				\$112.50	\$3318.77
Purchased Livestock						
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, guarding	\$2400.00	\$0.00	100	8		\$350.97
Ewe replacements	\$180,000.00	\$85,000.00	100	5		\$24,196.52
Total	\$204,300.00					\$29,002.96
Retained Livestock						
Total	\$0.00					\$0.00²
Machinery and Vehicles						
Tractor - 30hp	\$14,000.00	\$3500.00	40	20	\$21.00	\$374.38
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				\$207.98	\$2161.02

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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