

EBB-SR4-02

### Sheep - Range Ewes on Range and Lambs on Pasture Wintered on Alfalfa Pasture

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## Background and Assumptions

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 forage source is deeded alfalfa pasture in California during the winter and public range in Idaho during the summer. Lambing begins about mid-November and ends in January. Most of the lambs are sold in late spring, but some are pastured and sold in the fall.

### Livestock Investment

Livestock investment includes 1,000 ewes, 30 rams, 3 horses, and 3 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 purchased from outside Idaho, and 8 percent of them are either culled or die. The ranch also purchases rams and replaces them every 4 years. The weaned lamb crop is 120 percent of the ewes wintered, and the lamb death loss rate on range is 10 percent.

### Machinery and Equipment

Machinery and equipment investment is 60 percent use of a pickup, 20 percent use of a 2-ton truck, 40 percent use of a tractor and scraper, and 100 percent use of a camp trailer, sheep camp, moveable electric fence, 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

Building investment includes a storage shed in California to store trucks, fencing, trailers, and other miscellaneous equipment. These items are needed only during the winter since sheep are transported back to Idaho for the spring, summer, and fall. Buildings and improvements are valued at 80 percent of new replacement cost.

### Management Practices

On November 1, ewes are trucked from fall range to alfalfa pasture in southern California where they will spend the entire winter. Ewe replacements are purchased in the fall and also hauled to winter pasture with the other ewes. During this time they graze alfalfa pasture at an average cost of 15 cents per ewe per day. No additional feed besides salt and mineral supplements is fed.

Lambing takes place on open pasture with no shelter provided. Eighty-acre fields enclosed by 3-wire electric fencing are provided for each band of sheep. During lambing, electric wire netting is stretched across the field to create separate group pens for ewes who have given birth. Ewes and lambs start out in small groups shortly after birth and gradually move to larger group pens as lambs grow older and their mothers can identify them. Twins are immediately hobbled to keep them together.

On April 1, the sheep are loaded into trucks, hauled back to Idaho, and soon trailed to spring range. The sheep gradually make their way to summer range where they stay until November. Rams are trucked to range in the spring to prepare for breeding in June and July.

Lambing is staggered through November and December, and this results in a certain percentage of lambs being too small for market in June. These lambs are put on pasture and given small amounts of corn until they are ready for market in August and November. About 70 percent of the lamb crop is sold in June. Of the remaining 30 percent, two-thirds are sold in August. These lambs graze on pasture for about 5 cents per head per day and are fed about 1 pound of corn per day until sold. Lambs are sold at 130 pounds. All feed consumed is produced on the farm.

Veterinary care in the operation is minimal. Ewes receive a vibrio/EAE vaccination just before lambing, while the lambs receive no treatment.

Labor is provided by the owner-operator and one herdsman with the support of additional labor during lambing season. The hired labor rate is \$8.50 per hour and includes payroll taxes and employee benefits paid by the producer.

**Table1: Sheep - Range Budget**  
**Ewes on Range and Lambs on Pasture**  
**Wintered on Alfalfa Pasture**

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	Weight Each	Unit	Total Number of Head or Units	Price or Cost/Unit	Total Value	Value or Cost/Head	Your Value
<b>1. Gross Receipts</b>							
Fat lambs	135.00	lb	780	0.76	80,028.00	80.03	_____
Fat lambs	135.00	lb	300	0.76	30,780.00	30.78	_____
Cull ewes	160.00	lb	150	0.29	6960.00	6.96	_____
Cull rams	225.00	lb	8	0.23	414.00	0.41	_____
Cull replacement ewes	140.00	lb	16	0.76	1702.40	1.70	_____
Wool - ewe	10.00	lb	1000	0.60	6000.00	6.00	_____
Wool - ram	11.00	lb	30	0.60	198.00	0.20	_____
Total Receipts					\$126,082.40	\$126.08	_____
<b>2. Operating Costs</b>							
Alfalfa Pasture		day	183,616.00	0.15	27,542.40	27.54	_____
Pasture		day	23,040.00	0.05	1152.00	1.15	_____
Alfalfa hay		ton	39.76	75.00	2982.24	2.98	_____
Corn		cwt	232.50	5.10	1185.75	1.19	_____
Salt and minerals		lb	8040.00	0.10	804.00	0.80	_____
Federal range		AUM	1627.00	1.35	2196.45	2.20	_____
Pasture		AUM	15.00	12.00	180.00	0.18	_____
Hauling		head	1000.00	22.00	22,000.00	22.00	_____
Marketing		head	1000.00	5.99	5990.00	5.99	_____
Shearing - ewe		head	1000.00	2.50	2500.00	2.50	_____
Shearing - ram		head	30.00	4.50	135.00	0.14	_____
Sheep Commission		head	1000.00	1.03	1030.00	1.03	_____
Western range association		head	1000.00	2.44	2440.00	2.44	_____
Camp supplies		head	1000.00	4.50	4500.00	4.50	_____
Dog food		head	2196.00	0.50	1098.00	1.10	_____
Veterinary Medicine	\$		3000.00	1.00	3000.00	3.00	_____
Machinery (fuel, lubrication, repair)	\$		364.80	1.00	364.80	0.36	_____
Vehicles (fuel, repair)	\$		2050.20	1.00	2050.20	2.05	_____
Equipment (repair)	\$		342.50	1.00	342.50	0.34	_____
Housing and Improvements (repair)	\$		635.69	1.00	635.69	0.64	_____
Hired Labor		hour	2400.00	8.50	20,400.00	20.40	_____
Owner Labor		hour	498.00	8.50	4233.00	4.23	_____
Interest on Operating Capital	\$		15,768.33	0.06	985.52	0.99	_____
Total Operating Costs					\$107,747.55	\$107.75	_____
<b>3. Income Above Operating Costs</b>					\$18,334.85	\$18.33	_____
<b>4. Ownership Costs</b>							
Capital Recovery:							
Purchased Livestock	\$		9264.59	1.00	9264.59	9.26	_____
Housing and Improvements	\$		1261.14	1.00	1261.14	1.26	_____
Machinery	\$		346.74	1.00	346.74	0.35	_____
Equipment	\$		2212.70	1.00	2212.70	2.21	_____
Vehicles	\$		2329.93	1.00	2329.93	2.33	_____
Interest on Retained Livestock	\$		70,000.00	0.07	4725.00	4.72	_____
Taxes and Insurance	\$		253.23	1.00	253.23	0.25	_____
Overhead	\$		2500.00	1.00	2500.00	2.50	_____
Total Ownership Costs					\$22,893.32	\$22.89	_____
<b>5. Total Costs</b>					\$130,640.87	\$130.64	_____
<b>6. Returns to Risk and Management</b>					-\$4558.47	-\$4.56	_____

**Table 2: Monthly Summary of Returns and Expenses.**

												EBB-SR4-02	
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Value
Production:													
Fat lambs						30780	30780	18468					80028
Fat lambs									18468			12312	30780
Cull ewes									6960				6960
Cull rams									414				414
Cull replacement ewes									1702				1702
Wool - ewe											6000		6000
Wool - ram							198						198
<b>Total Receipts</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30780</b>	<b>30978</b>	<b>18468</b>	<b>27544</b>	<b>0</b>	<b>6000</b>	<b>12312</b>	<b>126082</b>
Operating Inputs:													
Alfalfa Pasture	5654	5654	5107	5654								5472	27542
Pasture								465	321	180	186		1152
Alfalfa hay		632	624	632	547	547							2982
Corn								474	332	190	190		1186
Salt and minerals	67	67	67	67	67	67	67	67	67	67	67	67	804
Federal range					324	324	328	332	332	278	278		2196
Pasture					72	72	36						180
Hauling					13200							8800	22000
Marketing							5750					240	5990
Shearing - ewe											2500		2500
Shearing - ram					135								135
Sheep Commission										1030			1030
Western range association	203	203	203	203	203	203	205	205	205	205	203	203	2440
Camp supplies	450	135	135	180	450	450	450	450	450	450	450	450	4500
Dog food	90	93	90	93	90	93	90	93	90	93	90	93	1098
Veterinary Medicine					3000								3000
Machinery (Fuel,Lube,Repair)	31	30	30	30	30	30	30	30	30	30	30	30	365
Vehicles (Fuel and Repair)	172	171	171	171	171	171	171	171	171	171	171	171	2050
Equipment (Repair)	29	29	29	29	29	29	29	29	29	29	29	29	343
Housing, Improvements (Repair)	53	53	53	53	53	53	53	53	53	53	53	53	636
Taxes and Insurance		253											253
Hired Labor	2380	2380	2380	2380	1360	1360	1360	1360	1360	1360	1360	1360	20400
<b>Total Costs</b>	<b>9128</b>	<b>9700</b>	<b>8888</b>	<b>9492</b>	<b>19730</b>	<b>3398</b>	<b>8569</b>	<b>3729</b>	<b>3440</b>	<b>4135</b>	<b>5606</b>	<b>16967</b>	<b>102782</b>
<b>Net Returns</b>	<b>-9128</b>	<b>-9700</b>	<b>-8888</b>	<b>-9492</b>	<b>-19730</b>	<b>27382</b>	<b>22409</b>	<b>14739</b>	<b>24105</b>	<b>-4135</b>	<b>394</b>	<b>-4655</b>	<b>23300</b>

**Table 3: Monthly Feed Requirements.**

Feed	Units	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Alfalfa Pasture													
Ewes	day	37696	37696	34048	37696	0	0	0	0	0	0	0	36480
Pasture													
Lambs	day	0	0	0	0	0	0	0	5580	2700	0	0	0
Lambs	day	0	0	0	0	0	0	0	3720	3720	3600	3720	0
Alfalfa hay													
Ewes	ton	0	8	8	8	7	7	0	0	0	0	0	0
Corn													
Lambs	cwt	0	0	0	0	0	0	0	56	28	0	0	0
Lambs	cwt	0	0	0	0	0	0	0	37	37	37	37	0
Salt and minerals	lb	670	670	670	670	670	670	670	670	670	670	670	670
Federal range													
Ewes	AUM	0	0	0	0	240	240	240	240	240	200	200	0
Rams	AUM	0	0	0	0	0	0	3	6	6	6	6	0
Pasture													
Rams	AUM	0	0	0	0	6	6	3	0	0	0	0	0

**Table 4: Investment Summary.****EBB-SR4-02**

	Purchase Price	Salvage/Cull Value	Livestock Share	Useful Life	Annual Taxes and Insurance	Annual Capital Recovery <sup>1</sup>
<b>Buildings, Improvements and Equipment</b>						
3-wire electric fence	\$2500.00	\$0.00	100	20	\$7.50	\$231.42
Corral	\$700.00	\$0.00	100	15	\$2.10	\$75.65
Horse barn	\$6100.00	\$610.00	100	25	\$20.13	\$501.71
Machinery storage	\$5500.00	\$550.00	100	25	\$18.15	\$452.37
Trailer	\$3700.00	\$0.00	100	20	\$11.10	\$342.50
Miscellaneous	\$10,000.00	\$0.00	100	10	\$30.00	\$1407.37
Sheep camp	\$5000.00	\$0.00	100	20	\$15.00	\$462.83
<b>Total</b>	<b>\$33,500.00</b>				<b>\$103.98</b>	<b>\$3473.84</b>
<b>Purchased Livestock</b>						
Ewe replacements	\$29,160.00	\$10,800.00	100	5		\$5176.90
Rams	\$12,000.00	\$1050.00	100	4		\$3285.40
Dogs	\$1050.00	\$0.00	100	8		\$174.14
Horses	\$5400.00	\$1800.00	100	10		\$628.15
<b>Total</b>	<b>\$47,610.00</b>					<b>\$9264.59</b>
<b>Retained Livestock</b>						
Ewes	\$100,000.00	\$40,000.00	100			\$4725.00 <sup>2</sup>
<b>Total</b>	<b>\$100,000.00</b>					<b>\$4725.00<sup>2</sup></b>
<b>Machinery and Vehicles</b>						
Tractor - 30hp	\$9200.00	\$2024.00	40	17	\$13.47	\$346.74
Pickup 4x4 3/4 ton	\$17,000.00	\$3740.00	60	6	\$93.33	\$1807.74
Truck 2 ton	\$23,300.00	\$5000.00	20	12	\$42.45	\$522.18
<b>Total</b>	<b>\$49,500.00</b>				<b>\$149.25</b>	<b>\$2676.66</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.

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