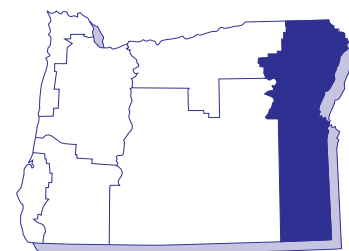


# Enterprise Budget

## Alfalfa Hay Establishment, Eastern Oregon Region

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This enterprise budget estimates the typical costs of establishing alfalfa hay in Baker, Wallowa, and Union counties of northeastern Oregon. It should be used as a guide to estimate costs and returns and is not representative of any particular farm. The major assumptions used in constructing this budget are discussed below. Assistance provided by area producers is very much appreciated.

### Land and Irrigation

This budget is based on a farm consisting of 1,000 total acres, with 600 acres of alfalfa hay and 400 acres of grain and potatoes. Alfalfa stands are assumed to last 4 years, and 150 acres of alfalfa is established each year. A land charge of \$40 per acre is included to represent the annual cost of owning or leasing land. A wheel-line irrigation system is used to apply 24" of water annually. Irrigation equipment is valued at \$400 per acre with a 20-year useful life. Irrigation system depreciation and interest is \$36 per acre.

### Labor

Labor is provided by the owner/operator at a cash cost of \$10 per hour. Hired labor costs \$7 per hour, including social security, FICA, and other payroll expenses.

### Capital

Costs of capital are charged at a rate of 8 percent for current and intermediate capital provided by the owner/operator. This rate represents a real interest rate calculated by subtracting the inflation rate from the current borrowing rate.

### Machinery and Equipment

The machinery complement is sufficient to farm 1,000 production acres in a timely manner. Table 1 summarizes machinery values, useful life, and annual uses. Machinery values are based on April 1994 replacement costs. To represent the mix of new and used equipment on individual farms, this budget assumes all assets are half depreciated. The hours of annual use are based on the machinery's field capacity per hour.

### Operations

The previous crop is assumed to be either grain or potatoes. After harvest of the previous crop, the fields are spot sprayed for quackgrass control. They are then burned, plowed, disked, and cultipacked before planting. A preplant fertilizer mix is applied, and alfalfa seed is planted at a rate of 17 lb per acre at a cost of \$2.50 per lb.

The yield per acre for the establishment year is 4 tons: 1 1/2 tons first cutting, 2 tons second cutting, and 1/2 ton third cutting. The \$80-per-ton sale price is a weighted average of prices received for the three cuttings. The hay crop is swathed and raked by the owner/operator. The alfalfa is custom baled and stacked at \$18 per ton. The stacks are covered with tarps at \$2 per ton. The cost of marketing the hay is assumed to be \$1 per ton for phone calls, labor, samples, and brokerage services as needed. The final operation for the establishment year is loading hay trucks with a squeeze loader charged at \$2 per ton.

The pickup is driven 20,000 miles annually, with 15 percent of the mileage charged to the 150 acres of establishment alfalfa.

### Other

The total establishment and first year harvest costs of \$377 are partially offset by the harvest and sale of 4 tons of alfalfa per acre. The remaining cost of \$56.57 must be recovered during the 3 additional production years. At 8 percent interest, an annual payment of \$22 will just repay this amount, with interest, in 3 years. This annual payment is included as a noncash fixed cost in *EM 8606, Enterprise Budget: Alfalfa Hay Production, Eastern Oregon Region*.



OREGON STATE UNIVERSITY EXTENSION SERVICE

## EM 8605 Enterprise Budget

### ECONOMIC COSTS and RETURNS

#### Eastern Oregon Region

Alfalfa Hay Establishment, 150 acres (\$/acre)

<u>GROSS INCOME Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>\$/Unit</u>	<u>Total</u>	<u>Your Returns</u>
Alfalfa Hay	4.0	ton	80.00	320.00	_____
Total GROSS Income				320.00	_____
<u>VARIABLE COST Description</u>	<u>Labor</u>	<u>Machinery</u>	<u>Materials</u>	<u>Total</u>	<u>Your Cost</u>
<b>FALL</b>					
Weed Control	0.00	0.00	4.00	4.00	_____
Plow	1.06	4.51	0.00	5.57	_____
Disk	1.21	4.87	0.00	6.08	_____
Cultipack	1.54	3.80	0.00	5.34	_____
Plant	1.21	3.39	58.28	62.88	_____
Alfalfa Seed	17 lb x 2.50 = 42.50				
10-40-0-15	158.75 lb x 0.099 = 15.77				
Total FALL				83.87	_____
Irrigation (24")	21.00	0.00	30.00	51.00	_____
Electricity	1 ac x 25.00 = 25.00				
Repair & Maint.	1 ac x 5.00 = 5.00				
<b>SPRING</b>					
Swath (3x)	3.30	7.85	0.00	11.15	_____
Rake (3x)	1.49	3.76	0.00	5.25	_____
Bale and Stack	0.00	0.00	72.00	72.00	_____
Cust. Bale & Stack	4 tn x 18.00 = 72.00				
Cover Stacks	0.00	0.00	8.00	8.00	_____
Tarps	4 tn x 2.00 = 8.00				
Hay Marketing	0.00	0.00	4.00	4.00	_____
Hay Marketing	4 tn x 1.00 = 4.00				
Load Hay Truck	0.00	0.00	8.00	8.00	_____
Squeeze Loading	4 tn x 2.00 = 8.00				
Total SPRING				108.40	_____
Farm Pickup	4.44	2.41	0.00	6.85	_____
Operating Capital Interest	0.00	0.00	9.69	9.69	_____
Total VARIABLE COST				259.81	_____
GROSS INCOME minus VARIABLE COST				60.19	_____

## EM 8605 Enterprise Budget

### ECONOMIC COSTS and RETURNS Eastern Oregon Region Alfalfa Hay Establishment, 150 acres (\$/acre)

<u>FIXED COST Description</u>	<u>Unit</u>	<u>Total</u>	<u>Your Cost</u>
<b>CASH Cost</b>			
Machinery & Equipment Insurance	acre	3.07	_____
Land Lease	acre	40.00	_____
<b>Total CASH Cost</b>		<u>43.07</u>	_____
<b>NONCASH Cost</b>			
Irrigation System Interest & Depreciation	acre	36.00	_____
Machinery & Equipment Interest & Depreciation	acre	37.69	_____
<b>Total NONCASH Cost</b>		<u>73.69</u>	_____
<b>Total FIXED Cost</b>		116.76	_____
<b>Total of ALL Cost</b>		376.57	_____
<b>NET PROJECTED RETURNS</b>		-56.57	_____
Break-even Price, Total Variable Cost		\$64.95 per ton	_____
Break-even Price, Total Cost		\$94.14 per ton	_____

**Table 1. Machinery Cost Assumptions**

<b>Machine</b>	<b>Size</b>	<b>List Price</b>	<b>Current Market Value</b>	<b>Salvage Value</b>	<b>Useful Life</b>	<b>Remaining Life</b>	<b>Annual Use</b>
Tractor	200 hp	\$105,000	\$68,250	\$31,500	10,000 hr	5,000 hr	44 hr
Tractor	120 hp	59,000	38,350	17,700	10,000 hr	5,000 hr	54 hr
Tractor w/ Loader	75 hp	47,000	30,550	14,100	10,000 hr	5,000 hr	29 hr
Swather		44,000	28,600	13,200	2,500 hr	1,250 hr	64 hr
Cultipack	14 ft	15,000	9,000	3,000	2,000 hr	1,000 hr	27 hr
Disk	18 ft	19,000	11,400	3,800	2,000 hr	1,000 hr	21 hr
Double Rakes	14 ft	16,000	9,600	3,200	2,000 hr	1,000 hr	26 hr
Drill	20 ft	19,000	11,400	3,800	2,000 hr	1,000 hr	21 hr
Plow	8 bottom	10,000	6,000	2,000	2,000 hr	1,000 hr	19 hr
Pickup	3/4 ton	20,000	13,000	6,000	100,000 mi	50,000 mi	3,000 mi

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