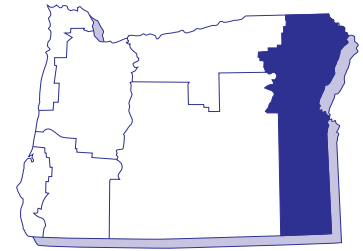


Enterprise Budget

Alfalfa Hay Production, Eastern Oregon Region

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EM 8606, July 1995

This enterprise budget estimates the typical costs of producing 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 450 acres of alfalfa is in production each year. A land cost 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/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 acres in a timely manner. Table 1 summarizes machinery values, useful life, and annual use, while Table 2 reflects per-hour and per-acre cost of the equipment. 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

A dormant herbicide is custom applied every fall at a cost of \$3.50 per acre. A fertilizer mix is custom applied to equal about 75 lb of P, 15 lb of N, 60 lb of K, 30 lb of S, and 1 lb of boron per acre at a cost of \$40 per acre. A gopher getter is used for rodent control.

The yield per acre is 6 tons: 2 1/2 tons first cutting, 2 tons second, and 1 1/2 tons 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 hay is custom baled and stacked at a cost of \$18 per ton. The stacks are covered with tarps at a cost of \$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 45 percent of the mileage charged to the 450 acres of alfalfa production.

Other

An annual noncash fixed cost of \$22 is included to cover the expense of establishing the alfalfa crop. This charge is calculated based on the costs and returns presented in *EM 8605, Enterprise Budget: Alfalfa Hay Establishment, Eastern Oregon Region*.

The total variable cost is \$268, and total fixed cost is \$113. A harvest of 6 tons per acre results in a net projected return of \$99. The break-even price over total cost is \$64 per ton.



OREGON STATE UNIVERSITY EXTENSION SERVICE

EM 8606 Enterprise Budget

ECONOMIC COSTS and RETURNS

Eastern Oregon Region

Alfalfa Hay Production, 450 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	6.0	ton	80.00	480.00	_____
Total GROSS Income				480.00	_____
<u>VARIABLE COST Description</u>	<u>Labor</u>	<u>Machinery</u>	<u>Materials</u>	<u>Total</u>	<u>Your Cost</u>
Weed Control	0.00	0.00	6.30	6.30	_____
Dormant Herbicide 0.5 lb x 5.60 = 2.80					
Custom Application 1 ac x 3.50 = 3.50					
Fall Fertilizer	0.00	0.00	43.50	43.50	_____
Fertilizer Mix 500 lb x 0.08 = 40.00					
Custom Application 1 ac x 3.50 = 3.50					
Rodent Control	0.35	0.36	0.40	1.11	_____
Rodent Bait 0.2 ac x 2.00 = 0.40					
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					
HARVEST					
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	108.00	108.00	_____
Cust. Bale & Stack 6 tn x 18.00 = 108.00					
Total HARVEST				124.40	_____
Cover Stacks	0.00	0.00	12.00	12.00	_____
Tarps 6 tn x 2.00 = 12.00					
Hay Marketing	0.00	0.00	6.00	6.00	_____
Hay Marketing 6 tn x 1.00 = 6.00					
Load Hay Truck	0.00	0.00	12.00	12.00	_____
Squeeze Loading 6 tn x 2.00 = 12.00					
Farm Pickup	4.44	2.41	0.00	6.85	_____
Operating Capital Interest	0.00	0.00	5.04	5.04	_____
Total VARIABLE COST				268.20	_____
GROSS INCOME minus VARIABLE COST				211.80	_____
<u>FIXED COST Description</u>		<u>Unit</u>		<u>Total</u>	<u>Your Cost</u>
CASH Cost					
Machinery & Equipment Insurance		acre		1.33	_____
Land Lease		acre		40.00	_____
Total CASH Cost				41.33	_____
NONCASH Cost					
Amortized Establishment Cost		acre		21.96	_____
Irrigation System Interest & Depreciation		acre		36.00	_____
Machinery & Equipment Interest & Depreciation		acre		13.59	_____
Total NONCASH Cost				71.55	_____
Total FIXED Cost				112.88	_____
Total of ALL Cost				381.08	_____
NET PROJECTED RETURNS				98.92	_____
Break-even Price, Total Variable Cost				\$44.70 per ton	_____
Break-even Price, Total Cost				\$63.51 per ton	_____

EM 8606 Enterprise Budget

Table 1. Machinery Cost Assumptions

Machine	Size	List Price	Current Market Value	Salvage Value	Useful Life	Remaining Life	Annual Use
Tractor w/ Loader	75 hp	\$47,000	\$30,550	\$14,100	10,000 hr	5,000 hr	101 hr
Swather		44,000	29,600	13,200	2,500 hr	1,250 hr	193 hr
Double Rakes	14 ft	16,000	9,600	3,200	2,000 hr	1,000 hr	79 hr
Gopher Getter		1,000	600	200	2,000 hr	1,000 hr	13 hr
Pickup	3/4 ton	20,000	13,000	6,000	100,000 mi	50,000 mi	9,000 mi

Table 2. Machinery Cost Calculations

Machine	Size	Costs per Hour or Mile				Total Cost	Hours or Miles per Acre	Costs per Acre		
		Fuel & Lube	Repair & Maint.	Depr. & Interest	Fixed Insurance			Variable	Fixed	Total
Tractor w/ Loader	75 hp	\$3.75	\$5.78	\$15.85	\$1.22	\$26.60	0.23 hr	\$2.15	\$3.85	\$6.00
Swather		5.19	13.14	9.45	0.57	28.35	0.43 hr	7.80	4.29	12.15
Double Rakes	14 ft	0.00	8.84	7.07	0.49	16.39	0.18 hr	1.56	1.33	2.89
Gopher Getter		0.00	0.22	6.43	0.42	7.07	0.03 hr	0.01	0.20	0.21
Pickup	3/4ton	0.09	0.03	0.23	0.04	0.38	20.00 mi	2.40	5.24	7.64
Total								\$13.97	\$14.91	\$28.88



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