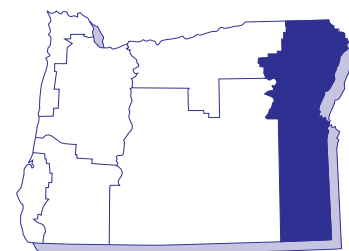




# Enterprise Budget

## Peppermint Establishment, Eastern Oregon Region

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**EM 8601, June 1995**

This enterprise budget estimates the typical costs and returns associated with establishing peppermint in Northeastern Oregon. While efforts were made to reflect common practices, it is not representative of any particular farm and should thus be used only as a guide to estimating actual costs. The major assumptions used in constructing this budget are discussed below. Assistance provided by area producers is greatly appreciated.

### Cropping Pattern

This budget is based on the establishment of 160 acres of peppermint on a 1,200-acre farm in rotation with a grain or pea crop. The established stand is assumed to have a 5-year life, which includes the establishment year.

### Land and Irrigation

A land lease charge of \$100 per acre is included to represent the annual cost of renting land. Irrigation system costs are based upon a wheel-line irrigation system valued at \$485 per acre including pump and well costs. The straight-line depreciation method was used to calculate depreciation. Four wheel-lines valued at \$7,900 each have a 10-year life with a total salvage value of \$6,320. This results in an annual depreciation charge of \$15.80 per acre. The well has a 15-year life with a salvage of \$5,200, resulting in an annual depreciation charge of \$8.66 per acre. The pump has a 5-year life with a salvage value of \$4,000, resulting in an annual depreciation charge of \$20 per acre. Interest on the average investment is calculated to be 10 percent of the irrigation system market value minus salvage value divided by 2, or \$29.10 per acre.

Irrigation operating costs are based on labor, electricity, repair, and maintenance, at a cost of \$4 per inch of water.

### Labor

Hired labor typically costs approximately \$10 per hour including social security, FICA, and other payroll expenses. For this study, labor is treated as owner/operator labor valued at \$10 per hour and is assumed to be a noncash cost.

### Capital

Opportunity costs of capital are charged at a rate of 8 percent for current and intermediate capital provided by the owner.

### Machinery and Equipment

The machinery complement is sufficient to establish and harvest the 160 acres of peppermint on the farm in a timely manner. A detailed breakdown of machinery values used in this budget is shown in Table 1. January 1994 replacement costs are used, assuming the machinery is half depreciated. Estimated machinery costs are shown in Table 2.

The hours of annual use for machinery are calculated based on the machinery's field capacity in acres per hour. The annual use values from Table 1 represent the hours the machinery is used to maintain and harvest the 160 acres.

### Operations

Cultural operations are listed in the budget in the order they are performed, beginning with land preparation in early September to harvest in August of the following year. The land is assumed to be coming out of grain crop production.

In late September, 269 lb of a custom blend fertilizer containing 20 lb of nitrogen, 75 lb of phosphorus, 45 lb of potash, and 12 lb of sulfur is custom applied, followed by custom root planting at the end of October. Three applications of herbicide are custom applied in the spring. Two custom fertilizer applications in the spring apply 40 lb of nitrogen each. Fertilizer is applied in the summer in the form of two urea applications totalling 100 additional lb of nitrogen. Throughout the growing season, 18 acre-inches of water are applied. Custom hand hoeing is hired at a cost of \$58 per acre.

Custom harvesting begins in early August. The typical yield on establishment year production is 50 lb per acre.

### Establishment Cost

The total establishment cost of \$1,146 per acre is partially offset by a first-year harvest of 50 lb of oil per acre. The net establishment cost of \$496 must be recovered during the 4 additional production years. At 9.1 percent interest, an annual payment of \$153 will just repay this amount, with interest, in 4 years.

### Other

A pickup is driven 20,000 miles annually, with 5,000 miles charged to the peppermint crop. A general overhead charge of \$25 per acre is included to cover general insurance, tools, shop, utilities, accounting fees, office supplies, and other miscellaneous expenses.

## EM 8601 Enterprise Budget

### ECONOMIC COSTS and RETURNS

#### Eastern Oregon Region

Peppermint Establishment, 160 acres (\$/acre)

<u>GROSS INCOME Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>\$/Unit</u>	<u>Total</u>	<u>Your Returns</u>
Peppermint	50.0	lb	13.00	650.00	_____
Total GROSS Income				650.00	_____
<u>VARIABLE COST Description</u>	<u>Labor</u>	<u>Machinery</u>	<u>Materials</u>	<u>Total</u>	<u>Your Cost</u>
<b>LAND PREPARATION</b>					
Flail Chop	2.69	5.96	0.00	8.65	_____
Plow	2.69	8.49	0.00	11.18	_____
Cultipack	1.51	3.71	0.00	5.22	_____
Preplant Fertilizer	0.00	0.00	35.45	35.45	_____
Custom Blend     269 lb x 0.113 = 30.44					
Custom Application 1 ac x 5.00 = 5.00					
Cultivate	3.02	8.33	0.00	11.35	_____
Total LAND PREPARATION				71.85	_____
<b>PLANTING</b>					
Planting Roots (Fall)	0.00	0.00	330.00	330.00	_____
Roots             1 ac x 250.00 = 250.00					
Custom Planting 1 ac x 80.0 = 80.00					
Irrigate Fall	0.00	0.00	8.00	8.00	_____
Lab/Elec/Rep&Maint 2 in x 4.00 = 8.00					
Total PLANTING				338.00	_____
<b>FIRST YEAR PRODUCTION</b>					
Spring Weed	0.00	0.00	25.48	25.48	_____
Herbicide         0.75 lb x 27.30 = 20.47					
Custom Application 1 ac x 5.00 = 5.00					
Spring Weed	0.00	0.00	42.48	42.48	_____
Herbicide         0.75 lb x 27.30 = 20.47					
Herbicide         0.125 gal x 127.00 = 15.87					
Oil Concentrate 0.125 gal x 9.00 = 1.12					
Custom Application 1 ac x 5.00 = 5.00					
Spring Weed	0.00	0.00	26.00	26.00	_____
Herbicide         0.25 gal x 84.00 = 21.00					
Custom Application 1 ac x 5.00 = 5.00					
Spring Fertilize (2x)	0.00	0.00	34.24	34.24	_____
Ammonium Nitrate 0.1212 tn x 200.00 = 24.24					
Custom Application 2 ac x 5.00 = 10.00					
Summer Fertilize (2x)	0.00	0.00	35.41	35.41	_____
Urea             0.108 tn x 234.00 = 25.41					
Custom Application 2 ac x 5.00 = 10.00					
Irrigate Summer	0.00	0.00	64.00	64.00	_____
Lab/Elec/Rep&Maint 16 in x 4.00 = 64.00					
Hand Hoeing	0.00	0.00	58.00	58.00	_____
Cust. Hand Hoeing 1 ac x 58.00 = 58.00					
Harvesting Mint	0.00	0.00	150.00	150.00	_____
Cust. Harv. Mint 50 lb x 3.00 = 150.00					
Total FIRST YEAR PRODUCTION				435.61	_____
<b>MISCELLANEOUS</b>					
Oregon Mint Commission Assessment	0.00	0.00	3.00	3.00	_____
Charge             50 lb x 0.06 = 3.00					
Pickup	7.64	3.52	0.00	11.15	_____
Operating Capital Interest	0.00	0.00	51.53	51.53	_____
Total MISCELLANEOUS				65.68	_____
Total VARIABLE COST				911.14	_____
GROSS INCOME minus VARIABLE COST				-261.14	_____

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## EM 8601 Enterprise Budget

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**ECONOMIC COSTS and RETURNS**  
**Eastern Oregon Region**  
Peppermint Establishment, 160 acres (\$/acre)

<u>FIXED COST Description</u>	<u>Unit</u>	<u>Total</u>	<u>Your Cost</u>
CASH Cost			
General Overhead	acre	25.00	_____
Machinery & Equipment Insurance	acre	2.99	_____
Land Rent	acre	<u>100.00</u>	_____
Total CASH Cost		127.99	_____
NONCASH Cost			
Machinery & Equipment Depreciation & Interest	acre	33.03	_____
Irrigation System Depreciation & Interest	acre	<u>73.56</u>	_____
Total NONCASH Cost		106.59	_____
Total FIXED Cost		234.58	_____
Total of ALL Cost		1,145.72	_____
<b>NET PROJECTED RETURNS</b>		-495.72	_____
Break-even Price, Total Variable Cost		\$18.22 per lb	_____
Break-even Price, Total Cost		\$22.91 per lb	_____

## EM 8601 Enterprise Budget

Table 1. Machinery Cost Assumptions

Machine	Size	List Price	Current Market Value	Salvage Value	Useful Life	Remaining Life	Annual Use
Tractor	120 hp	\$69,000	\$44,850	\$20,700	10,000 hr	5,000 hr	39 hr
Tractor	180 hp	85,000	55,250	25,500	10,000 hr	5,000 hr	105 hr
Flail Chopper	14 ft	8,500	5,100	1,700	2,000 hr	1,000 hr	36 hr
Roller Harrow	15 ft	9,800	5,880	1,960	2,000 hr	1,000 hr	20 hr
Field Cultivator	30 ft	13,500	8,100	2,700	2,000 hr	1,000 hr	40 hr
Plow	6-bottom	12,500	7,500	2,500	2,000 hr	1,000 hr	36 hr
Pickup	4 wd	19,000	12,350	5,700	100,000 mi	50,000 mi	5,000 mi

Table 2. Machinery Cost Calculations

Machine	Size	Costs per Hour or Miles					Total Cost	Hours or Miles per Acre	Costs per Acre		
		Variable		Fixed		Variable			Fixed	Total	
		Fuel & Lube	Repair & Maint.	Depr. & Interest	Insurance						
Tractor	120 hp	\$6.48	\$8.69	\$11.63	\$0.90	\$27.70	0.24	\$3.64	\$3.01	\$6.65	
Tractor	180 hp	9.73	10.71	14.33	1.10	35.87	0.65	13.29	10.03	23.32	
Flail Chopper	14 ft	0.00	6.73	21.17	1.44	29.33	0.22	1.48	4.97	6.45	
Roller Harrow	15 ft	0.00	2.10	4.50	0.29	6.89	0.13	0.27	0.62	0.90	
Field Cultivator	30 ft	0.00	5.72	31.01	2.03	38.75	0.25	1.43	8.26	9.69	
Plow	6-bottom	0.00	10.63	4.59	0.30	15.52	0.22	2.34	1.08	3.41	
Pickup	4 wd	0.08	0.03	0.22	0.04	0.36	31.25	3.50	7.84	11.34	
Total								\$25.95	\$35.81	\$61.76	



Extension Service, Oregon State University, Corvallis, Lyla Houglum, interim director. This publication was produced and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Extension work is a cooperative program of Oregon State University, the U.S. Department of Agriculture, and Oregon counties.

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