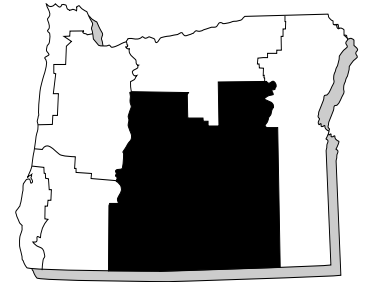




Enterprise Budget

Peppermint, South Central Region



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This enterprise budget estimates the typical costs of producing peppermint in the Madras area of South Central Oregon. While efforts were made to reflect common practices, it is not representative of any particular farm and should 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. For costs and returns associated with establishment of peppermint crops, see *EM 8576, Enterprise Budget: Peppermint Establishment, South Central Region*.

Cropping Pattern

This budget is based on a 500-acre farm with 100 acres in production of peppermint. This budget estimates per-acre costs and returns of a typical production year. The production year begins in late summer directly after harvest and continues through the following year's harvest. The peppermint stand is assumed to have a 4-year life, including the establishment year.

Land and Irrigation

A land lease charge of \$100/acre based on a long-term lease is included to represent the cost of leasing or owning land. This charge is based on the cost of leasing good quality, irrigated acreage, and includes irrigation canal maintenance costs. A water charge of \$0.96 per acre inch of water applied covers the cost of irrigation water. This is calculated based on the North Unit Irrigation District rate and the total water use by the 500-acre farm. The peppermint is flood irrigated.

Labor

Labor is hired at a rate of \$7 per hour, which includes worker's compensation, unemployment insurance, social security taxes, and other labor overhead expenses. Owner/operator compensation is assumed to be a cash expense of \$15 per hour. Owner labor is used for irrigation and cultivation activities. Labor hours for machinery operation are calculated by multiplying 1.21 times machine

hours to allow for machinery setup, movement, and adjustment. All repairs are estimated separately from operation labor hours.

Capital

Opportunity costs of capital are charged at a rate of 8 percent for current, intermediate, and long-term capital provided by the owner/operator.

Machinery and Equipment

The machinery complement is sufficient to farm 500 production acres. A detailed breakdown of machinery values used in this budget is shown in Table 1. November 1993 replacement costs are used. Estimated machinery costs are shown in Table 2, assuming the machinery is half depreciated.

Operations

The cultural operations are listed in the order in which they typically are performed. Several operations typically are performed 1 or 2 of the 3 full production years, and are entered at one-third and two-thirds of their full cost, respectively. Two herbicide applications are applied 2 out of 3 years. The year in which no weed control chemical is applied, a series of tillage operations (disc, plow, rip, roll, harrow, and corrugate) are performed. An insecticide for cutworm is applied 1 out of 3 years. A charge of \$2.85 per pound covers all expenses associated with custom mint harvest.

Results

Total of all costs is \$914, including \$691 variable cost and \$223 fixed cost. The break-even price over variable cost is \$9.21 per lb and the break-even price over total cost is \$12.19 per lb.

An annual noncash fixed cost of \$97.11 is included to cover the expense of establishing the peppermint crop. This charge is calculated based on the costs and returns presented in *EM 8575, Enterprise Budget: Peppermint Establishment, South Central Region*.



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ECONOMIC COSTS AND RETURNS SOUTH CENTRAL REGION Peppermint, \$/acre (75 acres)

<u>GROSS INCOME Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>\$/Unit</u>	<u>Total</u>	<u>Your Income</u>
Peppermint Oil	75.00	lb	16.00	1,200.00	_____
Total GROSS Income				1,200.00	_____
<u>VARIABLE COST Description</u>	<u>Labor</u>	<u>Machinery</u>	<u>Materials</u>	<u>Total</u>	<u>Your Cost</u>
DORMANT SEASON					
Burn Mint	1.06	1.82	13.30	16.18	_____
Propane	17.5 gal x 0.76 = 13.30				
Fertilize	0.00	0.00	50.30	50.30	_____
11-20-20	400 lb x 0.112 = 44.80				
Custom Application	1 ac x 5.50 = 5.50				
Irrigate (9")	11.25	0.00	8.64	19.89	_____
Water	9 in x 0.96 = 8.64				
Weed Control (2/3 x)	0.00	0.00	14.60	14.60	_____
Broadleaf Herbicide	1 pint x 7.81 = 7.81				
Sticker	0.033 gal x 17.00 = 0.56				
Broadleaf Herbicide	4 oz x 0.64 = 2.56				
Custom Application	0.66 ac x 5.50 = 3.66				
Weed Control (2/3 x)	0.00	0.00	12.37	12.37	_____
Contact Herbicide	1 pint x 4.56 = 4.56				
Sticker	0.033 gal x 22.00 = 0.73				
Broadleaf Herbicide	5.33 oz x 0.64 = 3.41				
Custom Application	0.66 ac x 5.50 = 3.66				
Disc (1/3 x)	1.51	1.41	0.00	2.92	_____
Plow (1/3 x)	2.02	2.23	0.00	4.25	_____
Rip (1/3 x)	2.02	1.93	0.00	3.95	_____
Roll (1/3 x)	1.21	0.56	0.00	1.77	_____
Harrow (1/3 x)	2.42	0.77	0.00	3.19	_____
Corrugate (1/3 x)	2.02	1.53	0.00	3.55	_____
Weed Control	0.00	0.00	21.37	21.37	_____
Pre-emerge Herbicide	0.5 lb x 26.00 = 13.00				
Sticker	0.25 gal x 11.46 = 2.86				
Custom Application	1 ac x 5.50 = 5.50				
Total DORMANT SEASON				154.34	_____
GROWING SEASON					
Fertilize	0.00	0.00	80.25	80.25	_____
40-0-0-6	650 lb x 0.115 = 74.75				
Custom Application	1 ac x 5.50 = 5.50				
Mite Control (2 x)	0.00	0.00	62.83	62.83	_____
Sticker	8 oz x 0.21 = 1.68				
Insecticide	5 pint x 10.03 = 50.15				
Custom Application	2 ac x 5.50 = 11.00				
Cutworm Control (1/3)	0.00	0.00	11.28	11.28	_____
Insecticide	1.33 pint x 6.88 = 9.16				
Sticker	1.33 oz x 0.21 = 0.28				
Custom Application	0.33 ac x 5.50 = 1.83				
Irrigate (36")	45.00	0.00	34.56	79.56	_____
Water	36 in x 0.96 = 34.56				
Hoeing	35.00	0.00	0.00	35.00	_____
Harvest	0.00	0.00	213.75	213.75	_____
Harvest Mint	75 lb x 2.85 = 213.75				
Total GROWING SEASON				482.67	_____

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ECONOMIC COSTS AND RETURNS SOUTH CENTRAL REGION Peppermint, \$/acre (75 acres)

<u>VARIABLE COST Description</u>	<u>Labor</u>	<u>Machinery</u>	<u>Materials</u>	<u>Total</u>	<u>Your Cost</u>
<u>MISCELLANEOUS</u>					
Oregon Mint Commission Fee	0.00	0.00	4.50	4.50	_____
Fee 75 lb x 0.06 = 4.50					_____
Operating Capital Interest	0.00	0.00	17.65	17.65	_____
General Overhead	0.00	0.00	10.00	10.00	_____
Pickup	10.71	3.10	0.00	13.81	_____
ATV	7.50	0.13	0.00	<u>7.63</u>	_____
Total MISCELLANEOUS				53.59	_____
Total VARIABLE COST				690.60	_____
GROSS INCOME minus VARIABLE COST				509.40	_____
<u>FIXED COST Description</u>					
		<u>Unit</u>		<u>Total</u>	<u>Your Cost</u>
<u>CASH Cost</u>					
Machinery & Equipment Insurance		acre		2.66	_____
Land		acre		100.00	_____
Total CASH Cost				<u>102.66</u>	_____
<u>NONCASH Cost</u>					
Amortized Establishment Cost		acre		97.11	_____
Machinery & Equipment - Interest & Depreciation		acre		21.51	_____
Siphon Tube - Interest & Depreciation		acre		2.16	_____
Total NONCASH Cost				<u>120.78</u>	_____
Total FIXED Cost				223.44	_____
Total of ALL Cost				914.04	_____
NET PROJECTED RETURNS				285.96	_____
Break-even Price, Total Variable Cost				\$9.21 per lb	_____
Break-even Price, Total Cost				\$12.19 per lb	_____

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Table 1. Machinery Cost Assumptions

Item	Size	List Price	Current Market Value	Salvage Value	Useful Life	Remaining Life	Annual Use
Tractor	50 hp	\$21,500	\$13,975	\$6,450	10,000 hr	5,000 hr	17 hr
Tractor	80 hp	34,000	22,100	10,200	10,000 hr	5,000 hr	20 hr
Tractor	125 hp	65,000	42,250	19,500	10,000 hr	5,000 hr	25 hr
Corrugator	5 row	9,500	5,700	1,900	2,000 hr	1,000 hr	8 hr
Disc	12 ft	9,500	5,700	1,900	2,000 hr	1,000 hr	6 hr
Dixon Harrow	12 ft	800	480	160	2,000 hr	1,000 hr	10 hr
Moldboard Plow	3-bottom	6,500	3,900	1,300	2,000 hr	1,000 hr	8 hr
Propane Burner	30 ft	8,660	5,197	1,734	2,000 hr	1,000 hr	9 hr
Ripper	12 ft	4,500	2,700	900	2,000 hr	1,000 hr	8 hr
Roller	12 ft	2,500	1,500	500	2,000 hr	1,000 hr	25 hr
ATV		3,500	2,100	700	1,500 mi	750 mi	38 mi
Pickup	1/2 ton	15,000	9,000	3,000	100,000 mi	50,000 mi	1,875 mi

Table 2. Machinery & Equipment Cost Calculations

Machine	Size	Costs per Hour or Mile					Hours or Miles per Acre	Costs per Acre		
		Variable		Fixed				Variable	Fixed	Total
		Fuel & Repair & Lube	Maint.	Depr. & Interest	Insurance	Total Cost				
Tractor	50 hp	\$2.70	\$2.66	\$6.04	\$0.47	\$11.87	0.22	\$1.18	\$1.43	\$2.61
Tractor	80 hp	4.32	4.28	5.73	0.44	14.77	0.26	2.24	1.60	3.84
Tractor	125 hp	6.76	8.19	10.96	0.84	26.75	0.34	5.02	3.97	8.99
Corrugator	5 row	0.00	1.99	17.46	1.14	20.59	0.11	0.22	2.07	2.29
Disc	12 ft	0.00	1.99	17.46	1.14	20.59	0.08	0.17	1.55	1.72
Dixon Harrow	12 ft	0.00	0.43	1.05	0.07	1.55	0.13	0.06	0.15	0.21
Moldboard Plow	3-bottom	0.00	5.12	11.36	0.93	17.41	0.11	0.57	1.36	1.93
Propane Burner	30 ft	0.00	2.81	22.74	1.49	27.04	0.13	0.35	3.03	3.38
Ripper	12 ft	0.00	2.41	13.21	1.08	16.70	0.11	0.27	1.59	1.85
Roller	12 ft	0.00	0.54	0.81	0.05	1.40	0.33	0.18	0.29	0.47
ATV		0.06	0.20	1.48	0.08	1.82	0.50	0.13	0.78	0.91
Pickup	1/2 ton	0.08	0.04	0.20	0.06	0.38	25.00	3.10	6.33	9.43
Total								\$13.48	\$24.14	\$37.62



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