University of Idaho
Office of Community Partnerships

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Background & Assumptions

The cost and return estimate shown here is typical for growing tomatoes on a small scale in southwestern Idaho. Because each farm has a unique set of resources, production challenges, and level of productivity, costs will vary from farm to farm.[1] Users of this budget are encouraged to think about their individual operation, especially when calculating costs to be included in overhead.

The Farm

This budget is based on a farm with a total of five acres in production, with one acre planted in tomatoes. The farm uses a drip irrigation system that must be replaced every three years. Because the farm is small and diverse, very little machine labor is used.

Production Practices

Although the farm is not certified organic, it follows general organic production practices. In the spring the land is disked and trenched. Then compost is spread and the drip irrigation tape and plastic mulch is installed. The tomatoes are planted 24" apart in rows on the plastic mulch. Weeds are controlled largely by the plastic mulch, and supplemented with hand and mechanical controls.

The yield listed is estimated to be 5 pounds per plant. It is also assumed that 80% of the tomatoes are sold for processing and 20% are sold for fresh market to distributors and grocery stores.

Minimal costs are included for pesticides as their use is infrequent and unpredictable. Approximately half of the tomatoes are covered to mitigate damage from leaf hoppers.

Machinery, Land, and Labor

Custom hiring is used for land preparation and chemical applications. Labor to operate machinery is valued at $16.25 per hour and general farm labor is valued $9.55 per hour. Labor rates include a base wage plus a percentage for Social Security, Medicare, unemployment insurance, and other labor overhead expenses. The land charge of $150.00 is based on the 2011 NASS cash rent for irrigated cropland in southwestern Idaho. The interest rate for annual operating expenses is assumed to be 6.75%.

[1] Input prices, labor values, and interest rates were taken from the University of Idaho's Idaho Crop Input Price Summary for 2011 where applicable.

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Sample Tomato Budget

South Western Idaho Production

Items	Quantity per Acre	Unit	Price per Unit	Total Value/Cost per Acre
Gross Returns				
Tomatoes - No.1	7,280	lb	$ 1.50	$ 10,920.00
Tomatoes - Processing Tomatoes	29,120	lb	$ 0.50	$ 14,560.00
Total Gross Returns for Tomatoes				**$ 25,480.00**
Variable Costs				
Soil Amendments				
Compost	1	cubic yard	$ 42.99	$ 42.99
Pest Management				
Leaf Hopper Control - Some Row Covers	1	acre	$ 1,200.00	$ 1,200.00
Land Preparation				
Black/Embossed/Red plastic mulch (4' width)	7,280	feet	$ 0.04	$ 291.20
Drip irrigation tape (tape and labor)	1	acre	$ 467.00	$ 467.00
Supplies				
Tomato transplants	7,280	plants	$ 0.28	$ 2,038.40
Stakes	3,640	stakes	$ 0.10 [1]	$ 364.00
Labor				
Custom Applications				
Primary Tillage	1	time	$ 29.63	$ 29.63
Row Markout & Spread Compost	1	time	$ 40.00	$ 40.00
Cultivate	3	times	$ 17.00	$ 51.00
Pest scouting	8	hours	$ 11.55	$ 92.40
Plastic mulch installation/removal	60	hours	$ 9.55	$ 573.00
Planting transplants	26.5	hours	$ 11.55	$ 306.08
Hand Hoeing	20	hours	$ 9.55	$ 191.00
Staking and tying	86	hours	$ 9.55	$ 821.30
Hand harvest	738	hours	$ 9.55	$ 7,047.90
Packing/grading	72.25	hours	$ 9.55	$ 689.99
Pest control	40	hours	$ 16.25	$ 650.00
Misc.				
Twine	43,680	feet	$ 0.005	$ 214.03
Picking Baskets	40	baskets	$ 1.30	$ 52.00
Cartons (25 lbs.)	1450	cartons	$ 1.35	$ 1,957.50
Interest on Operating Capital			6.75%	$ 577.78
Total Variable Costs				**$ 17,697.19**
Fixed Costs				
Irrigation	1	acre	$ 125.85	$ 125.85
Land Charge	1	acre	$ 150.00	$ 150.00
Total Fixed Costs				**$ 275.85**
Total Costs per Acre				**$ 17,973.04**
Net Enterprise Income				**$ 7,506.96**

[1] It is assumed that wooden stakes cost $.50 each and have a useful life of 5 years.

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South Western Idaho Production

Sensitivity Analysis					
Net returns for five different yields and prices					
	Yields				
Prices	30,400	32,400	34,400	36,400	38,400
$ 0.50	$ (2,773.04)	$ (1,773.04)	$ (773.04)	$ 226.96	$ 1,226.96
$ 0.75	$ 4,826.96	$ 6,326.96	$ 7,826.96	$ 9,326.96	$10,826.96
$ 1.00	$12,426.96	$14,426.96	$16,426.96	$18,426.96	$20,426.96
$ 1.25	$20,026.96	$22,526.96	$25,026.96	$27,526.96	$30,026.96
$ 1.50	$27,626.96	$30,626.96	$33,626.96	$36,626.96	$39,626.96