

U.C. COOPERATIVE EXTENSION

SAMPLE COSTS TO PRODUCE TOMATOES Fresh Market and Furrow Irrigated IN THE SAN JOAQUIN VALLEY - 1992

by

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The detailed costs for furrow irrigated, fresh market tomato production in the San Joaquin Valley are presented in this study. The hypothetical farm used in this report consists of 1200 acres of which 600 acres are used to grow fresh market tomatoes. The remainder of the farm is planted to different field crops.

Practices described are based on those production procedures considered typical for this crop and area. Sample costs given for labor, materials, equipment and contract services are based on current figures. Some costs and practices detailed in this study may not be applicable to your situation. This study is only intended as a guide and can be used in making production decisions, determining potential returns, preparing budgets and evaluating production loans. A column for Your Cost is provided on Tables 1 and 2, Costs Per Acre To Produce Tomatoes and Details of Costs To Produce Tomatoes, respectively.

This study consists of General Assumptions for Producing Tomatoes, Fresh Market and Furrow Irrigated and six tables.

Table 1.	Costs Per Acre To Produce Tomatoes
Table 2.	Details of Costs Per Acre To Produce Tomatoes
Table 3.	Monthly Cash Costs Per Acre To Produce Tomatoes
Table 4.	Annual Equipment, Investment And Business Costs
Table 5.	Hourly Equipment Costs
Table 6.	Ranging Analysis

For an explanation of calculations used for the study refer to the attached General Assumptions or call the Department of Agricultural Economics, Cooperative Extension, University of California, Davis, California, (916) 752-3589 or call the Farm Advisor in the county of interest.

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GENERAL ASSUMPTIONS FOR PRODUCING TOMATOES

Fresh Market and Furrow Irrigated

San Joaquin Valley - 1992

U.C. Cooperative Extension

The following is a description of some general assumptions pertaining to sample costs of furrow irrigated, fresh market tomato production in the San Joaquin Valley. The costs are based on typical cultural practices used by growers in this region, some of which may not be used during every production year. Costs are presented as annual costs per acre. The use of trade names in this report does not constitute an endorsement or recommendation by the University of California nor is any criticism implied by omission of other similar products.

1. LAND:

This cost of production study is based on a 1,200 acre field and row crop operation of which 600 acres dedicated to growing fresh market tomatoes. Other crops grown on the same acreage in rotation with tomatoes might include small grains, cantaloupes, mixed melons, sugar beets, broccoli, field corn, etc.

2. RENT AGREEMENT:

The 600 acres used for fresh market tomato production in this study is rented on a per acre basis. Under this agreement the landowner receives \$200 per acre. The landowner is responsible for the of the irrigation system. Interest costs for land and interest, depreciation and the maintenance for the irrigation system is incurred by the landowner.

3. CULTURAL PRACTICES:

The cultural, pesticide and fertilizer inputs for the production of fresh market tomatoes vary considerably from grower to grower and field to field. Land preparation operations such as discing, land planing, subsoiling and listing, are done with a 270 hp (horsepower) crawler tractor during the month of November. After bed shaping, successive operations are performed with an 80 hp and 130 hp wheel tractors.

Nitrogen and phosphate are first applied as a liquid, preplant fertilizer during February when the beds are shaped. A total of 50 pounds of nitrogen and 100 pounds of phosphate per acre is incorporated into the beds before the seedlings are transplanted. The remaining nitrogen is injected into the irrigation water during April and May. This water run fertilizer supplies an additional 100 pounds of nitrogen to the crop for a total of 150 pounds per acre.

In March after the beds have been shaped and the fertilizer has been spread, a preemergent herbicide is applied and incorporated into the beds. Weed control for the remainder of the season consists of hand hoeing and mechanical cultivations. The one contract hand weeding occurs in May and is supplemented with 3 mechanical cultivations during the months of February, April and May.

The transplants are grown by a commercial greenhouse from the seed that the grower supplies. The cost for both seedlings and seed are shown on Table 2. The cost of the seedling represents the greenhouse's cost to produce seedlings. Seedlings are planted in March using a 3 row transplanter. The plants are planted on 60 inch beds, spaced 18 inches apart, in order to obtain a density of 5800 plants per acre.

The irrigation water is supplied by a water district at \$30 per acre foot. The first irrigation occurs in March, followed by subsequent irrigations in April, May and June. A total of 38 acre inches

applied to the crop. Also, during the April and May irrigations, 100 pounds of N are injected into the water.

Pest management techniques are used to manage several different species of worms and diseases. Armyworms (*Spodoptera* sp.) can be controlled by various insecticides. These worms are controlled in mid to late June with 2 applications of Lannate. In the second application, Bayleton is tank mixed and applied to prevent powdery mildew (*Leveillula taurica*). These applications are put on by air.

The pesticides and rates mentioned in this cost study are a few of those that are listed in the UC IPM Tomato Pest Management Guidelines and the IPM For Tomatoes manual. Bayleton has a Section 18, special local need permit, for control of powdery mildew affecting fresh market tomatoes in certain counties and is not listed in the IPM guidelines. Cultural practices for the production of fresh market tomatoes vary from grower to grower and region to region. The practices and inputs used in this cost study serve only as a sample or guide. Variations can be significant. Contact your local farm advisor for advice on production practices.

4. HARVEST, YIELDS & RETURNS:

The tomato crop is hand harvested in late June or early July by contract labor. Tomatoes are picked and hauled from the field to the packing shed. Custom harvesting of the tomatoes costs \$45 per gross ton plus \$14 per gross ton to haul the tomatoes to the packing shed.

San Joaquin Valley fresh market tomato harvests have, on average, yielded 11.2 to 25 tons per acre over the past 5 years. Crop yield for fresh market tomatoes is 18 gross ton per acre with a pack-out rate of 72% netting 13 tons per acre. The \$59 per gross ton equates to \$1.02 per packed box. A packed box of tomatoes equals 25 pounds. The costs of packing, selling and shipping total \$2.50 per box. The total cost of harvest is \$3.52 per packed box.

Prices in the last 5 years ranged from an average of \$325 to \$677 per ton for growers in the San Joaquin Valley. This price range is equal to \$4.06 to \$8.46 per box. No specific return price is assumed in this study due to the market fluctuation of prices received by growers. Table 6, Ranging Analysis, shows the net returns above operating costs, cash costs and total costs for various price and yield levels. Differences in fresh market tomato prices and yields can be substantial over the season.

5. RISK:

The risks associated with fresh market vegetables should not be minimized. While this study makes every effort to model a production system based on typical, real world practices, it cannot fully represent financial, agronomic and market risks which affect the profitability and economic viability of fresh market vegetable production.

The market for fresh vegetables is very volatile for both price and quantity. Producers do not have control over either of these market components. Because of this, fresh market vegetables are a high risk enterprise. Risk is caused by uncontrollable factors such as a decrease in the demand for tomatoes or an oversupply from other sources. Because of the risk involved, access to a market is crucial. A market channel should be determined before any tomato production begins.

Perishability of fresh vegetables diminishes the opportunity to wait for a better market and price. Agronomic difficulties may also increase the risk to growers. Rain can interfere with harvest, planting delays may reduce the chance to sell in an early market or pest and disease might lower quality.

6. LABOR:

Basic hourly wages for workers are \$5.97 and \$4.48 per hour for machine operators and field workers respectively. Adding 34% for SDI, FICA, insurance and other benefits gives the labor rates shown of \$8.00 per hour for machine operators and \$6.00 per hour for field labor. The labor for operations involving machinery are 10% higher than the machine hours to account for the extra labor involved in equipment set-up, moving, maintenance and repair. Wages for managers are not included as a cash cost. Any returns above total costs are considered a return to management.

7. INVESTMENT:

The investments shown in Table 4 are those that can be partially or completely allocated to the fresh market tomato enterprise. All of the investments used in this study can be allocated to all of the enterprises of the 1200 acre farm. Annual investments shown in Table 1 represent depreciation and opportunity cost for each investment on an annual per acre basis.

8. OVERHEAD:

County taxes are calculated as 1% of the average of the equipment, buildings and improvements. Insurance is charged at 0.5% of the average value of the equipment over its useful life. Office and business costs are estimated at \$30 per acre for the ranch. These expenses include office supplies, phone, bookkeeping, accounting, legal fees, road preparation and maintenance, etc. The California Tomato Board levies an assessment fee at the rate of \$0.11 per hundredweight (cwt) on packed tomatoes. California Department of Food and Agriculture assesses growers a fee for the curly top control program, but this charge is not represented in this study. Call your local Agricultural Commissioner for further information.

9. INTEREST:

Interest on operating capital is based on cash costs and is calculated monthly, for five months, until harvest at the rate of 9.00% per year. Adjustments for inflation has not been included in these interest rates. Interest is also charged on investment at 4.00% per year to account for income foregone that could be received from an alternative investment (opportunity cost) and is based on the average value of the buildings and equipment.

10. EQUIPMENT COSTS:

In allocating the equipment costs per acre, the following calculations were made and shown in Table 4: (a) Original Cost of equipment is the cost of the new equipment plus sales tax. (b) Depreciation is straight line with a ten percent salvage value. (c) Interest on investment is calculated as the average value per acre of the equipment during its useful life, multiplied by an interest rate of 4.00%. Average value equals new cost plus salvage value divided by 2 on a per acre basis. (d) Total investment costs are also calculated as 60% of the depreciation and the interest costs for all new equipment to reflect a mix of the new and used equipment. These values are also used in Table 1. Most of this equipment is used on the entire 1200 acre ranch.

11. FUEL & REPAIR:

The fuel and repair cost for each operation in Table 1 is determined by multiplying the total hourly operating cost for each piece of equipment by the number of hours per acre for that operation. Prices for on-farm delivery of gasoline and diesel are \$0.71 and \$0.98 per gallon respectively.

Table 1.

U.C. COOPERATIVE EXTENSION
 COSTS PER ACRE TO PRODUCE TOMATOES
 Fresh Market and Furrow Irrigated
 SAN JOAQUIN VALLEY - 1992

Labor Rate: \$10.00/hr. machine labor
 \$7.00/hr. non-machine labor

Interest Rate: 9.00%
 Yield per Acre: 1040 box

Operation	Operation Time (Hrs/A)	Labor Cost	Fuel & Repairs	Cash and Labor Material Cost	Costs per Acre Custom/Rent	Total Cost	Your Cost
Cultural:							
Disc Stubble 2X	0.25	3.00	7.26	0.00	0.00	10.26	
Chisel 2X	0.60	7.20	15.13	0.00	0.00	22.33	
Land Plane Field 2X	0.28	3.31	7.11	0.00	0.00	10.42	
Disc	0.10	1.20	3.11	0.00	0.00	4.31	
List Beds	0.20	2.40	4.81	0.00	0.00	7.21	
Cultivate	0.79	9.53	5.75	0.00	0.00	15.28	
Shape Beds & Apply Fertilizer	0.25	3.00	6.28	43.03	0.00	52.31	
Spray & Incorporate Herbicides	0.25	3.00	4.56	5.99	0.00	13.55	
Mulch & Shape Beds	0.25	3.00	4.35	0.00	0.00	7.35	
Transplant Seedlings	0.33	25.00	4.15	232.00	0.00	261.15	
Make Ditches	0.06	0.72	0.93	0.00	0.00	1.65	
Irrigate	3.00	21.00	0.00	75.00	0.00	96.00	
Irrigate & Fertilize	1.00	7.00	0.00	44.64	0.00	51.64	
Close Ditch & Drag	0.06	0.72	0.76	0.00	0.00	1.48	
Hoe Weeds	0.00	0.00	0.00	0.00	50.00	50.00	
Apply Insecticide	0.00	0.00	0.00	15.80	6.75	22.55	
Apply Insecticide & Miticide	0.00	0.00	0.00	45.40	6.75	52.15	
Pickup Truck Use	0.22	2.67	1.43	0.00	0.00	4.10	
TOTAL CULTURAL COSTS	7.65	92.75	65.62	461.86	63.50	683.74	
Harvest:							
Field Pick	0.00	0.00	0.00	0.00	810.00	810.00	
Haul To Shed	0.00	0.00	0.00	0.00	252.00	252.00	
Box, Pack & Sell	0.00	0.00	0.00	0.00	2600.00	2600.00	
TOTAL HARVEST COSTS	0.00	0.00	0.00	0.00	3662.00	3662.00	
Postharvest:							
Disc Crop Residue 2X	0.29	3.43	8.16	0.00	0.00	11.59	
TOTAL POSTHARVEST COSTS	0.29	3.43	8.16	0.00	0.00	11.59	
Interest on operating capital @ 9.00%						50.69	
TOTAL OPERATING COSTS/ACRE		96.18	73.79	461.86	3725.50	4408.02	
TOTAL OPERATING COSTS/BOX						4.24	
CASH OVERHEAD:							
Rent						200.00	
Office Expense						30.00	
CTB Assessment						28.60	
Property Taxes						2.55	
Equipment Insurance						1.28	
Investment Repairs						0.48	
TOTAL CASH OVERHEAD COSTS						262.91	
TOTAL CASH COSTS/ACRE						4670.93	
TOTAL CASH COSTS/BOX						4.49	
NON-CASH OVERHEAD:							
Investment	Per producing Acre	Depreciation	Annual Cost	Interest @ 4.00%			
Shop Building	30.83	1.54		0.62		2.16	
Shop Tools	8.33	0.42		0.17		0.58	
Fuel Tanks & Pumps	6.71	0.34		0.13		0.47	
Fuel Wagon	1.25	0.11		0.03		0.14	
Tool Carrier	10.17	0.46		0.22		0.68	
Gated Pipe	4.76	0.21		0.10		0.32	
Equipment	405.87	29.61		8.93		38.54	
TOTAL NON-CASH OVERHEAD COSTS	467.92	32.69		10.20		42.89	
TOTAL COSTS/ACRE						4713.82	
TOTAL COSTS/BOX						4.53	

Table 3.

U.C. COOPERATIVE EXTENSION
MONTHLY CASH COSTS PER ACRE TO PRODUCE TOMATOES
Fresh Market and Furrow Irrigated
SAN JOAQUIN VALLEY - 1992

Beginning NOV 92 Ending OCT 93	NOV 92	DEC 92	JAN 93	FEB 93	MAR 93	APR 93	MAY 93	JUN 93	JUL 93	AUG 93	SEP 93	OCT 93	TOTAL

Cultural:													
Disc Stubble 2X	10.26												10.26
Chisel 2X	22.33												22.33
Land Plane Field 2X	10.42												10.42
Disc	4.31												4.31
List Beds	7.21												7.21
Cultivate				5.29		5.00	5.00						15.28
Shape Beds & Apply Fert.				52.31									52.31
Spray & Incorporate Herb.					13.55								13.55
Mulch & Shape Beds					7.35								7.35
Transplant Seedlings					261.15								261.15
Make Ditches					0.55		1.10						1.65
Irrigate					23.50	14.50	14.50	43.50					96.00
Irrigate & Fertilize						25.82	25.82						51.64
Close Ditch & Drag						0.49	0.49	0.49					1.48
Hoe Weeds							50.00						50.00
Apply Insecticide									22.55				22.55
Apply Insecticide & Miticide									52.15				52.15
Pickup Truck Use	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41			4.10
TOTAL CULTURAL COSTS	54.93	0.41	0.41	58.01	306.51	46.22	97.32	119.11	0.41	0.41			683.74

Harvest:													
Field Pick									810.00				810.00
Haul To Shed									252.00				252.00
Box, Pack & Sell									2600.00				2600.00
TOTAL HARVEST COSTS									3662.00				3662.00

Postharvest:													
Disc Crop Residue 2X										11.59			11.59
TOTAL POSTHARVEST COSTS										11.59			11.59

Interest on oper. capital	0.41	0.42	0.42	0.85	3.15	3.50	4.23	5.12	32.59				50.69
TOTAL OPERATING COSTS/ACRE	55.34	0.82	0.83	58.86	309.67	49.72	101.55	124.23	3695.00	12.00			4408.02
TOTAL OPERATING COSTS/BOX	0.05	0.00	0.00	0.06	0.30	0.05	0.10	0.12	3.55	0.01			4.24

OVERHEAD:													
Rent				200.00									200.00
Office Expense	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00			30.00
CTB Assessment									28.60				28.60
Property Taxes			1.28						1.28				2.55
Equipment Insurance			0.64						0.64				1.28
Investment Repairs	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05			0.48
TOTAL CASH OVERHEAD COSTS	3.05	3.05	4.96	203.05	3.05	3.05	3.05	3.05	33.56	3.05			262.91

TOTAL CASH COSTS/ACRE	58.39	3.87	5.79	261.91	312.71	52.77	104.60	127.28	3728.56	15.05			4670.93
TOTAL CASH COSTS/BOX	0.06	0.00	0.01	0.25	0.30	0.05	0.10	0.12	3.59	0.01			4.49
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Table 4.

U.C. COOPERATIVE EXTENSION
 WHOLE FARM ANNUAL EQUIPMENT, INVESTMENT, AND BUSINESS OVERHEAD COSTS
 SAN JOAQUIN VALLEY - 1992

ANNUAL EQUIPMENT COSTS

Yr	Description	Price	Yrs Life	- Non-Cash Over. - -		Cash Overhead -		Total
				Depre- ciation	Interest	Insur- ance	Taxes	
92	130 hp 2wd Tractor	77359	12	5801.92	1701.90	212.74	425.48	8142.04
92	270 hp Crawler	151940	12	11395.50	3342.68	417.84	835.67	15991.69
92	270 hp Crawler	151940	12	11395.50	3342.68	417.84	835.67	15991.69
92	80 hp 2wd Tractor	39906	12	2992.92	877.94	109.74	219.48	4200.08
92	Bed Shaper - 3 Row	3745	15	224.67	82.40	10.30	20.60	337.97
92	Cultivator Sled	3745	15	224.67	82.40	10.30	20.60	337.97
92	Cultivator Sled	3745	15	224.67	82.40	10.30	20.60	337.97
92	Cultivator Sled	3745	15	224.67	82.40	10.30	20.60	337.97
92	Disc - Offset 18'	20230	15	1213.80	445.06	55.63	111.27	1825.76
92	Disc - Offset 26'	27310	15	1638.60	600.82	75.10	150.21	2464.73
92	Disc - Stubble 16'	18622	15	1117.33	409.68	51.21	102.42	1680.64
92	Ditcher - V	12706	15	762.33	279.54	34.94	69.88	1146.69
92	Incorporator - 15'	19260	15	1155.60	423.72	52.96	105.93	1738.21
92	Lister - 3 Row 16'	2838	15	170.27	62.44	7.81	15.61	256.13
92	Mulcher - 3 Row	19260	15	1155.60	423.72	52.96	105.93	1738.21
92	Pickup Truck - 1/2 Ton	17655	7	2269.86	388.42	48.55	97.11	2803.94
92	Saddle Tank - 300 Gal	1650	10	148.50	36.30	4.54	9.07	198.41
92	Saddle Tank - 300 Gal	1650	10	148.50	36.30	4.54	9.07	198.41
92	Scraper - Drag 10'	2884	15	173.07	63.44	7.93	15.86	260.30
92	Subsoiler - 8'	6955	12	521.58	153.02	19.13	38.25	731.98
92	Subsoiler - 8'	6955	12	521.58	153.02	19.13	38.25	731.98
92	Transplanter 3 Row	6833	7	878.57	150.32	18.79	37.58	1085.26
92	Transplanter 3 Row	6833	7	878.57	150.32	18.79	37.58	1085.26
92	Triplane - 16'	17527	15	1051.60	385.60	48.20	96.40	1581.80
TOTAL		625293		46289.88	13756.52	1719.57	3439.12	65205.09
60% of New Cost *		375176		27773.93	8253.91	1031.74	2063.47	39123.05

* Used to reflect a mix of new and used equipment.

ANNUAL INVESTMENT COSTS

Yr	Description	Price	Yrs Life	- Non-Cash Over. - -		Cash Overhead -		Total
				Depre- ciation	Interest	Insur- ance	Taxes	
INVESTMENT								
	Fuel Tanks & Pumps	8050	20	402.50	161.00	20.13	40.25	748.88
	Fuel Wagon	1500	10	135.00	33.00	4.13	8.25	230.38
	Gated Pipe	5712	20	257.05	125.66	15.71	31.42	529.84
	Shop Building	37000	20	1850.00	740.00	92.50	185.00	2967.50
	Shop Tools	10000	20	500.00	200.00	25.00	50.00	875.00
	Tool Carrier	12200	20	549.00	268.40	33.55	67.10	1018.05
TOTAL INVESTMENT		74462		3693.55	1528.06	191.02	382.02	6369.65

ANNUAL BUSINESS OVERHEAD COSTS

Description	Units/ Farm	Unit	Price/ Unit	Total Cost
CTB Assessment	156000.00	cwt	0.11	17160.00
Office Expense	1200.00	acre	30.00	36000.00
Rent	600.00	acre	200.00	120000.00

Table 5.

U.C. COOPERATIVE EXTENSION
 HOURLY EQUIPMENT COSTS
 SAN JOAQUIN VALLEY - 1992

Yr	Description	COSTS PER HOUR								Total Costs/Hr.
		Actual Hours Used	-Non-Cash Depre- ciation	Over- Interest	- Cash Insur- Overhead ance	Taxes	Repairs	Operating Fuel & Lube	Total Oper.	
92	130 hp 2wd Tractor	1047.2	3.32	0.98	0.12	0.24	4.64	6.16	10.80	15.47
92	270 hp Crawler	1008.3	6.78	1.99	0.25	0.50	7.60	13.51	21.11	30.62
92	270 hp Crawler	1060.8	6.45	1.89	0.24	0.47	7.60	13.51	21.11	30.15
92	80 hp 2wd Tractor	1035.8	1.73	0.51	0.06	0.13	2.39	3.21	5.60	8.04
92	Bed Shaper - 3 Row	166.0	0.81	0.30	0.04	0.07	1.07	0.00	1.07	2.30
92	Cultivator Sled	166.0	0.81	0.30	0.04	0.07	1.07	0.00	1.07	2.30
92	Cultivator Sled	165.8	0.81	0.30	0.04	0.07	1.07	0.00	1.07	2.30
92	Cultivator Sled	165.8	0.81	0.30	0.04	0.07	1.07	0.00	1.07	2.30
92	Disc - Offset 18'	166.0	4.39	1.61	0.20	0.40	5.81	0.00	5.81	12.41
92	Disc - Offset 26'	166.0	5.92	2.17	0.27	0.54	7.84	0.00	7.84	16.75
92	Disc - Stubble 16'	171.4	3.91	1.43	0.18	0.36	5.35	0.00	5.35	11.24
92	Ditcher - V	166.0	2.76	1.01	0.13	0.25	3.65	0.00	3.65	7.79
92	Incorporator - 15'	166.0	4.18	1.53	0.19	0.38	5.53	0.00	5.53	11.81
92	Lister - 3 Row 16'	166.0	0.62	0.23	0.03	0.06	0.82	0.00	0.82	1.74
92	Mulcher - 6 Row	166.0	4.18	1.53	0.19	0.38	5.53	0.00	5.53	11.81
92	Pickup Truck - 1/2 Ton	266.5	5.11	0.87	0.11	0.22	3.12	3.29	6.41	12.72
92	Saddle Tank - 300 Gal	150.0	0.59	0.15	0.02	0.04	0.83	0.00	0.83	1.62
92	Saddle Tank - 300 Gal	150.0	0.59	0.15	0.02	0.04	0.83	0.00	0.83	1.62
92	Scraper - Drag 10'	166.0	0.63	0.23	0.03	0.06	0.83	0.00	0.83	1.77
92	Subsoiler - 8'	208.0	1.50	0.44	0.06	0.11	2.00	0.00	2.00	4.11
92	Subsoiler - 8'	208.0	1.50	0.44	0.06	0.11	2.00	0.00	2.00	4.11
92	Transplanter 3 Row	171.0	3.08	0.53	0.07	0.13	3.43	0.00	3.43	7.23
92	Transplanter 3 Row	171.0	3.08	0.53	0.07	0.13	3.43	0.00	3.43	7.23
92	Triplane - 16'	165.6	3.81	1.40	0.17	0.35	2.54	0.00	2.54	8.28

Table 6.

U.C. COOPERATIVE EXTENSION
RANGING ANALYSIS
SAN JOAQUIN VALLEY - 1992

COSTS PER ACRE AT VARYING YIELDS TO PRODUCE FRESH MARKET TOMATOES

	YIELD (BOX/ACRE)						
	750	850	950	1050	1150	1250	1350
OPERATING COSTS/ACRE:							
Cultural Cost	684	684	684	684	684	684	684
Harvest Cost	2641	2993	3345	3697	4049	4401	4754
Postharvest Cost	12	12	12	12	12	12	12
Interest on operating capital	43	46	48	51	54	56	59
TOTAL OPERATING COSTS/ACRE	3379	3734	4089	4443	4798	5153	5508
TOTAL OPERATING COSTS/BOX	4.51	4.39	4.30	4.23	4.17	4.12	4.08
CASH OVERHEAD COSTS/ACRE	263	263	263	263	263	263	263
TOTAL CASH COSTS/ACRE	3642	3997	4352	4706	5061	5416	5771
TOTAL CASH COSTS/BOX	4.86	4.70	4.58	4.48	4.40	4.33	4.27
NON-CASH OVERHEAD COSTS/ACRE	43	43	43	43	43	43	43
TOTAL COSTS/ACRE	3685	4040	4395	4749	5104	5459	5814
TOTAL COSTS/BOX	4.91	4.75	4.63	4.52	4.44	4.37	4.31

NET RETURNS PER ACRE ABOVE OPERATING COSTS FOR FRESH MARKET TOMATOES

PRICE (DOLLARS PER BOX)	YIELD (BOX/ACRE)						
	750	850	950	1050	1150	1250	1350
3.50	-754	-759	-764	-768	-773	-778	-783
4.00	-379	-334	-289	-243	-198	-153	-108
4.50	-4	91	186	282	377	472	567
5.00	371	516	661	807	952	1097	1242
5.50	746	941	1136	1332	1527	1722	1917
6.00	1121	1366	1611	1857	2102	2347	2592
6.50	1496	1791	2086	2382	2677	2972	3267

NET RETURNS PER ACRE ABOVE CASH COSTS FOR FRESH MARKET TOMATOES

PRICE (DOLLARS PER BOX)	YIELD (BOX/ACRE)						
	750	850	950	1050	1150	1250	1350
3.50	-1017	-1022	-1027	-1031	-1036	-1041	-1046
4.00	-642	-597	-552	-506	-461	-416	-371
4.50	-267	-172	-77	19	114	209	304
5.00	108	253	398	544	689	834	979
5.50	483	678	873	1069	1264	1459	1654
6.00	858	1103	1348	1594	1839	2084	2329
6.50	1233	1528	1823	2119	2414	2709	3004

NET RETURNS PER ACRE ABOVE TOTAL COSTS FOR FRESH MARKET TOMATOES

PRICE (DOLLARS PER BOX)	YIELD (BOX/ACRE)						
	750	850	950	1050	1150	1250	1350
3.50	-1060	-1065	-1070	-1074	-1079	-1084	-1089
4.00	-685	-640	-595	-549	-504	-459	-414
4.50	-310	-215	-120	-24	71	166	261
5.00	65	210	355	501	646	791	936
5.50	440	635	830	1026	1221	1416	1611
6.00	815	1060	1305	1551	1796	2041	2286
6.50	1190	1485	1780	2076	2371	2666	2961