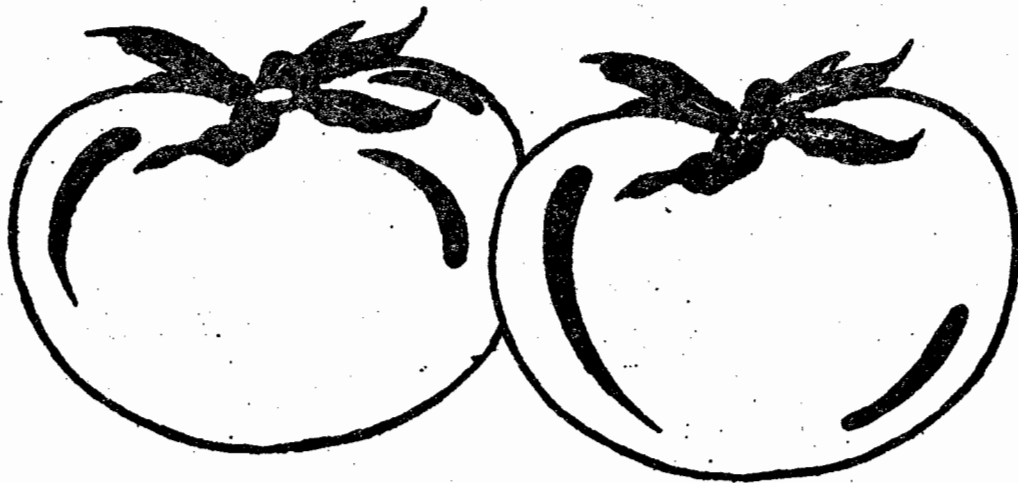


SAMPLE COSTS OF TOMATO PRODUCTION

in

Contra Costa, San Joaquin, and Stanislaus Counties

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SAMPLE COSTS OF TOMATO PRODUCTION
IN CONTRA COSTA, SAN JOAQUIN, AND STANISLAUS COUNTIES

Introduction

Processing tomatoes constitute a large percentage of the vegetable production in the three-county area. Many questions have been asked about the economics of producing this crop.

This study was initiated in order to answer the questions received and to pinpoint the inputs required to produce a crop of tomatoes.

Costs vary from farm to farm because of individual differences in soil, rotations, equipment, size of units and management. This study represents estimated costs and yields for the area. Equipment costs are computed using new (1982) prices. While this may not be representative of the typical tomato operation in the area, it does provide a detailed breakdown of the investment required for a new grower. Certain cultural operations included in this study may not be universal in their application. Growers are invited to use the "your costs" column of the study in order to develop the true costs of their operation for management decisions.

For specific assumptions (as marked by footnotes ()), please refer to the notes on page 6.

The authors are indebted to and wish to thank a group of growers and associated farm service and supply personnel from the area for their help in developing this study. These people provided the basic information on machinery, operations, and size of operation. Their comments and guidance are greatly appreciated.

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SAMPLE COSTS OF TOMATO PRODUCTION
RENTED LAND BASIS

Contra Costa, San Joaquin, Stanislaus Counties - 1982
Based on 300 acres of tomatoes on a 1200-acre farm. Yield: 25 tons per acre
Based on a 5-year yield average for San Joaquin County

Operation	Hours Per Acre	Labor (3)	Fuel & Repairs (2)	Materials		Per Acre Total	Your Cost
				Kind and Quantity	Cost		
<u>SEEDBED PREPARATION</u>							
<u>Fall (1)</u>							
Disc, plow & subsoil (120 acres) 2/5 of 1.40	.56	\$ 2.80	\$20.66			\$ 23.46	
Disc 2x, subsoil 2x (180 acres) 3/5 of .80 x 2	.96	4.80	25.35			31.15	
Landplane 2x (300 acres)	.64	3.20	10.36			13.56	
<u>Spring</u>							
Disc 2x	.52	2.60	9.61			12.21	
Springtooth	.10	.50	1.30			1.80	
Harrow & roll	.15	.75	1.59			2.34	
List or ridge, (fumigate) (13)	.22	1.10	3.58			4.68	
Move Equipment, set-up, and service at 7% of oper. time	.22	1.10				1.10	
TOTALS		\$16.85	\$73.45			\$ 90.30	
<u>PLANTING</u>							
Sled, shape, incorporate herbicide	.34	1.70	6.37	Tillam @ 6# +	64.00	72.07	
Plant (2 men), starter fertilizer	.28	2.80	4.23	1# seed @ \$32/lb.	32.00	39.03	
				20 gal. starter fertilizer (10-34-0)	37.00	37.00	
Move equipment, set-up and service at 10% of oper. time	.03	.15				.15	
TOTALS		4.65	10.60		133.00	\$148.25	

Operation	Hours Per Acre	Labor(3)	Fuel & Repairs(2)	Materials Kind and Quantity	Cost	Per Acre Total	Your Cost
BULK HARVEST (6)							
Machine (harvester), based on \$29.00/hr. operating charge	\$ 1.44		\$ 41.76			\$ 41.76	
Driver @ \$5.00	1.72	\$ 8.60				8.60	
Sorters (11)							
Electronic, 6 @ \$3.75	1.44	32.40				32.40	
(Manual, 12 @ \$3.75)		(64.80)				(64.80)	
Sorter, supervisor @ \$5.00	1.44	7.20				7.20	
Driver, 1-1/2 @ \$5.00	1.72	12.90				12.90	
5th wheel dolly 1-1/2	1.44		2.38			2.38	
Tractor, 1-1/2 @ \$12.58(7)	1.44		18.12			18.12	
Mechanic & supervisor @ \$8.00	1.72	13.76				13.76	
Misc. equip., disc, scraper water trailer, pick-up truck @ \$40.00/10-hr. day or shift	1.44		5.76			5.76	
Misc. supplies, drinks, goggles, etc., @ \$20.00/day					\$3.80	3.80	
		\$ 74.86	\$ 68.02		\$3.80		
(Cost for manual harvest & extra sorters)		(\$107.26)					
Inspection @ 17¢/ton, 25 tons						4.25	
Unemployment, Soc. Security, Workmen's Comp., bonus, transportation, etc., @ 22% of cash wages of steady employees (\$42.46)						9.34	
Unemployment, Soc. Security, Workmen's Comp. insurance on sorters - 22% of \$7.13 (\$14.26)						7.13 (14.26)	
Addit. charges for seasonal labor, bookkeeping, etc., \$4/day/man; 6 men x \$4 = \$24÷6 ac/day (12 men x \$4 = \$48÷6 ac/day)						4.00 (8.00)	
Toilets						2.00	
TOTAL BULK HARVEST COSTS				Electronic sorter (Manual sorter)		\$173.40 (\$216.93)	
Taxes on bulk harvest equipment \$1,094 x .65 = \$711 x 25% = \$177.78 assessed value x .1200 San Joaquin County tax rate ⁽¹²⁾						21.33	
Assessments (association dues, CTRI, leafhopper, etc.) @ 24.1¢/ton						6.03	
TOTAL						\$ 27.36	

		Per Acre Total	Your Cost
TOTAL CASH COSTS--Preharvest + Bulk Harvest + Taxes on Equipment		Electronic harvest \$1178.36 (Manual harvest) 1221.89	
Management--5% of 25 tons at \$56.00		\$ 70.00	
<u>Investment</u>			
		<u>Annual Cost</u>	
	<u>Per Acre</u>	<u>Depreciation</u>	<u>Interest</u>
Buildings	\$ 45.84	\$ 1.53	\$ 3.44
Equipment, bulk harvest	1093.65	150.81	88.04
	<u>\$1139.49</u>	<u>\$152.34</u>	<u>\$85.48</u>
TOTAL COST PER ACRE BULK HARVEST			237.82
COST PER TON AT 28 TONS/ACRE YIELD BULK HARVEST		Electronic sort \$1486.18 (Manual sort) (\$1529.71)	
COST PER TON AT 25 TONS/ACRE YIELD, BULK HARVEST		Electronic sort \$ 53.08 (Manual sort) (\$ 54.63)	
COST PER TON AT 30 TONS/ACRE YIELD, BULK HARVEST		Electronic sort \$ 59.44 (Manual sort) (\$ 61.19)	
COST PER TON AT 25 TONS/ACRE YIELD, BULK HARVEST		Electronic sort \$ 49.54 (Manual sort) (\$ 50.99)	

INVESTMENT COSTS FOR TOMATOES - 1982

Based on 300 acres of tomatoes on 1200-acre farm

Item	Cost Incl. 6% Tax	Annual Use (acres)	Cost per Acre	Life (yrs)	Depre.	Interest @ 15%	Cash Costs per Hour ⁽²⁾		
							Fuel	Repairs	Total
BUILDINGS									
Shop, 40' x 60'	\$35,000	1,200	\$29.17	30	\$.97	\$ 2.19			
Shed, 4,000 sq. feet	20,000	1,200	16.67	30	.56	1.25			
TOTAL BUILDINGS	\$55,000		\$45.84		\$ 1.53	\$ 3.44			

EQUIPMENT INVENTORY

Item	Cost	Annual	Cost	Life	Deprec.	Interest	Cash Costs per Hour (2)		
	Incl. 6% Tax	Use (acres)	Per Acre				Fuel	Repairs	Total
Tractor 125 C.D. H.P. (D6DSA)	\$103000.00	1000	\$ 103.00	10	\$ 10.30	\$ 7.73	\$7.70	\$ 8.25	\$ 15.95
Tractor 90 C.D. Used (HT 11)	12000.00	1000	12.00	10	1.20	.90	6.05	6.50	12.55
Tractor 90 W.D. H.P. (2040) used	12000.00	1000	12.00	10	1.20	.90	4.40	3.85	8.25
Tractor 125 W.D. H.P.	40000.00	1000	40.00	10	4.00	3.00	6.60	4.59	11.19
Tractor, used (60 H.P. for bulk trail.)	10000.00	1000	10.00	4	2.50	.75	2.75	2.98	5.73
Landplane 12 x 60	13000.00	1200	10.83	20	.54	.81		5.00	5.00
Plow 4 - 16's 2-way	8000.00	700	11.42	8	1.43	.86		9.45	9.45
Disc, 18' 24"-blade	12000.00	1200	10.00	10	1.00	.75		7.30	7.30
Bed harrow, 3-bed	3000.00	1200	2.50	10	.25	.19		.55	.55
Smizer roller, 18' (1)	9600.00	1200	8.00	12	.67	.60		1.80	1.80
Roller (Flat)	2200.00	600	3.67	10	.37	.27		.30	.30
Sled (plant) incorporator	15500.00	300	51.67	10	5.17	3.87		6.75	6.75
Sled (cultivating)	4500.00	300	15.00	10	1.50	1.13		4.65	4.65
Planters (sled)	9000.00	300	30.00	10	3.00	2.26		3.10	3.10
Ditcher, 54"	5000.00	1000	5.00	20	.25	.38		.60	.60
Bedding Tool Bar with Fertilizer/ Fumigation Shanks	5000.00	300	16.67	10	1.67	1.25		.30	.30
Saddle tanks and associated equipment for fert. & herbicide rigs (3)	7500.00	700	10.71	10	1.07	.80		2.40	2.40
Harvester, new with electronic sort.	185000.00	300	616.67	7	88.09	46.25	5.50	23.50	29.00
Pick-up, 3/4 ton (4 x 4)	13000.00	1200	10.83	3	3.61	.81			
Pick-up, 1/2 ton (3 used)	12000.00	600	20.00	2	10.00	1.50			
Springtooth, 24' (transport type)	9000.00	1200	7.50	10	.75	.56		4.75	4.75
Siphons, (600) var. sizes @ \$2.50	1500.00	300	5.00	10	.50	.38			
Tarps, 200 @ \$24.00	4800.00	1200	4.00	2	2.00	.30			
Truck with water tank	8000.00	600	13.33	8	1.67	1.00			
Electronic (blocker) thinner 6 row (3 bed)	10500.00	400	26.25	6	4.38	1.97		4.03	4.03
5th wheel convertible trailers (2) used	2400.00	300	8.00	10	.80	.60		1.10	1.10
Subsoiler, 10' (ripper)	7500.00	600	12.50	10	1.25	.94		4.20	4.20
Ditch closer	5600.00	1000	5.60	15	.37	.42		2.50	2.50
Sprayer-300 gal tank, 10gpm pump	3100.00	1200	2.58	10	.26	.19			
Toilets (3)	1600.00	600	2.67	7	.38	.20			
Tool carrier	2500.00	1200	2.08	10	.21	.16			
Heavy tilt-bed trailer (used)	5000.00	1200	4.17	10	.42	.31			
TOTALS	\$542800.00		\$1093.65		\$150.81	\$82.04			

NOTES

- 1) Fall operations are calculated on the basis of 300 acres total of tomatoes. (2/5 of 300 acres is 120 acres, etc.) Soil amendments (gypsum or manure applications) will add approximately \$36 per acre costs to the fall operation.
- 2) Fuel and repairs are calculated as the total of the tractor and the implement as taken from the equipment list multiplied by the hours per acre. Fuel costs are based on a charge of \$1.10/gal diesel and \$1.25/gal unleaded gasoline.
- 3) Labor rates - Hourly labor rates are:

Supervisor	\$ 8.00	Irrigator	\$ 4.00 (includes overtime for
Harvester operator	\$ 5.00	Regular	\$ 3.75 part of the year)
Skilled	\$ 5.00		
- 4) Irrigation water cost ranges from approximately \$5 per acre foot to \$17 per acre foot, depending on the location within the area. The figure used in this study (\$12) is within this range and represents a typical cost in the major tomato-growing areas of the three counties.
- 5) Costs for Ethephon, vine training and whitener are pro-rated over the entire 300 acres of tomatoes.
- 6) Harvest costs are calculated based on bulk handling. Harvest costs are based on good harvest conditions; circumstances which lead to overripe and mold conditions can effectively double costs of harvest.
- 7) Cost per hour on tractors for bulk harvest was an average of three large tractors $(11.19 + 8.25 + 5.73 \div 3 = 8.39 \times 1\text{-}1/2 = 12.58)$.
- 8) Approximately 1.0% of delivered loads are rejected at the inspection station, incurring losses from return freight, harvest costs and, in some instances, reconditioning of the loads.
- 9) Various rent arrangements are common in the area: cash figures are used for the study; share rents vary from 18 to 20% of the gross.
- 10) Health insurance for full-time employees is included in the 22% charge for benefits.
- 11) Harvest costs are based on an average of 6 sorters for a machine equipped with an electronic sorter. However, some growers use a manual sort harvester at an approximate cost of \$125,000 and employing from 10 to 12 sorters. Cash costs for fuel and repairs for an older harvester would be approximately \$61.75/acre.
- 12) The tax rate will vary with location; for example, Stanislaus County will average \$10/\$100 assessed value.
- 13) Fumigation should only be practiced if there is a serious nematode population and/or if weed infestation is quite a problem.

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