

COSTS OF PRODUCTION PROCESSING TOMATOES

Yolo County
1976

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* For those who use this study - *
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* In developing this study, certain assumptions had to be made. *
* Vagaries of weather, insects, or manmade problems of quotas, *
* tonnage restrictions, labor shortages, etc. cannot be *
* predicted. *
*

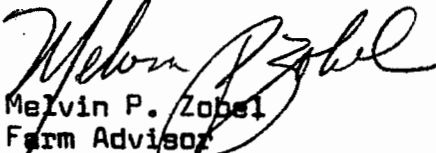
* It was assumed that - *
*

- * 1. It was an uninterrupted harvest - No quota situation; *
* good planting scheduling, no labor problems. *
*
- * 2. No acreage was lost due to tonnage restrictions, *
* weather, or management mistakes. *
*
- * 3. A good job of herbicide applications and insecticide *
* application was done and effective controls were *
* obtained. *
*
- * 4. Excessive, not needed or insurance type applications *
* were not used. *
*

* This study represents an average, rather than an individual *
* situation. *
*

* I trust you will find the study of value when you compare *
* your cost with it. *
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* Sincerely, *
*

*  *
* Melvin P. Zobel *
* Farm Advisor *
*

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This cost study based on 240 acres of machine harvested tomatoes, is
assumed to be part of a 2640 acre multi-crop farming operation. The
basic cost information was developed using 1974 costs of equipment,
supplies, labor use, etc. In March, 1976, the study was updated
using 1975 costs of equipment, labor and supplies. In this study,
1976 costs were used. The 2640 acre farm enterprise base was used
to develop realistic figures for equipment usage and costs for the
crops in the farm enterprise.

The rotation shown of tomatoes following corn or wheat is commonly used in Yolo County. Tomatoes in Yolo County may be and are grown following all crops. However, the corn-tomato rotation is increasing in popularity. Cost would change slightly under different rotations because management practices would change. Cost variation, however, would be only minor.

The operations shown in the study are not fixed procedures. Different situations call for different operations. In general, however, operations would follow a general pattern of those shown. It is not uncommon to encounter special problems which would require special applications or operations.

Equipment costs as shown in the original study were based on 1974 costs for equipment and parts supplies. By 1977, equipment costs will have increased about 15%. Some items of equipment have increased more, others less. This study includes the 15% increase.

Labor charges used include the basic hourly cash wage plus an hourly benefits package. The benefit package amounts to 31 or 32¢ per hour. The hourly wage rates used were similar to the union rates in labor union contracts. In addition to these hourly wages, there would be the usual social security and workmen's compensation insurance costs of labor. Also, it was assumed that there would be no overtime paid or night work charges. To cover the 240 acres with one machine, two shifts would probably be used for part of the harvest season. Night time crews usually are paid at a higher rate per hour.

Labor costs were charged at \$3.10 per hour plus benefits package for common labor--sorters, weed crew, etc. Irrigator wages were \$3.15 plus benefit package. Tractor driver labor was charged according to skills and experiences--heavy equipment operator at \$4.02 plus package, skilled driver at \$3.92 plus package, semi-skilled at \$3.82 plus package and trailer puller at \$3.36 plus package.

The foremen and/or supervisors wages would be above those paid for hourly work. In addition, the long-time employees would receive vacations, bonuses, and frequently free transportation and housing. Allowances for these costs are included under miscellaneous labor costs.

For seasonal and part-time labor--weeding crews, sorters, etc.--an additional charge is made at 15% of the cash hourly wage per day per man. This charge covers labor supervision and includes bookkeeping, field supplies, transportation to field, and subsidizing housing.

Your costs should be used to figure costs of production for your operation and conditions. This study was developed and is intended to be used as a guide to compare your costs. For more detailed information on how the original cost study was developed, see "Sample Costs of Production," Yolo County, 1975, Woodland Area.

TOMATOES
Yield - 25 Ton
(240 Acres - Following Corn and/or Wheat)

	Hours/ Acre	Cash & Labor Costs Per Acre				Materials	Total
		Labor	Fuel & Repairs Tractor	Implt.			
<u>Seed Bed Preparation</u>							
<u>Fall</u>							
Plow (½ acreage)(.50/2)	.25	1.06	1.61	1.37	--	4.04	
Subsoil (½ acreage)(.40/2)	.20	.88	1.83	.38	--	3.09	
Landplane 2X	.40	1.73	2.53	.28	--	4.54	
Chisel	.40	1.73	3.06	.63	--	5.42	
<u>Spring</u>							
Disc 2X	.24	1.04	1.84	1.93	--	4.81	
Springtooth 2X	.16	.68	1.23	.47	--	2.38	
Swede Harrow & Roll 2X	.16	.68	1.01	.99	--	2.68	
List/Ridge & ap. starter	.30	1.27	1.81	.28	--	3.36	
Fertilizer @ 10 gal/acre @ \$1.55/gal					15.50	15.50	
Saddle Tanks	.30	--	--	.21	--	.21	
Move equip., setup & service @ 10% of operating time	.21	.91	--	.10	--	1.01	
Total	2.32	9.98	14.92	6.64	15.50	47.04	
<u>Planting</u>							
Sled, Shape, Incorporate							
Herbicide & Plant (2 men)	.30	2.29	1.81	6.00	--	10.10	
Herbicide (comb.) 30" band on 60" row (½ area)					14.15	14.15	
Seed - 1#/acre @ \$18.00/lb.					18.00	18.00	
Saddle Tanks	.30	--	--	.21	--	.21	
Move equip., setup & service @ 20% of operating time	.12	.52	--	.06	--	.58	
Total	.42	2.81	1.81	6.27	32.15	43.04	
<u>Growing Costs</u>							
Cultivate - Sled & imp.	.50	2.12	1.86	.45	--	4.43	
Thin - Mechanical	.25	1.06	1.51	1.99	--	4.56	
Cultivate & furrow 3X	.75	3.10	4.52	.68	--	8.30	
Rolling Cultivate 2X	.40	1.65	1.48	2.06	--	5.19	
Hoe (trim & hoe, hoe 2X)	7.3	24.93	--	--	--	24.93	
Ditch (open & close) 3X	.15	.65	1.14	.17	--	1.96	
Irrigate-7X @ 1.5 hrs/ac	10.5						
Labor		36.38	--	--	--	36.38	
Water - 5 ac ft @ \$5.93/ac ft					29.65	29.65	
Misc. irrig. equip.-shovels, siphons, dams, etc. @ 75¢/ac					.75	.75	
Fertilizer - sidedress							
Tractor & sled	.25	1.06	1.51	.22	--	2.79	
Fertilizer - Nitrogen 80# N/ac @ 20¢/lb.					16.00	16.00	
Saddle Tanks	.25	--	--	.17	--	.17	

Tomatoes, cont.	Hours/ Acre	Cash & Labor Costs Per Acre				Total
		Labor	Fuel & Repairs Tractor	Implt.	Materials	

Growing Costs continued

Insect control

Seedling stage (flea beetle, grd. beetle)

Tractor & sprayer 1X	.16	.67	.50	.69	--	1.86
Insecticide - 2 pts. @ \$13.50/gal					3.39	3.39
Fruit worm control - 2½X - air \$2.50/ac/time					6.25	6.25
Materials - 1 qt/app/ac/treatment @ \$13.85/gal + 2 qts/app/ac @ \$22.00					36.15	36.15
Cutworm control 1X - air @ \$2.50/ac/time					1.00	1.00
Materials 1X - 2/5 acres - bait - 30#/ac @ .325/lb.					3.90	3.90
Russet mite - 1X - air @ \$2.50/ac/time					2.50	2.50
Sulfur Dust - 35#/ac @ 6.8¢/lb.					2.38	2.38
Misc. Insect - air-1X @ \$2.50/ac/time					1.67	1.67
Materials (armyworms, stinkbug, etc.) 2/3 ac- 2qt @ \$20.88/gal					6.96	6.96
Mold control 2X-½ ac	.16	.67	.50	.69	--	1.86
Materials 2#/ac @ \$9.70/gal (4# gal)					9.70	9.70
Ethephon 1X - 2/5 of ac.	.06	.25	.20	.27	--	.72
Materials .8#/ac @ \$48.40/gal					3.87	3.87

Move equip., setup & service

@ 15% of operating time	.44	1.91	--	.06	--	1.97
Total	21.17	74.45	13.22	7.45	124.17	219.29

Misc. Operation & Growing Costs

Misc. Production & Operation costs

@ 11% of cultural costs						29.71
Soc. Sec., comp. ins., bonuses, vac. etc. @ 20% of hourly wage						17.18
Additional charges for seasonal & part time labor @ 15% of cash wage (includes transportation, bookkeeping, crew supervision, etc.)						9.06
Pickup & truck use						1.54
Total						57.49

Total Growing Costs**366.86**

Management Cost - @ 5% of Gross Income - 25 ton @ \$55/ton

68.75

Taxes (land)

20.00**Total Costs Pre-harvest****455.61**

Pre-harvest cost per Ton

18.22Harvest Costs

Machine - 4 ac/day	2.5	--	--	39.07	--	39.07
Driver @ \$4.24	2.9	12.28	--	--	--	12.28
Sorters - 14 @ \$3.42	2.5	119.53	--	--	--	119.53
Trailers (3)	2.5	--	--	.69	--	.69
Drivers (3) @ \$3.68	2.7	29.81	--	--	--	29.81
Tractors (3)	2.6	--	35.03	--	--	35.03

Tomatoes, cont.	Hours/ Acre	Cash & Labor Costs Per Acre				Total
		Labor	Fuel & Repairs Tractor	Implt.	Materials	
<u>Harvest Costs continued</u>						
Forklift	2.9	--	--	8.17	--	8.17
Driver @ \$4.24	2.9	12.28	--	--	--	12.28
Other Labor						
Swampers (2) @ \$3.42	2.5	17.07	--	--	--	17.07
Mechanics @ \$5.25(½ time)	1.3	6.83	--	--	--	6.83
Gen Super. @ \$7(½ time)	1.3	9.10	--	--	--	9.10
Misc. equip. (disc, scraper, wash equip., etc.) @ \$30/day						6.00
Misc. supplies (drinking water, sodas, goggles, etc.) @ \$25/day						6.25
Toilet facilities - 2 units						1.00
Inspection - 18¢/ton - 25 ton						4.50
Container Rental @ 40¢/ton						10.00
Rejected loads - 1.7% of harvested - 25% sort out						5.10
Misc. dues & charges - Assoc., Mkt order, leafhopper, etc.) @ 15¢/ton						3.75
Soc. Sec., comp. ins., bonuses, vac. etc. @ 20% of cash wage						34.78
Additional charges for seasonal & part time labor (sorters, swampers, 1 trailer man, @ 15% of cash wage)						26.09
Misc. Production & operation costs @ 11% of harvest cost						40.54
Pickup & truck use						2.30
Total Harvest Costs						430.17
Cost per ton - Harvest						17.21
<u>Investment Costs</u>						
Land - \$1750 @ 8%						140.00
Buildings						4.48
Irrigation Wells & Equipment						26.22
Tractors & Equipment						137.82
Total Investment Costs						308.52
Total Costs Per Acre						1194.30
Cost Per Ton						47.77

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COSTS OF PRODUCTION OF THE SHARE-RENT OR CASH RENT TOMATO GROWER

The share-rent or cash rent tomato grower would have the same annual cash costs as an owner-operator, except for the land tax and the rent paid. Fixed or overhead costs would be different. Investments in land, wells and pumps, and buildings need not be considered by the rent grower. These are the landlords costs. However, the rent operator does have to consider and include tractor and equipment fixed costs as part of his operational cost.

There is no set rental rate (share or cash) for tomatoes. The rental rates depend on many things such as the amount of costs or services shared or supplied, length of term of the lease, working agreement or relationship between landlord and rentor, productivity of soil, reliability of the grower, reputation of the landlord, competition between growers for available land, company for whom the tomatoes are grown, etc. The share rental rates vary from less than 15% to over 20%. The most common rates are in the 15% to 17% range.

The accompanying table presents the per ton costs of production, with three prices per ton and three rental rates for several yields. The cost per ton varies because at different yields the rent charges are different, management charges are different, and harvest efficiencies are different.

To show a few examples, the share-rent grower would have to figure his costs as follows (Cash rent growers would use the cash rent paid):

	20 TON @ \$55		25 TONS @ \$55/TON		30 TON @ \$55	
	17%	15%	17%	20%	17%	
Growing Cost to Harvest	\$386.86	\$386.86	\$386.86	\$386.86	\$386.86	\$386.86
+ Mgmt. charges @ 5% of Gross Income	55.00	68.75	68.75	68.75	68.75	82.50
- Land Tax	20.00	20.00	20.00	20.00	20.00	20.00
	<u>\$421.86</u>	<u>\$435.61</u>	<u>\$435.61</u>	<u>\$435.61</u>	<u>\$435.61</u>	<u>\$449.36</u>
+ Tractor & Equip. Cost	137.82	137.82	137.82	137.82	137.82	137.82
+ Harvest Costs	426.52	430.17	430.17	430.17	430.17	433.82
+ Rent	187.00	206.25	233.75	275.00	275.00	280.50
Total Costs Per Acre	<u>\$1173.20</u>	<u>\$1209.85</u>	<u>\$1237.35</u>	<u>\$1278.60</u>	<u>\$1278.60</u>	<u>\$1301.50</u>
Cost Per Ton	\$58.66	\$48.39	\$49.49	\$51.14	\$51.14	\$43.38

PER TON COSTS TO GROW TOMATOES Under 3 Prices, 3 Rental Rates and Several Yields

Yield Tons/ Acre	\$48.00 Per Ton			\$55.00 Per Ton			\$60.00 Per Ton		
	15% Rent	17% Rent	20% Rent	15% Rent	17% Rent	20% Rent	15% Rent	17% Rent	20% Rent
10	101.90	102.95	104.39	103.39	104.49	106.14	104.39	105.59	107.39
15	71.44	72.40	73.84	72.84	73.94	75.59	73.84	75.04	76.84
20	56.16	57.12	58.56	57.56	58.66	60.31	58.56	59.76	61.56
23	50.18	51.14	52.58	51.58	52.68	54.33	52.58	53.78	55.58
25	46.99	47.95	49.39	48.39	49.49	51.14	49.39	50.59	52.39
28	43.07	44.03	45.47	44.07	45.57	47.22	45.47	46.67	48.47
30	40.88	41.84	43.28	42.28	43.38	45.03	43.28	44.48	46.28
35	36.52	37.48	38.92	37.92	39.02	40.67	38.92	40.12	41.95
40	33.25	34.21	35.65	34.65	35.75	37.40	35.65	36.85	38.65
45	30.70	31.66	33.10	32.10	33.20	34.85	33.10	34.30	36.10