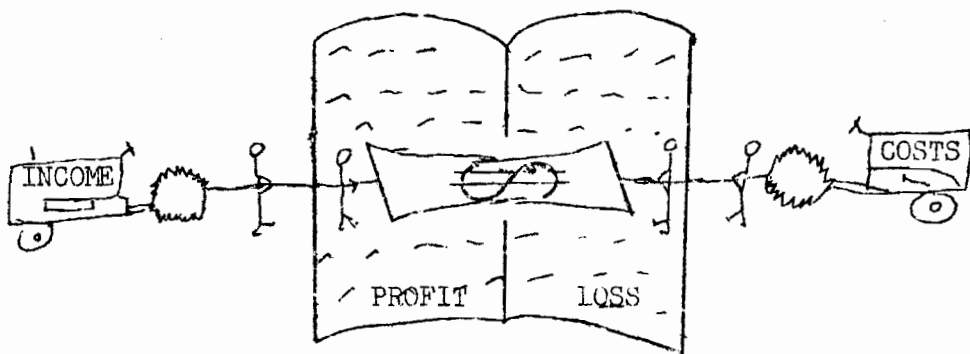


ESTIMATED COST OF PRODUCTION - - TOMATOES

WOODLAND AREA, YOLO COUNTY

1964



WHAT CAN YOU GROW CANNING TOMATOES FOR? WHAT DO YOU AND YOUR PENCIL FIGURE YOUR COSTS TO BE? SUBSTITUTE YOUR COSTS AND SEE WHAT YOU COME UP WITH. - DON'T FUDGE - YOU ARE ONLY KIDDING YOURSELF!!!

LABOR - The hourly wage rates used were \$1.40 for tractor drivers. This includes other benefits not itemized. Other hourly wage rates used were \$1.25 for irrigators and \$1.15 for general labor. This also includes additional benefits. Social security and workmen's compensation costs are in addition to the hourly wage rate and amounts to 11¢ per hour. The combined wage costs would be \$1.51 for tractor driver, \$1.36 for irrigators and \$1.26 for general labor. The foreman's wage would be more and would in addition have benefits such as vacation, housing and transportation.

EQUIPMENT - In addition to the actual operating costs of fuel and repairs, depreciation, interest on the investment, taxes and insurance should be included as costs. Too many growers overlook the depreciation and investment costs. Taxes and insurance are cash costs that must be paid annually. Again growers tend to overlook them as costs of crop production.

PICKING - The use of the "scale of pay" is in standard use. This is a good method as it takes into account the adversities of the field being picked. In this study a picking price of 15¢ was used. This was the price commonly paid through the 1963 season. For every 1¢ increase in rate per box, it means that the cost per ton will increase 42¢ plus per ton. Thus if the picking price was 18¢ instead of the 15¢ the costs per ton would be \$1.28 higher. This includes additional costs for overtolerance fruit and reject losses. If all harvest costs in this study were put as a single per box charge, the cost per box would be 28.1¢ per box.

HIGHER OR LOWER YIELDS - The costs, up to harvest, are about the same regardless of yields. With high yields the cost of growing is spread over more tons, thus less cost per ton. Picking costs per ton are also usually lower with high yields, as the minimum rate on the scale of pay is usually used and fixed charges are spread over more tons. Low yields on the other hand usually cost more per ton to pick because low yielding fields are frequently associated with adverse conditions. Also, fewer tons must absorb the cost of production.

UNPREDICTABLE COSTS - Nearly every crop encounters some unusual condition or problem. This means higher costs because money must be spent to overcome the adverse situation or problem. If leafminers, crickets, army worms, etc., need control, the cost is in addition to the usual pest control problem. If high temperatures cause flower drop, this causes a longer growing season. Thus more costs to maintain the crop. Weedy conditions, moldy fruit, overripe fruit because of quotas, all mean extra costs. Any operation, in addition to the standard operation, adds to the costs of production.

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4/63 - 300
10/63 - 100
3/64 - 250

Tomato
 This cost study is assumed to be part of an over-all farm operation. This is necessary to develop realistic cost figures for equipment and investment costs. Originally this tomato cost sheet was developed as part of an over-all study. This cost sheet was reviewed and revised to bring the prices and costs to those currently in effect (1962). Costs and conditions are changing rapidly and those now in effect may not be so in a short period of time.

Revised in 1964 to reflect 1963 harvest costs.

160 Acres in a 1,000-acre operation following ~~barley~~
 Yield - 20 Tons Per Acre

	Hours/Acre	Cash and Labor Costs Per Acre				Total
		Labor	Fuel & Repairs Tractor	Imp.	Materials	
<u>Seed Bed Preparation</u>						
Disc 2X (fall)	0.4	0.56	1.34	0.30	-	2.20
Landplane 2X (fall)	0.5	0.70	1.67	0.34	-	2.71
Subsoil or chisel (fall) 2X	1.3	1.82	4.35	1.14	-	7.31
Springtooth 2X	0.4	0.56	1.34	0.36	-	2.26
Harrow & roll 2X	0.3	0.42	0.82	0.25	-	1.49
Move equip., set up & service @ 10% of time	0.3	0.42	-	-	-	0.42
Total	3.2	4.48	9.52	2.39	-	16.39
<u>Planting</u>						
Sled plant & fertilize (2 men)	0.3	0.84	0.35	0.09	-	1.28
Seed 1/2 lb. @ \$15/lb.	-	-	-	-	7.50	7.50
Rent tag-a-long @ 50¢/acre	-	-	-	-	-	0.50
Fertilizer 8-24-0 -- 10 gals/acre @ 40¢/gal.	-	-	-	-	4.00	4.00
Total	0.3	0.84	0.35	0.09	11.50	13.28
<u>Growing Costs</u>						
Thinning	10.0	11.50	-	-	-	11.50
Hoeing 2 1/2 X @ 6.5 hrs/A.	16.5	18.97	-	-	-	18.97
Cultivate - sled & implements 2X	0.6	0.84	0.70	0.76	-	2.30
Cultivate & furrow 3X	0.9	1.26	1.05	1.19	-	3.50
Ditch 5X	0.2	0.28	0.67	0.20	-	1.15
Irrigate 7X						
Labor	10.5	13.12	-	-	-	13.12
*Water - 5 acre feet @ \$3.04/acre ft. (pumping costs)					-	15.20
Irrigation equipment - siphons, canvas dams, shovels, etc.					0.25	0.25
Fertilize (sidedress)						
Tractor	0.3	0.42	0.28	0.29	-	0.99
Fertilizer -- 75 lbs. N @ 9 1/2¢/lb.		-	-	-	7.12	7.12
Rent tag-a-long @ 50¢/A		-	-	-	-	0.50
Insect control						
Seedling stage & 1st worm	0.5	0.70	0.47	0.24	-	1.41
Control -- spray with ground rig - materials		-	-	-	3.90	3.90
Worm & mite control - air 2X @ \$2		-	-	-	-	4.00
Materials - Sevin - spray - \$4.40 & Sulfur dust 40 lbs. @ 5.5¢/lb.		-	-	-	6.60	6.60
Move equip., service & set up at 10% of time	0.2	0.34	-	-	-	0.34
Total	39.5	47.43	3.17	2.68	17.57	90.85

*Total water costs - \$4.74/acre foot (\$3.04 pumping plus \$1.70 investment)

	Per Acre Total
<u>Misc. Operating and Growing Costs</u>	
Pickup, phone, postage, cut roadways, misc. weed control etc. @ 7% of cultural cost	8.84
Social Security, compensation insurance @ 11¢/hr.	1.81
Foreman's transportation, vacation, bonuses, etc. @ 25¢/hr.	4.12
Additional charges for seasonal labor	
Camp charges @ 50¢/day/man	1.75
Crew supervision @ \$12.50/day	0.50
Crew transportation to and from field @ 10¢/hr/man	3.70
Additional board @ 50¢/day/man -- 12 men	1.75
Recruit and transport men from center @ \$41/man (1 man/15 A.)	3.21
Management charges 5% of gross income (20 ton @ \$25/ton)	25.00
Total misc. operating & growing cost	<u>50.28</u>
<u>Taxes - land</u>	12.00
Total costs pre-harvest	182.80
Pre-harvest costs per ton	9.14
<u>Harvesting Costs</u>	
Picking -- 20 tons - 42 boxes/ton - 840 boxes @ 15¢/box	126.00
Box rent @ 1¢/box	8.40
Loading - includes scattering empties @ 2¢/box	16.80
Inspection @ 17¢/ton	3.40
Drinking water, equipment, clean-up after harvest @ 2¢/box	16.80
Labor supervisor @ 3¢/box - includes transportation to field, checkers, bookkeeping, swampers, camp supervision	25.20
Association dues @ 10¢/ton	2.00
Additional board @ 50¢/day/man	5.00
Recruiting and transport of harvest labor @ \$41/man (1 man/2.5 acres)	15.00
Delivery of over-tolerance tomatoes (10% tomatoes on 5% contract)	
Grower receives \$1/ton for over-tolerance fruit	8.70
Rejected loads 1-3/4% of loads delivered plus sorting	4.00
Camp upkeep - 50¢/man/day	5.00
Total harvest costs	<u>236.30</u>
Cost per ton	11.82
Total all growing and harvesting costs	419.10
Costs per ton	20.96
<u>Investment Costs - (includes depreciation and interest)</u>	
Land - \$750/acre @ 6%	45.00
Buildings - \$10/acre	0.80
Irrigation wells and equipment	8.50
Tractors and equipment	16.78
Total investment cost	<u>71.08</u>
Total - all costs	490.18
Costs per ton	24.51

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

The share-rent or cash rent tomato grower would in general 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 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, company for whom the tomatoes are grown, etc. The rental rates vary from less than 15% to over 20%. The most common rates are in the 15 to 17% range. Rents in the higher range usually have a service furnished or land preparation done by the landlord.

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 there would be different picking costs per acre. The gross income would vary because the price and tons picked would change the rent paid and cost per ton. The harvest cost per ton is mainly dependent on the price paid per box to harvest.

To show a few examples using a 15¢ per box picking charge, the share-rent grower would have to figure his costs as follows:

	20 ton @ \$25.00			15 ton @ \$25.00
	20% Rent	17% Rent	15% Rent	17% Rent
Growing cost to harvest	182.80	182.80	182.80	182.80
Less Land Tax	12.00	12.00	12.00	12.00
	<u>170.80</u>	<u>170.80</u>	<u>170.80</u>	<u>170.80</u>
Plus tractor & equipment	16.78	16.78	16.78	16.78
Plus harvest cost	236.30	236.30	236.30	184.20
Plus rent	100.00	85.00	75.00	63.75
Total	<u>523.88</u>	<u>508.88</u>	<u>498.88</u>	<u>435.53</u>
Cost per ton	26.19	25.44	24.94	29.03

PER TON COSTS TO GROW TOMATOES
under 3 prices and 3 rental rates

Yield Tons/A	\$23.50 per ton			\$25.00 per ton			\$27.50 per ton		
	15% Rent	17% Rent	20% Rent	15% Rent	17% Rent	20% Rent	15% Rent	17% Rent	20% Rent
10	34.04	34.51	35.22	34.34	34.84	35.59	34.84	35.39	36.22
12	30.84	31.31	32.02	31.14	31.64	32.39	31.64	32.19	33.01
15	27.82	28.29	29.00	28.12	28.62	29.37	28.62	29.17	30.00
18	25.68	26.15	26.85	25.98	26.48	27.23	26.48	27.03	27.85
20	24.64	25.11	25.82	24.94	25.44	26.19	25.44	25.99	26.82
25	22.90	23.37	24.07	23.04	23.54	24.29	23.54	24.09	24.91
30	21.47	21.94	22.64	21.77	22.27	23.02	22.27	22.82	23.64
40	19.44	19.91	20.61	19.74	20.24	20.99	20.24	20.79	21.61

Costs of the Transplant Tomato Grower -

If you use plants to establish a tomato planting, your costs would be different. Normally ground preparation in the spring would be less exacting. A rougher seed bed could be tolerated and the necessity of maintaining surface moisture less important. The number of operations may be the same however, as the soil must be loosened to a greater depth.

There would be the added cost of plants. This cost would depend on the number of plants used per acre and the actual price of plants. The cost of the seed that is used in a direct seeding operation can be deducted. Final plant populations are usually less when plants are used than when a stand is cut from direct seed planting. There is less risk in losing a stand when plants are used. Only occasionally is it necessary to replant a transplant field.

Planting a field takes longer when using plants, but the thinning operation is not necessary. Darkling ground beetle damage both transplants and seedlings and must be controlled. Seldom do flea beetles need controlling in a transplant field.

Once past the stand established stage the cultural operations are similar. Harvest operations may be a little different. Since a transplant field has a lower plant population, the set is usually less concentrated and a third pick is necessary to harvest the majority of the fruit.

Machinery and equipment used for a transplant operation and a direct seed operation would be similar except during the planting operations and perhaps some modification of the ground preparation.

The transplant operator would have to --
Add the costs of --

Plants - 18" spacing - 5,800 @ \$6/1,000	Cost/Acre \$35.00
Planting - 10 acres/day - 7 men @ \$13.25/day	9.00
Equipment charges - tractor, water trucks, planter, etc.	5.00
	\$49.00

But he can subtract the cost of --

Seed - 1/2 lb. @ \$15/lb.	7.50
Planting and equipment used	1.50
Thinning	12.00
Flea beetle insect control	2.00
	\$23.00

The net added cost would be --

\$49.00	
less 23.00	
\$26.00	per acre

\$26.00

This is \$1.30 per ton more to produce a 20-ton crop of tomatoes by using transplants.

Numbers and costs of plants per acre at various spacings when 5' rows are used and at several cost of plants.

Plant Spacing in row	Plants per Acre	Plant cost per Acre at			
		\$5.00/M	\$6.00/M	\$6.50/M	\$7.00/M
12"	8,700	43.50	52.20	56.55	60.90
18"	5,800	29.00	34.80	37.70	40.60
21"	4,900	24.50	29.40	31.85	34.30
24"	4,300	21.50	25.80	27.95	30.10
27"	3,900	19.50	23.40	25.35	27.30
30"	3,500	17.50	21.00	22.75	24.50