

Ventura 1971

MACHINE HARVESTED CANNERY TOMATOES

Yields

Most machine-harvested cannery tomato fields yield between 20 and 30 tons per acre. A yield of 25 tons per acre is used in this sample.

Varieties and Seed

Several strains of the VF145 variety of round tomatoes developed especially for mechanical harvesting are in a general use. Each year a few new varieties are tried and changes in varieties can be expected as progress is made toward a more desirable type for mechanical harvesting. Several major seed companies have substantial tomato breeding projects.

Soils and Climate

Except for the extreme coastal exposure, soils and climate of the level land throughout Ventura County are suitable for cannery tomato production. A low risk of rain in September and October is a substantial advantage of Ventura County over many other tomato-growing areas in the State.

When to Plant and Harvest

Planting must be carefully scheduled to assure about the same acreage ready for harvest each week throughout the harvest season. Early plantings may not emerge for more than 20 days and late plantings may emerge in less than a week. For this reason it is suggested that each planting be made at a time when the first true-leaf is about 1/2" long in the seedlings of the previous planting. More detailed suggestions are found in "Mechanized Growing and Harvesting of Processing Tomatoes", a University of California publication available from Farm Advisors.

Although the optimum time for harvesting may be when 80% of the fruit is ripe, it is advisable to start harvesting as soon as the percent of ripe fruit exceeds 65%. At this time, fruit is ripening rapidly and it is only a few days after a field is 65% ripe until it is over 75% ripe.

From the time the first leaf is about a half inch long until harvest is around 130 days.

Planting, Cultivation and Weed Control

Single rows spaced 4 1/2 to 5 ft. apart are generally used, but

double rows, 12 to 14" apart on 5 ft. centers have been used successfully also. The usual planting rate is from $\frac{1}{2}$ to $\frac{3}{4}$ lb. per acre. This is equivalent to 12 to 20 seeds per foot of single row and plantings of this kind are followed by hand thinning to 9 to 12 inches between plants. Thinning can be eliminated by using precision planters to drop about 5 seeds every 9 inches. Where this hill or clump planting is used, it is important that the seed for each clump be confined to an inch or two of row space; otherwise the clump effect which causes each clump to act as a single plant may be lost.

Selective herbicides incorporated in the seedbed immediately ahead of planting have been used to good advantage. However, the treatments most effective on the weeds may not be perfectly safe under all conditions. Wherever herbicides are used it is important to leave a few small untreated areas in the field to observe for both weed control and effect of the herbicide on stand and growth of the crop.

Each cultivation must be done with a high regard for the condition of the bed surface at harvest time. A tomato harvester works best when beds have a smooth flat surface.

Fertilizing

Although tomatoes will not respond to phosphorus in all fields or all parts of some fields, it is advisable to apply some phosphorus under the seed at planting time. A combination of 8 to 10 lbs. of nitrogen and 10 to 20 lbs. of phosphorus placed under the seed or not more than 1" to the side of the seed and 1 or 2" below the seed will help to get all plants off to a good start. On some soil it is advisable to limit nitrogen applied after planting to less than 80 lbs., and this should be applied no later than thinning time. This restriction on nitrogen application and timing is to allow plants to become deficient in nitrogen before harvest time. If this deficiency does not occur, plants tend to continue setting fruit that has no chance of ripening in time for harvest.

Irrigation

At planting time the soil should be at field capacity throughout the root zone; then in the milder sections of the county a single irrigation is adequate. When more than one irrigation is required, the final irrigation should be early enough so soil moisture will be nearly exhausted at harvest time.

CANNERY TOMATOES, MACHINE HARVESTED, 1969

Yield: 20 Tons & 25 Tons/A

Land Use: 7 Months

Remarks: Fumigation, Fertilizing, Planting, Pest Control and Harvesting contracted

Planted: March through May

Harvested: August through October

CULTURAL CASH COSTS	Labor per Acre		Cash Costs per Acre		Total per Acre
	Hrs.	Cost	Machinery	Contract & Materials	
Plow	.68	1.67	2.38		4.05
Disc and Roll 2 x	.52	1.27	1.82		3.09
Landplane 2 x	.52	1.27	1.82		3.09
Springtooth harrow 2 x	.32	.78	1.12		1.90
Drag harrow 1 x	.16	.39	.56		.95
Form beds & Fumigate		Contract		38.90	38.90
Plant, apply herbicide and fertilizer		Contract		40.00	40.00
Irrigate up	1.25	2.44	.20	½ A-ft. wtr @ \$5 2.50	5.14
Fertilize		Contract		100 lb. N sidedress 15.00	15.00
Cultivate 4 x	1.44	3.12	2.40		5.52
Irrigate 3 x	3.75	7.31	.60	1 A-ft. wtr @ \$5 5.00	12.91
Pest Control		Contract		45.00	45.00
Hoe	8.00	15.60			15.60
Disc and Roll refuse 2 x	.52	1.27	1.82		3.09
Total Cultural Cash Costs		35.12	12.72	146.40	194.24

CASH OVERHEAD

Land rent	@ \$14.60 per acre-month x 7	102.20
Taxes on Machinery	@ .24 per acre-month x 7	1.68
Supervision	@ 5.00 per acre-month x 7	35.00
General Expense	@ 2.00 per acre-month x 7	14.00
Total Cash Overhead	@ 21.85 per acre-month x 7	152.88

Total Cash Costs except Harvesting and Selling 347.12

HARVESTING CASH COSTS @ 20 T/A

Prepare for harvest @ \$1.50 per acre		1.50
Harvest and load	Contract 10.00 x 20	200.00
Inspection @ \$0.21/Ton		4.20
Total Harvest Cash Cost		205.70

Total Cultural and Harvest Cash Cost 552.82

INVESTMENT OVERHEAD

Depreciation	@ \$2.40 per acre-month x 7	16.80
Interest	@ .72 per acre-month x 7	5.04
Total Investment Overhead	@ 3.12 per acre-month x 7	21.84

Total Cost per Acre @ 20 T/A	574.66
Total Cost per Acre @ 25 T/A	625.71
Total Cost per Ton Roadside @ 20 T/A	\$ 28.73
Total Cost per Ton Roadside @ 25 T/A	25.02

CASH FLOW - EXCLUDING LAND RENT AND TAXES

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

Start
\$100

Grow
\$120

Harvest
\$215

Prices Reported by Ventura County Agricultural Commissioner

<u>Year</u>	<u>\$/Ton</u>
1962	27.88
1963	26.00
1964	27.96
1965	35.50
1966	30.50
1967	38.00
1968	36.50

Per-acre figures not given because some cannery tomatoes have in the past come from fields used partly for market tomatoes; so acreage is indefinite.