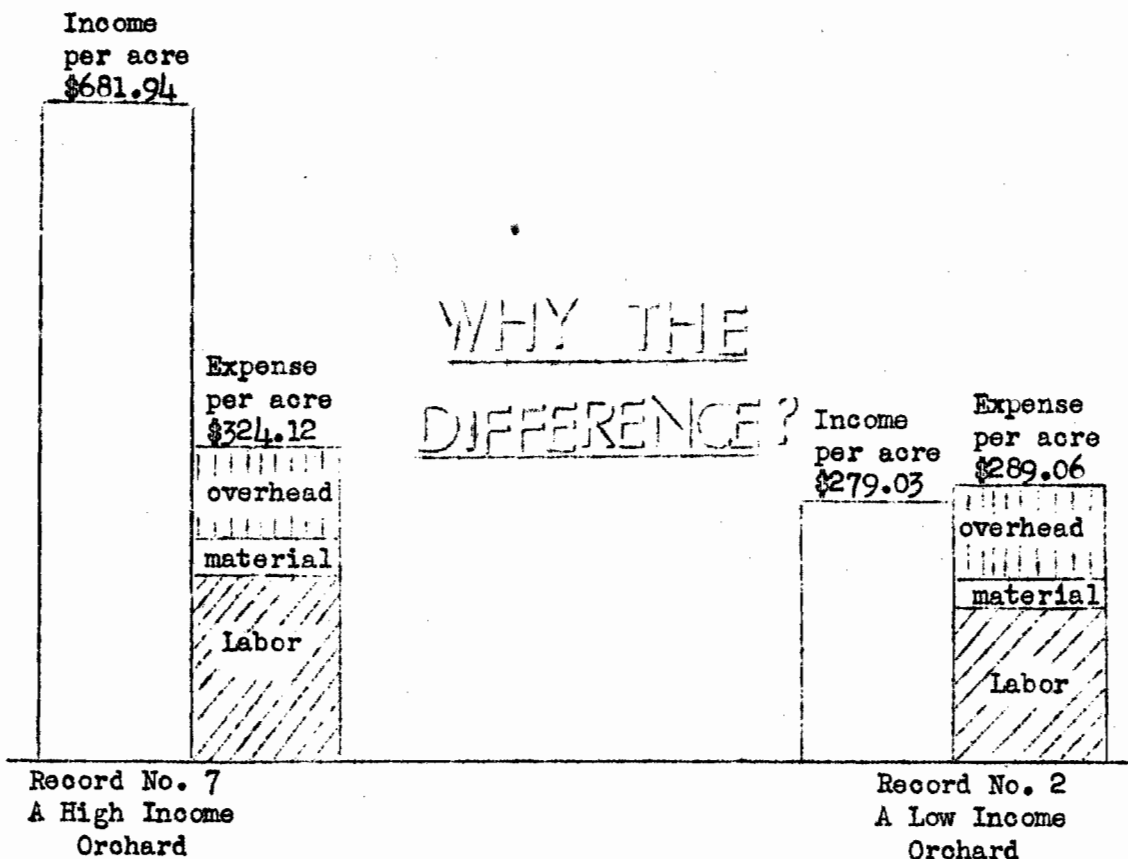


FREESTONE PEACH MANAGEMENT STUDY SOLANO COUNTY

FOURTH ANNUAL REPORT
CROP YEAR
1953



Study Conducted by
University of California
Agricultural Extension Service
In Cooperation with
Solano County Peach Growers

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INTRODUCTION

There is a great difference between the records included in this study. The highest total income was \$769.33 per acre; the lowest was \$279.03 per acre. The highest total expense per acre was \$522.33; the lowest was \$176.59. The highest management income per acre was \$357.82; the lowest was a management loss of \$10.03 per acre. Why the difference?

A study of this report will show some of the reasons for the difference.

For example, all of the eight orchards showing a management income per acre of over \$100.00 also show a yield per acre of 8 tons or more. In fact, five of the eight show yields of over 10 tons per acre. On the contrary, all but one of the orchards showing a management income of less than \$100.00 per acre, also show an average yield below 8 tons per acre. Apparently, in most cases, high yield per acre is associated with high management income per acre.

Then look at the price received per fresh ton for peaches dried. Among the four orchards earning the highest management income per acre, three dried some of the fruit. All received a net return for each ton dried of over \$38.98 per ton. Only three of the remaining eight orchards received a net return for each ton dried as high as \$38.00. In fact, one record showed only \$23.34 per ton. Apparently, it was important to handle drying fruit so as to avoid waste and excessive costs, and at the same time produce dried peaches that would sell at a good price.

The purpose of this study is to learn the management practices which will enable Solano County Freestone Peach Growers to reduce their costs and improve their management incomes. This is the fourth year of the study and it appears that we are beginning to get some of the answers. We plan to continue the study two more years.

We wish to express our appreciation to the growers who cooperated in this study. They have furnished monthly reports of labor and material costs in their peach orchards. At the end of the year they helped us to secure income reports, final inventories, and other data needed to complete the study. We urge that they continue to cooperate for the two remaining years of the study.

DEFINITION OF TERMS
Peach Management Study .

COSTS

CULTURAL LABOR COSTS are composed of the cost of hired labor and the value of the operator's actual labor at the going wage rates, and the value or cost of tractor and truck work for all orchard operations prior to harvesting. Tractor and truck work, termed field power, are charged at hourly rates figured to cover the overhead, maintenance and operating costs.

CULTURAL MATERIAL COSTS are for pumping power, fertilizer, spray material and other materials used in producing the crop.

HARVESTING includes picking and hauling labor. This also includes field power equipment costs of tractors and trucks.

CASH OVERHEAD COSTS include all cash costs not listed under labor and material costs. They cover taxes, machinery repairs (other than tractors and trucks,) compensation insurance and general expense. The general expense item is computed at 5 per cent of the total labor and material costs and covers miscellaneous unreported costs such as interest on operating capital, use of family car in conjunction with the enterprise and office expenses.

TOTAL CASH AND LABOR COSTS are a sum of all labor, material and cash overhead costs as indicated above.

DEPRECIATION is that part of the original cost of trees, improvements and equipment which is charged to each year of operation in order to absorb the cost of such facilities during their period of usefulness.

INTEREST on investment is figured at 5 per cent of the average values ($\frac{1}{2}$ of original costs) of trees, improvements and equipment. The land values used in calculating an interest on investment charge were conservative and below current market values.

TOTAL COST includes all of the above costs.

INCOME

TOTAL INCOME PER ACRE OR AVERAGE NET RETURNS PER TON reflects the returns for the naked fruit at the first delivery point after the deduction of marketing expenditures. Costs of drying were deducted from returns for the dried fruit in order to show a comparable net income to the fruit which was sold fresh.

MANAGEMENT INCOME is the amount by which total income exceeds total costs, as indicated above. It represents the operator's income for management after he has already paid himself wages for his work and interest on invested capital at 5 per cent. When total income fails to cover total costs, a loss occurs which is indicated by a minus sign (-).

TABLE 1 - GENERAL SUMMARY OF COSTS, INCOME AND EARNINGS PER ACRE - INDIVIDUAL ORCHARDS - 1953

Record Number	Average age of trees	Yield tons per acre	Average net return per ton	Costs per Acre								Total income per acre	Management income per acre
				Cultural labor	Harvest labor	Material	Cash overhead	Total cash & labor	Depreciation	Interest on invest.	Total		
7	17	11.65	58.56	79.48	119.43	31.69	25.21	255.81	36.34	31.97	324.12	681.94	357.82
17	25	11.96	49.99	62.09	140.02	18.14	23.36	243.61	32.81	26.29	302.71	597.74	295.03
11	23	15.92	48.33	156.86	199.26	32.99	36.10	425.21	56.46	40.66	522.33	769.33	247.00
19	10	10.35	57.89	126.84	109.12	21.11	24.93	282.00	58.15	33.54	373.69	599.09	225.40
12	31	8.00	58.05	78.68	84.83	23.10	21.24	207.85	29.77	30.52	268.14	464.50	196.36
4	23	10.44	46.39	76.12	104.72	20.94	29.29	231.07	43.15	32.22	306.44	484.27	177.83
9	20	9.25	46.26	93.05	96.19	22.24	22.42	233.90	39.09	31.82	304.81	427.85	123.04
16	16	8.35	47.46	75.68	91.24	21.81	25.12	213.85	46.71	34.07	294.63	396.27	101.64
18	18	3.62	69.03	58.52	52.52	9.84	13.89	134.77	21.41	20.41	176.59	250.00	73.41
5	13	12.48	41.38	122.79	136.50	60.63	38.57	358.49	54.15	40.18	452.82	516.61	63.79
3	20	4.13	57.11	58.59	70.93	8.01	16.78	154.31	34.95	24.21	213.47	236.10	22.63
2	12	6.71	41.58	90.19	72.26	23.70	20.02	206.17	41.18	41.71	289.06	279.03	-10.03
Av. 1953	20	9.07	49.31	84.16	99.77	21.83	24.71	230.47	41.45	32.36	304.28	447.28	143.00
Av. 1952	19	9.64	48.81	91.65	120.30	22.98	26.92	261.85	38.39	30.76	331.00	470.43	139.43
Av. 1951	19	9.83	54.99	78.13	117.10	20.80	23.37	239.40	38.83	31.70	309.93	540.64	230.71
Av. 1950	16	8.50	57.31	87.76	90.28	16.19	22.44	216.67	38.89	26.76	282.32	487.17	204.85

This summary shows a wide variation in yield, prices received, costs and earnings for the different cooperators in this year's study. Orchard No. 11, for the 3rd consecutive year had the highest yield in the study, but orchard No. 7 was the most profitable due to a higher return per ton and lower costs per acre. The lowest yield was obtained in orchard No. 18 which is a non-irrigated orchard. All orchards but one showed a management income above total costs of production. Orchard No. 2 showed a management loss due principally to an average net return per ton of only \$41.58.

On the average, the 1953 record year was more profitable than the 1952 year, but less profitable than either the 1951 or 1950 years. The increase in profit in the 1953 record year over 1952, was due to reduced costs per acre. The greatest reductions were in harvest labor and cultural labor.

Records are arranged in tables 1 to 5 inclusive, in decreasing management income per acre, as shown in the extreme right column above.

TABLE 2 - COSTS, RETURNS AND EARNINGS PER FRESH TON - INDIVIDUAL ORCHARDS - 1953

Record Number	Total yield tons per A.	Per cent of fruit			Av. net return per fresh ton				Picking costs per ton**	Hauling costs per ton	Total cash & labor costs	Deprec. and int. costs	Total costs per ton	Mgt. income per ton
		Sold to cannery	Fresh Sales 1/	Dried*	Cannery fruit	Fresh fruit 1/	Fruit* Dried	All Fruit						
7	11.65	-	-	100.0	-	-	58.56	58.56	7.32	2.94	21.97	5.86	27.83	30.73
17	11.96	100.0	-	-	49.99	-	-	49.99	10.11	1.60	20.37	4.95	25.32	24.67
11	15.92	81.9	1.3	16.8	49.88	70.72	38.98	48.33	9.31	3.21	26.71	6.10	32.81	15.52
19	10.35	54.2	14.4	31.4	50.00	96.22	54.00	57.89	9.49	1.05	27.25	8.86	36.11	21.78
12	8.00	62.5	16.6	20.9	50.00	107.53	42.87	58.05	8.54	2.06	25.98	7.53	33.51	24.54
4	10.44	73.8	-	26.2	49.71	-	37.03	46.39	8.55	1.48	22.14	7.21	29.35	17.04
9	9.25	78.2	2.4	19.4	50.00	60.00	29.46	46.26	8.82	1.58	25.29	7.67	32.96	13.30
16	8.35	63.9	3.2	32.9	50.00	75.00	39.88	47.46	9.81	1.12	25.61	9.68	35.29	12.17
18	3.62	-	100.0	-	-	69.03	-	69.03	12.00	2.50	37.21	11.55	48.76	20.27
5	12.48	66.7	1.0	32.3	49.54	79.88	23.34	41.38	9.12	1.76	28.71	7.56	36.27	5.11
3	4.13	45.1	-	54.9	50.00	-	62.96	57.11	14.42	2.74	37.33	14.31	51.64	5.47
2	6.71	58.0	.4	41.6	49.31	75.75	30.52	41.58	8.94	1.83	30.72	12.36	43.08	-1.50
Av. 1953	9.07	62.6	5.0	32.4	49.82	64.58	45.98	49.31	9.13	1.87	25.41	8.13	33.54	15.77
Av. 1952	9.64	63.0	2.4	34.6	50.14	85.43	43.86	48.81	10.51	1.97	27.17	7.17	34.34	14.47
Av. 1951	9.83	61.3	1.1	37.6	65.26	94.54	37.09	54.93	9.44	2.47	24.35	7.17	31.52	23.47
Av. 1950	8.50	72.8	0.1	27.1	60.60	77.69	48.40	57.31	8.82	1.80	25.49	7.72	33.21	24.10

1/ Mostly local retail sales with some to wholesale market

* Includes fruit sold for drying as well as that dried by the grower. ** Average for all fruit harvested, including that picked from ground for drying in some cases. Also, includes some sorting in a few cases.

Total production costs per ton in 1953 averaged lower than in 1952 even though production per acre was also lower than in 1952. Most of this reduction was due to lower average picking costs.

The average price received for all fruit was slightly higher than in 1952 due to a higher average net return for fruit dried and a larger percentage of the fruit being sold fresh at above average prices. The percentages of fruit sold to canneries and dried were very similar to the 1952 season.

The average management income per ton shown in this study is \$1.30 more than in 1952. This was due to larger average returns for fresh fruit dried and lower total cash and labor costs. The greatest management income per ton was earned by grower #7 who dried his whole crop.

TABLE 3 - CULTURAL COSTS PER ACRE - INDIVIDUAL ORCHARDS - 1953

Record Number	Pruning	Brush disposal	Cover crop labor & seed	Fertilizing labor & material	Spraying		Cultivation furrow etc.	Irrigation		Thinning	Proping and tying	Other cultural L & M	Total cultural labor & material
					Labor	Material		Labor	Power				
7	26.93	1.42	-	11.44	5.26	14.29	11.25	2.15	7.16	25.85	5.42	-	111.17
17	12.95	5.60	-	-	4.56	7.64	9.10	7.69	10.50	6.48	15.71	-	80.23
11	44.83	6.61	-	11.36	8.68	10.80	16.65	6.98	9.45	57.66	10.32	6.51	189.85
19	39.57	-	-	-	9.86	10.84	22.96	8.69	5.15	30.43	13.22	7.23	147.95
12	18.39	4.05	-	10.82	8.21	5.80	12.02	5.42	7.42	25.11	3.82	.72	101.78
4	20.09	3.07	-	7.77	3.18	7.14	13.85	2.85	6.16	26.03	6.08	.84	97.06
9	28.59	2.94	1.42	4.49	6.88	10.70	11.51	11.93	4.23	19.06	4.35	9.19	115.29
16	23.87	1.80	-	12.16	6.00	6.53	8.02	5.15	3.64	29.40	.92	-	97.49
18	15.26	.96	-	-	13.52	9.84	10.00	-	-	18.78	-	-	68.36
5	28.47	4.18	1.83	7.98	8.97	16.63	23.86	16.09	4.84	25.56	5.46	39.55	183.42
3	41.00	-	-	-	3.03	6.15	6.38	3.44	1.86	.45	4.29	-	66.60
2	34.74	1.71	-	10.02	6.14	10.26	11.74	6.00	4.56	13.31	11.95	3.46	113.89
Av.1953	28.16	2.89	1.47	8.72	5.47	8.77	12.10	5.61	5.20	22.01	5.98	4.95	105.99
Av.1952	24.91	3.28	2.37	10.96	3.83	6.77	10.88	6.19	4.23	33.61	6.37	8.30	114.63
Av.1951	23.16	2.70	1.96	7.97	6.16	7.76	12.48	7.94	5.61	20.71	5.14	4.87	98.93
Av.1950	22.36	1.42	1.64	7.40	3.25	4.50	8.48	6.54	5.01	28.73	11.80	5.39	103.95

Average cultural costs per acre were lower this year in this study than they were in 1952. The largest reduction was in thinning costs. This was due to frost damage, which affected some orchards more than others. The result is a wide variation in thinning costs between the 12 orchards in the study.

There is a wide variation in other cultural costs between growers in this study. Most of the variation is due to management. In general, more money is spent in the more profitable orchards for irrigation, spraying and fertilizers than in the less profitable orchards.

Averages at the bottom of the table for the various items are based upon the acreage reporting such costs. Since all orchards did not report such costs for all items, the average total cultural, labor and material cost is less than a sum of the various items.

TABLE 4 - CASH OVERHEAD AND DEPRECIATION COSTS PER ACRE - INDIVIDUAL ORCHARDS - 1953

Record Number	Cash overhead costs per acre					Depreciation costs per acre							
	General expense	County taxes	Repairs except field pr	Comp. insurance	Total	Trees	Buildings	Irrigation system	Tillage equipment	Spray equipment	Props etc.	Other equipment	Total ex. field power
7	11.53	8.34	.83	4.51	25.21	20.00	2.91	4.36	.58	4.70	.67	3.12	36.34
17	11.01	7.83	1.43	3.09	23.36	20.00	1.07	6.46	1.55	.67	.77	2.29	32.81
11	19.45	8.80	1.39	6.46	36.10	20.00	4.00	11.98	2.59	10.51	3.70	3.68	56.46
19	12.85	7.62	1.45	3.01	24.93	20.00	10.00	13.63	1.52	9.14	1.60	2.26	58.15
12	9.33	7.83	1.19	2.89	21.24	20.00	.47	4.45	.47	-	1.05	3.33	29.77
4	10.09	8.26	7.11	3.83	29.29	20.00	3.07	12.41	.94	2.70	.94	3.09	43.15
9	10.57	7.82	-	4.03	22.42	20.00	4.84	4.56	.84	2.22	.96	5.67	39.09
16	9.44	7.09	4.69	3.90	25.12	20.00	3.53	1.91	.89	1.28	3.20	15.90	46.71
18	6.05	7.84	-	-	13.89	20.00	-	-	.25	-	-	1.16	21.41
5	16.00	9.17	3.03	10.37	38.57	20.00	4.01	6.86	4.18	2.85	-	16.25	54.15
3	6.88	6.70	.16	3.04	16.78	20.00	3.53	2.75	.49	1.26	2.94	3.98	34.95
2	9.31	6.73	1.07	2.91	20.02	20.00	1.34	2.35	.45	1.67	1.67	13.70	41.18
Av. 1953	10.29	7.73	2.86	3.83	24.71	20.00	3.46	6.85	.93	3.00	1.65	5.97	41.45
Av. 1952	11.75	7.65	1.96	5.56	26.92	20.00	3.33	6.32	.85	2.68	1.34	5.88	38.39
Av. 1951	10.80	7.89	.98	3.70	23.37	20.00	2.22	7.01	.82	1.68	1.35	7.52	38.83
Av. 1950	9.71	7.91	1.79	3.03	22.44	20.00	2.92	5.40	.57	1.25	1.82	7.01	38.89

Cash overhead costs as shown above include all cash costs not classified under labor and material costs. Interest paid on mortgaged indebtedness is not included as a cash cost since an interest on investment charge, as shown in Table 5, is included for all orchards in the study and would normally cover any interest paid on indebtedness. Interest paid on operating capital is covered by the general expense item which is explained on the page "Definition of Terms" at the fore part of this report.

Depreciation on buildings and equipment varies considerably between orchards depending upon individual situations. The size of the farm unit on which such facilities are used is an important factor influencing depreciation costs per acre. Depreciation on trees was figured the same for all orchards at \$20 per acre. This is based upon an original cost to bring trees to bearing age of \$400 per acre and a productive life thereafter of 20 years. Depreciation of field power equipment is not included in the total depreciation cost in this table since it is included in the hourly rate charged for the use of such equipment in the labor record.

Averages at the bottom of the table for the various items are based upon the acreage reporting such costs. Since all orchards did not report investment in all items, the average total depreciation cost is less than a sum of the various items.

TABLE 5 - INVESTMENT PER ACRE - INDIVIDUAL ORCHARDS - 1953

Record Number	Trees	Buildings	Irrigation system	Tillage equipment	Spray equipment	Props etc.	Other equipment	Land	Total except field power	Field power equipment	Total investment	Interest at 5% excluding field power
7	200.00	51.00	47.60	6.30	21.50	5.00	7.95	300.00	639.35	56.50	695.85	31.97
17	200.00	13.40	73.58	8.60	6.67	5.00	18.48	200.00	525.73	35.40	561.13	26.29
11	200.00	29.23	101.87	19.01	47.70	27.78	37.64	350.00	813.23	74.91	888.14	40.66
19	200.00	30.00	58.75	11.44	43.49	20.00	7.08	300.00	670.76	39.92	710.68	33.54
12	200.00	11.84	64.28	5.26	-	7.89	21.14	300.00	610.41	34.21	644.62	30.52
4	200.00	21.26	79.88	8.07	13.52	4.70	17.05	300.00	644.48	45.00	689.48	32.22
9	200.00	34.57	54.57	5.16	8.20	4.82	29.08	300.00	636.40	52.61	689.01	31.82
16	200.00	14.19	12.43	5.76	12.84	32.00	104.20	300.00	681.42	45.68	727.10	34.07
18	200.00	-	-	2.50	-	-	5.79	200.00	408.29	27.57	435.86	20.41
5	200.00	40.08	71.33	23.61	21.39	-	147.18	300.00	803.59	60.11	863.70	40.18
3	200.00	17.65	29.53	2.45	6.28	7.35	21.08	200.00	484.34	21.10	505.44	24.21
2	200.00	10.66	25.74	3.12	7.11	12.50	75.02	500.00	834.15	26.13	860.28	41.71
Ave. 1953	200.00	23.87	54.57	6.86	14.79	10.47	35.27	303.79	647.10	42.64	689.74	32.36
Ave. 1952	200.00	22.56	50.74	6.40	13.82	8.82	40.07	288.36	615.29	36.83	652.12	30.76
Ave. 1951	200.00	17.49	59.64	6.14	10.43	8.25	52.81	293.97	634.07	27.40	661.47	31.70
Ave. 1950	200.00	19.12	38.84	3.78	7.19	8.20	33.68	224.82	535.15	21.97	547.12	26.76

The investment figures shown in the above table are calculated at one-half of the original cost except for land values. Such values are maintained throughout the life of facilities and equipment as a basis for calculating an equitable interest on investment charge against each year's crop.

As pointed out in table 4, tree values were considered the same for all orchards with an original cost of \$400 per acre. Average tree values, thus, are shown at \$200 per acre. The land values used in this study are conservative agricultural values for the purpose of calculating a nominal interest on investment charge.

The above table should not be used as indicative of the amount of capital required to go into the peach growing business at the present time. Current values are considerably higher than those shown. Interest on investment in field power equipment is excluded from the interest charge shown above since this cost is included in the hourly rate charged for the use of this equipment in the labor record.

Averages at the bottom of the table for the various items are based upon acreages reporting such items.

TABLE 6 - DRYING COSTS PER FRESH TON - INDIVIDUAL ORCHARDS - 1953

Record Number	Total fresh tons dried	Drying ratio to 1	Costs per fresh ton								Per dried owt.			
			Tray wash, store	Cut-ting	Shed & yard work	Total labor	Sulfur & other material	Other cash costs	Depreciation on eqt.	Inter-est on invest.	Total cost	Ave. price rec'd	Dry-ing cost	Net returns
7	140	5.77	1.66	5.26	4.46	11.38	.36	.94	.51	.52	13.71	20.86	3.96	16.90
5	13	7.41	.95	7.28	3.28	11.51	1.25	.99	1.77	.86	16.38	14.72	6.07	8.65
19	22	5.12	.80	7.28	4.01	12.09	1.56	.99	1.41	.65	16.70	18.11	4.28	13.83
4	119	5.56	1.79	6.06	3.95	11.80	1.51	1.03	1.72	.71	16.77	14.94	4.66	10.28
9	40	6.56	1.89	6.35	7.12	15.36	1.07	1.29	1.68	1.14	20.54	16.51	6.78	9.73
11	19	5.96	3.01	6.49	6.37	15.87	.99	1.27	1.69	1.32	21.14	17.91	6.30	11.61
16	41	5.93	4.07	6.27	7.56	17.90	.96	1.49	1.62	.81	22.78	18.59	6.76	11.83
12	14	5.85	4.91	6.74	6.69	18.84	.85	1.41	1.73	.70	23.53	19.44	6.89	12.55
Ave.1953	109	5.81	2.07	5.99	5.00	13.06	.97	1.09	1.27	.73	17.12	18.12	4.81	13.31
Ave.1952	131	5.76	1.86	6.51	5.34	13.71	.85	1.24	1.68	.92	18.40	18.93	5.30	13.63
Ave.1951	648	6.15	1.74	6.35	5.11	13.20	.58	1.03	1.60	.81	17.22	16.11	5.25	10.86
Ave.1950	130	6.15	2.66	5.45	4.61	12.72	.31	.94	1.94	.57	16.48	19.94	5.06	14.88

Detailed drying cost data were obtained this year from 8 of the 12 growers in this study. In the above table, records have been arranged downward in order of increasing total drying costs per fresh ton. This is different from the arrangements in the preceding tables.

Total drying costs for records in this study varied from \$13.71 to \$23.53 per fresh ton. Greatest differences occurred in the cost of washing and storing trays, the cost of sulfur used, and interest on the investment in equipment. The average for all records shows total drying costs to be \$1.28 less than in 1952. The drying costs shown in this table were deducted from the gross returns received for the dried fruit to determine the net income per fresh ton dried, as shown in table 2.

Prices received for dried fruit this year averaged slightly less than in 1952, but 2.01% more than in 1951. Final net returns for cooperators belonging to the California Prune and Apricot Growers Association were estimated returns since they were not available at the time of publication of this report.