

Discussion of Cost of Production Studies

M. B. Rounds

Farm Advisor, Los Angeles County

It is a very difficult task to determine, even from our cost study figures, the cost of bringing an avocado orchard to bearing age. Some of the reasons for this situation are varying response, differences of climate and soil, uncertainty as to quality, quantity, and cost of water, not sufficient information regarding relationship to temperatures—both maximum and minimum—and a lack of knowledge regarding production, especially in relation to age of trees.

Even though a certain strain of a given variety appears to be acclimated, the weather conditions during the blossoming and setting period are a very important factor in determining the performance of the trees as to production. In spite of the many phases of the subject of avocado production which are little known, a great deal has been learned during the last several years in accumulating cost figures on cultural operations. We are, therefore, in a position to make some estimates.

VALUABLE DATA

Mr. Wahlberg, in the Orange County Study, has acquired some valuable figures showing the value per acre of trees each year from the beginning to the tenth year of the age of the orchard. The figures used are not the average, but are better-than-the-average. Standard cultural practices and production figures which are considered possible of attainment are used. The figures used for yield and tree values were agreed upon by representatives of both the University and the growers of the several avocado counties. The value of trees each year is arrived at by considering all costs including interest and depreciation of equipment, all based on a standardized estimate of cost and a return of 5c a pound for fruit produced.

Using \$1000 as a valuation for land and water rights and \$1000 as the tree valuation per acre, which is according to the above table, the value per acre of land and trees is \$2000. The cost, then, of caring for the orchard including all expense up to this point, assumed as the time the returns should pay all costs, is \$1000 and is represented in the estimated value of the trees. Starting with \$500 land, if the grower can obtain it at that price, the investment is reduced. Ten years, then, is about the time required to bring an orchard to that period when it should pay a small interest on investment. Using an interest rate of 5%, twenty to thirty acres should be required as a profitable unit using the above figures. However, as the production increases, the number of acres required decreases. It seems reasonable to expect that eventually we will be able to obtain a variety of avocados or some strain of the Fuerte avocado or learn how to handle the trees which we already have so that we may obtain a production of 10,000 to 15,000

pounds annually. Then, if the minimum price is 5c a pound, this would be a gross return of \$500 to \$750 per acre. When we learn more regarding the number of trees which can be efficiently planted per acre we will be in a better position. We shall gradually accumulate knowledge with reference to handling the trees and learn more about soil management and therefore enhance the returns.

PROBABLE COST OF GROWING A YOUNG AVOCADO ORCHARD

Age Begin, Year	Yield Pounds Per A.	Cultural Cost Per A.	Harvest- ing Per A.	Cash Over- head	Depre- ciation Per A.	Inter- est on Invest.	Total Cost Per A.	Income Per Acre	Mgmt Income Per A.	Net Cost of Trees
0	0	\$192.00	\$	\$17.10	\$ 5.00	\$52.50	\$266.60	\$	—\$266.60	\$266.60
1	0	52.00	.....	10.60	5.00	65.83	133.43	.....	— 133.43	400.03
2	30	52.00	0.30	11.61	6.00	73.00	142.91	1.50	— 141.41	541.43
3	400	58.50	4.00	13.62	8.00	81.07	165.19	20.00	— 145.19	686.63
4	1100	61.50	8.80	15.26	10.00	89.33	184.89	55.00	— 129.89	816.52
5	2300	69.50	16.00	17.28	12.00	96.83	211.71	115.00	— 96.71	913.23
6	3350	74.50	20.10	18.98	12.00	101.66	227.24	167.50	— 59.74	972.97
7	4000	79.50	24.00	20.67	12.00	104.65	240.82	200.00	— 40.82	1013.79
8	4550	79.50	27.30	22.09	12.00	106.69	247.58	227.50	— 20.08	1033.87
9	5000	79.50	30.00	23.47	12.00	107.69	252.66	250.00	— 2.66	1036.53
10	5400	79.50	32.40	23.60	12.00	107.83	255.33	270.00	14.67	1021.86

GOOD OUTLOOK—FOR THOSE USING CARE

It may be necessary to keep the avocado tree from growing too high, if that be possible, consistent with the growth habits of the variety. The cost of harvest is great, and according to the records it amounts to around 60c a hundred pounds on the average. At that rate it would cost \$60.00 per acre for the harvest of a 10,000 pound crop. "Efficiency in Production" has not been the watchword in the growing of fruits as much as it should be. We find this situation in citrus production.

The efficient orchard of the future is the one which will support the family and not require the owner to have an outside income to support it. How can this be brought about? There is, I believe, sufficient evidence that it is possible. The outlook for the avocado industry is quite satisfactory, but the grower who is to get his share of the profits is the grower who will take a sufficient amount of his time to carefully plan every detail; the one who selected a good location with ideal climate, soil, and other conditions, with plenty of good water at a reasonable price, and who selected the best quality trees and gives them consistent care and attention.

CALIFORNIA AVOCADO STATISTICS

Compiled from California Cooperative Crop Reporting Service (1938) and Bureau of Agricultural Statistics of the United States Department of Agriculture (1936)

ACREAGE AS PLANTED IN CALIFORNIA

	Before									Total 1937
	1930	1930	1931	1932	1933	1934	1935	1936	1937	
Anaheim	136	66	90	62	28	22	27	15	....	446
Dickinson	144	43	59	46	18	18	5	1	....	334
Fuerte	3260	1573	1801	1018	729	400	249	116	62	9208
Lyon	86	16	20	15	9	7	5	7	....	165
Nabal	95	65	109	70	57	55	41	13	1	506
Puebla	258	33	39	27	18	10	12	4	....	401
Spinks	47	2	2	8	1	2	1	....	....	63
All Other	1215	450	434	284	196	131	106	35	3	2854
TOTAL	5241	2248	2554	1530	1056	645	446	191	66	13977

Est. 85 trees per acre.

By Counties (1937)	In 1937, 66 per cent of all avocado trees standing in California were Fuertes.
Los Angeles	3216
Orange	2017
Riverside	37
San Bernardino	73
San Diego	7998
Santa Barbara	266
Ventura	331
All other Counties.....	39
TOTAL.....	13,977

Percentage of Fuerte Fruits Delivered to Calavo Growers:	
1933.....	53.8%
1934.....	36.7
1935.....	73.3
1936.....	62.3
1937.....	84.8
1938.....	80.1