

Size of Avocado Orchard—Income Factor

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On previous occasions we have discussed the several essential factors influencing the income from a successful orchard. They include kind of soil, climatic influence, tree vigor and health, desirable varieties and good orchard management. Another factor which must be considered and which has commanded the attention of the Orange County Economic Conference and its land use committees this year, is that of size of farm or orchard. The low farm price situation in recent years has put this factor in the spotlight. The avocado industry is typically a small farm industry—the average orchard unit is very apparently less than that of other orchard crops in Southern California. The range varies from the small home site plantings in the slightly foothill districts of Southern California to the larger commercial plantings in the same vicinities or in the protected areas of the valleys.

Paralleling the wide range of farm or orchard units in the avocado industry, we find a wide range of people engaged in growing avocados. They may be classified into four general groups:

- (1) The grower who depends on the orchard for his entire income.
- (2) The part-time farmer who has an outside job or possibly another farm enterprise and wishes supplementary income from the avocado orchard.
- (3) The retired business or professional man who likes to spend his remaining days in the orchard and would like it to pay its way if possible, but he is not dependent upon it.
- (4) The investment farmer or operator who hopes to secure dividends on his investment but must hire all work done. He is the absentee owner.

What is Successful Orchard

Thus we come to four points of view as to what a successful orchard is with regard to size of unit and earning capacity.

The first-class farmer described above, who depends on the avocado orchard for his family's entire livelihood, must have sufficient acreage and good yields to furnish a gross income that will pay cost of production, amortize his farm indebtedness, and have enough left to meet the living requirements of his family.

A successful farm unit for the man in the second group, the part-time avocado grower, obviously may be less than the unit required for the first group. The necessary size of

orchard and its productive efficiency will be in proportion to the supplementary income desired and, of course, the trend of avocado prices, which must be reckoned by all types of operators except probably the third group, which is interested in avocado production as an avocation or health and happiness venture.

Certainly, the fourth group of operators, the dividend farmer, needs to seriously consider the minimum size of orchard and look well to its maximum efficiency in production.

Income Analyzed

In an attempt to answer the question. What is the relation of size of avocado orchard and its ability to support a family, we have looked again to the 10-year avocado cost analysis conducted by the Agricultural Extension Service in Orange County. In this study we have accumulated about 150 annual records from some 20 orchards over a period of ten years that offer the best source of orchard efficiency data available at the present time.

From this mass of records, 6 typical avocado orchards have been selected to demonstrate the effect of (1) size of orchard and (2) yield per acre in relation to income to maintain a farm family.

One 9-acre orchard, three 6-acre orchards and one 2-acre orchard were selected for this purpose. The 9-acre orchard represents a good commercial enterprise with good yields over a period of several years—the five-year period 1935-1939 was used for all the orchards in this discussion.

Three 6-acre orchards were selected to show the influence of yield per acre on the earning capacity of the orchard. We'll identify these three orchards as 6A, 6B, and 6C. Then a 2-acre orchard of good yields was picked out to emphasize the inability of a small orchard unit even with good production records to provide an income sufficient to maintain a family. But it does definitely have a place in the role of supplementary enterprise for some additional income, or a suburban estate and residential planting that can be used as a substitute for an outdoor gymnasium and fountain of youth.

The following table aligns these six orchards in the order of their earning power to maintain a farm family. For the purpose of this discussion two figures were used for family maintenance—\$1,000 and \$1,500. The latter figure probably more nearly approaches the requirements of a Southern California family.

Size of Farm and Annual Income — 1935-1939

Orch No.	Age Yrs.	No. Acres	Yield Per Acre	Annual Returns (a)	Cash Costs (b)	Debt Costs (c)	Labor Income (d)	Income Above or Below	
								\$1000 (e)	\$1500 (f)
9	16	9	6922 lbs.	\$3762	\$1260	\$377	\$450	+\$1575	+\$1075
6A	13	6	7539 "	2586	870	225	300	+ 791	+ 291
6B	14	6	3382 "	1722	600	225	300	+ 197	— 303
6C	16	6	2117 "	906	600	225	300	— 619	— 1119
2	14	2	5826 "	780	308	75	100	— 503	— 1003

Chart Explained

It will be noted that all orchards are mature bearing, the youngest being 13 years and the oldest 16—ideal for comparative purposes. The yield per acre indicated is the annual average for the five years 1935 to 1939 inclusive. 1935 and 1939 were years of heavy crops, but 1937 and 1938 countered with frosted crops. Column (a) gives the average annual total returns for each orchard. Column (b) presents the actual average cash costs reported by each grower for his orchard, including his own and hired labor. Column (c) shows the annual payments on the orchard indebtedness assumed at \$500 per acre, amortized over 20 years and interest at 5 per cent. Column (c) shows the possible value of the owner's labor if he did all the work on the place. Credit for \$50 per acre is given here to apply on farm income.

Column (e) is the amount earned by the orchard above or below the \$1000 budget set for family maintenance. This is computed by subtracting columns (b) and (c) from (a) and adding labor income (d). Column (d) is the amount earned by the orchard above or below the \$1500 family budget.

Yield and Farm Size

The chart shows very clearly the effect of yield and size of farm on income. Orchard No. 9 reported a fine yield of 6922 lbs. per acre per year for the 5-year period. Because of its ample size, 9 acres, and good yields, it provided a generous income above the family requirements of \$1000 or \$1500 per year.

The influence of yield is excellently revealed in the comparison of the three 6-acre orchards. Orchard 6A, with its high yield averaging 7539 pounds per acre per year, brings returns well above the family expenditures. Orchard 6B, with only fair production—3382 lbs. per acre, just exceeds the \$1000 family budget by \$197, but is short of the \$1500 budget by \$303. By frugal living this family can get by with a 6-acre orchard averaging 3382 pounds per acre annually.

Now look at orchard 6C. Here is another six-acre orchard of low production—only 2117 pounds per acre. Note that this orchard fails to provide a \$1000 living by \$619, and is short \$1119 on a \$1500 budget. Such an orchard cannot support a family. Supplementary income is necessary by the amounts just mentioned. This is a typical example of a marginal orchard which may be described as a liability or failure from the standpoint of the class 1 or class 4 farm operator, but may be tolerated by the class 2 and class 3 operators who have other enterprises or sources supporting them. A considerable portion of the avocado acreage comes in this class.

An example of the pocket farm is orchard No. 2, consisting of two acres. This particular orchard is located on deep good soil and has a good average yield of 5826 pounds per acre. If there were enough acres in this orchard it would make an ideal income enterprise. It is entirely too small to support a family. No horticultural industry can expect to be that optimistic these days, or possibly for some time to come. However, it does offer a tempting rendezvous for the suburban estate or the part-time farmer who has other income.

Vocation vs. Avocation

It is thus seen from the evidence submitted that the interpretation of a successful orchard depends on what is expected of that orchard. If avocado growing is to be a vocation, it appears that larger orchard units than we find customary in the industry today are necessary. And higher yields than average are paramount to economic production. Present average yields in the industry are not very encouraging. While the orchards just compared and analyzed reported from 2117 pounds to 7539 pounds per acre, the average production in this county for the same period was only 1882 pounds per acre. Such an average would lead me to believe that much avocado acreage is being maintained as an avocation.