AVOCADOS IN VENTURA COUNTY

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According to the California crop report of 1926, there is a total of 665 acres of avocados in California, bearing and non-bearing. Of this amount, Ventura County is credited with 41 acres. That figure is probably slightly less than what we actually have. Our acreage, however, does not exceed 60 acres. The sizes of the individual plantings range from a fraction of an acre to eight acres. The oldest commercial plantings are 15 years.

Ventura County has six distinct districts in which avocados are planted. Three of the districts mentioned might be grouped as coastal, while the other three are interior. The coastal districts have distinct climatic influences exceedingly favorable for the setting of avocado fruits, due to the lack of extremes in temperature; while the interior districts have higher temperatures that cause dropping of the fruit and prevent the production of large crops.

Avocados in Ventura County respond similarly to lemons and walnuts in their productive ability according to climatic influence. We, therefore, expect that most of the future plantings will be in the coastal districts, although there are a few favorable locations within the interior districts which are protected from heat and cold that have secured good results with avocados.

During the past few weeks, I have been carrying on a survey of avocado growing in Ventura County. The work is not complete, and therefore I will discuss only soil moisture regulation and varieties.

Soil Moisture Trepidation

Some avocado growers say that an avocado tree thrives best under uniform moisture conditions and that it is necessary to irrigate frequently to accomplish this. Is it true or not? I believe that the answer will mean much to successful avocado production.

Frankly, my observations on that question lead me to believe that an avocado tree will respond better with greater periods between irrigations without trying to maintain a uniform moisture supply. If a tree is functioning normally, it is impossible to have a uniform moisture supply in the soil, as the quantity of water is constantly diminishing. If the moisture content does remain about the same, then you can begin to worry, because such a tree is sick.

An avocado orchard was irrigated twice in 1926 and has just received its third irrigation for this year. Previous to 1926, that orchard was irrigated frequently, as the owner considered that young trees needed water frequently. His trees were slow in growth and off color. Greater intervals between irrigations have worked wonders with that orchard—

the growth is vigorous and healthy. I was interested in finding other orchards that have responded similarly.

It is said that an avocado tree is a shallow root feeder and that it is necessary to irrigate frequently to keep those roots supplied with water. What makes any kind of a tree a shallow root feeder? My observations have shown me that poor environmental conditions below the shallow root zone are responsible. A citrus tree, and even a walnut tree, that has been over-irrigated has its feeder roots growing only in the upper few inches of soil, due to the drying out of that zone more quickly, rendering it more favorable for root growth. More judicious use of water permits roots to penetrate to greater depths which is a more desirable condition. Avocados are similar in their response.

On light soils, it is possible, and often desirable, to irrigate frequently, as those soils have a low moisture holding capacity; the reservoir is smaller. But, the heavier soils do not need water so frequently, and frequent applications result in shedding of the fruit and off-colored trees. The determining factor for water application should be to irrigate before the soil gets dry and then the grower can rest assured that environmental conditions for root development are more nearly normal.

Varieties

It is with hesitancy that I discuss avocado varieties. It seems to be a question on which no two persons can agree and if I discuss avocado varieties, it will be to merely add one more difference of opinion on this subject. A few months ago, two of my friends and I made a tour of avocado orchards in Los Angeles and Orange counties, attempting to increase our knowledge of avocado growing, and especially of varieties. We found that the avocado growers whom we interviewed in those counties mentioned one variety as satisfactory for commercial production, and that was the Fuerte. There was wide difference of opinion as to the other varieties, and most of the growers were hesitant about offering their opinions.

Before continuing with this discussion, we should be agreed as to what are the qualifications of a good commercial variety. In my opinion, the following qualifications are paramount: It should hold up well under severe shipment conditions; it should be of pleasing flavor and texture and appearance when ready for consumption; the tree should be normally healthy and capable of attaining a size sufficiently great to produce large crops; reasonably early bearing is desirable; regularity of bearing is essential, and heavy production per tree is necessary for a profitable enterprise.

Those six qualifications are of paramount importance and should receive consideration by any grower who is contemplating planting. I have found, so far, that the avocado growers of Ventura do not agree with the growers in other parts of California that the Fuerte is a satisfactory variety, at least for our conditions. In fact, I have not found a single grower who has grown the variety over a period long enough to observe its response, who is favorable to it as a desirable variety for Ventura County. The growers admit that the fruit is superior to most varieties. However, they are unanimous in their opinion that it does not come into bearing early enough and that it is too irregular in production. It apparently produces only one crop in three, and in the off years does not produce enough to call it a crop. If the Fuerte tree continues to maintain this characteristic of irregularity in bearing under Ventura County conditions, it is doubtful whether our growers should plant a high percentage of this variety.

Evidently the observation made as to the Fuerte being a shy bearer when young, and irregular in production when old, is not limited to Ventura County. On page 114 of the Annual Report of the California Avocado Association for 1925 and 1926, the concluding sentence for the description of the Fuerte variety states as follows: "About the only objection to it is shy bearing while the tree is young, and lack of uniformity of bearing in older trees."

Our growers are of the opinion that we cannot hope for success in the avocado business unless we can secure regular production with heavy yields. A variety with high edible and marketing qualities that cannot fill the qualifications of regularity of bearing and heavy yields is a doubtful variety to depend upon for a profitable enterprise. And it is just as true that a variety which is regular in bearing and a heavy producer and does not meet the marketing qualifications, should not be planted.

Before mentioning some of the varieties that are being considered favorably, I want to discuss briefly the differences in time of maturity of fruits under our conditions as compared with other sections. The harvesting season in Ventura County is later from one to three months as compared with most of the districts in California. That puts Ventura County in the position of producing fruit of a given variety at a season when there is only a small quantity of that fruit on the market. Therefore, our growers are of the opinion that we should attempt to grow varieties which would be harvested during the months of October, November and December, a period when the supply from California has not been great.

C. J. Daily of Camarillo, who has been growing avocados over a period of 15 years and is a keen observer of the responses of varieties, has suggested that the following varieties are harvested during that period or a portion of it and are worthy of trial: Miller (August 1 to November 1), Dickinson (July 15 to October 15), Queen (August 1 to November 1) and Meserve (October and November.) He is of the opinion that the Miller has all the qualities of a good variety. It is precocious, a heavy and regular bearer, and edible characters are good. It does, however, have a hard shell similar to the Dickinson, although it is green in color.]

The Dickinson seems to be peculiarly adapted to Ventura County conditions. It is precocious, a heavy and regular bearer, and the quality is good. This variety seems to be in disfavor in some parts of California on account of its thick skin, dark color, and discoloration of the flesh when overripe. Mr. Daily is of the opinion that these are minor objections and that if it is harvested at a proper stage of maturity, it is a very desirable fruit, at least under Ventura County conditions. This fruit has also been accused of being a deceiver of the consumer as it can appear to be in good condition when overripe or bad inside. Mr. Daily is of the opinion that it is a matter of education of the consumer, and that compared to the mysteries of a watermelon, it is about ten times easier to tell whether a Dickinson avocado is ripe.

The Queen apparently fills all of the production qualifications in Ventura County. It is, however, a large fruit and some persons might object to it as a commercial fruit on that account. It is precocious and a heavy and regular bearer. The Meserve is a fair

producer and fairly regular in its crops. It deserves further trial in Ventura County.

Other varieties which seem to meet with favor and some objection by our growers are the Dickey A, (July, August and September) and the Challenge (June 15 to August 1.) The Dickey A is a variety which has many friends in Ventura County. The Challenge is liked because of its precocity, regular bearing and heavy crops. C. J. Daily is of the opinion that if the Challenge were harvested when fully mature that much of the objection to its eating qualities would be removed. However, it is a doubtful variety with our present knowledge concerning it. The Fuerte can be harvested here from July 15 to October 15, which places it in a favorable position, as but little fruit is available then from other districts. The Taft seems to be getting considerable favorable mention in various parts of California. J. H. Bays of the Ventura district has a two-acre orchard of mature trees about 14 years old which tells the story of this variety. These trees have produced a wonderful crop this season. Mr. Bays is of the opinion that this variety comes into bearing too late. It did not bear a good crop until it was about 10 years old. It is questionable whether we can wait 10 years for production, and irregularity practically throws a variety out.

We have not tried the newer varieties long enough to give an opinion concerning them. Some of our growers are contemplating the planting of the Nabal. The description given of it in the annual report of the Avocado Growers' Association for 1925 and 1926, states that its harvest period is May to June in California. We would expect its harvest period might be June, July and August in Ventura county, judging from the way other varieties have worked out.

Since we are new in the avocado industry, I believe we should stick to the varieties which seem to be best adapted to our conditions and to profitable marketing. If the newer varieties do not measure up to these they should be thrown out of the picture. We do not want the avocado industry complicated with innumerable varieties, as that would tend to confuse the consuming public. Several of our growers have experimental plantings to try varieties out in a small way, but we do not intend to plant doubtful varieties on a large scale.