

Mexican and Guatemalan Avocados at Point Loma

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As some of the differences in behavior between Mexican and Guatemalan avocado varieties are not well known, experience gained in this orchard may be of value.

The first considerable planting of avocados on these grounds was made in 1916. Seventeen Guatemalan varieties have been given a good trial; of these nearly all have proven fair to very heavy producers. Fourteen budded Mexican varieties and about three hundred Mexican seedlings have been given a trial; of these only two seedlings have averaged reasonably productive, and none have compared with the productive Guatemalan varieties. Occasionally some of the Mexican seedlings have produced a large number of fruits; but these fruits were small and had very large seeds, so that in pounds of edible matter these trees did not compare with the production of most of the Guatemalan varieties, though the Mexican trees were vigorous and healthy. About the least productive of the Mexicans has been the Puebla, of which thirty four trees were planted and given a most thorough trial for eight to ten years. Usually these Pueblas averaged two to three fruits per tree per year. We have been told that in some locations a few miles farther from the ocean the Puebla is more productive. We have been forced reluctantly to conclude that this coastal climate is not well suited to the productiveness of Mexican varieties, except perhaps the two mentioned, which have other drawbacks; but this climate is certainly well-suited to the production of heavy crops of Guatemalans. This difference seems to be entirely a matter of suitability to climatic conditions. If results in other places close to the ocean should be found to agree with results here the facts should be known for the benefit of planters of gardens and orchards near the sea from Santa Barbara to Mexico. Perhaps the poor bearing of the Mexican varieties here is explained by the fact that they bloom during the winter and early spring when the weather here is cool;

Heavy rains last winter kept the shallow soil on which the Theosophical University's avocados are located somewhat too wet from December to March. The trees put out a large amount of sappy new growth. Evidently the sap was too watery and not sufficiently nourishing for the good of the crops. Twenty-five per cent of the fruits of some varieties cracked, rotted, and dropped. Those fruits which matured were low in oil content. Fuerte fruits did not crack or rot, but were not quite up to normal in flavor. As a result of this soil-moisture and growth condition Mexican and Fuerte trees which blossomed before the soil had properly dried out set practically no fruits for next season. There was no other discoverable reason, as these trees were apparently in healthy condition, had not overborne, and the records of the Weather Station on these grounds show that the weather during blooming was warmer than normal. Guatemalan varieties bloomed later when the soil-moisture condition was good and had been so for some time. They all set

fair to very heavy crops, except those which produced no bloom due to being very much overloaded with the previous crop then maturing. This illustrates the necessity for the right amount of soil moisture and indicates that for shallow soils with hardpan late-blooming varieties may be the most productive. We believe that heavy rains and too much soil moisture account for the light setting of some varieties in many orchards this year.



AVOCADO GRAFTING AT POINT LOMA

1. A row finished February, 1926. One large limb, besides twigs, left on to draw the sap. Paper bags protect the grafts from drying.

The University's Mexican avocado trees have been subject to severe infestation of greenhouse thrips which injured the old leaves and russeted the fruits. These Mexican trees were interplanted among Guatemalans most varieties of which were uninfested or only slightly infested. The hybrid Fuerte has had many fruits somewhat discolored. If fruit in this condition had to be marketed subject to the keen competition of the future the trees would have to be sprayed. Repeated applications of dusts failed to give satisfactory control, probably because the coastal climate is not warm enough to volatilize dusts freely. Volck at 1 per cent to 2 per cent, applied on different rows at different times each month from April to October, caused no apparent spray-injury to Mexican, Fuerte, or Guatemalan trees, and one application gave satisfactory control for one year. We understand that the preference of thrips for certain varieties is not yet well known, but it has been unmistakable here.

As a result of the poor behavior of Mexicans here, and the good behavior of Guatemalans, most of the Mexican trees have been dug out or top-grafted to Fuerte, Dickenson, and other varieties, the Dickenson being the most regular bearer in the orchard. Several complete rows have been top-grafted and have grown large, well-shaped new tops in two years. When two years old many of these set so much fruit that it had to be heavily thinned — rapidly knocked off with a long pole. The fruits not knocked off were sufficient to produce heavy crop. The latest row to be grafted was done in 1926. Now seventeen months later, many of the new tops have a good crop of

young Dickenson fruits. To get good new tops by grafting avocado trees is an expert job and not to be too lightly undertaken. However, eliminating Mexican varieties by grafting has proven one of this orchard's most profitable operations.



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2. The same row in July, 1927, seventeen months later. Many of these trees have good crops on the new tops.



A GOOD CROP OF AVOCADOS

Photograph taken in 1927 at the International Theosophical Headquarters, Point Loma.