California Avocado Society 1922-23 Yearbook 8:20-21

Making the Avocado tree Bear

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Our worthy President requests a five minute paper on "How to Make the Avocado Tree Bear." The fact that it has been deemed necessary to set aside a day for the discussion of this subject would seem to imply that most of the widely planted varieties of avocado have not proven satisfactory, so far as the all important question of production is concerned, and I think the experience of the owners of the older orchards largely confirms this. Of course when a man plants avocados commercially, he expects them to bear regularly, and in quantity something like our oranges and other fruits, and the reason most of the avocados thus far planted do not meet this requirement seems to be to be obvious, and only to be expected when we look into the history of the selection and propagation of most of the hitherto popular varieties.

Our named varieties are simply the budded progeny of certain seedling trees, and with few exceptions are representatives of the Guatemalan race. Now over five years ago Mr. Wilson Popenoe, after devoting more than a year to the careful study of this race in its natural habitat, very plainly warned us that with rare exceptions it was not customary for the tree to bear annual crops. I cannot do better than quote a few lines from his instructive paper published in the Association Year Book for 1917:

Regularity of Bearing

"I was somewhat surprised to observe the irregularity in bearing which seemed to characterize most of the trees in Guatemala. How much of this irregularity is due to faulty culture, and how much is inherent, I do not know. But it was rare to find a tree which bore heavily two years in succession. The Guatemalans usually say that the trees bear a heavy crop one year, and a light one the following, but I saw many trees which bore heavy crops one year and nothing the next. This is a point which I do not believe we have emphasized sufficiently in this country, and I would strongly urge all prospective planters of Guatemalan avocados to investigate thoroughly the bearing habits of the varieties they propose to plant."

This is plain enough for anyone to understand, it is sound sense, and there can be little doubt that the neglect of this admonition is responsible for the situation that has called for this discussion today. I believe that it has been established by experience that the bearing habits of seedling fruit trees are inherent, and in most instances transmissible, and that we cannot expect to develop a satisfactory fruiting orchard by planting trees propagated from a light or irregularly bearing parent. It is a well known fact that the most of our widely advertised and planted varieties were propagated and disseminated before the parent tree had borne more than one or two crops, and before there was any evidence whatever as to whether the tree was a heavy and consistent fruiter, and this

would appear to fully account for our present trouble. It has taken centuries of careful observation and selection to produce many of our standard commercial varieties of other fruits, while in the case of the avocado we propagated and planted about the first ones we saw, without any knowledge whatever of their bearing habits, and consequently have no right to be surprised if they do not fully satisfy us in all respects.

So far as the title of this discussion is concerned, I do not know how to make an avocado tree bear if it is not naturally inclined to do so. We have ancient and honorable authority for believing that the leopard cannot change his spots, nor the Ethiopian his skin, and like reasoning would indicate that by means of no thaumaturgical feat or magical incantation can we transmute a naturally light or intermittent cropper into a heavy and regular bearer. While girdling will generally cause a tree to bear somewhat earlier than it otherwise would, I have neither seen or heard of any evidence that this practice has an effect on the inherent fruiting habits of the tree so far as amount and regularity of production is concerned. It would also seem logical to conclude that in the case of trees propagated from an unsatisfactorily fruiting parent, fertilization and good culture could only result in the production of a fine lot of what Mr. Shamel has happily termed "shade trees," and probably most of us have seen plenty of these.

However, I think there is an easier, better, and more rational method of attaining our object, and that is, to plant trees propagated from parents that have regularly produced satisfactory crops for a number of years, and I believe that an intelligent and discriminating search will locate such trees here in California. Our explorations and investigations have been sufficiently extensive to enable us to recognize a good commercial avocado when we see one, and it only remains to find parent trees that have regularly produced satisfactory crops of such fruit over a period of years, and if the budded progeny of these trees makes a vigorous and healthy growth, and comes into bearing early, the problem would seem to be solved.

The question might be summed up as follows:

A large proportion of our commercial plantings of avocados consists of trees of the Guatemalan race.

Most of them have not borne regular and satisfactory crops.

This light or intermittent bearing is a well marked characteristic of the Guatemalan race, and our trouble seems to be due to the fact that we have planted many trees propagated from unsatisfactory parents.

Exceptional trees of this race have been noted, both in Guatemala and in California, which have borne good commercial fruit regularly and in satisfactory quantities.

Our orchard plantings should be confined to stock propagated from such exceptional trees.

To make an unproductive avocado tree bear, work it over to a variety that does bear.