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To Thin or Not to Thin—The Avocado Grower's Dilemma

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Now that the natural fruit-thinning "drop" is virtually over, it is evident that early-season forecasts for the largest avocado crop on record are practically certain to be realized. While the estimates for the coming crop show a wide range of variation there can be little doubt that it will reach a total of not less than double the largest harvest to date and possibly as much as three times the maximum production of record.

What effect this may have on price levels and successful marketing is a question, therefore, of general and widespread interest. The situation which confronts the marketing agencies, while admittedly difficult, is not a new one, however. The history of the avocado marketing problem in Southern California thus far has been that of disposing of a highly fluctuating, though constantly increasing, production with occasional seasonal advances of several hundred per cent. It is most decidedly to the credit of the major marketing agency, Calavo Growers of California, Inc., that thus far this difficult problem has been solved, and with results much above the average of most other industries confronted with similar problems. The magnitude of the increased production in sight for the coming season, however, together with the general economic outlook, cast some doubt on the possibility of marketing the forthcoming crop and at the same time maintaining price levels of recent years. And the irony of the situation is that past experience all indicates that the crop which follows a season of heavy production is at best merely a fair crop and more likely to be a poor one. In the history of the industry thus far two bumper crops have never occurred in succession; indeed they seem to occur not oftener than once in three or four years. The last such crop was that of the 1930-31 season.

With these general facts in mind and many, if not most, of their trees of bearing age heavily laden for the coming season, avocado growers are asking what, if anything, can be done to insure the best size and quality of fruit and to improve the prospects for a satisfactory crop the season following. For growers of the Fuerte variety, which now comprises considerably more than half the total production, the situation is a real dilemma: Shall they allow the trees to mature the present crop with the practical certainty of a poor crop next season or shall they thin the crop to a reasonable degree in the hope that by so doing the crop prospects for next season may be improved? For many growers the Fuerte crop now on the trees is the first good crop in four years. Should they take full advantage of nature's bounty with the probability of lower prices this season or should they sacrifice part of the crop in the hope of greater participation in better prices next season?

Important as these questions are, they cannot be answered at the present time. The information required to provide the answers is not now available, though investigations now underway should provide a considerable part of it within a few years. As a consequence the College of Agriculture is not in a position to offer recommendations at this time. Moreover there are certain variables involved which are inherently difficult or impossible to appraise. Who is there who can accurately forecast general economic conditions for the 1935-36 season or weather conditions during the coming winter and spring? There are, however, certain facts and considerations, which experience provides; which may be utilized in reaching conclusions bearing on the answers to these questions.

For varieties which tend to bear satisfactory crops every year the principal considerations appear to be the prevention of breakage under the weight of excessive crops and the development of that fruit size most in demand on the markets. There can be little doubt that many trees will suffer severe breakage during the coming season unless the fruit now set is heavily thinned. And for varieties that run smaller than the market preference experience indicates, though experimental proof is still lacking, that thinning the crop can be employed to increase the size of the fruits left on the trees.

For the Fuerte variety, and others which exhibit a pronounced tendency to the alternate bearing habit, the situation is much more complicated. Rarely, if ever, do healthy, vigorous Fuerte trees bear two heavy crops in succession. Almost without exception an excessively heavy crop is followed by a lighter and later bloom the following season and a much smaller crop. And the heavy crop of one season appears to be the cause of the light crop the next season. If this be true the lightening of the crop in the seasons of heavy production should favor more regular bearing. There is some evidence, experimental and otherwise, which supports this conclusion. It is not adequate in amount nor does it extend over a sufficient period, to be conclusive. Assuming this to be true, which is not yet satisfactorily proved, it should be noted that lightening the crop one year does not insure a crop the next year. It merely favors the production of a successive crop, the setting of which is largely a matter of weather conditions during the blooming and setting period. There never will be the certainty, therefore, that thinning heavy Fuerte crops will insure good crops the following season. On the other hand failure to thin excessive crops almost certainly means light crops the following season.

If thinning is to be done the questions of chief importance have to do with the best time for the operation and the amount of fruit which should be removed. Answers to these questions cannot be given at this time for experimental data are still lacking. It would seem logical, however, to delay thinning until the natural dropping is practically over. The bulk of the dropping is either now or soon will be over in most localities. (July 15.)

The amount of fruit to be removed will obviously vary in accordance with the size of tree and crop set, and with other factors. The chief consideration in all cases should be the amount of fruit it is desirable and safe to leave on the tree, and still permit it to bear a satisfactory crop the following season. What such amounts may be for trees of different sizes is still to be determined and in the nature of the situation must be expected to vary considerably in different localities.

The question may be approached however from the economic viewpoint of what is a

profitable crop for a good bearing tree, 10 to 15 years old. Cost data available indicate that an annual production of 150 pounds per tree would provide a satisfactory return even at price levels considerably lower than have obtained in recent years. At 8 ounces per fruit this would mean 300 fruits per tree. Individual crops of 3000 fruits per tree have been reported and counts made this season on heavily laden 9-year-old Fuerte trees have reached 2000 fruits. Individual tree yield records on trees[1] 3 years older in the same locality indicate that crops in excess of 400 fruits have almost invariably been followed by crops of 100 fruits or less. It should be understood that this discussion relates only to the Fuerte variety. Experience indicates that this variety is much more sensitive than most others and that the amount of crop which will cause it to alternate in bearing habit is much less than with other varieties.