

nation to the setting of fruit, what kind of pollinations are responsible for the fruits which mature on a tree and to what erratic setting of fruit is due.

Observation clearly shows that a large majority of the flowers produced by avocados do not set fruits and this condition continues even after the careful cross-pollination by hand of first-period flowers. Possibly (1) the pollinations are not made in a way necessary for success, or (2) the pistils of many flowers are unable to function in any relation except when conditions are favorable to a normal development either in the structure of the pistils or in their physiological condition, or (3) the most effective relations in cross-fertilizations were not involved in the crosses attempted.

FRUIT SETTING BY TENTED TREES

The extent to which avocado trees are able to produce fruit without cross-pollination may, it would seem, be determined experimentally by enclosing a tree in a cheesecloth "house" or "tent" during the entire period of flowering. Also trees or parts of trees of two varieties may be enclosed together. Bees to make the pollinations may or may not be supplied.

Tests of this sort were first made for avocados at the Theosophical Homestead, Point Loma, California. The results have been published and discussed (1, 2 and 3). In these tests Fuerte, Tinsley, and to some degree Dickinson were found to be self-fruitful provided bees were enclosed to effect self- or close-pollinations and it was concluded that at least the Fuerte is adequately self-fruitful. There were somewhat conflicting results. For example, part of a tree of Fuerte set no fruit when enclosed with part of a tree of Spinks with two hives of bees. If trees of Fuerte are adequately self-fruitful the enclosed portion of the tree in question should have borne fruit to selfing irrespective of any cross-pollination with the Spinks. The result seems to indicate either that the insects did not effect cross-pollinations or that such pollinations did not lead to fruit setting.

During 1925 in the orchards of Wm. J. Krome at Homestead, Florida, a tree was tented with a hive of bees enclosed of each of the varieties Linda, Panchoy, Taft, and Trapp (13) (Fig. 2). About eight weeks after the close of the flowering period the Taft tree had seven fruits, the Panchoy two, the Linda 22, and the Trapp 18. There was no question that the flowers of these tented trees received abundant visitations daily by the enclosed bees