

clonal pollination) than there is for pollination from flower to flower on a single tree. In such cases proper interplanting to provide for natural cross-pollinations becomes desirable or necessary.

How the types of flower behavior operate in the clonal varieties now in cultivation, how they influence and determine the production of fruit, the extent to which these adaptations for cross-pollination make interplanting necessary or advisable, and what particular interplanting will promote increased and maximum yields of fruit in any or in all varieties are matters that are vital in the culture of avocados.

THE GENERAL RULES OF FLOWER BEHAVIOR IN AVOCADOS

The flowers of all avocados thus far studied, except the Collinson, have both pistils and normally developed stamens—that is they are perfect flowers. Also the flowers are very similar in structure and appearance. They are rather small and inconspicuous in color; they are produced in large numbers; and a tree has a succession of sets of flowers that gives continuous flowering for at least several weeks and sometimes for several months. Each flower has one pistil, two sets of stamens arranged in an inner whorl of three and an outer whorl of six, and two sets of nectaries corresponding in number and relative position to the sets of stamens.

The flowers open synchronously in sets that have, normally, two distinct periods of opening. There is for each set (a) a period of first-opening when the flowers function as females, (b) an interval of being closed, and (c) a period of second-opening when they function as males, and these three periods constitute what may be called a cycle of dianthesis. The first-opening and the second-opening take place on different days and they cover different hours of the day. The succession of sets day after day brings a daily alternation of a new set in its first-opening with an older set in its second-opening and there is little or no overlap in the periods of opening of the two sets.

THE GENERAL RULES OF BEHAVIOR FOR THE "A" GROUP

Under favorable weather conditions the flower behavior for the A group of seedlings and clonal varieties is as follows:

The First Period of Opening:—In the hours of the early morning no flowers are open anywhere on the tree but during the early