## Methods of Top-Working the Avocado

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There are many different ways of grafting avocado trees. The pictures on the opposite page were kindly furnished by Dr. C. A. Schroeder of the Division of Horticulture of the University of California at Los Angeles. They illustrate a style of bark grafting in summer which is gaining predominance in California. The operation is usually performed in late summer and fall, after scion wood has properly matured.

The advantages over late winter cleft-grafting are several. Good scions are more abundant. The operation is easier, more rapid, and requires less skill. It is especially adapted to young stocks two to three inches in diameter which are difficult to cleft graft. Done after harvest to bearing trees, there is less waste of fruit.

The disadvantages as compared to winter cleft-grafting are: danger of loss should a spell of very hot weather follow immediately; and danger of mealy-bugs colonizing under the protection of the paper bags in orchards which are infested with Argentine ants. If the first tiny shoots from the scions are eaten by mealy-bugs the grafts are almost sure to die. Cleft grafts placed in late winter usually make enough growth to allow removal of the paper bags before warm weather encourages ants and mealy-bugs to become destructively active.

It has been observed that in the case of very large old trees, the bark will often slip sufficiently to take a bark graft much earlier than stocks of small diameter—in some cases as early as February—and before the scion wood comes into bloom.

There does not appear to be much difference between the two methods with respect to strength of union formed. All growing scions should be firmly supported by stakes during the first full year of growth. Good care and follow-up work is most important with any type of graft.

It is highly desirable that more avocado growers become proficient in top-working their own trees. There is a serious shortage of skilled contract operators. Also there is a justified tendency on the part of such operators to avoid work where only a few trees are involved. This is chiefly because in such cases the extra travel time incident to necessary follow-up work makes for an unavoidable increase in cost per tree.

Meld demonstrations of top-working by county Farm Advisors have done much to educate growers and should be continued. Usually, however, growers attending such demonstrations do not get enough actual practice to gain confidence. One learns best by doing. Trimming scions to fit any kind of graft requires practice. The top of the tree cut off may furnish any number of twigs on which to practice trimming without wasting valuable scions. On every hand one sees unproductive trees and undesired varieties reducing the net income from groves and crying out to be top-worked.

