

Hastening the Production of Fruit in Grape Hybridizing Work

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A METHOD of procedure to hasten the fruiting of grape seedlings has been followed at the United States Experiment Vineyard, Fresno, California, during the past 2 years. Various methods of budding and subsequent care were tried. The use of the ordinary "T" bud with some modified treatments has resulted in the production of ripe fruit 18 months after the grape seeds were planted in greenhouse flats. This quick fruiting of seedlings has been obtained in the following manner.

Grape seeds from controlled crosses have been planted in flats and started under greenhouse conditions about February 1. The seedlings were transplanted to gallon cans after three or four true leaves were formed. During May and early June, these seedlings have attained a length of from 12 to 16 inches, as indicated in Fig. 1-A. At this time, three to four buds from the basal part of the seedling shoot suitable for "T" budding can be obtained and are "T" budded into vigorous-growing shoots of rootstocks or bearing vines which have been growing in vineyard form. After the buds are inserted, they are securely wrapped with rubber grafting-tape. The budded shoots then are pinched off at the tip to check terminal growth. A week to 10 days later, the shoot is cut back to the bud, leaving some of the original leaves on the shoot to shade the bud. In practice, three and four buds are inserted in each shoot. If all buds start as shown in Fig. 1-B, the weaker ones are pinched back and the strongest allowed to grow. During the past season, 1,586 buds were inserted and 78.9 per cent of them grew. Shoots developing from these buds trained on wires have grown 6 to 12 feet by the end of the growing season. At pruning time, a cane 3 to 4 feet long can be left for the next season's fruiting wood, as shown in Fig. 1-C. At the Fresno station, ripe fruit has been picked in August, 18 months from the time the seeds were planted in the greenhouse flats. Fig. 1-D shows a cluster produced in this manner from selfed seeds of the variety Agadia.

There are some precautions necessary to obtain growth from a good percentage of the buds. Where excessive temperatures are encountered, it has been found necessary to provide some form of shade. Brush pruned from the vines at the time of budding has been placed across the trellis over the buds. Muslin shade cloth has also been stretched along the rows over the bud to afford partial shade. The shoots should be cut back at the proper time to force the small seedling buds into growth. Constant upright training has been found to promote rapid growth. The rubber grafting-tape must be cut if it does not break of its own accord.

A quick fruit-reading can be obtained by this method, gaining at least one year if not two over ordinary methods of propagating grape

seedlings. While the final commercial merits of a seedling can not be told by this method, many qualities such as color, shape, size, and flavor of fruit can be determined.

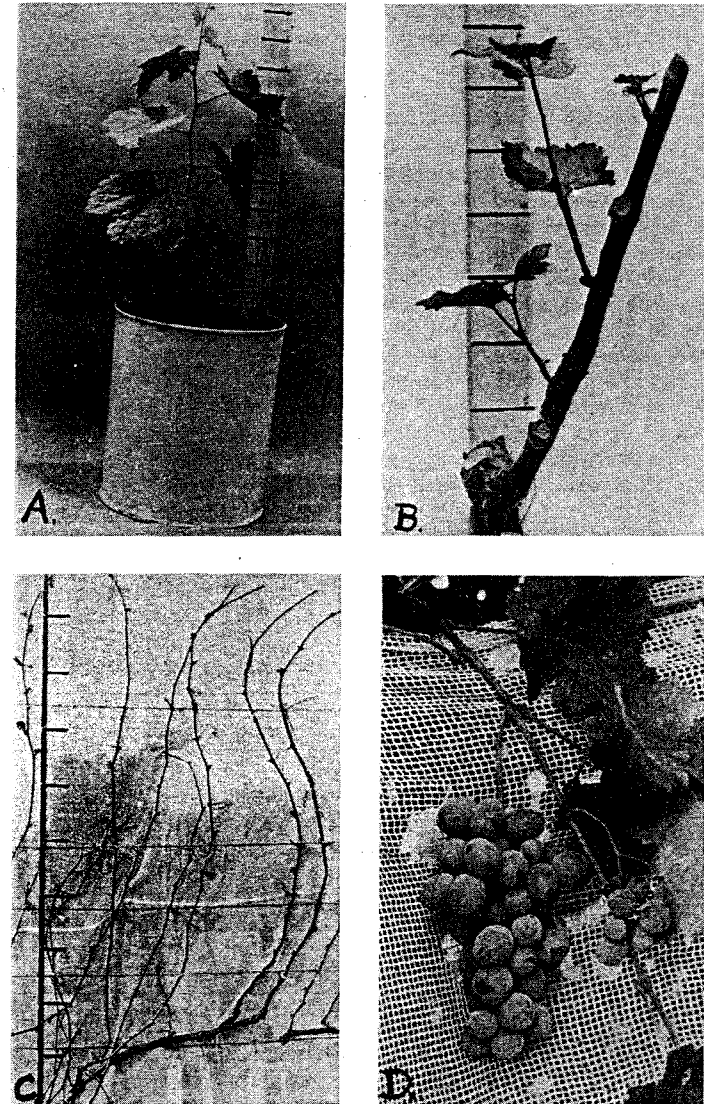


FIG. 1. A growth and fruiting of seedlings after "T"-budding on vigorous vines.