

ly just above the bud, thus throwing the growth to the bud. When the seedling is very large at the time of budding the top is sometimes "lopped" when the bud starts, by cutting it partially through. This helps to start the bud and at the same time leaves some top to support the roots (Fig. 12). The cut should be on the same side as the bud. After the bud shoot has grown 6 to 12 inches high, the old seedling top is entirely removed with a pair of sharp clippers, making the cut close to the bud. Lopping is seldom practiced in nurseries where normal seedlings are being budded but is sometimes used where seedlings that have remained too long in the nursery row are being worked.

As soon as the buds start to grow it will be necessary to put a stake at each tree and to tie the shoot to the stake from time to time with raffia or coarse string. The stakes may be of good heart pine or cypress $\frac{3}{4}$ to 1 inch square and 4 feet long, or they may be of heavy galvanized wire. Many nurserymen using wood stakes make it a practice to place the stake on the north side of the scion to protect it from the north winds. The best practice is to place the stake in the angle formed by the scion and the stock. The stake is close to the scion, making training easy, and the stake is kept out of the way of the cultivator. If the stake is placed on the opposite side of the stock from the bud, the scion will be bent in training. When the shoot is from 2 to 3 feet high, it is usually topped, thus starting the formation of a framework for the tree.

A large number of other methods of budding can be used but are not ordinarily necessary in citrus. Some of these, such as ring or patch budding, are particularly adapted to some trees that are budded with considerable difficulty and which will not respond readily to shield budding, but these methods are not used in citrus. Some variations of the shield bud are used in working stocks that are too hard or in utilizing budwood that is too angled to permit of the cutting of satisfactory shields of the usual type. Two of these methods are illustrated in Fig. 14. These two pictures represent types of what is called side budding and either of these methods will work sometimes on stocks that are too hard for the usual method of shield budding. Note in particular the shape of the bud shield with the bud eye on one side of the shield instead of in the center. This type of shield can be readily cut from very angular budwood. Except for the shape of the bud shield and the method of making the incision in the stock the procedure to be followed is the same as