is unfavorable to all of these dominant varieties, some other variety, old or new, may be grown for local markets; but the fruit may be at considerable disadvantage if it comes into competition in any market with fruit of one of these dominant varieties. For example, most of the varieties of deciduous fruit trees do not grow and fruit well in districts with winters as warm as some of those in parts of southern California and the southern states. By crossing good varieties with varieties that have especially short winter chilling requirements, one is apt to find among a number of seedlings obtained, a tree with a short chilling requirement that produces acceptable fruit. But, the chance that fruit from a variety propagated from such a seedling could compete in markets that receive fruit of well established varieties seems very small.

If a long-continued breeding program should produce a variety with such rare character as a short chilling requirement among apple or cherry varieties, coupled with the ability to economically produce fruit as good for the markets as that of our standard varieties, the breeder would be exceptionally lucky. The chilling requirements of some of the seedlings would be as great as that of either parent or greater; of some, as small as that of either parent or smaller; and of others, at all intermediate gradations. The market quality of some may be as poor as that of either parent or poorer. But the chance that one among thousands of seedlings will bear fruit with market quality as good as that of the best parent, and also have a short chilling requirement, is very small. In fruits such as the peach the difficulty may not be so great, especially if the chilling requirements of some good market varieties are only a little too great. Peach seedlings show more tendency than seedlings of most other orchard fruits to be like the parents. Some may have chilling requirements a little smaller than the parents, so that it may not be necessary for one parent to be of poor quality to give a shorter chilling requirement.

Many of our best fruit varieties came each from a wild seedling, but such a seedling is rare among the many that have been found. The fruit breeder will be the primary source of better market varieties in the future in spite of the difficulties. However, among the varieties they will introduce, as well as among those from wild seedlings, much the largest percentage will prove, after some decades of trial, to have weaknesses that make them unprofitable. In other words, a good market variety is a small but notable part of a species.

## Notes on New Peach Varieties

The new peach varieties Dixired, Dixigem, Southglobe, Redglobe, and Redskin have recently been receiving a great deal of attention. The first three have become important in Georgia and South Carolina. Redglobe and Redskin have shown promise in Maryland and nearby states.

These varieties have all been under test at the Michigan South Haven Experiment Station for several years. The fruits of Dixired have been too small, dark, and clingy. The flesh of Dixigem has been too soft. Southland and Redglobe are beautiful peaches, but the trees have been unproductive at South Haven. Its fruit buds are apparently tender to cold. Redskin may be valuable if fruits of good size can be produced.

These varieties are excellent examples of varieties doing well in that part of the country in which they originated, but not doing well under considerably different climatic conditions. —STANLEY JOHNSTON, *South Haven, Mich.*