

heavier soils, and little difficulty is experienced with this trouble in rough lemon roots on such soils.

There is a general opinion that it produces a quality of fruit somewhat inferior to that produced by sour orange, the rind being a little rougher and the texture a little coarser. There is no question but that this attitude is accentuated considerably by the fact that the rough lemon has been used extensively on very sandy soils, which soils naturally tend to produce a coarser and drier fruit. There are several groves on rough lemon stock on heavier soils that have a reputation for the high quality of fruit produced. In all cases these are groves of considerable age, and observations would indicate that the quality of fruit produced by trees budded on rough lemon stock improves as the trees become older. The coarseness of fruit on young trees is probably in part due to the very vigorous growth of the trees when budded on this stock. The effect of the stock seems to be less apparent in grapefruit budded on rough lemon and most apparent in tangerines, Temple oranges, and early oranges. The rough lemon seedlings are less resistant to cold than sour orange seedlings and trees budded on rough lemon stock seem to flush a little quicker with the advent of warm weather than do trees budded on sour orange.

Generally speaking, the chief advantage possessed by the rough lemon stock is the rapidity with which it will produce a tree, particularly on light soil. It is probably not to be recommended for the heavier soils upon which sour orange is a satisfactory rootstock.

#### THE TRIFOLIATE ORANGE

The trifoliolate orange (*Poncirus trifoliata* Raf.) is used chiefly as the rootstock for satsuma oranges and kumquats. It is deciduous and highly resistant to cold. The seedling trees of this species are very thorny, and are relatively slow growers. The addition of the evergreen top by budding, however, appears to increase the vigor of the root system. In spite of this, however, there is usually some stunting of the top. Outside of the northern portion of the state where it is used extensively for satsumas on account of the cold hazard it is very little used except as a stock for kumquats, though some of the old groves have other varieties budded on it. Generally speaking, it is probably much better adapted to the northern section of Florida than to the central and southern sections. Fruit from trees budded on this