

Since the peach does not heal over large wounds readily, it is unwise to use limbs much over two inches in diameter for topworking. The branches, however, may be cut back and the new variety budded into the shoots that grow from near the stubs.

#### LAYING OUT AND PLANTING THE PEACH ORCHARD

Preparation for planting the peach orchard may consist of clearing and leveling the land, establishing the irrigation and drainage systems, and properly tilling the soil.

*Leveling the Land and Establishing the Irrigation System.*—Most peach trees in California require irrigation. Hence, the preparation of the land before planting becomes of importance. Poorly leveled land results in uneven irrigation, excessive use of water, greater labor costs, and frequently in too much water, resulting in a rise of the water table with possible consequent alkali injury.

It is not generally practical to make marked changes in the original grade of the land, but advantage can be taken of the most desirable slope in laying out the irrigation system. If the trees are to be watered in basins or checks, flat grades or slopes can be utilized. At present, laying the checks according to contour seems to be the desirable practice.<sup>6</sup> Local soil conditions must be taken into consideration.

A contour or topographical survey will indicate the leveling necessary. The land should preferably not be scraped so deep as to result in infertile spots, which prevent the best growth of the trees.

Some grain lands have been repeatedly plowed at the same depth and a hard layer of soil has resulted from the compacting of the soil particles by the plow. This plow-sole or plow-pan should be broken up before planting to allow water to penetrate freely. By changing the depth of plowing each year and by avoiding plowing when the soil is too wet, the trouble may be prevented.

*Irrigation Water.*—In case the water comes from the outside, the grower should be assured of a regular supply when needed. The irrigation system and pumping plant, if the orchard is not in a gravity water district, should preferably be installed previous to planting. Before planting the grower ought to ascertain whether his acreage will warrant the expense of a pumping plant, or whether he can sell sufficient water to neighbors, after meeting the needs of his own orchard, to justify the investment.<sup>7</sup> The water should be free from an excess of alkali salts.

<sup>6</sup> Huberty, M. R. and J. B. Brown. Irrigation of orchards by contour furrows. California Agr. Ext. Cir. 16:1-16. 1928.

<sup>7</sup> Johnston, C. N. Principles governing the choice, operation and care of small irrigation pumping plants. California Agr. Exp. Sta. Cir. 312:1-28. 1928.