

Adding Organic Matter.—Much of the land in California that is used for peach growing is light in texture and located where summer temperatures are high. Under these conditions the humus in the soil is quickly exhausted. Lands that have been growing grain, or old orchard lands, are usually low in humus. When such conditions exist, the incorporation of barnyard manure or the plowing under of a green manure crop may be a part of the orchard preparation.

Laying out the Orchard.—The first step in laying out the orchard is to establish the boundaries. If the field is square or rectangular and one side has been determined, the other sides may be established by laying them off at right angles to each other.

The second step is staking out the orchard to the planting system to be used, and thus to establish the location of the trees. This frequently is done by use of a long planting wire with buttons at the planting interval. The usual planting system is where the trees are planted in squares, generally 22 to 24 feet apart.^s

To determine the number of trees to the acre in the 'square system,' multiply the distance between the trees in the row by the distance between the rows and divide this product into the number of square feet in an acre (43,560 square feet).

The contour system of planting is adapted to land that is too steep and broken to use the square system.

Orchard Fillers and Interplanting.—Because of its early bearing habit the peach is sometimes used as a filler between other orchard trees, such as the walnut, which is slower to come into bearing. The fillers must be removed as soon as the permanent trees need the space.

In a peach orchard it may be desirable to grow crops between the trees as a source of income before they begin bearing. Melons, beans, peas, cabbage, tomatoes, spinach, cauliflower, onions, beets, lettuce and other cultivated crops are used for interplanting. Some of these are grown during the winter months and others during the summer months. It is well to leave a cultivated strip of about five feet on each side of the trees to lessen competition with the trees. In sandy and sandy loam soils such intercropping may be dangerous because of the possible introduction of, or increase, in nematodes.

Pollinators.—Commercial varieties of peaches are ordinarily self-fertile and set good crops without special provision for cross-pollination. There is evidence, however, that the J. H. Hale is self-sterile bearing no viable pollen and hence should not be planted alone. Experience seems to indicate that any of the other commercial varieties will pollinate the J. H. Hale.

^s Allen, F. W. Planting and thinning distances for deciduous fruit trees. California Agr. Exp. Sta. Bul. 414:1-29. 1926.