Orchards and vineyards occupy about 3 million acres, or 1 percent of the land used for crops in the 50 States (Table 1). In 1965, farm value of the 18 principal fruits and planted nut crops listed in Table 1 totaled 1.5 billion dollars, comprising 7 percent of the total farm value of the 79 principal crops in the USA. Farm value (gross receipts) of orchard and vineyard crops is on the order of $500/acre. In good years the value for some crops may be more than five times that per acre. Thus the relatively small proportion of land devoted to these crops contributes significantly to the economic value of the nation’s agricultural production.

With high gross returns in prospect, fruit and nut growers have not hesitated to exploit relatively infertile but otherwise favorable orchard sites through liberal application of fertilizers. Nearly all tree fruits and nut crops receive nitrogen fertilizers. Many receive zinc, potash, magnesium, and manganese. The standard Florida citrus and California walnut recommendations provide for the use of 12 of the essential elements in the fertilizer program, although in most orchards only a few of these need to be applied every year.

Soil fertility is not necessarily the primary consideration in orchard site selection. The major USA citrus industry is located in peninsular Florida, primarily on very infertile soils.

Soil physical conditions and climate are more important than native soil fertility. All orchard crops require good soil drainage for deep root penetration and most do well only where the water table remains 4 feet or more below the surface of the soil at all times.

Temperature requirements of fruit trees are most critical. Citrus trees must be located in areas where the temperature seldom falls below 22°F, thus restricting citrus primarily to small areas of Florida, California, and Texas.