

nutrients in insoluble form, making special fertilizer management practices necessary for these soils. Fertilizer recommendations for the calcareous soils, especially the marl and Rockdale of Dade County, are lower than other mineral soils mainly because of reduced plant growth on the high pH soil. The reduced plant growth results from a variety of reasons, including the high fertilizer-fixing capacity of both soils and the shallowness of the marl and Rockdale soil. Also, these soils, occurring in southern Florida, are used for winter vegetable production. The short days and reduced sunlight intensity during winter also contribute to reduced plant growth. Based on soil particle size, calcareous soils can be divided into two groups:

1. **Marl soil.** This calcareous soil consists of fine, clay size particles of a narrow size range.
2. **Rockdale soil.** This calcareous soil is composed of particles of a very wide range in size. The soil is very shallow and made of approximately one-fourth rock (Fig. 4).

Organic soils. These soils include the peat and muck soils, which are composed largely of organic matter (Fig. 5). As these soils oxidize, large amounts of nitrogen are provided to the crop. Therefore, additional fertilizer nitrogen is not required except on winter crops growing under cool conditions.

Soil testing

There are 16 elements (C, H, O, P, K, N, S, Ca, Fe, Mg, B, Mn, Cu, Zn, Mo, Cl) required by for optimum growth and yield. The soil itself can supply many of these nutrients in abundance for crop growth. Soil testing is used to determine which nutrients and in



Figure 3. Tomatoes growing on seep-irrigated soil in Collier County.

what amounts can be supplied from the soil. By using soil testing, the amount of fertilizer to add to supplement the nutrient-supplying capacity of the soil can be determined.

To receive the most benefit from soil testing, carefully collect quality soil samples and have them analyzed by a competent soil testing laboratory. Different laboratories use different methodologies to



Figure 4. Snapbeans growing in the Rockdale soils of Dade County.

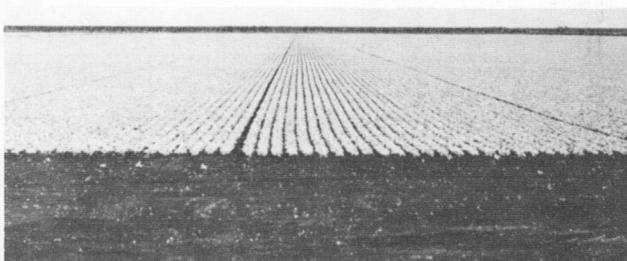


Figure 5. Radish production on muck soil in the Belle Glade area of Palm Beach County.