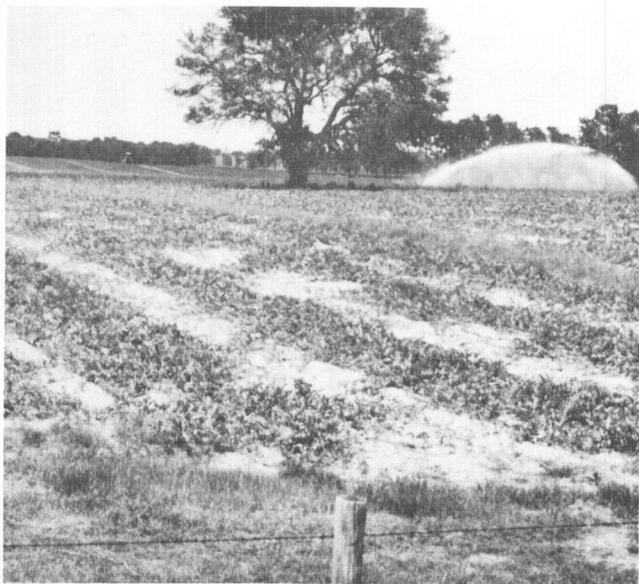


**Liquid fertilizer** — Fertilizer nutrients supplied in true solution.

**Micronutrients** — Essential plant nutrients required in small quantities. The micronutrients are iron, boron, chlorine, copper, manganese, zinc, and molybdenum. In most cases there is a fine line between sufficient amounts and toxic amounts of these nutrients.



**Figure 2.** Watermelons growing on overhead-irrigated sandy soils in Sumter County.

**Placement** — Location of the fertilizer in the soil relative to the plant or seed.

**Primary nutrients** — The term used by the fertilizer trade for nitrogen, phosphorus, and potassium.

**Secondary nutrients** — The term used by the fertilizer trade for calcium, magnesium, and sulfur.

**Sidedress** — Application of fertilizer after the crop is planted.

**Soil reaction or pH** — A measure of the acidity or alkalinity of the soil. The pH is defined as the negative logarithm of the hydronium ion concentration. A pH of 7 is neutral; above 7 is alkaline and below 7 is acidic.

**Source** — The kind or origin of the fertilizer nutrients. For example, sources of nitrogen include urea, ammonium nitrate, ammonium sulfate, potassium nitrate, chicken manure, and sludge. The source is sometimes important when deciding how to supply plant nutrients to a vegetable crop.

**Split application** — The required fertilizer amount applied in two or more portions during the growth cycle.

**Supplemental application** — Fertilizer (in addition to the fertilizer portion of the crop nutrient requirements) applied to a crop during the growing season. The use and number of supplemental applications depends largely on the intensity and duration of rainfall and the length of the cropping season.

**Suspension fertilizer** — A fluid mixture containing dissolved and undissolved nutrient materials and inert materials often requiring continuous mechanical agitation.

**Timing** — Coordination of the time periods during the crop growth cycle when the fertilizer is to be applied; for example, pre-plant, at-planting, etc.

**Unit** — One percent (1%) of a ton, i.e. 20 pounds. A term used by the fertilizer industry to refer to amounts of fertilizer nutrients. Do not confuse “units per ton” with “pounds per acre.” Growers should only be concerned with pounds per acre. Be sure that the fertilizer material purchased can supply the needed amounts of nutrients in pounds per acre.

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## Soils

Florida vegetables are produced successfully on a wide array of soil types. For the purposes of simplifying fertilizer recommendations, soils are placed in three categories: mineral soils, organic soils, and calcareous soils.

**Irrigated mineral soils.** This group includes sands, sandy loams, and loamy sands, which require a dependable moisture supply from rains and irrigation (Figs. 2 and 3). Also included in this group for fertilizer recommendations are the sandy muck soils. Because of their sandy nature, the above soil types require careful management of irrigation and fertilizer programs to ensure maximum yields. The sandy mucks, because of their higher organic matter content, require less nitrogen than other mineral soils.

**Calcareous soils.** These soils are composed largely of calcareous marine deposits and have a pH in the range of 7.5 to 8.5. The high pH fixes many plant