

## CULTURAL AND FERTILIZER PRACTICES

Preparation of the seedbed and cultivation of the crops were such as to preclude, as far as possible, mixing of soil of the various plots.

The customary system of cultivation used with sweetpotatoes and corn in Florida was followed. The sweetpotatoes were planted and grown on low beds. The corn was planted slightly below the level and given shallow, level cultivation.

The cover crops, except the volunteer growth, were planted in the spring and none were fertilized. All plots were prepared by thoroughly disking each spring, whether they were to grow volunteer or planted cover. The beggarweed and *Crotalaria striata* were planted broadcast and the cowpeas and velvet beans were planted thickly in 2½-foot rows. Every care was taken to insure a perfect stand and good growth of the crops. The beggarweed was inoculated, but even so its yields usually were light, since this crop is poorly adapted to deep Norfolk sand. None of the other leguminous crops required artificial inoculation.

Two 64 square foot areas were harvested from each cover crop plot each fall when the crop had reached maximum growth. Green weights of the top growth of cover crops from these areas were recorded. Dry weight determinations were made on sub-samples of the plant materials and yields were computed in pounds of dry matter (8% moisture) per acre.

Cuban Flint corn and Porto Rican sweetpotato draws were used in the experiment. These crops were planted each year in March and June, respectively. Both the corn and sweetpotatoes were fertilized with 600 pounds per acre of a 4-8-4 ( $\text{NH}_3\text{—P}_2\text{O}_5\text{—K}_2\text{O}$ ) fertilizer made from nitrate of soda, superphosphate and muriate of potash. One-half of the nitrogen of this fertilizer was withheld for side-dressing. The corn was side-dressed with nitrate of soda 45 to 50 days after planting, and the sweetpotatoes after vine growth started.

It may be noted from Figure 1 that each year, except the first, duplicate plots of corn and sweetpotatoes followed each of the planted cover crops, and triplicate plots of corn and sweetpotatoes followed the volunteer cover crops. The first year corn and sweetpotatoes followed a volunteer cover crop consisting mainly of "Florida pusley" on all plots. The entire plot (1/30 acre) of sweetpotatoes was harvested and weighed upon reaching maturity. The yield of potatoes was calculated