THE IMPORTANCE OF PEANUTS LEFT IN THE SOIL IN THE
INTERPRETATION OF INCREASES IN YIELD DUE TO
SULFUR TREATMENTS

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SEVERAL workers in various states have reported (2, 5, 6, 7, 9, 12, 17, 18) that the yields of peanuts have been increased by the use of sprays and sulfur dust. Others (4, 16) have pointed out that the results of fertilizer and other experiments with peanuts are frequently inconsistent, with a wide variation in response. Such variation might be due to several factors. For example, any treatment that would influence the date of maturity or diseases of the foliage or pegs probably would have an effect on the amount of nuts produced and left in the soil at harvest. For this reason it is necessary to have complete yield data before the results of a treatment can be properly evaluated. Some preliminary experiments with sulfur treatments of peanuts as related to yields have been conducted at Gainesville, Fla. The purpose of this publication is to give a summary of the results and to use some of them to illustrate how important the peanuts left in the soil during the digging process are to the interpretation of the results.

This report deals with seven experiments conducted during 1944 with a total of 420 plots. The sulfur treatments, with the exception of one experiment, were in conjunction with various fertilizer treatments. Only the effects of sulfur will be discussed in this paper.

OUTLINE OF EXPERIMENTS

EXPERIMENTS I, 2, AND 3

Florida Runner peanuts were planted April 20 on Norfolk fine sand which had been in peanuts the previous year. Peanuts following peanuts is not a good practice, but that system was a part of the fertility phase of these experiments. The pH value of the soil was 5.6 to 5.8 and a modification of the Morgan (8) rapid soil test indicated that calcium, magnesium, and potash were low and phosphorus between low and medium.

Experiment 1 dealt with 15 fertilizer ratios, experiment 2 with 6 placements of a 2-10-4 fertilizer at 300 pounds per acre, and experiment 3 with 5 combinations of lime, magnesium, and sulfur used in connection with 500 pounds per acre of a 2-16-10 fertilizer.

Sulfur dust (325-mesh) was applied in strips by machinery across the fertilizer plots in the above three experiments. This formed dusted and nondusted sub-blocks composed of four-row plots 12 X 50 feet. The dust treatment in experiment 1 was duplicated and triplicated in experiments 2 and 3. Sulfur dust was applied in three applications, June 16, June 29, and July 13, at approximately 20 pounds per acre per dusting. The peanuts were harvested September 7 and 8. Lime seemed to hasten maturity and some of the nondusted plots in experiment 3 probably should have been harvested sooner.

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3Figures in parenthesis refer to "Literature Cited", p. 694.