## LIME EXPERIMENT

The lime experiment was a randomized block design with four replications and four rates of lime on a three-year rotation. The rates of application were 0, 2,000, 4,000 and 6,000 pounds of dolomitic lime per acre, applied once at the beginning of the experiment. The crops in the three-year rotation were the same as those for the fertilizer experiment. Each crop was grown every year as previously explained.

At planting time corn and oats for grain received 500 pounds per acre of 2-10-8 fertilizer. Corn was top-dressed with 32 pounds per acre of nitrogen from Uramon and oats with 32 pounds from nitrate of soda. Oats turned under received annual applications of 500 pounds of 2-10-8 per acre. Peanuts were fertilized with 400 pounds of 2-10-4 per acre the first three years and 500 pounds of 2-10-8 fertilizer the last two years of the test. Bitter blue lupine and *Crotalaria spectabilis* received annually 300 pounds per acre of 0-14-10 fertilizer.

**Corn.**—Lime gave a slight increase in the yield of corn (Table 12), but the increase was not significant, except when 4,000 pounds per acre in 1950 and 6,000 pounds per acre in 1949 produced significant increases over no lime. In 1948 and 1951 lime at 2,000 pounds per acre gave almost significant increases.

TABLE 12.—YIELDS OF CORN WITH VARIOUS RATES OF LIME.

| Dolomitic Lime—Pounds per Acre | Yield of Corn—Bushels per Acre | | | | |
|---|---|---|---|---|---|
| | 1947 | 1948 | 1949 | 1950 | 1951 |
| 0 | 39.3 | 41.4 | 78.2 | 98.5 | 69.4 |
| 2,000 | 41.4 | 45.3 | 81.9 | 100.8 | 74.3 |
| 4,000 | 41.5 | 42.2 | 82.4 | 105.2 | 69.2 |
| 6,000 | 40.1 | 43.6 | 84.7 | 103.2 | 70.9 |
| L. S. D. (.05) | Not sig. | Not sig. | 6.1 | 4.5 | Not sig. |

Florida W-1 hybrid corn was planted the first two years and Dixie 18 hybrid corn the last three years.

**Peanuts.**—Yields of peanuts in the lime test are presented in Table 13. Lime gave a significant increase in yield for the first year, probably because of calcium nutrition. Since the lime was applied at planting time, it did not have time to change the pH of the soil much during the first growing season. After the lime had been in the soil over a year the pH increased considerably (Table 14). The increase in pH above 6.48 and the