

Dixie runner peanuts were used throughout the experiment. All corn received 10 pounds of zinc sulphate per acre annually. Peanuts in all experiments were dusted each season with 60 to 80 pounds of elemental sulfur-DDT mixture per acre.

The lupine, crotalaria and, in some of the cropping systems, oats were turned under for green manure. Corn was harvested and stalks turned under. Both peanuts and vines were removed from the land.

For the years 1947 to 1950, inclusive, the peanuts were dug when they were ready, so that the loss in the ground was small and was not measured. In 1951, excessive rain rotted the pegs and many peanuts were left in the ground. These nuts were scratched out of the ground by hand, dried, weighed, and included in the yields.

The fertilizer used in all experiments was made from Uramon (42 percent N), superphosphate (18%  $P_2O_5$ ), and muriate of potash (60 percent  $K_2O$ ).

### ROTATION EXPERIMENT

The rotation experiment consisted of six continuous<sup>2</sup> crops, three two-year rotations and two three-year rotations. A list of continuous crops and rotations appears with the yield data in Tables 1 and 2. Each crop in the two- and three-year rotations was grown every year. This was accomplished by alternating the two-year rotations between two series of plots and the three-year rotations among three series of plots.

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 the first three years and no fertilizer the last year. Native cover turned under was not fertilized. Peanuts were fertilized with 400 pounds of 2-10-4 per acre for 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 300 pounds per acre of 0-14-10 the first three years, but no fertilizer during the last two years. Plowing was done with a pick-up disk harrow the last four years. During the first two years, the direction of plowing was clockwise around each block; it

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<sup>2</sup> In this bulletin the term "continuous" crop refers to a crop replanted on the same area in successive seasons.