

before planting to sterilize the seed and to make planting easier.

When the plants were five or six inches high they were chopped to a stand, and side-dressed with nitrate of soda at the rate of 100 pounds per acre. The plants were then counted at weekly intervals until just before blooming time, the percentage of wilt being recorded on each count. At this time the plants were pulled up and cut in order to get a final accurate count of the wilt-infected plants and as a check on the preceding counts. On account of the fact that breeding work with another variety of cotton was being conducted in the same field it was necessary to remove the Trice plants to prevent cross-pollination, consequently no records on comparative yields were available, but in view of the high percentages of infection and killing in all the plots this was considered a minor point.

FIRST FIELD TEST

On March 28, 1928, the fertilizer was put down in the five plots and the seed planted. The general field fertilizer, containing 5% potash, was put down in Plot 1 as a check. In Plot 2 the proportion of potash was raised to 7½%, by the addition of sulphate of potash; in Plot 3, to 10%; in Plot 4, to 12½%; and in Plot 5, to 15%. On May 12 the plants were chopped to a stand and three days later a side-dressing of nitrate of soda was applied. Counts were begun on May 24 and were made at approximately weekly intervals until June 26, when the plants were pulled up and cut to note the blackening of the vasculars.

In Table I the results of these counts are set forth with the percentage of wilt found in each plot. At the bottom of the table for each plot is given an average percentage of wilt for the season which was obtained by considering all plants that died as being infected by wilt, totalling them with the wilt plants found at the end of the season, and computing the percentage on the basis of the total plants at the beginning of the season. Since the counts were started after the plants were out of danger from damping-off by *Rhizoctonia*, and since there was no other factor to which much killing could be attributed, this percentage is considered rough but legitimate. It is, however, thought that there was possibly some killing from some other cause in this first test, since the percentages of total killing are generally somewhat higher than in subsequent trials, though this might possibly be considered as an evidence of the cumulative effect of the potash treat-