SOME DETERMINATIONS OF PLAT VARIABILITY

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I. PRELIMINARY TESTS OF LAND FOR EXPERIMENTAL USES

Early in the spring of 1925, the Arkansas Experiment Station purchased an adjoining 100 acres for experimental purposes. The part that was assigned to the Agronomy Department was laid off in sections 138 feet by 800 feet. The actual experimental area was to be twenty-four 1/10-acre plats 33 feet by 132 feet, without alleys. No experiments were planned for several of these sections and they were cropped in oats and corn to determine variability of the soil. Fulghum oats and Paymaster corn (our better varieties) were used in this test.

No fertilizers were used on oats, but the corn land had an application of stockyard manure. At harvest time the oat sections were staked off into 1/10-acre plats, the ends squared, and the oats harvested by plats. The yields are shown in Table 1. The corn was harvested by rows or one-half rows, each weighed separately. The results from one section were combined in various ways to study the effect of size and shape of plat on experimental error. The yields by one-half rows are given in Table 2 and by 1/10 acres (adjacent and distributed rows) in Table 1. Table 1 also gives the mean yield of the

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