SOME CHARACTERISTICS OF AN ERODED SOIL

G. W. Musgrave and Henry Dunlavy

It is generally recognized in the black waxy belt of Texas that soil erosion is accompanied by decline in crop yields. At Temple, during the 1930 season, an artificially eroded plat produced but one-eighth as much cotton as adjoining uneroded plats. It is also a matter of common knowledge, though perhaps less generally recognized, that the tillage practices commonly followed by farmers in the production of cotton, corn, sorghum, and other row crops encourage erosion. The greater losses of soil and of surface water as runoff from land growing row-spaced crops in contrast to those growing grasses, clover, or small grain have been shown by several workers.

The purpose of the present study was to determine the more important effects of the common practice of growing cotton continuously and of the accompanying soil erosion upon some of the physical properties of the soil.

METHODS

For this purpose an area was chosen for study which has a slight fall and a slight but gradually increasing amount of erosion extending in one direction across the field. It is 1 acre in size and is normally planted in 110 rows which run across or at right angles to the direction of slope. The area represents one of the Texas Blacklands Sub-station acre plats, and was devoted to a cotton variety test during the season these data were collected. In this test every third