SOME OF THE INFLUENCES OF SOILS UPON FARMING IN SOUTHWESTERN OKLAHOMA

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This article attempts to describe the effects of soils upon farming in Southwestern Oklahoma according to our observation in the field in soil survey work. It covers only a few counties of Southwestern Oklahoma; namely those of Greer, Kiowa, Tillman, Jackson, and Harmon. However, it is hoped that it may serve to increase an interest in continuing the study of soils and agriculture in this part of the state.

In Southwestern Oklahoma the climate is practically the same over the area embraced by these counties. The annual rainfall averages between 25 and 30 inches and most of this falls during the growing season. The summers are very warm and periods of dry weather accompanied with a temperature of 100 degrees fahrenheit or more commonly occur in July and August. The average temperature for the summer is about 81 degrees fahrenheit and for the winter about 62.

Farming is developed over a large variety of soil conditions. According to soil surveys of a few counties in southwestern Oklahoma, the area is embraced by a large number of soil types. Although with the large number of soil types in the area, there are only a few distinct types of farming that can be easily identified. Among many of the soil types there is practically the same type of farming, but it is possible that most of these types may have some kind of influence upon farming which will be discovered after a more thorough study.

The soils, on which the different types of farming are most easily recognized, differ widely in character. They are divided into three groups. One group includes all of the sandy soils and the second group embraces all of the soil types, ranging from a very fine sandy loam to a clay loam. The third soil group consists of soils with a shallow surface which is severely eroded. In the accompanying map the first soil group is represented as the sandy soil and the second group as the clay loam soils. The third soil group is confined to the area as shown on the map, as the area of the Rough Broken lands.

The clay loam soil is the most extensive group in southwestern Oklahoma. It embraces most of Kiowa county and about one half of Tillman county. In Greer county it is confined to small areas in different sections of the county. The sandy soils occupy about one half of Tillman county, forming a belt bordering the southern and western edge. In Kiowa county there is a narrow belt of sandy soils along the western edge and a small area in the northeastern corner. In Greer county about one third of the area is of sandy soils and is confined chiefly to slopes and ridges. The surface soil is between two and three inches deep and beneath it is a heavy clay subsoil which is very plastic and sticky when wet or very hard when dry. Continuing downward the subsoil is fairly uniform to slopes and ridges. The surface soil is between 4 to 6 inches deep and beneath it is a heavy clay subsoil which is very plastic and sticky when wet or very hard when dry. Continuing downward the subsoil is fairly uniform to slopes and ridges.

The clay loam soils range from silt to a clay loam texture. They are either a reddish brown or black depending upon their environment. The dark reddish brown soil occurs where the surface is nearly level and sloping, while the more reddish colored soils are in slopes and ridges. The surface soil is between two and three inches deep and beneath it is a heavy clay subsoil which is very plastic and sticky when wet or very hard when dry. Continuing downward the subsoil is fairly uniform to slopes and ridges.

Map of the principal soil types that are related to the different types of farming in southwestern Oklahoma.