SOIL OBSERVATIONS ON SOILS DEVELOPED FROM LOESS IN NORTHEASTERN NEBRASKA

By F. A. Hayes

Soil Surveys of several counties were made in northeastern Nebraska between 1914 and 1922. In the earlier surveys of this period parent materials were considered to be of primary importance in determining the soil characteristics and as elsewhere in the United States no special emphasis was placed on those characteristics resulting from the climatic, vegetative and topographic environments under which the soils had developed.

With increasing knowledge concerning the morphology and genesis of the soils in northeastern Nebraska, profile features not emphasized in the earlier surveys were found to be of major significance in soil mapping and were recognized in the later ones.

The recognition of soil features not emphasized in the earlier surveys prevented uniformity in soil mapping. Detailed studies of the soils throughout northeastern Nebraska were therefore begun in order to ascertain the fundamental characteristics of these soils and to establish a comprehensive basis for their correlation.

The studies were started in 1928 by state and federal soil men in connection with the soil survey of selected counties and under the direction of the Soil Survey Division of the Nebraska Conservation and Survey Department. The investigations have already been of considerable value in determining the more persistent and important features of the soils, the relationships between the soils and the topography, and the content, character and mode of distribution of lime in the soil profiles.

The studies are not completed and the material presented in this article is merely intended as a progress report on soil survey investigations in Nebraska.

Description of Area Studied.

Location. The studies were largely confined to an area west and south of the Missouri River bluffs, east of the sandy lands bordering the eastern edge of the Sand Hill region and north of the Platte River alluvial lands. This area occupies over 6,000 square miles and includes all or parts of 17 counties. It roughly conforms to the physiographic region known as the "Loess Hills" by the Nebraska geologists.