Reconnaissance Soil Survey of Japan

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This paper is a report on a reconnaissance soil survey now in progress in Japan recently under the supervision of the writer. This survey is the first of its kind to be made in Japan using modern soil survey methods for classifying and mapping soils in terms of their morphological features. Because of the nature of the survey, only associations of soils are shown on the soil map.

The reconnaissance soil survey was started because modern soil maps of Japan were not available which could be used as an aid in maximizing food production. Japan has produced only 80 to 85% of her annual food requirements during the past 20 years and because of the food shortage in Japan and the world as a whole, a maintenance or increase of food production now is of particular importance. Japanese soil maps now available have been made according to the old geological method of soil surveying similar to that used initially in the United States. Furthermore, these maps are in the Japanese language which limits their use not only to the Japanese, but to those Japanese who are well trained in the Japanese language. Because of the many and varied intricate characters common to the written Japanese language, only those who constantly use the ideographs in a given field of science can readily and accurately read them. Aside from the more immediate usefulness of this survey, soils information will be available so that the soils of Japan can be compared with each other as well as with soils found in other parts of the world.

Field surveys of the Kanto Plain area near Tokyo and the island of Kyushu have been completed (Fig. 1). Areas in progress include the islands of Hokkaido and Shikoku and the Osaka Plain on the main island of Honshu. A soil map printed in color and a report in outline similar to that of the Soil Survey Division, Bureau of Plant Industry, Soils, and Agricultural Engineering, U. S. Dept. of Agriculture, is to be published for each area surveyed.

Several sources of data are used in preparation of the map and report. Much of the information is obtained by field observation of the soils. Most of the main roads are traversed, as well as many of the secondary and local roads. Air photos are used to some extent, but their use is of limited value in a reconnaissance soil survey. Japanese soil and geological maps are an important source of information. Army Map Service 1:50,000 topographic maps based on Imperial Geological Survey maps are used as field sheets. Data from the field sheets are transferred and printed in color on Army Map Service 1:250,000 topographic maps. Arrangements have been made with the Soils Departments of the Imperial Universities to make physical and chemical determinations on soil samples taken in the field during the course of the survey. Some soil samples have been sent to the Soil Survey Division for analysis.

A rather small scale map for delineating the soil groups was chosen because the survey was a generalized one. It has been possible to do a limited amount of field work. It is intended to be an inventory of the soil resources of the area and is suited to planning soil uses and soil research in broad areas. It is emphasized that the map units are not definable as soil types, phases, or series, but they are homogeneous in character. The units are specifically, associations of soils made up of types of soil, one to several series, and generally, or more great soil groups. Each unit, however, within a definite kind of landscape, and the proportion of different soils varies within the limits among different areas of the same classification. The soil name selected for the classification is

LEGEND

ELEVATION IN FEET

\[0 \text{ TO } 600\]
\[600 \text{ TO } 3000\]
\[3000 \text{ AND OVER}\]

FIG. 1.—Relief of Japan.