NOTES

COMPARATIVE SOIL TESTS

RAPID chemical soil tests have long been considered by agronomists to be potentially useful for obtaining some idea regarding the nutrient status of soil. The degree to which such tests have been helpful in field work has varied with kind of soil, with local conditions, and with the experience of the agriculturist using the test. By the late 'thirties, interest in these tests was sufficiently widespread to justify a collaborative study of soil testing methods and such a program was accordingly sponsored by the American Society of Agronomy (2)¹ and by other organizations.

Staff members of 14 State experiment stations furnished a group of 31 soils used for the test and these 14 stations, together with other institutions, took part in the collaborative work. M. F. Morgan of the Connecticut Agricultural Experiment Station acted as Chairman of the committee in charge of the testing program, known as the Soil Testing Committee, and M. S. Anderson of the former Bureau of Chemistry and Soils, U. S. Dept. of Agriculture, took charge of the soil samples and received from each collaborator a copy of the results sent to the Chairman. Use has been made of these soil samples by a considerable number of organizations, particularly in the eastern part of the United States. A brief description of the soils and their characteristics was published in a bulletin of this Department (1). The data received from collaborators were summarized by Morgan in a mimeographed report (3).

Each collaborator used the methods currently employed in his laboratory. This led to the use of widely varied extractants and to wide variations in other features of the tests. Some collaborators used weak solutions of strong acids; others used concentrated solutions of weak acids or their salts. Results obtained with these two widely different groups of extractants were considered separately in Morgan's report. This report rates the results of the various collaborators on a relative scale of zero to 10. In order to have a value of 10 the constituent of a soil must be voted highest by all collaborators.

The original collaborative study did not include Neubauer tests, but such determinations have been made with facilities recently provided by this Division. The work of the Soil Testing Committee was officially closed several years ago, but the soil samples are still in the hands of the original custodian. The main interest in Neubauer data probably will lie in its relation to the relative productivity estimates made by those who selected and collected the soils. There

¹Figures in parenthesis refer to "Literature Cited", p. 158.