REPORT OF THE HORIZON CRITERIA COMMITTEE

The plan of presenting a series of papers to bring out the principal morphological features of the major soil groups in North America which the Horizon Criteria Committee has been following was temporarily abandoned, this year. The Reddish yellow, Red and Lateritic soil groups were scheduled to be discussed, and because the meeting was being held in the middle west, the Committee believed that the unfavorable economic condition in the country would keep many who are interested in these soil groups from attending. If the meeting is held in Washington next year, undoubtedly it will draw a larger attendance from the region where these soils exist.

The papers that have been presented this year were planned as a contribution of the study of maturity in soil profile development. One purpose of the organization of this Committee was to determine the characteristics in soils that could most satisfactorily serve as a basis of differentiating soil profiles into units. To do this it is necessary to know which of the soil characters are fully developed, subject to little or no change under their prevailing environment, and which of the soil characters are only partially or incompletely developed. For example, the incomplete developed zone of compaction in a youthful soil should not be used as a basis soil feature in any grouping which includes a fully developed zone of compaction in a mature soil, because the two features are of different magnitude. In a comparison of animals for classification purposes, the features of the youth of one species are not likened to those of the mature of another species, and it is just as absurd to compare the characteristics of youthful soil profiles of one type with the features of a mature profile of another type.

A mature soil is one whose characteristics express the completed action of the prevailing environmental forces, or whose features are in equilibrium with the prevailing environmental conditions. The definition is clear but unfortunately it is given different interpretations. A soil having the greatest number and the most definitely expressed features of any soil in a given environment has often been considered a mature soil. This interpretation is correct in regions where the environmental factors completely dominate the parent material features, but in many regions and the glaciated province of this country is a good example such is not the case. The papers presented on this program have furnished ample evidence that the weathering forces are still making rapid changes in the characteristics of the soils developing in the middle west.

The discussion has pointed out a great number of factors which must be considered in a study of soil profile maturity. Among these factors are physical, chemical, and combined physical and chemical characteristics, each of which shows in some degree maturity. There is still much to be learned about the true maturity features of the soils in each environmental area. The committee has no definite recommendations, but asks that in using the word mature in soil profile discussions that care be observed to define exactly what is meant. If the definition is properly interpreted there will be no misunderstanding.

This committee has made very little active progress on its assignment of determining the characteristics in soils that could most satisfactorily serve as a basis of differentiating all profiles into units and of suggesting appropriate designations for these units. However, it has learned that there are many things to be taken into consideration before a proper decision can be reached. It begs your patience to give it more time to reach a conclusion.

The committee expresses its gratitude to those who have prepared and presented papers on this program.

Respectfully submitted,

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