5. THE VALUE OF THE SOIL SURVEY AS A BASIS FOR SOIL STUDIES AND SOIL USE

A. IN STUDIES OF SOIL PROPERTIES

Discussion by M. M. McCool

Those who have attempted to employ the soil survey as a basis for soil studies and soil use have found it to be of great value; yet it is no doubt true that the field work of the soil survey has not been exploited to its fullest extent in these lines. It is my opinion that in the future investigators working in the fields of horticulture, farm crops, farm management, livestock production and agricultural economics will make much greater use of the soil survey than is being done at present. It is probably well recognized that there is still a great need for continuous and systematically organized observations and studies of the physical, chemical and biological properties of the various horizons of the several soil types that have been mapped. It seems that this is essential if many of the results of scientific efforts are to be correlated and duplication reduced to the minimum, and it is recognized, by some workers at least, that this is the only way that the work may be systematized. As is well known, there are many workers who are interested in the development of soil science, and in order to accomplish this it is obviously necessary that much study will be concerned with the other matters than immediate practical aspects.

Inasmuch as I have only a few minutes to discuss this subject, it seems advisable for me to confine my remarks to an outline of the work which we are doing in Michigan, without burdening you with detailed results. In the first place, I should state that we are considering the soil profile as promulgated by Dr. C. F. Marbut in our investigations. We have considered it advisable and found it profitable to have descriptions and samples of various horizons that make up the soil types at our disposal. By careful selection of areas for the field work, we believe that we have described and have specimens of practically all of the soil types that occur in Michigan.

Certain physical properties of several of the important soil types have been studied. The water-retaining capacity of the different horizons that make up certain sandy soil types of northern Michigan, has been determined, by adding an excess of water to the surface of the soil and covering to prevent evaporation. After five days, samples

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