When the soil survey of Illinois was begun twenty years ago, very little was definitely known concerning the soils of the state. Just as the systematic organization and classification of the existing and accrued knowledge in any science is fundamental in the development of the science, so the systematic classification of the soils of the state was recognized as fundamental, both to the planning and execution of future soil investigations, and to the most efficient utilization of land in agricultural practice. Thus, the soil survey has served as a method of classifying not only the soils themselves, but also the knowledge obtained by the soil survey workers, concerning the various soil types as they occur in the field.

The Value of the Soil Survey in Investigational Work.

Knowledge which will make possible the better management of farm soils for increased or more efficient food production is obtained mainly by two types of investigation. These are, first, laboratory investigations, including physical, chemical and biological studies and greenhouse cultures and, second, the experiment field. These two lines of investigation must, of course, supplement each other.

It is not appropriate at this time to enter into a discussion of the extent to which laboratory and field investigations contribute to the solution of problems in soil management. It is of value, however, to note some of the ways in which the soil survey aids in attacking soil problems in laboratory and field.

Laboratory Investigations.- In Illinois, the analysis of soil samples representing each soil type, as it occurs in each county has been carried out as a part of the soil survey itself. This record of analytical data, together with the soil maps, serves as an "index" of the soils of the state, and by reference to it, the soils can be located which are best suited to a given investigation. The following instance is illustrative: In a rather extensive limestone investigation begun recently, it was desirable to use in the greenhouse two soils, both as high as possible in acidity, but at the same time having the widest possible divergence in organic matter content. By the combined use of the soil analysis records and the soil survey mapping records, the best soils available for the purpose in all the fifty odd counties which have been surveyed and analyzed up to the present time were readily located.

It is realized that the "index" is not perfect, and sometimes directs us to the wrong "page". For instance, in a search for a soil which would be especially responsive to phosphate treatment, one was selected which contained only 0.018 per cent of phosphorus, or 360