EARLY DEFINITION OF SOIL TYPES.

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The real work of the soil surveyor in any area is to map, define and describe the soil types that are distinguishable. What he has mapped as one type may later, using finer criteria, be found to be properly devisable into two types, or the differences between what he regarded as two distinct types may prove so small and inconstant that they will be combined into one. Such things are to be regarded as a normal part of the work and not reflecting upon any of the workers. The naming of the types does not necessarily come within the field of the surveyor. In order to achieve a harmonious country-wide nomenclature, it may even be passed up by the head of the state organization to a federal office without any reflection upon the knowledge or judgement of the state representatives. For the accuracy of the mapping or for most of the description of the types, however, there can be little passing on of the responsibility to someone else. This must rest with the state workers and whatever federal men may assist in the field.

Whatever gives promise of reducing the errors in mapping or of improving type descriptions by making them more accurate, more comprehensive, and of more agricultural significance merits a trial.

In dealing with the survey of any county it is the general practice, we believe, to first complete the field work, mapping the soil types and making or less complete notes, leaving the writing of the description of the soil types that have been mapped, which includes their definition as well as the agricultural development, productivity and crop adaptations of these, until the last. We submit that much might be gained by giving a part of this literary effort an earlier place on the programme of areas that are not contiguous to one or more counties already carefully surveyed. This would be the early formulation of exact definitions of the soil types as encountered, or as recognized in the course of the survey—putting them down in black and white—to be constantly revised, corrected, made more accurate and significant as the work progresses.

Uncertainty in mapping is often due to the want of sufficiently sharp definitions of the various types encountered or to an imperfect appreciation of these definitions by the field men. A really serious problem is presented by the occurrence side by side, or interpenetration, of types that have much in common as for example several silt loams, more or less similar in origin, topography, natural vegetation and agricultural use. With these the placing of boundaries may at best be somewhat arbitrary and under ordinary circumstances it becomes largely a matter of chance to which of the types any particular field will be assigned. Two trained surveyors working independently of one another under different conditions may make very different mappings. Thus if the total acreage of one township of three such similar types, which we may refer to as 1, 2 and 3, amounts to 18,000 acres, Surveyor A might map 10,000 acres of type 1 and 2,000 acres of type 3, while Surveyor B might map only 5,000 acres of type 1, but...