CROP rotation is recognized as a means for conserving soil resources and as an aid in the control of plant diseases, insects, and weeds. Even in a well-planned farming system, the customary succession of crops may be disturbed by crop failures, brought about by unfavorable weather conditions. The study reported here was undertaken to determine the succession of crops throughout a period of years on a large number of farms. The method of study is offered as a means for determining the crops actually grown in representative areas.

The accumulation of the data for this study was in connection with cover or land use surveys which are being made a part of many soil and conservation surveys. The use of aerial photographs as base maps in such surveys has made possible the delineation of fields on which the kind of crop being grown can easily be indicated. Such a land use survey has been made in connection with the soil survey of Huron County, Ohio, located in the north central part of the state. The cover survey included a consideration of the kind of crop, and in the case of meadow, pasture, and forest, some indication of quality. An interest in the succession of crops resulted in a repetition of the cover survey on selected areas. A summary of these surveys is presented.

The area studied included three representative townships of 25 square miles each, located in the western, south central, and eastern parts of the county. The crops grown on each field have been determined for 4 years in two townships and for 3 years in the third. In making these surveys, observations were made from the highways for a large proportion of the fields. Foot trips between roads were necessary in some areas. Field boundaries were indicated on a transparent overlay attached to the aerial photographs. Ozalid copies of the field sheets were assembled into a mosaic of the township. Photographic copies of the mosaic served as a base on which each year’s crop was indicated.

The soils of the county are largely glacial in origin, textured glacial drift. Limestone outcrops along the western border, noncalcareous black shale along most of the western half, and noncalcareous limestone and shale the eastern half. The glacial plain bordering Lake Erie occupies the non-calcareous northwestern parts of the county. The soils included in this study are entirely in the glacial soils.

Sherman township, on the west, has a gently undulating topography. Mahoning silt loam, a fine-textured, relatively impervious soil, predominates in this area. Limestone outcrops along the western border, noncalcareous black shale underlies most of the western half, and noncalcareous sandstone and shale the eastern half. The underlying bed rock is noncalcareous black shale makes up an important part of the glacial drift, hence, the high content of clay.

Fairfield Township, in the south central part of the county, ranges from gently undulating northern part to undulating or gently rolling central and southern portions. The soils in the south central areas are somewhat coarser textured in the subsoil and either better drained naturally or more easily drained (Cardington silt loam, Bennington silt loam, etc.) than those of the northern part (Mahoning silt loam). The underlying bedrock is noncalcareaous sandstone and shale.

Clarksfield Township, in the eastern part, is somewhat similar to Sherman Township in topography and drainage. Mahoning silt loam is the dominant soil.

Land use in these three townships is summarized in Table 1. Approximately 50% of the land is designated as crop land, slightly over 20% as pasture, and about 15% as forest. Clarksfield township has slightly less crop land and more pasture and forest than either of the other two. General farming is the usual type of agriculture, with the wheat acreage only slightly below that of corn. The oats acreage is somewhat less. A clover-timothy mixture makes up about half of the hay.