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APPLICATION OF MULTISPECTRAL DATA
IN DEVELOPING A DETAILED SOIL SURVEY
OF FORD COUNTY, ILLINOIS

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A soil survey program was initiated in Ford County, Illinois in October 1979 with a scheduled completion date of September 1984. The soils of this county are Mollisols (>95%) with dominant drainage classes (>90%) being poorly and somewhat poorly drained. The area has <5% woodland and a minimum of other permanent vegetation. With the initiation of the survey it was decided to use spectral maps as an aid in field mapping.

Spectral maps have been developed by computer-aided digital analysis of Landsat data covering Ford County. The classification maps were developed using a layered classifier technique with the initial decision in the decision tree being related to parent material boundaries that were applied to the data set after field investigations. The parent materials of this area are of Wisconsinan age and consist of glacial till and drift, and lacustrine and outwash sediments. Within each of the parent material areas, a systematic sampling procedure was used to develop statistics to apply in the final classification. Maps were developed at a 1:15,840 scale and are presently being used in the field. Preliminary evaluation on the usefulness of these maps in the soil survey program of Ford County will be presented.

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