Introducing the Universal Soil Data Base and Map Display System

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*Universal Soil Data Base* is a method whereby soils and related resource information may be computerized for easy storage, manipulation, and retrieval. The *Map Display System* is a method of illustrating retrieved data in map form, coordinated to specific locations on the earth's surface.

*Using the procedures outlined for development* of this system should help scientists and land use planners of developing countries in the utilization of available soil surveys and other related resource inventories. It would enable scientists and other specialists to store and merge soils and other resource and geographic information for specific locations throughout the world. It will also enable production of various maps that plot information as it relates to specific areas on the landscape. One example would be the production of computer-generated soil interpretive maps. These maps may either illustrate the soil's suitability for certain uses in specific areas or identify locations of a given area where particular soil characteristics (or limitations) may exist. For example: it could indicate areas that are highly alkaline and toxic to certain plants, or areas that are best suited for highway or road construction. The different types of soil interpretive maps that may be generated by computer for specific areas are numerous.

*This system is adaptable worldwide* because it utilizes the Universal Transverse Mercator (UTM) coordinates, which are expressed in measurements based on the International System of Units (SI units). With this system, any portion of the earth's surface (regardless of size) may be divided into grid cells and a coordinated data base with spatial capabilities established. The procedures for this system are explained in greater detail in a forthcoming publication. However, briefly, it establishes an imaginary “window” that will totally encompass the soil survey area. The first cell in the upper-left corner of the “window” contains the registration point whereby all data within the “window” may be referenced to known latitude/longitude lines.

*This system is compatible* to other types of data, such as Landsat satellite-acquired data and almost any geographic data that may be collected. It may also be used for storing and merging data collected by professionals from other disciplines such as agronomy, biology, climatology, forestry, geology, hydrology, and many other resource-related studies.

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1 More detailed information is given in a booklet, *Universal Soil Data Base and Map Display System* by James H. Brown. The booklet consists of 29 pages and includes 11 exhibits.
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