

**Agronomy Abstract**  
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Database Design for GIS: I. Conceptual Design.

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A soil database has been designed as a part of a geographic information system (GIS). The objectives of the conceptual database design process were to satisfy the informational and processing requirements of the user, and to understand the interrelationships among data. The Enhanced Entity-Relationship (EER) model was used to create a conceptual schema, which reflects the semantics and the constraints of the database. Under the EER model, the real world is perceived as a collection of entities (described by attributes) and relationships among entities. Since the EER model is generic, the design phase is independent of the Database Management System (DBMS) used to implement the database. This approach is closer to the user's perception of data and applications, and allows interactive modifications during the design process.