

## **Dominance of Geographic Information System in Developing a Database for Precision Farming**

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**KEY WORDS** Precision Farming. GIS Database. Raster Data. Vector Data.

**ABSTRACT** The advent of information technology and the hard work of multidisciplinary researchers and experts have brought this new technique called precision farming. Precision farming is a new concept to this world and a great evolution in the agricultural field. Improving the agricultural process by precision farming will definitely benefit the farmers and landlords by maximizing the financial returns and produce more to the needful world. GIS refers to the computer software that provides data storage, retrieval and transformation of spatial (field) data. GIS software for precision farming management will store data such as soil type, nutrient levels etc., in layers and assign that information to the particular field location. GIS is the nucleus of precision farming. It provides the platform for processing, automating tasks and analyzing data to provide derived information to support decision-making. Creating a GIS database will definitely help the farmers, researchers, government and other authorities in the field. Once the database is created it is very important to update and manage them properly. Major difference in using GIS software is that it offers complex capabilities for different processing stages. GIS helps in storing large volume of data for future analysis and can be updated by retrieving them whenever it is required, the results are produced in the form of informative thematic maps.

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