

# Precision Farming

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## In News

The easiest way to understand precision farming is to think of it as everything that **makes the practice of farming more accurate and controlled** when it comes to the growing of crops and raising livestock.

## Features of Precisions Farming

- A key component of this farm management approach is the **use of information technology and a wide array of items** such as:
  - . GPS guidance
  - . control systems
  - . sensors, robotics, drones, autonomous vehicles
  - . variable rate technology (It enables the variable application of inputs and allows farmers to control the amount of inputs they apply in a specific location)
  - . GPS based soil sampling (Soil sampling allows growers to consider productivity differences within a field and formulate a plan that takes these differences into account)
  - . automated hardware, telematics, and software (Computer applications can be used to create precise farm plans, field maps, crop scouting and yield maps)
- An information and technology-based farm management system **identifies, analyses and manages variability in fields by conducting crop production practices** at the right place and time and in the right way, for **optimum profitability, sustainability and protection of the land resource.**

- Research suggests **educational and economic challenges** as the two most important factors in the application of precision agriculture.

. Among the variables that contribute to educational challenges, **lack of local experts, funds, knowledgeable research and extension personnel** have more of an impact compared to others.

. Precision agriculture and **initial costs** have more of an impact among the economic challenges compared to the other issues.

- **Advantages** of precision farming

. Increase in agriculture productivity

. Prevents soil degradation

. Reduction of chemical application in crop production

. Efficient use of water resources

. Dissemination of modern farm practices to improve quality, quantity and reduced cost of production

. Precision farming changes the socio-economic status of farmers