



Indian Farmer  
Volume 8, Issue 10, 2021, Pp. 508-510.  
Available online at: [www.indianfarmer.net](http://www.indianfarmer.net)  
ISSN: 2394-1227 (Online)

POPULAR ARTICLE



## Importance of Agricultural technology

Goodwill Nyaane, Uzma Manzoor\*, Gomezgani Kasaro, Henry Umali, Sophai Kaonga, Kevin Redombo

*School of Agricultural Sciences, Sharda University, Greater Noida*

*\*Corresponding Author: [uzma.manzoor@sharda.ac.in](mailto:uzma.manzoor@sharda.ac.in)*

**Article Received:** 10 October 2021

**Published:** 15 October 2021

Technology plays a very important role in agriculture. Higher yield depends upon the nature of your technology. Modern farms and agricultural operations work far differently than those a few decades ago, primarily because of advancements in technology, including sensors, devices, machines, and information technology. Today's agriculture routinely uses sophisticated technologies such as robots, temperature and moisture sensors, aerial images, and GPS technology. These advanced devices and precision agriculture and robotic systems allow businesses to be more profitable, efficient, safer, and more.

With the changing pace of digital technologies, tons of innovation came in agriculture. Few decades ago, agriculture's meaning was far different than today's. The entire agriculture definition has been changed for making sustainable agriculture keeping agriculture technology on side, by allowing being efficient, environmental friendly in addition to safety and profitability. In present, the importance of agriculture enables management and monitoring of natural resources plus farmers are adjusting for managing fields to generate greater efficiency. For generating reliable farming, in agriculture farmers using GIS software because fields are location- specific. Precision agriculture needs GIS support to map current and future fluctuation in, Temperature, Precipitation, Plants safety and health, Humidity, crop yields and so on. Due to adaptation of GPS technology, the quicker help reflected in farmers shoulders are able to succeed in sustainable agriculture with effort, time and money. It also enables great benefit, allows to deal in certain areas by optimizing fertilizer and pesticides. There are various uses of technology in agriculture including the following.

- **Farm machines**

One of the challenges that farmers face nowadays is the need to satisfy labor. There is an increasing cost of labor, which calls for better approaches to ensure less cost on labor.

The introduction of combined harvesters and planters simplifies the process. Production and time are some of the important elements in agriculture. It is important, therefore, to plant early, harvest in time, as well as ensure that the yield is stored within the right time. The use of modern technology in agriculture ensures that farmers grow vast food within the shortest time possible.

GPS technology has been used in the development of autopilot sprayers and tractors that do not require any driver. Such technology is important in agriculture in that it promotes better and more efficient farming practices. For example, the autopilot tractors and sprayers are equipped with tracking systems that eliminates human error and in the end save on fuel and equipment.

- **Crop sensors**

Effective application of fertilizers and pesticides remains to be a big challenge in agriculture especially when it comes to the determination of what fertilizer works best for different plans, when to apply, as well as what quantities. The use of crop sensors can make it easy for farmers to effectively apply fertilizers and pesticides just as much as the crops need. Variable rate technology becomes useful in such cases. Such technology gives you the opportunity to sense how your plants are feeling and subsequently help you reduce the probability of leaching or surface runoff. Crops sensors are designed in a manner that they dictate to the application machinery the amount of the resource that a given crop needs, and at what time.

- **Use of GPS in fields documentation**

GPS is becoming a common technology in agriculture. For example, modern agriculture involves the use of GPS to document the status of the farmland. Through the GPS, it is easy to determine and document the yields from a given farm, as well as record the application rates. Such technologies are useful in that the farmers can rely on the collected and recorded data for reference when making any decisions. The recommendable documentation technology is the yield map, which can be used to offer a summary of entire year's activities. Such maps are highly useful as they can give a wide range of information about just anything such as the status of the drainage system in your field.

- **Biotechnology**

Biotechnology is also referred to as genetic engineering and the process of improving the genes of a given crop. In most cases, genetic engineering is carried out to increase the resistance of certain crops to farm inputs such the application of herbicides. Through biotechnology, farmers can plant on areas that were otherwise considered dry or deserts. Reduced farm inputs implies that the farmer as well saves on the cost of farm resources.

Modern agricultural technology hopes to achieve among others, two important goals – profitable economy and better output. It is therefore, important to be careful with the goals and objectives that you set aiming upon the implementation of different

technologies in agriculture. Some of the aspects that you should look at include how to apply and organize fertilizer, irrigation, theatre, intensive tillage, monoculture, and the application of other resources. However, in order to achieve these goals, farmers need to understand the concept of modern farming and the use of technology.

- **Drones- Data from the sky**

The essence of the sky drones, one of the most advanced agriculture technology where farmers have golden opportunity to interpret various field areas scenarios such as plant height, water saturation, weeds level and crop biomass for estimating the correctness.

Assistance from drones gives better chances to do clarity of agriculture and collect data which help not to get delayed further.

Modern agricultural technology hopes to achieve among others, two important goals – profitable economy and better output. It is therefore, important to be careful with the goals and objectives that you set aiming upon the implementation of different technologies in agriculture. Some of the aspects that you should look at include how to apply and organize fertilizer, irrigation, theatre, intensive tillage, monoculture, and the application of other resources. However, in order to achieve these goals, farmers need to understand the concept of modern farming and the use of technology.