
ICT Tools in Agriculture

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ABSTRACT

Agriculture is a vertebra of our Indian economy. ICT tools stands for Information and Communication Technology in agriculture. ICT plays an important role in agriculture. ICT is one which is major tool to give information daily to the farmers based on their requirements. This revolution in Information technology has given entrance to the details easily and cost - efficient.

INTRODUCTION

ICT tools stands for Information and Communication Technologies. It is a currently developed technology which allows structural communication information. It is also known as E-Agricultural. The common ICT tools for agricultural sector are computers, mobile phones, and other communication like press and newspaper.

ICT USES IN SMART AGRICULTURE

To improve the agricultural production remote sensor techniques with the help of Geographic Information System (GIS), Satellite technology, Soil science are used in smart agricultural. ICT provide the capacity to farmers to trace and react to the weather condition changes on our daily life.

NEEDS OF ICT IN AGRICULTURE

- Mostly farmers are not educated.
- Lack of information about modern technologies and market prices.
- Lack ability to complete with Modern agricultural.
- ICT technology should be used Agricultural marketing, Irrigation, Fisheries, Drainage system, Crop production.

ICT initiatives by various sectors

A. Government

- N - logue (with local service provider)
- AG Market (Central government)
- E -Sagu (Andhra Pradesh)
- Kisan call center (Ministry of agricultural)
- Weather advisory

B. Private & NGO'S

- Agriwutch (IASL)
- TATA Kisan Kendra (TATA Business house)
- Tarahaat (TARA)
- Hariyali Kisan Bazaar (DSCL)
- Weather advisor - SKYMET
- E - Choupal (ITC-IBD)

REASON TO USE ICT IN AGRICULTURE

- ICT helps in burgeoning request for new application.
- ICT supports the rural people to give effective approach to natural resources, to promote new agricultural technologies, new strategies, marketing, banking and financial services.

TYPES OF ICT TOOLS IN AGRICULTURE

a) Wireless Technology

- Wireless technology has number of operation in agriculture.
- Mostly used one is the simplification of closed-circuits television camera system.
- The use of this is to reject the electric cables.

b) Global Positioning System

It is an accurate farming most important technique used for farm planning, mapping, soil analysis, observing the crop, calculating the yield.

c) Geographic Information System [GIS]

- It has the ability to examine to examine the soil data and help to map the field data and monitor to crop.
- It helps to enlarge the yield and minimize the cost it permits the land resources.

d) Computer-Controlled Devices [Automatic System]

- It is the device which is controlled by the computer.
- Mostly used in the dairy industries without any human labour.
- The complete milk process is controlled by a robot a complex herd software and a specific computer.

e) Smartphone Mobile App

- Mobile apps provide latest entreaty in agriculture
- It helps to identify the new implements, new automation and methods.
- It is used to identify pests and diseases, allows to know the real time data about weather, storms, markets, offers a good prize, seed, fertilizers, etc.

f) RFID for Animal Identification

- RFID stands for RADIO FREQUENCY IDENTIFICATION FOR DAIRY CATTLE MANAGEMENT
- It is a livestock management.
- It records the basic details of animals like birth date, breeding details and the kind of vaccine they receive.
- It is mostly used in the animals like cow, pigs, an American buffaloes, goats, etc.
- They have barcode to identify the data.

ROLE OF ICT TOOLS IN AGRICULTURE IN INDIA

- It helps in meet the new challenges in agricultural, awareness and education.

APPLICATION OF ICT IN PRE-CULTIVATION

- Crop selection - Decision Support system (DSS), Modeling software are used in crop selection.
- Land selection - Remoting sensing Knowledge Management Systems (KMS) are used in land selection.

APPLICATION OF ICT IN CROP PRODUCTION & HARVESTING

- Land preparation - KMS, machine 2 machine communications and sensor network are used in land preparation.
- Sowing - GPS, GIS, Computer controlled devices are used in sowing.
- Water management - DSS, GIS, MIS are used in water management.
- Fertilizers - Sensor network, GIS are used in fertilizer spraying.
- Pest management - Management information system, sensor networks are used in pest management.

APPLICATION OF ICT IN POST HARVESTING

- Marketing - Networking tools like mobile phone, and Wi-Fi technologies are helpful in transportation.
- Transportation - GPS, GIS, Machine 2 machine communication are helpful in transportation.
- Packaging - Tracing devices are used in packing.

BENEFITS OF ICT IN AGRICULTURE

- Used to know the seed varieties.
- To know the new planting techniques.
- To understand the vital date to improve soil fertility.
- To predict the information about weather.

- It gives better work efficiency.

IMPACTS OF ICT IN AGRICULTURE

- ICT in agricultural helps the farmers to stay updated with all recent updated information in agriculture.

DISADVANTAGES OF ICT TOOLS

- Loss of soil fertility.
- Requires a great deal of capital.
- Leads to water depletion.
- High cost.

CONCLUSION

Nowadays farmers need to know various technologies done in farming. So ICT tools helps us to know about the new technology in agricultural, marketing and allotting the according the price to the product. It is the most useful technique to the farmers.

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