

Role of Information technology and its importance in creating employability for farmers in agriculture

Pavan Benakatti¹

Full time research scholar

Kousali Institute of Management Studies
(KIMS)

Karnatak University Dharwad – 580003

Email: pavanbenkatti@gmail.com

Jayadatta S²

Assistant Professor, KLE's IMSR

Research Scholar

Kousali Institute of Management Studies
(KIMS)

Karnatak University Dharwad – 580003

Email: jayadattaster@gmail.com

Abstract:

There is still a potential for improving the quality of farm products and manufacturing using information technology that inevitably needs productivity, effectiveness and knowledge in various agricultural sectors. The need for the moment is to know different trends in agricultural development, farming patterns, smallholder productivity efficiency, smallholder farming participation, the major role played by smallholder farmers in improving food security and generating employment. However various policies and other institutional support for small-scale farmers, as well as recognizing the obstacles and potential prospects for small-scale farming, including information needs where appropriate Information technology is highly predicted to play a major role in various facets of Indian agriculture. In addition to improving and facilitating the efficiency and effectiveness of farmers in agriculture and other related activities, IT has the potential to improve the quality of life in general by providing timely data and inputs for critical decision-making. This article focuses on the potential in India for people living in e-powering as well as those communities working for their welfare. In addition to the paper also highlights recent trends, evolving IT patterns in rural India that promote successful IT penetration knowledge requirements and IT function, emphasizing the post-WTO system climate necessarily with possible bottlenecks in rural India, e-powering solutions are examined.

Keywords: Agricultural products, WTO, Institutional support, employment generation, productivity, critical decision making

Introduction:

In agriculture, knowledge and communication definitely mattered. People growing crops, raising livestock, catching fish have evolved since then, necessarily seeking information from one another. Farmers in a village used to plant the same crops from ancient times but with time shifts in weather patterns, soil conditions and pests as well as infectious diseases come and go. Farmers are certainly in a position to cope with this updated information and can also benefit from these changes. Agriculture as such is highly localized in nature, and information needs to be tailored to different conditions, which means that not only does it contribute to knowledge, but it can also be challenging.

Major objectives of the present study are as follows:

1. To understand the role of IT in agriculture
2. To know importance of Information technology and its various components
3. To analyse the significance of IT and agriculture in the future
4. To know the need of technology in agriculture farming
5. To understand the need for changing patterns through DSS (Decision support systems) for farmers

Role of IT in agriculture

IT as such facilitates decision-making in agriculture has naturally been regarded as having great potential for a long time. IT as such is strongly interlinked in today's world, and the dynamics are changing our way of life and social consciousness. This is very important for success in all other

phases of agriculture, industry, IT management and business avenues. Agriculture has also been heavily influenced by information technology. Today, information technology is changing our lives quickly and the agricultural society is also becoming increasingly visible. Through information technology, we can communicate how we can interpret information to people and how we can use the information we refer to. As such, the agricultural industry must have the capacity to exploit the information in order to make informed decisions in the assembly process. In the agricultural context, however, decisions are taken which will have a positive impact on related activities. One such example is precision farming, which is common in many developed countries, where the widespread use of IT makes direct contributions to agricultural productivity. Agricultural productivity can be improved by using satellite technology, geographic information systems; remote sensing is typically intended to increase agricultural production by using various agronomy and social science techniques. This type of technique can also be used in large areas of land with a capital-intensive and useful approach. It is therefore much more suitable for the production of corporate sections. More often than not, Indian farmers take urgent decisions to manipulate anticipated results in a timely and reliable supply of various knowledge inputs. Presently, farmers are flowing very slowly and unreliably off the conventional input sources that rely on the decision. Faced with Indian farmers remaining competitive in this ever-changing climate, providing information is not only useful but not necessary.

Importance of Information technology and its various components

Agricultural production should be considered as a major strategic resource in place of the requisite IT infrastructure for the overall welfare of rural India. A rapid change in the prices of different components of the downward trend in IT as well as a large-targeted IT penetration in rural India makes this very likely. Some of the w.r.t wider IT components mentioned below, and the factors to be noted are as follows:

1. Significant input devices: In the sense of information technology, revolutionary developments are used as keyboards,

mouse devices, scanners are used by human beings as main instruments for communicating with computers. Most of the pictures were taken with high quality graphics and also a large range of video clips in the earlier days of creativity in digital photography. Anyway, it is opined that little size is turning out to be progressively reasonable and advanced cameras are coming in low weight to instruct farmers to open up the conceivable outcomes of PC based exhibition cuts for what's to come. In any case, advanced camera likewise encourages answer for rapidly select a specialist's photographs that would then be able to support the area where it is conceivable to transfer significant pictures and video cuts.

2. Output gadgets: Monitor screens, printers and plotters, information projectors bolster high goals and excellent yield. Farmers in its utilization-based administrations, nature of the yield gadgets have commonly the possibility to create restored intrigue. The lightweight, versatile information projectors effectively to a wide crowd which gives more accentuation to rural augmentation administration can be done by workers. Other than ranchers ought to likewise be joined with voice-based preparing which can be associated with a PC.
3. Processors: Improved handling pace of PCs at present Intel processors dependent on enormous information preparing on the customer side empowers the PC to be accessible inside the range
4. Storage devices: Drives and computers have become popular in PC category 40 GB or more hard disk space. This also allows access to store information as quickly as possible which is essential at the local level. In addition, high-capacity disk drives, CDs are connected to networks as soon as possible, as well as location information for large volumes transfer. The storage devices are often used for data which is much needed. As a precautionary measure, several businesses are now working to store their backups away from the position to other locations

5. Networking devices: There has been an improvement in the ability of modems commonly used to convert data from digital to analog and vice versa used for widespread use of telephone lines. Most of them are not exposed to the external world because integrated internal modems are readily available in the device. These routers and other networking devices like the big ability to make it as easy as possible for large networks with increased data transmission. Routers and other such networking devices have the ability to make it as easy as possible with data transmission for large networks which will certainly increase it.
6. Graphical user interface: software is available for different operating systems that function as a human-machine interface. Graphical user interface as such has become a required precondition for approved end-users. Microsoft's 'Windows' in India is becoming a favorite that can definitely meet complex user requirements where software for applications is available. Groupware applications, office robotization bundles, complex DB answers for store information and data, correspondence items, arrangements dependent on remote detecting and geographic data frameworks for the rack arrangements are likewise accessible. Fast application improvement and sending (Radd) is a mainstream model for quick advancement and arrangement of utilizations. Anyway venture the board and checking programming is especially essential for rural India to encourage proficient usage of enormous and complex applications that which are accessible.

Significance of IT and agriculture in the future

Data innovation to address the issues of the Indian farmer, as illustrated in the past areas, it is conceivable to create proper frameworks. Easy to understand frameworks, particularly in neighborhood dialects with the material, farmers and others keen on working at the grassroots can deliver. These administrations are accessible in all pieces of the nation to cause the intensity of the Internet to can be utilized to make or devoted systems. Indian agriculture is a massive challenge

to build a system to reach the full spectrum of application packages and databases. Long-term agricultural policy is protected in order to include a complete list of all the regions. The design changes and provides service to each of the areas listed in the list can be taken as a guide to the creation of suitable systems. Catering for a position in our region, specializing in different aspects of Indian farming has the benefit of having a large number of organisations. Such organizations need software & databases and resources that can play a key role in the design. The task of achieving fast modularization of results and will encourage better control. As it is, in their field of specialization several organizations have already produced system outcomes; it may be useful to get these programs outsourced by software companies in India. To promote the speedy deployment of applications and will improve the software industry in India. The users, the standard framework for tracking progress in creating a comprehensive template, would have to play an advisory role to prevent duplication of effort, which may be useful in supporting a coordinating organization.

It has been observed that in the post-WTO system, maintaining emphasis on the more useful it is suggested is an obvious competitive advantage for the export of certain agricultural products. Immediate intervention, etc., such as remote sensing, geographic information systems, bio-engineering, satellite technology, has made rapid progress reflecting the state-of - the-art technology for making the call. Successful agricultural exhibition can be kept an eye on using remote sensing and GIS applications. The use of technology can efficiently address such natural hazards, major challenges, soil issues, natural disasters.

Need of technology in agriculture farming

Innovation has assumed a major role in building up the farming business. Today it is conceivable to develop crops in a desert by utilization of horticultural biotechnology. With this innovation, plants have been designed to get by in dry season conditions. Through hereditary designing researchers have figured out how to bring characteristics into existing qualities with an objective of making crops impervious to dry seasons and irritations.

A brief description of the need for and the use of technology in agriculture is as follows:

- **Use of machines on farms.** Presently a farmer can develop on multiple sections of land of land with less work, and can reduce expenses much more when they are searching for a pre-owned tractor and other reaping innovation, versus new hardware. The utilization of grower and gatherers makes the procedure so natural. In horticulture, time and creation are so significant; you need to plant in time, gather in time and convey to stores in time. Present day rural innovation permits few individuals to develop tremendous amounts of nourishment and fiber in a briefest timeframe.
- **Modern transportation:** This aides in making items accessible on business sectors in time from the farm. With current transportation, buyers in Dubai will consume crisp carrots from Africa with around the same time that carrot experiences the nursery in Africa. Present day transportation innovation offices help farmers effectively transport manures or other farm items to their farms, and it likewise speeds the stock of horticultural items from homesteads to the business sectors where customers get them every day.
- **Cooling facilities:** These are utilized by farmers to carry tomatoes and other fleeting yields to keep them new as they transport them to the market. These cooling houses are introduced in nourishment transportation trucks, so crops like tomatoes will remain new upon conveyance. This is a success win circumstance for both the customers of these agrarian items and the ranchers. How the shoppers gets these items while still crisp and the farmer will sell every one of their items on the grounds that the interest will be high.
- **Genetically modified plants,** such as potatoes, can withstand diseases and pests, rewarding farmers with good yields and saving time. Such crops are growing very quickly and delivering high yields. Since they are immune to most diseases and pests, the farmer is investing less money on pesticides, which in return increases their return on investment (RIO).
- **Development of animal feeds.** This has tackled the issue of chasing for grass to take care of animals; presently these feeds can be made and devoured by animals. The cost of these feed is reasonable with the goal that a low pay farmer can bear the cost of them. The greater part of these produced animals takes care of have additional sustenance which enhances the animal's wellbeing and the yield of these animals will likewise increment. In farming, the soundness of an animal will decide its yield. Inadequately feed animals are constantly unfortunate and they produce next to no outcomes in type of milk, meat or hide.
- **Nursing of disease resistant animals.** Most of these genetically engineered animals will produce more milk or fur than normal animals do. This is good for the farmer as their production will be high. In animal grazing cross breeding is very good; cross breeding animals are stronger and more productive.
- **Land Irrigation.** Farmers adopted technology to irrigate their crops in dry areas, such as deserts. Throughout Egypt, a good example is where farmers use water pumps to collect water from the Nile River into their crops. Most of these farmers grow rice that needs a lot of water, so they manage to grow this rice using advanced technology-enhanced irrigation methods. Propelled water sprinklers are utilized to inundate enormous farms and this enables the yields to get enough water that is fundamental for their creation. Numerous farmers consolidate supplements right now; the development of these yields improves also.

Understand the need for changing patterns through DSS (Decision support systems) for farmers

On the off chance that farmer is wary; at that point for the most part he can evade the hazard. Fare appropriations on farm items that stipulating training in the arrangements of the WTO will make sends out increasingly serious, it has been proposed. On the opposite reaping costs, effective

cultivating strategies and the information on the accessibility of contributions against imports will encourage the evaluation of the qualities of indigenous items. As obvious from the accessibility of data on unfavorable shortcomings will assist with taking the fundamental restorative measures have a particular impact of the WTO on rural creation. Rising circumstance, an upper hand to be completely misused to improve the fare potential is required. In India natural products, oil seeds, cotton, milk items are considered as territories of upper hand.

This sector can be given special thrust to fulfilling international standards. Specialisation opportunities may be a good export potential. Similarly, the macroeconomic situation is needed in terms of information relating to the threats predicated on cheap imports from other countries.

Conclusion:

Innovation in technology is rapidly expanding and impacts nearly all areas of human activity. Farms where farmers can engage in the development of so important online direct deal interfaces, and the knowledge control system and store related to any movement of cultivation. Agrarian colleges need to get ready to use new IT, but additionally exceptional, e.g., sense of expansion advantages and making other unique websites use the platform will help farmers. In addition, the essence of data inputs will increase personal satisfaction in rural dynamic capabilities. IT in this aspect helps in resolving these difficulties and evacuating the rapidly evolving computerized isolate rural India will take on a significant role in promoting the change process. Fast changes in provincial data innovation, the development and scattering of electronic administration is significant. It would be tendentious to conduct errands in the present bottlenecks immediately. Provincial IT penetration to drive a regional solution should be drawn. Around the same time, a regional coordinating office with a job alert will go around like an impulse. No one organization will succeed on its own, farmers and e-driving capability on the region. Simultaneously, dispersed and irresolute activities may not be fruitful in meeting the goal. Villages, for example, compost area, with the fundamental piece of the business, have met up to advance early.

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