



## **Role of Information Technology in Improvement of Current Scenario in Agriculture**

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(Received: November 20, 2014; Accepted: December 10, 2014)

### **ABSTRACT**

Always has the potential to improve the quality of agricultural products and production using information technology that requires efficiency and information in all sectors of agriculture. Emerging view of a non-regularity in agriculture, thanks to the World Trade Organization [WTO], to make a great need and urgency to bring in it's an integral part of decision making by the Indian Farming Community. Information Technology (IT) has a major role to play in all facets of India Agriculture. In addition to facilitating and improving the efficiency of farmers productivity in agriculture and allied activities, bringing the potential of IT about qualitative improvement in the overall quality of life by providing timely and data inputs for decision making. Who work for the welfare of employees Indian farmers such as extension workers, do not have access to the latest hinders their ability to serve the farming community information effective. This manuscript focusses on the opportunity for people living in the e-powering in India, as well as those peoples who work for their welfare. Latest developments changing patterns of IT in rural India that facilitate effective IT penetration information requirements & IT role, the post-WTO necessarily systems environment, with possible bottlenecks in rural India, e-powering solutions are examined.

**Key words:** Role of information technology, Agriculture, WTO, e-powering solutions, decision support system, IT Technology usage in Agriculture, World Trade Organization.

### **INTRODUCTION**

Information and communication have always mattered in agriculture. People crops, raise livestock, and catch the fish has evolved since then, they have sought information from one another. What is the most effective strategy for planting on steep slopes? Where I buy improved seeds that can feed this year? How can I receive the title? Are paying the highest price at which the market? How can I

take part in the government's credit? Manufacturers rarely have the same issues arise in season after season, even if it's easy to find to get the answers to these questions. For centuries, farmers in a village in the "same" crops can be planted, but over time, changes in weather patterns and soil conditions and pests and diseases epidemics come and go. Farmers cope with updated information and can also benefit from these changes. Agriculture is highly localized nature of the information must be

specially adapted to the different conditions means that, not only because such knowledge, however, can be challenging.

#### **Role of IT in Agriculture:**

Information Technology (IT) to improve decision making in agriculture for long has been viewed as having great potential. IT is connected to the global world and the dynamic is changing our life style and social consciousness. In all phases of agriculture, industry, information technology management and business is essential for success. Agriculture has also been greatly influenced by IT.

Information technology quickly and agricultural society is becoming more and more visible. IT information we communicate to people how we compute information, and how we use the information refers to. People must have a computer and information technology. Part of a person, the process of assembling, and the agricultural industry must have the ability to manipulate information to make informed decisions.

In the agriculture context, decisions which will have a positive impact on related activities are conducted. Precision farming, popular in developed countries, the widespread use of IT to make a direct contribution to agricultural productivity. Satellite technology, geographic information systems, remote sensing, using the techniques of agronomy and soil science is to increase agricultural production. Including large tracts of land where this approach is capital intensive and useful. As a result, it is more suitable for the cultivation taken on corporate lines.

Significant indirect benefits of IT in the power of the Indian farmer, and remains to be exploited. Indian farmers urgently take the necessary decisions in a timely and reliable source of information inputs. Currently, farmers are slow and unreliable, trickling down from the traditional sources of inputs depends on the decision. Faced by Indian farmers to remain competitive in this changing environment is not only useful, but not required, making information.

#### **Needs for Changing Patterns**

##### **DSS [Decision Support System] for Farmers:**

Farmer cautious and usually can avoid the risk. Export subsidies on farm products that stipulating an education in the provisions of the WTO will make exports more competitive, it has been suggested. On the course. Harvesting costs, efficient farming methods and the data on the availability of inputs against imports will facilitate the assessment of the strengths of indigenous products.

As evident from the availability of information on adverse weaknesses will help to take the necessary corrective measures have any specific effect of the WTO on agricultural production. Emerging situation, a competitive advantage to be fully exploited to improve the export potential is required. India, fruits, oil seeds, cotton, milk products are considered as areas of competitive advantage.

Special thrust to meet the international standards can be accorded to this sector. Opportunities for specialization may be a good export potential. Similarly, in terms of information related to the threats predicated on cheap imports from other countries, the macro-economic situation is necessary.

##### **Systems that facilitate farmers to appropriate alliances for collective benefit:**

The size of land holdings is a major barrier to the absorption of any export potential. Farmers to come together through cooperative alliances to remain competitive and to derive a better price realizations, it will become imperative. Online farmers come together to facilitate the disposal of their products at attractive prices and geographical barriers by facilitating relief is possible for farmers. Online bids can be introduced to the various categories of agricultural production. The proper bricks and mortar infrastructure and post-harvest technology, storage, etc., which can be supported by the development of complex IT systems will need to be.

**Monitoring:**

Local agriculture is exposed to fluctuations in the international scene, it is necessary to be vigilant to external shocks. International market, to monitor the international supply systems - demand scenario, the macro-economic factors, it is necessary to develop a political disruptions. Advance warning systems to alert farmers are required to be developed. It maintains information related to agriculture and allied activities of all the major organizations promoting cells provide periodic analytical reports are needed to enhance and advance warnings.

**Opportunities**

Indian farmers to come together for additions to the value it is necessary to equip their Agricultural production. This gives them good returns from their produce and rural areas at the same time will generate new employment opportunities. The agricultural processing industries, aqua culture units, animal husbandry, floriculture, etc. units, set procedures regarding the export opportunities for farmers will need to provide information systems, quality standards, etc., packaging, or are available to be adopted.

**Awareness with System**

First and foremost, it's common for people of the WTO is required to provide unambiguous interpretation and implication. Under WTO jargon and various articles need to be distilled by language experts and their implications for all segments of Indian agriculture and allied activities are clearly spelled out. And the time frame for the effects of all the stake holders are spelled out. This has to be addressed immediately, which is a priority item. Import tariffs, Season wise and Year wise phases of the mandatory changes in government policies, the impact on the various subsidy schemes people may be concerned. One area of immediate concern to farmers in his / her life is going to be affected on how to get an analytical input. Remove restrictions to throw open the Indian agricultural markets, macro-economic situation, foreign exchange, inflation, the current tariff, etc. in the respective country and their likely impact on Indian agriculture segments inside and outside the structure of Indian agriculture will have a direct bearing on decisions.

**IT and Agriculture in the Future**

Information technology to meet the needs of the Indian farmer, as outlined in the previous sections, it is possible to develop appropriate systems. User-friendly systems, especially in local languages with the material, farmers and other people interested in working at the grassroots can produce. These services are available in all parts of the country to make the power of the Internet can be used to create or dedicated networks.

Indian agriculture to meet the full spectrum of application packages and databases is a huge task to create a task. The long-term agricultural policy are covered to provide a complete list of all the areas. The design changes and provide service to each of the areas specified in the list can be taken as a guide for the development of appropriate systems. Catering for a place in our country, specializing in various aspects of Indian agriculture has the advantage of having a large number of organizations. These organizations require applications & databases and services can play a crucial role in the design. The task of achieving rapid results modularisation, and will facilitate better control.

As it is, many organizations have already developed systems results in their area of specialization, it may be useful to get these programs in India has outsourced software companies. To facilitate the rapid deployment of applications and will give a boost to India's software industry. In order to avoid duplication of efforts, the users, the standard interface for monitoring progress in evolving a comprehensive design and will have an advisory role to play, which could be useful in promoting a coordinating agency.

In the post-WTO regime, it is an undeniable competitive advantage for the export of some agricultural products to maintain focus on the more useful it is suggested. Immediate action, etc., such as remote sensing, geographic information systems (GIS), bio-engineering, satellite technology, India has made rapid strides represents the state of the art technology to make the call. Using remote sensing and GIS applications effective agricultural exhibition is possible to keep an eye on. Crop stress, soil problems, challenges, natural disasters, this

technology can be effectively tackled. The export potential of precision farming can be tilted in favour of our country which can be motivated in large tracts of land.

### IT and its' Components

Agricultural development and for the welfare of rural India as a strategic tool to have in place the necessary IT infrastructure, IT induction is required. Rapid changes in the prices of the various components of the downward trend in IT and IT penetration in rural India, targeted at a large scale makes it possible. IT Listed below are some of the various components of the broader context of the factors to be noted:

1. Input devices: Radical improvements are seen in the context of the Earth, Such as keyboards, mouse devices, scanners, as human beings communicate with computers. . In the early days of digital cameras to capture possible, and to be of good quality graphics and a large collection of video clips. The small size and are becoming increasingly affordable, the digital camera, low weight, to educate farmers to open up the possibilities of computer-based demonstration clips. The digital camera also recommend solutions to quickly remove the US from an expert who can facilitate the location at which the plant stress-related images, movie clips can be used to upload.
2. Output devices: Monitors screens, printers and plotters, data projectors supports high resolution and high quality output. Farmers in the use of IT-based services, the quality of the output devices have the potential to generate renewed interest. The lightweight, portable data projectors easily to a wide audience, agricultural extension service can be carried out by employees. Similarly, speakers but also for farmers to incorporate voice-based training can be connected to the computer.
3. Processors: increased processing speed of computers. Currently, Intel processors based on the significant processing of data on the client side makes it possible for the PC is available in the range.
4. Storage Devices: 40GB or more hard disk drives and computers have become common in the PC category. This facilitates access as quickly as possible to store information which is significant at

the local level. Similarly, high-capacity floppy disk drives, CD's are connected to networks as soon as possible, information on the locations to transfer large volumes of forms. The storage devices are also used for much-needed data. As a precaution, many companies are working away from the place of places to store their backups.

5. Software for various operating systems are available which act as an interface between the user and the machine. Graphical user interface (GUI) has become a prerequisite for end users accepted. Microsoft 'Windows' in India is becoming a favourite. Which can support complex user requirements, application soft wares are available. Office automation packages, Groupware applications, complex DB solutions for store data and information, communication products, solutions based on remote sensing and geographic information systems for the shelf solutions are also available. In addition, based on some or all of these solutions are also readily available. Developed at an affordable price to the downward trend in the industry is currently working on an idea to provide a customized application. Rapid Application Development and Deployment (Radd) is a popular model for rapid development and deployment of applications. Quicken the pace of development, the environment itself is easy with tools that software specialists. Project management and monitoring software that is necessary for rural India to facilitate efficient implementation of large and complex applications that are available.

6. Networking devices: the ability of a modem, used to convert data from digital to analog and vice versa, which is employed for the popular use of telephone lines, has increased. So that they are not exposed to the outside environment integrated internal modem is available in the computer. Such routers, and other networking devices, such as the ability to make it as easy as possible for large networks with data transmission, which makes increased.

7. Transmission media: the data transfer takes place has undergone a radical transformation, by which the media. Although the main issues of reliability and low bandwidth telephone lines yet still popular in India is the source. High-capacity cables, optical fibre, radio, wireless local loops, satellite broadcasting and based on a combination of these different solutions are already in use in many parts of the country.

8. Other accessories: Uninterrupted Power Supply (UPS) devices Longevity ensure IT equipment is crucial to provide a backup methods. Need to exploit the potential of solar power in rural areas to provide a possible solution to the shortage of power pack.

### CONCLUSION

Information technology is expanding rapidly and touches almost all areas of human activity. Farms that farmers can participate in the creation of web portals for direct sale that are so necessary, and system for data manipulation and store related any activity of farming. Agricultural universities must prepare students to use new IT, but also different, e.g., Meaning of extension services, and creating a new specific websites using the web should help farmers. Providing a better

quality of life in rural decision making capabilities can be improved by the quality of information inputs. IT to meet these challenges and to remove the fast growing digital divide rural India can play a major role in facilitating the process of transformation. Rapid changes in the field of information technology in rural, it is necessary to develop and disseminate making electronic services. Undertaking tasks in the current bottlenecks need to be addressed immediately. IT penetration in rural to lead a national strategy needs to be drawn. A national coordinating agency with an advisory role can act as a catalyst in the process. No one organization can succeed alone, farmers and rural e-powering function. At the same time, scattered and half-hearted efforts may not be successful in meeting the objective. Villages such as fertilizer sector, with the main part of the industry, have come together to promote early.

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