

E-AGRICULTURE TECHNOLOGY: A STUDY OF RELEVANCE IN RURAL DEVELOPMENT OF INDIA

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ABSTRACT

E-Agriculture includes the concept, structure, developed strategies, evaluation and application of innovative processes to use information and communication technology (ICT) in the rural domain, with a primary focus on agriculture. People all around the world from few years and from now are being carrying a handheld computer (also Mobile Phones) connected to the Web to get the information about the World at their fingertips. E-Agriculture is an emerging trend which focused on the enrichment of agricultural and Rural Development by innovative and improved information and communication processes. We have 28 States and 9 Union Territories after reorganization of J&K, 626+ District 6, 38,596+ villages and near about 70% of the Indian population lives in rural areas. Agriculture in the real manner we can say, it is backbone of Indian economy and on Agriculture 68% of India population is mainly dependent for their livelihood. In this paper, we have discussed the relevance & need of e-Agriculture in Rural Development of Indian.

Keywords: *E-Agriculture, Rural Development, ICT, E-Agricultural Technology, Indian Economy.*

Introduction

The e-agriculture strategies could help countries to use information and communication technology to drive rural development. Primarily, focusing on agriculture, information and communication technologies (ICTs) is useful to boost agricultural development through improving Indian farmers' access to needed information by which farmers can take the best decisions and use their available resources sustainably.

E-Agriculture is a global Community of Practice related to use of information and communication technologies (ICT) in agriculture, where the information, ideas, and resources related to and useful for sustainable agriculture and rural development are exchanged among people from all over the world. Here, ICT is considered as the useful devices, networks, services and applications, including internet-based technologies and tools such as telephones, mobiles, televisions, radio and satellites.

In agriculture, when Information technology can be used as a potential tool for improving decision making of Indian farmers then it called as e-Agricultural Technology. E-Agricultural Technology can be improved farmers farm management and various farming technologies by efficient farm management. Also use of e-Agricultural Technology can be resulted into improved contribution of agricultural productivity. E-Agricultural Technology may Benefits as in reducing impact on natural ecosystems, rural development with higher crop productivity and minimum use of water, fertilizer, and pesticides, which in turn keeps food prices down.

ICT and its Use in Agriculture (E-agriculture)

Farming and Information Technology are likely to be the most distantly placed knowledge sets in the present world. Farming is the oldest, historical and most basic of the jobs in India and IT related to the most advanced and most modern technology. However, we know the essence of farming as it is essential for life maintenance on the surface of mother earth and it is needful to develop IT to aid for the betterment of farming to produce better.

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E-Agriculture is a new area of knowledge which is emerging out of convergence of IT and farming techniques. It sets, organizes and enhances the agricultural value chain through the use of Internet and application of related technologies. Mainly IT helps farmers to have better access to information world which leads farmers to grab the information pertaining to agriculture related activities which increases the productivity. It also enables farmers to get the information and awareness of better prices through information of change in price in different markets.

Relevance and Need of e-Agriculture in Rural Development of India

The agriculture sector is the core sector for India in terms of nutritional security, food security, poverty alleviation, and sustainable development. It approximately contributes 14 % of GDP. Agricultural development in India includes Milestones such as Green revolution, Evergreen revolution, Blue revolution, White revolution, yellow revolution, Biotechnology revolution and the most recent one is the Information and communication technology revolution. Central, State Governments and Private Organisations have taken various ICT initiatives for advancement in agriculture sector which includes e-choupal, Kisan credit card, Rice knowledge management portal , e-krishi, Mahindra Kisan Mitra, IFFCO Agri-portal, Village knowledge centers (VKCs)- M.S Swaminathan research foundation (MSSRF), village resource centres (VRCs)- Indian Space research organisation, National Telecom policy, 2012, National mission on agricultural extension and Technology, Bharat Nirman, Universal service obligation fund (USOF), Mobile values added services (m-VAS) , Kisan Choupal, Kisan Call centre, Kisan SMS Portal, Sandesh Pathak application, Village Knowledge Centre (VKC), Village resource centres (VRC), etc.

IT as e-Agriculture, benefits for the improvement and strengthening of agriculture sector activities in India which includes timely information about weather forecasts and calamities, better and spontaneous agricultural practices, better knowledge of marketing exposure and pricing, limiting the agricultural risks and grow the incomes, facility of online trading and e-commerce, better awareness and information, improved networking and communication, better representation at various forums, authorities and platform, etc. E-agriculture can play a vital role in increased food production and productivity in India.

IT as e-Agriculture supports new methods for accuracy in agriculture like computerized farm machinery that applies for fertilizers and pesticides. Farm animals are monitored, fed, identified and checked by electronic sensors systems. Power and electricity are a major problem for Indian farmers and alternative means of power like solar energy panels, regulated and optimized by ICT, can be a blessing for them. Selling or buying online began to become popular in India. , Thus, e-agriculture in India can put India on the higher pedestal in making India self-sufficient in the matters of food grains. Effective use of IT for agricultural purposes might be resulted in increased in India's food production and productivity in the future. Instead of tractors to plough lands the developed nations are using laser and other innovative technologies which help their farmers in optimizing the use of various inputs such as water, seeds, fertilizers, etc. The problem is that Indian farmers cannot afford these technologies till to be the Indian government comes in support for agricultural infrastructure, the same remains a dream only.

IT is changing all the spheres of human lives and agriculture cannot be an exception. IT may act as an agent for changing agrarian and farmer's life by improving access of information and sharing knowledge. The IT tools can change the ideas, activities and knowledge of the farmers. Farmers feel empowered and can adopt appropriate measures at the time of need. Nowadays the penetration of market forces in rural India is increasing and is a potential market. With diverse cultures and languages in India, ICT provides a good platform here. Thus in future, there would be substantial upliftment and sustainable development in rural areas.

Conclusion

In India, Agriculture is considered as a primary occupation for a major segment of the population in the country. A majority population of rural India depends upon agriculture as a primary occupation. However, agriculture in India is in doldrums situation due to defective land management, non-providing of fair prices to farmers for their crops, lack of attention, inadequate investment in irrigational and agricultural infrastructure, etc. Agriculture in India needs rejuvenation. The ultimate solution to these problems is a solid political will along with a competent bureaucracy, as without them all proposed reforms remain only paper works. India must also act at the grassroots and ground level. For instance, panchayats should encourage cooperative farming, power, and irrigational facilities must be provided to the farmers, easy and effective financial access must be provided to the farmers, direct marketing and sale must be adopted by farmers, public investment in agricultural infrastructure must be enhanced, a minimum support price for food grains must be set, etc. Finally, it is suggested that farmers in India must use Information technology (IT) for agricultural purposes.

References

1. Ainsley Wirekoon (2020) 'Role of Information Technology in Agriculture'
2. Marcel Fafchamps and Bart Minten (2018) "Impact of SMS-Based Agricultural Information on Indian Farmers" in Oxford journals VOL. 26, NO. 3, pp. 383–414,
3. Nidhi Dwivedy "Challenges faced by the Agriculture Sector in Developing Countries with special reference to India" in International Journal of Rural Studies vol. 18 no. 2,2011
4. Editorial Team of 'Modern Business' magazine, June 10, 2018 'Use of Modern Technology In Agriculture – An Overview & Advantages'
5. 'Agri economics' magazine September 21, 2018 'Benefits of technological advancements in farming'
6. <https://nifa.usda.gov/topic/agriculture-technology>.

