

# **ICT- An Innovative Extension Approaches In Agriculture Development\*.**

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## **ABSTRACT**

Agriculture is an important sector where majority of the rural population in developing countries like India depend on for their food and survival. Due to dwindling natural resources for agricultural production, the farming sector is now faced with a challenge. The ever increasing demand for agricultural products due to the increasing population, especially in India, offers opportunities for farmers to opt for sustainable agriculture and improve their livelihood. Recent advances in Information and Communication technology (ICT) has brought about a change even among the farming population. The prevailing ICT provides ample opportunities for skill up gradation among rural population, especially farmers in agriculture and to overcome community based development issues, through value addition in agri produce supply chain and also enhances the entrepreneurial behavior in the rural population.

Many a times availability of information on time is the problem faced by farmers in India, especially agro input like seed, varieties, farm equipments, fertilizers due to wide spread customer base and multi product and multi-tier distribution system. This can be overcome by the Market led agriculture and market intelligence which is the solution to the problem and is absolutely necessary considering the present trends. Keeping these factors in mind as the need of the farmers, innovative ICT application could be seen today to disseminate the agricultural and related information on the various electronic media. The information seekers today are relying on speedy ICT tools such as computer, Internet, Mobiles etc.

In the South Indian state of Karnataka, a number of initiatives for the benefit of farmers have been launched by the government and private companies to cater to the requirement of the farming community. To cite some of the successful cases- the 'Bhoomi' project of Karnataka government, where land records can be accessed in almost every village. 'Krishi darshana' programme on government T.V channels and also "Anna data" programme by a private T.V. channel. An Expert Centre of the University of Agricultural Sciences (UAS) Bangalore also provides the Teleconferencing facility, apart from forecast of Weather, Pest and Disease through mobile updates. The Government owned 'Kissan Call Centre' (KCC) working with a toll free number provides service to the farming population by answering queries over phone lines.

These are the advancements in the field of agriculture through ICT application where in farmers are reaping the benefit of agriculture related information, learning skill oriented operations and adopting modern agricultural methods leading to sustainable agriculture.

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**Key words:** Information; Market; Agri-input; Community; Entrepreneurial

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## INTRODUCTION

Agriculture is an important sector where majority of the rural population in developing countries like India depend on for their food and survival. Due to dwindling natural resources for agricultural production, the farming sector is now faced with a challenge. The ever increasing demand for agricultural products due to the increasing population, especially in India, offers opportunities for farmers to opt for sustainable agriculture and improve their livelihood. Recent advances in Information and Communication technology (ICT) has brought about a change even among the farming population. The prevailing ICT provides ample opportunities for skill up gradation among rural population; especially farmers in agriculture and to overcome community based development issues, through value addition in agriculture produce supply chain and also enhances the entrepreneurial behavior in the rural population. Recent advances in Information and Communication Technology (ICT) have changed the way we live, learn and interact. They have transformed the way the knowledge produced, processed and retrieved and transferred between different stake holders. In this direction agriculture extension and farmer-outreach program's are one of the key components for the development of the agriculture in the country especially in India. Accessibility of information is one of the most valuable components for the development of human resources which ultimately leads to development of the nation. Availability of desired ,reliable and timely information for solving the problems of stake holders ,specially for agriculture dependent population is of significant importance to boost up the agriculture and related economy which is a lively hood sources for millions of farmers in India.

Use of ICT is there in all spears of life and will continue to be present in every facet of human endeavor in the knowledge era. India is increasingly integrating ICT in to its national development plans and adopting strategies for its widespread promotion in all spheres of economic activities including agriculture where more than 60 percent of the population is dependent for their living. In order to cope up with the paradigm shift in the global agricultural scenario interconnecting policies related to pricing, marketing and trading of agricultural commodities has become indespencable.ICT can play spectacular role in the societal transformation to realize the concept of “Village knowledgeCentre(VKC)”.

### 1.1 Methodology

#### 1.1.1 Case –I;

Today, Television and Internet are playing a vital role in facilitating faster dissemination of information and innovations in all walks of life. These media are acting as aa change agent in the lives of farming community in creating awareness and improving their knowledge due to the increased access to these gadgetsby farmers in India. This is presented with a reconnaissance survey case study with impact analysis. Village Knowledge Centre is the common place in a village where every villager can come and have access for the computer with the help of a computer operator. Due to Television and Internet facilities in the villages, there has been increase in awareness and adoption of various technologies related to farming viz. Pesticides and its side effects,Fungisides,Fertilizer usage,Tracters and Powertillers etc., (Table 1)

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### 1.1.2 Case II

In the South Indian state of Karnataka, a number of initiatives for the benefit of farmers have been launched by the government and private companies to cater to the requirement of the farming community. To cite some of the successful cases- the 'Bhoomi' project of Karnataka state government, where land records can be accessed in almost every village. 'Krishi darshana' programme on government T.V channels and also "Anna data" programme by a private T.V. channel. An Expert Centre of the University of Agricultural Sciences (UAS) Bangalore also provides the Teleconferencing facility, apart from forecast of Weather, Pest and Disease through mobile updates. The Government owned 'Kissan Call Centre' (KCC) working with a toll free number provides service to the farming population by answering queries over phone lines.(Photos' gallery).

A KCC consists of a complex of telecommunication infrastructure , computer support and human resources organized to manage effectively and efficiently the enquiries raised by the farmers instantly in local language. The KCC consists of three levels namely Level -I; the basic call centre interface and local language proficient Agricultural graduates, Level-II; Subject Matter Specialists on the concerned important crops and enterprises and Level-III; the management group to ensure ultimate answering and solution of all the farmers questions and doubts.



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## 2. Conclusion

The Agricultural extension and farmer- outreach programmes in India face three major challenges viz. a) How to ensure cost-effective outreach, b) how to design solutions tailored to needs of individual farmers and different crops and c) How to manage an image that is farmer friendly. A large sections of the rural farming community do not have access to the huge knowledge base acquired by the from research organizations, extension centers and businesses. Data based decision making due to its speed and capability to provide comprehensive services can help in developing a strong and loyal customer base , thus providing a competitive edge in the market place.

Agriculture input marketing specially pesticides, fertilizers. Seeds and farm equipments marketing , with its own peculiarities in terms of widespread customer base ,multitier and multiproduct distribution system usability to millions if farmers etc., can improve its marketing efficiency through ICT application. This Data based ICT can help in developing strong and loyal customer base providing a competitive edg in the market, leading to significant increase in the profit margin for the producer leading to agriculture development through increased awareness.

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## 2.1 Comparative analysis of farm related activities on Television:

Sl, no	Items	Coverage time (Seconds/Day)	Repetition /Day	Increase in Awareness
1	Farmers success stories	100	20	90%
2	Agriculture demonstration (soil sampling/ seed treatment etc.)	20	03	70%
3	Method of spraying agro chemicals	05	05	90%
4	Safe handling of agrochemicals	03	02	90%
5	Fertilizer use	05	15	85%
6	Organic farming methods	05	05	100%
7	Bovine handling and management	05	05	95%
8	Poultry management	03	03	90%
9	Fish culture and management	03	03	90%
10	Compost and its importance	05	10	100%
11	KCC	20	10	100%

## REFERENCES

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