

“ROLE OF INFORMATION TECHNOLOGY IN AGRICULTURAL PRODUCTION AND MARKETING”

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Introduction

Agriculture is the largest livelihood provider in rural India. In the agricultural sector, constant application of latest ideas and better technologies is essential to enhance the economic well being of the farmer. The bane of Indian agriculture is not lack of technology, R&D efforts; it is inadequacy and inefficiencies in the dissemination of relevant information to the farming sector. Therefore, Information Technology in agriculture can act as a driving force in the development process.

Objectives of information technology towards agricultural production and marketing

To increase the amount of information provided to all participants in agricultural sector and to decrease the cost of disseminating the information. to bring farmers ,researchers, scientists, and administrators together by establishing “agricultural online” through exchange of ideas and information.

Need of information technology in agricultural production and marketing

Information technology can be applied particularly in the social and economic areas where it can effectively facilitate social and economic development of the Indian agrarian community

However, the rural population in our country still has difficulties in accessing crucial information in the form

they can understand in order to make timely decisions for better farming information technology in generating possibilities to solve such problems of different categories of end users. For this purpose electronic communications infrastructure need to be established in the country. For remote rural areas the challenge lies not only in improving the accessibility of communication technology to the rural population but also to improve the relevance of information to local development. The present topic depicts the changing scenario of information dissemination exploiting the information technology to the farmers for their agricultural development.

Information technology for agricultural production and marketing

Information technology is playing an important and vital role in agricultural production and marketing. Information technology allows farmers to save time on orders and delivery and getting feedback. In the existing competition, there is a need to rapidly attract new customers as well as retain existing customers. In order to take the real status of agricultural production and marketing there is an urgent need to develop the following items.

1. Farmers crop database must be managed. The data base includes the kinds of crops , the size of cultivated area , time of harvest and yield. Farmers of the extension personnel transmit those data via the internet to data base server. Further



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information provides the farmer with an important instrument for decision making and taking action

2. Crops information service system should be created. This system analyzes the crop data to create some statistical tables. Farmers can access these statistical data by browsing the home page and make their production plan . Changes within the structure of agriculture will probably have an impact on the selection and types of acquisition of software and other integrated system made by the farmers
3. Production technology and information inquiry system should be created. This system integrates the production techno experimental agricultural institutes and agricultural improvement stations. Farmers can findout relevant production information through this inquiry service system.
4. Production equipment inquiry service system should be created. This system gathers information from the company of seeds and crop production equipment to build the production equipments inquiry service system .At the same time , allow relevant company to access this system and enter their own data . Therefore

farmers can order the needed items through this system . Good communication system and information system reinforce commitments to sustainable productivity.

The Government of India is giving more thrust on food and information technology sectors towards achievement of economic reforms to achieve high growth rate in production in the years to come. The national agriculture policy announced addresses the challenges arising out of the economic liberalization and globalization. It seeks to strengthen the rural infrastructure to support faster agricultural development. Promote value addition and secure a fair standard of living for farmers and farm workers.

Agricultural Marketing Information Network In India

There are several Ministries/Departments in Government dealing with Agricultural Marketing. The Government's digital initiatives include Agrinet, Agris, Agmarknet, Dacnet, Vistarnet, Aphnet, Fishnet, Hortnet Seednet, Ppin, Coopnet, Fertnet, Arisnet, Afpinet, Arinet, Ndmnet, etc, with their independent websites.

Table 1. Important Agencies, Models, Initiatives, Projects of the Agricultural Marketing Information Network

Area/State	Agency / Project	Activity Description	Reference Information
India	AGMARKNET	Launched, in March 2000, linking important agricultural produce markets, the State Agriculture Marketing Boards & Directorates. It provides information on agriculture products, their prices, arrivals, availability, trends, analysis, laws, etc. Currently, AGMARKNET Covers 2900 markets all over the country and display of information of 400 commodities on daily basis in ten languages, linking all important APMCs in India Marketing Channel — PPP initiative Public-Partner-Participation concept	http://agmarknet.nic.in

Area/State	Agency / Project	Activity Description	Reference Information
State Agricultural Marketing Boards	SAMB	Gives sustainable development of agriculture that improves the quality of life of the rural population Identifies location of markets for connectivity under the Directorates of Marketing Scheme based on importance of the market in commodity flow patterns	http://agricoop.nic.in/stateagri.htm
Himachal Pradesh	DACNET	An e governance initiative executed by the Agricultural Informatics Division, National Informatics Center, Department of Information Technology, Ministry of Information and Communication Technology, Government of India in 2003. It is an agriculture-online central scheme, in which all the 172 directorates integrate Government Functions (G2G), Agri-Business Partners (B2B), Connect Farmers (C2C), Empower Employees, Enhance Government productivity, value and financial services.	http://dacnet.nic.in/ Email: lpmjk02@hub.nic.in, cipmjk02@jk.nic.in, jpmjk03@hub.nic.in
India	Kisan Call Centre	The Department of Agriculture & Cooperation (DAC), Ministry of Agriculture, Govt. of India launched Kisan Call Centers in 2004 in every state to deliver extension services and marketing information The Queries related to agriculture and allied sectors are addressed through the Kisan Call Centers in the local language by the experts of Agriculture / Horticulture Departments, State Agricultural Universities, ICAR institutions etc..	http://agricoop.nic.in/policyIncentives/kisanCallfirst.htm
India	Krishi Vigyan Kendra Pravara Village IT Project (PRAGATI) Maharashtra	Krishi Vigyan Kendra (KVK) is a project of ICAR for testing and transfer of agricultural technologies to bridge the gap between production and productivity The KVK has excelled in bringing the modern	

Area/State	Agency / Project	Activity Description	Reference Information
		technological packages at the farmers doorstep with the help of various instructional units e.g The PRAGATI project of National Informatics Centre (NIC) – Delhi, Convergent Communications, Pravara Group, Indian Space Research Organization aims to connect a hundred villages in Ahmednagar covering a population of more than 2.5 lakh with a wireless MAN solution (WMAN)	
Twelve villages in Southern India, Chennai	Information Village Research Project village information shops	MSSRF's "Mission 2007: Every village a knowledge centre" which aims to connect every village through computer by the year 2007. (Empower farming community through Information Villages and knowledge based IT services). It has a network of Village Resource Centers (VRC's)/ Village Knowledge centers (VKC). Most of these centers are located in Pondicherry and Tamil Nadu.	http://www.mssrf.org/
Karnataka	Grasso PCO Project	Gramin Sanchar Society through the PCO project to usher in a business process re-engineering in the lives and livelihoods of rural Bengal The Partners are, Govt. of West Bengal, GRASSO and BSNL .The project started in 2003	www.grassopotal.com
Karnataka	Agribiz India	Organic production of agriculture commodities in the state of Karnataka	http://www.agribizindia.co.in

Source: India science and technology: 2008, S & T for rural India and inclusive growth

Important online system available for agricultural marketing is

e-mandi, which is a web based application. It is a comprehensive system meeting all the requirements of the APMC's. It has been built with a number of features for easier use by APMC staff, traders and commission agents. e-mandi has been designed by incorporating the rules and regulations defined in APMC Act.

Agricultural marketing related information as a single window World Wide Web service over internet

Prices and Arrivals

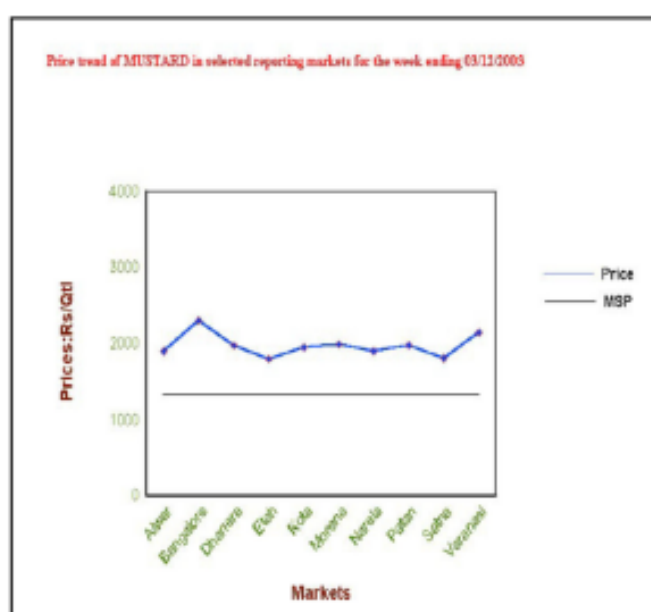
The portal provides easy access to commodity-wise , variety-wise daily prices and arrivals information in respect of various wholesale markets , spread all over the country . Prices and arrivals trend reports for important commodities are also published regularly. Besides, future prices from National Multi-Commodity Exchange of India Ltd. are being reflected online on the portal. Linkages have also been established with web sites of Food and Agriculture Organization (FAO) and Asian & Pacific Coconut Community (APCC) for accessing international commodity price trends.

Market-wise Daily Report for Specific Commodity On
23/12/2003

NB: Not Reported FAQ: Fair Average Quality

Commodity: Wheat

Market	Arrivals (Tonnes)	Origin	Variety	Grade	Minimum Price (Rs./Quintal)	Maximum Price (Rs./Quintal)	Model Price (Rs./Quintal)
Asses							
P.O. Uparhal	0	NR	Other	FAQ	960	1180	960
WBHAR							
Aurangabad	30	NR	Superior	FAQ	800	980	950
Begusarai	10	NR	Other	FAQ	760	880	780
Bhagalpur	32.5	NR	Deerh	FAQ	800	880	850
Bhansharif	11.5	NR	White	FAQ	685	715	700
Darbhanga	2	NR	UP 208	FAQ	700	750	725
Gaya	17.5	NR	Kalyan	FAQ	750	825	780
Madhubani	2	NR	UP 208	FAQ	700	750	725
Nawada	5	NR	Other	FAQ	700	750	725



Source: www.agmarknet.nic.in

Major recommendations to improve agricultural production and marketing through information technology

1. Information Technology for timely market and weather information is key to development in the farming sector. We should tailor our rural Information Technology Policies according to our requirements.
2. There is a need for Integrated Website for all agencies, of both State and Central Government, involved in Agricultural marketing services using ICT like APEDA, APMCs, CWC, SWCs, CACP, CCI, DMI, FCI, JCI, KVKs, MPEDA, NAFED, TRIFED, NCD, NDD, NHB, SAMBs etc.
3. Establishment of AGMARKNET Nodes at KVKs and Panchayats and computerization of all mandies/ APMCs.
4. Wholesale markets should have WiMAX based Internet Hubs.
5. There is a need for greater synergy between extension services and market.
6. Tele density in rural areas continues to be low, increase in tele-density as an important component of infrastructure development should be taken up.
7. Arrangements should be made to introduce electronic scientific grading of agricultural commodities in the markets or for a cluster of markets.

Conclusion

Indian farmers and those who are working for their welfare need to be e-powered to face the emerging scenario of complete or partial deregulation and reduction in government protection ,opening up of agricultural market ,fluctuations in agricultural environment and to exploit possible opportunities for exports .most importantly a person who is well versed in computer skills should guide the farmer group regarding the online agricultural production and marketing since our farmers are lack in computer knowledge.

References:

1. India Science and Technology :2008 , S &T for rural India and inclusive growth
2. e- mandi - online system for APMC national informatics centre Bangalore
3. www.agmarknet.nic.in (a farmers centric portal on agricultural marketing)

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