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Information Communication Technology Promoting Retail Marketing In Agriculture Sector in India as a Study

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Abstract

Now this era of Agriculture is treated as ICT mediated Market Led Agriculture Extension era. So in this Information revolution age we can’t able to survive without Information. As per R.T.I. act 2005 every person deserves his/her right for Information. So by giving respect to Information we should create a Revolution on Information by the enchanting mantra “Soochana se Samadhan”. India is second largest producer of commodities such as fruits and vegetables. One of the key issues, which require research, is the method by which we can reduce the post harvest loss, which is quite substantial at present. This would need design of cost effective, efficient, environment friendly storage system. Also, there is need for value addition to agricultural produce to maximize the agriculture return. This paper attempts to highlight the importance of ICT in improving marketing activities of retail business in agricultural areas in Indian economy. This paper also discusses vast potential of implementing the same in Indian agricultural business activities with some success stories, models for justification of the importance of ICT in Agriculture Retail Marketing.

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Keywords: Information technology; ICT; logistics; Retail outlets; Supply chain
1. Present Status of the Indian Agricultural Scenario

India is likely to become the food basket to the world considering 52% of total land under cultivation as compared to global average of 11%. India is also having the labor cost advantage; organized research is growing very speedily. Because of these developments, farmers would get latest market prices and various products, weather reports and best farming practices. India has 127 different agro climatic zones, immense biodiversity and natural resources.

India is one of the biggest food grain and oilseed producers in the world

1. Small farms produce 41 percent of India’s total grain (49% of rice, 40% of wheat, 29% of coarse cereals and 27% of pulses), and over half of total fruits and vegetables

2. • Largest producer of milk, tea

3. • Fruits & Vegetable and Sugar – Second in the world

4. • Provides Employment to 62.5 percent work force,

5. • Export Earnings 14.7 Percent

6. • Contributes 18 Percent to GDP

1.1. Introduction

The middlemen and poor supply chain facilities have increased agricultural prices up to 60% without actually adding any value. India produces 134.5 MT of fruits and vegetables but due to inadequate cold storage and preservation facilities and improper supply chain infrastructure, there is enormous loss of wastages. Agriculture and its allied industries sector employs 67% of the country's population. Reliance Group, Bharti Group, Mahindras, Godrej, PepsiCo, ITC and many more corporate companies are now planning in R & D, seeds, fertilizers, and pesticides business to assist farmers in improving irrigation by latest technologies and setting up cold storage and warehousing to transportation to exports. Agriculture is the largest livelihood provider in rural India. In spite of this, the small farmers gains are not enough compared to the efforts put in and agriculture cost inputs; this can affect the agricultural productivity and food security of the nation. In the agriculture sector, constant application of latest ideas and better technologies is essential to enhance 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. So Information and Communication Technology (ICT) in agriculture can act as a driving force in the development process. Like Agriculture the subject of, marketing is in the concurrent list of the Indian Constitution and is gaining importance. It facilitates marketing decisions, directs the competitive process and simplifies marketing mechanisms. If the marketing systems are to have any meaning for farmers, the information they provide must be accurate, timely and farmers must understand it. Accuracy, Availability, Applicability and Analysis are the four ‘A’s of marketing information; a farmer may decide how much to produce, when and where to sell and a trader may expand trade. Similarly, a consumer may find out alternative sources of supply. The Vision 2020 document of the
Department of Agriculture and Co-operation envisages that "the tools of ICT will provide networking of Agriculture Sector not only in the country but also globally. The Center and State Government Departments will have reservoir of databases. And it will also "bring farmers, researchers, scientists and administrators together by establishing "Agriculture Online" through exchange of ideas and information. There are several Ministries/Departments in Government dealing with Agricultural Marketing. The Government’s digital initiatives include Agrisnet, Agris, Agmarknet, Dacnet, Vistarnet, Aphnet, Fishnet, Hortnet Seednet, Ppin, Coopnet, Fertnet, Arisnet, Afpinet, Arinet, Ndmnet, etc, with their independent websites.

2. Vast Potential for Information Technology in Retail Marketing Business In India: - Considering the globalization of trade along with rising need of food retailers, this has resulted in boom in food transport logistics business. National Agricultural Co-operatives marketing Federation of India (NAFED) is planning to set up packaging and warehouses facilities at JNPT in Kandla. Mitsubishi and Reliance Industries Ltd are planning to start cold chain trucks. The modern distribution channels, warehousing and cold storage facilities will ensure the farmers to sell their products fresh and faster to retail outlets, resulting in lower wastage and also increasing opportunities for exports. Field Fresh, a Bharti Enterprises retail outlet is expecting to export 50% of its products. E-Choupal initiative of ITC’s International business division has resulted in efficient delivery channel for rural development and converting villages into upcoming potential markets in Chandigarh, Pune, and Hyderabad.

Table No:-1 Popular Retail Outlets in Rural India

| Name Of Company          | Name Of Retail Outlet         |
|--------------------------|-------------------------------|
| Reliance Group           | Reliance Fresh Stores         |
| Bharti Group             | FiledFresh                    |
| ITC International Business Division | Choupal Fresh            |
| ITC(Rural)               | Choupal Saagar                |
| Godrej                   | Aadharand Nature's Baske      |
| Thapar Group             | Global Green                  |
| M/s. Surendra Agritech Pvt. Ltd, Orissa | Udyan Fresh |

Table No:-2 Use of ICT in Retail Marketing

| Procurement | Manufacturing | Supply Chain | Finance / HRM | Marketing | Extension | Customer | Relation | Agriculture & Horticulture |
|-------------|--------------|--------------|---------------|-----------|-----------|----------|----------|---------------------------|
| Overall efficiency | Energy Consumption | Optimization of inventory | Optimization of expenses | Workforce motivation | Competence mapping | Bettering work culture | Enhancement of value | Reduction of Risk & increasing Productivity with proper Marketability of products. |
3. Research Methodology: To conduct this research, researchers were reviewed so many articles, Case Studies, Success Story to present the Theoretical Framework in order to illustrate the Conclusion part with Social Innovation.

4. Result and Discussion

**ITC’s ‘E-Choupal’ Initiative: A Novel Model for Rural India**

ITC’s ‘e-Choupal’ makes use of the physical transmission capabilities of current intermediaries - aggregation, logistics, counter-party risk and bridge financing. With a judicious blend of click & mortar capabilities, village internet kiosks managed by farmers - called *sanchalaks* - themselves, enable the agricultural community access ready information in their local language on the weather & market prices, disseminate knowledge on scientific farm practices & risk management, facilitate the sale of farm inputs and purchase farm produce from the farmers’ doorsteps.

The aggregation of the demand for farm inputs from individual farmers gives them access to high quality inputs from established and reputed manufacturers at fair prices. As a direct marketing channel, virtually linked to the ‘mandi’ system for price discovery, ‘e-Choupal’ eliminates wasteful intermediation and multiple handling. Thereby it significantly reduces transaction costs. Launched in June 2000, ‘e-Choupal’, has already become the largest initiative among all Internet-based interventions in rural India. ‘e-Choupal’ services today reach out to more than 3.5 million farmers growing a range of crops - soyabean, coffee, wheat, rice, pulses, shrimp - in more than 38,000 villages through nearly 6500 kiosks across nine states namely Madhya Pradesh, Haryana, Uttaranchal, Karnataka, Andhra Pradesh, Uttar Pradesh, Maharashtra, Rajasthan and Kerela.

5. A Success Story from Odisha by OCAC in Food Retailing, a special case.

**Food Supplies and Consumer Welfare Department – PDS Information System**

PDS Information System is to maintain transparency and accountability into the Public Distribution System through Web publication of information on District/Block wise allotment of food grains, distribution of food grains through the distribution network of Storage Agents, Retailers, Wholesalers and Sub-wholesalers, Publication of Beneficiary list and incorporation of Grievance management. This project was a pilot project for Nawarangpur district under 9/9 matrix e-Governance initiative which can be accessed at www.pdsorissa.in. The initiative has been planned to be replicated in rest of the districts of the state in the next phase. Common Service Centre (Sahaja Jana Seva Kendra) may be a Very good case study being implemented by OCAC, Dept. Of IT, Govt. Of Odisha for Information Dissemination as well as employment opportunity creation. Like wise Sahaj Shrei Village Scheme also a success story.

6. Policy Implication

6.1. Major Recommendations

- The future lies in rural computing. Using ICTs for timely market and weather information is key to development in the farming sector. We should tailor our rural ICT Policies according to our requirements
- 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, NCDC, NDDB, NHB, SAMBs etc..
- Establishment of AGMARKNET Nodes at KVKs and Panchayats and computerization of all mandies/APMCs. Wholesale markets should have WiMAX based Internet Hubs.
- ICTs cannot succeed on a stand-alone basis and need to be supplemented by other
programmes. e.g. Academic and research data in agriculture marketing needs to be digitalized and it is also necessary to make available the digitalized literature in local languages. Support is also needed to facilitate Cross-flow of information.

• The involvement of a local partner in the delivery of the services will be significant for a disciplined market.
• India needs to develop a structured nationwide common spot exchange.
• Arrangement should be made to introduce electronic scientific grading of agricultural commodities in the markets or for a cluster of markets.
• The small and medium farmers are always lacking in resources. In spite of lowest price paid by wholesalers, most of the small and medium farmers sell their produce to the wholesalers in lieu of receipt of advance borrowing from them. Adequate and timely on-line credit facilities should be made available, at reasonable rates of interest, by the financial institutions so that farmers can come out from the clutch of wholesaler.
• Tele-density in rural areas continues to be low, increase in tele-density as an important component of infrastructure development should be taken up.
• There is need for greater synergy between extension services and market.
• Strengthening of Agriculture Business Process through e-Form, e-Document, Workflow Computing should also be given importance.

Some Models of Information Communication Technology

The Marketing Information System
7. Conclusions

Information Technology should be used for maintaining an updated and enriched database of region specific agricultural information and timely dissemination of the information.
pertaining to soil enrichment, seed selection, actions relating to arrival of monsoon etc. to the
farmers. In addition, information regarding agricultural products, demand-supply status in
respect of different products and the current price should be made available on-line to the
farmers for taking timely decisions on crop product diversification strategies and positioning of
the same in right market to get optimum revenue. The educational and professional institutions
should take for guiding the latest information using IT as a tool and make it available to the
farmers. The need of the day is to harness the vast potential of agriculture in Indian economy.
The role of Information Technology to develop agriculture and quality of life in rural area is well
established. IT can help an average Indian farmer to get relevant information regarding agro-
inputs, crop production technologies, agro processing, market support, agro-finance and
management of farm agri-business. The agricultural extension mechanism is becoming
dependent on IT to provide appropriate and location specific technologies for the farmers to
furnish timely and proficient advice to the farmers IT can be a best mean not only to develop
agricultural extension but also to expand agriculture research and education system.

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