

## **DIGITAL AGRICULTURAL MARKETING: STEP TOWARDS SUSTAINABLE AGRICULTURAL SECTOR**

**Dr. Nilesh U. Bankar**

Dy. Director, PIRENS Institute of Business Management and Administration,  
Savitribai Phule Pune University,

**Dr. Mohasin A. Tamboli**

Assistant Professor, PIRENS Institute of Business Management and Administration,  
Savitribai Phule Pune University,

### **ABSTRACT**

Agriculture marketing is inferred to cover services involved in moving an agriculture product from the farm to the target consumer. Agriculture marketing system has undergone several changes over the last 60 years owing to the increased marketed surplus, increase in urbanization and income levels and consequent changes in the pattern of demand for marketing services; increase in linkages with distant and overseas markets. The main objective of agriculture marketing is to reduce the cost of marketing. Use of information and communication technology (ICT) in agricultural sector can be called as e-Agriculture or e-Agribusiness. Digitalization will change every part of agri food chain but require major transformations in farming, rural economics, marketing of produce. The application of ICT in agriculture has positive effects for farmers in terms of accessing market information and promoting agricultural products. In digital world, we can revolutionize agriculture market end to end digitally. ICT helps small farm holders to find multiple buyers for producer who are willing to pay high price. Small holders deal with only handful buyers who either pickup directly from them. Use of mobile application providing price information to farmers can reduce market distortions. In the Global scenario in Kenya m-Farm mobile applications are enabling collective sales where users can find location of farmers, input dealers, buyers, warehouse for storage, credit etc and it reported that farmers are receiving higher prices in market. In China's agricultural industry, traditionally farmers plan their crop based on sales of previous season. With Alibaba's flash sale and marketing platform 'Juhuasuan' its virtual farming feature "Jutudi" allowing farmers access to consumer sales data so that they can more accurately plan crops based on current consumer trends. It lets consumers pre order

agriculture products before harvest. It directly works with cooperatives and farmers to bypass middlemen. Uzhavan app by government of Tamilnadu for marketing of produce as one of service offered and many other digital apps by other state government for letting the farmers get to know about the timely and proper information for the crop production and the market details. This article gives idea about current digital services in marketing of agriculture produce

**Keywords:** Digital, Agriculture, Marketing,

## 1. INTRODUCTION

India is an agricultural country that depends on agriculture sector directly or indirectly. India laid much emphasis on agriculture production with world ranking of second in rice, fruits, and vegetables after China. Marketing plays eminent role in reach of agriculture produce to consumers, selling of output, fetching good price, creating relationships, satisfying customers. Agriculture marketing is inferred to cover services involved in moving an agriculture product from the farm to the target consumer. It helps in planning, organizing, grading, packing, storage, food processing, distribution and advertising. Agriculture marketing system has undergone several changes over the last 60 years owing to the increased marketed surplus, increase in urbanization and income levels and consequent changes in the pattern of demand for marketing services; increase in linkages with distant and overseas markets. The main objective of agriculture marketing is to reduce the cost of marketing. Agricultural Information Technology is one of the important factors that lead to the expected development. Use of information and communication technology (ICT) in agricultural sector can be called as e-agriculture or e-agribusiness. Digitalization will change every part of agri. food chain but require major transformations in farming, rural economics, and marketing of produce. The application of ICT in agriculture has positive effects for farmers in terms of accessing market information and promoting agricultural products.

## 2. LITERATURE REVIEW

(Jairath, M. S,2012) The benefits to farmers by sale of agricultural produce in the regulated market varies from area to area because of the variation in the spread of regulated markets over the regions and the existence of necessary infrastructural amenities/ facilities in these regulated

markets. (USAID FACET project,2012) Information and communication technology(ICT) solution in agriculture marketing helps to evaluate ,plan, deploy impactful interventions to facilitate smallholder marketing. (Bihu santosh behera, 2013) Retail marketing of agriculture commodities through initiatives made by multinational companies did not attempt to explain how extension services to farmers are linked to information technology. (Surarchith,N.K.2013) License for Electronic Spot Exchange has also been granted to National Spot Exchange Ltd (NSEL), NCDEX Spot Exchange Ltd. (NSPOT) and National Agriculture Produce Marketing Committee of India Ltd. (NAPMC) as spot exchange helps to remove intermediaries. (Ms.K.Kiruthiga, 2015) Agricultural marketing functionaries, marketing of agriculture produce, importance of agriculture produce. (V.Nagendra, 2015) Few prominent private sector organizations adopted different models for agricultural Marketing. Telephone is used as means of communication for marketing of produce in India. (Singh,U.S., 2013) Number of mobile enable services is addressing the information needs of the stakeholders to some extent. (Sukhpal Singh, 2014) Experience and the potential of agribusiness franchising of commodities in India is growing at a rapid extent and the interest among the people for agro start ups is more. (Shakeel-rehman, 2012) The scopes of Indian agriculture marketing systems, major private sector initiatives are reviewed.

### **3. INFORMATION AND COMMUNICATION TECHNOLOGY SOLUTIONS TO ENHANCE AGRICULTURE MARKETING**

Current Agricultural marketing system globally is the outcome of several years of Government intervention. In digital world, we can revolutionize agriculture market end to end digitally.ICT helps small farm holders to find multiple buyers for producer who are willing to pay high price. Small holders deal with only handful buyers who either pickup directly from them. Use of mobile application providing price information to farmers can reduce market distortions. In the Global scenario in Kenya m-Farm mobile applications are enabling collective sales where users can find location of farmers, input dealers, buyers, warehouse for storage, credit etc and it reported that farmers are receiving higher prices in market.

Technologies such as 'Blockchain' is used to detect poor quality food in food chain allowing early and effective responses. It provide competitive advantage for those who use it with information on origin of their food to consumers. Walmart is using blockchain to track every bag

of lettuce and spinach from farm .Over 100 farms that supply walmart with leafy green vegetables will be required to input information about their food into blockchain database. It helps to ensure quality of its fresh food to customers. Private sector initiatives that are successfully disseminating information to the farmers on a daily basis.

Technology innovations are increasing efficiency in China's agricultural industry. Traditionally, farmers plan their crop based on sales of previous season. With Alibaba's flash sale and marketing platform 'Juhuasuan' its virtual farming feature "Jutudi" allowing farmers access to consumer sales data so that they can more accurately plan crops based on current consumer trends. It lets consumers pre order agriculture products before harvest. It directly works with cooperatives and farmers to bypass middlemen. Consumers are enjoying discounts of 30% to 50% lower than regular prices. Chinese e-commerce platform like 'Pinduoduo' is running similar virtual farming feature called "Duo Duo orchard" introduced in 2018 with currently more than 11 million active users a day. In India e-choupal by ITC,AGMARKNET, M & M, Godrej group, APMC etc play a vital role for welfare of farmers

Agricultural products range from staple to high-value crops; however, there is an emphasis on cash crops that are marketed by smallholder producers and provide income to support rural households.

### **3.1 e-Choupal**

It is an initiative by Indian Tobacco Company limited (ITC) in the year 2000. e-Choupal links rural farmers via internet for procurement of agriculture and aquaculture products like coffee, soyabean, prawns etc.ITC will provide computers, internet access in rural area where farmers can directly negotiate price and sale. Farmers obtain information on mandi prices, good farming practices, weather forecast, placing orders for agriculture inputs(seeds, fertilizers).ITC kiosk is run by sanchalak (a literate and trained farmer). The computer is placed in sanchalaks home and is linked to internet. Each kiosk can serves 600 farmers in surrounding 10 villages within 5km radius. It eliminates middlemen completely. Since introduction of e-Choupal services farmers have seen raise in their income levels. At present 6100 e-Choupals are in operation over 35000 villages in 10 states.

### **3.2 Reliance group**

It is planning to acquire over 2000 acres for its contract farming venture in Karnataka, which could emerge as one of its hub for farm produce exports. In the pipeline it is going to setup

warehouses across the state. Reliance fresh stores-the first format from reliance retail would source fresh fruits and vegetables where farmers get large benefits by selling directly to reliance, thus saving on transportation expenses.

### **3.3 AGMARKNET**

Agricultural Marketing information network is a sponsored project of Directorate of Marketing and Inspection (DMI) to establish a nationwide information network for speedy collection and diffusion of price, commodities, sales, arrival information, contract farming. It started in march 2000 by union ministry of agriculture. It links around 7000 agriculture wholesale markets in India. Portal is in 8 regional languages and English. More than 3200 markets are covered under this with more than 350 commodities.

### **3.4 e-NAM**

Electronic trading portal integrating 585 markets across 16 states. More than 164.53 lakh tonnes of farm commodities have been transacted on e-NAM. It is developed to transport the agri product from one market to another in smooth way to save the produce.

### **3.5 NAFED**

National Agricultural Co-operative Marketing Federation of India (NAFED) is the apex body of the cooperative marketing system at the National level. One of oldest and successful association/cooperation of farmers was Grape Growers Association of Maharashtra. NAFED set up in 1958 promotes cooperative marketing of agricultural produce for the benefit of farmers through its own branches and the cooperative marketing network. It collects agro products directly from farmers in regulated markets eliminating middleman.

### **3.6 IKISAN**

The only entity that is specialized across the agri value chain with specific mandate and capabilities to harness the power of Information Technology. It provide information on market prices, products, weather, management techniques etc.

Cargrill provide assured marketing outlet without commission and brokerage. It is a private sector initiative aiming to squeeze out market inefficiencies and intermediaries in agriculture marketing. Khadi gramodyog board of Madhya Pradesh and Hindustan Unilever Limited entered into public private partnership. It is a joint venture with umbrella brand 'Vindhya valley'. Milk cooperative society called 'Warna Bazaar' in Kolhapur of Maharashtra has more than 40 outlets running as one stop store for agriculture products. Mahindra and Mahindra group initiative called

Mahindra krishi vihar in madhurai in the year 2000 for providing agriculture extension services and buyers a lot of produce from farmers. Aadhar retail stores by Godrej and Future group in Gujarat and Punjab states who procure directly from farmers for their stores. Other websites like krishivihar.com, agriwatch.com, commodityindia.com also provide market information.

India of uses social media to organize and empower small farmers. Small tea growers in West Bengal India launched a website last year and linked it with Facebook and Twitter to connect growers directly with international buyers. Another example, turmeric farmers in Maharashtra's Sangli district used Facebook's Mobile Messenger to organize themselves and avoid a potentially calamitous price crash due to oversupply. They were able to reach thousands of turmeric farmers.

### **3.7 UZHAVAN APP**

Tamilnadu government launched bilingual(Tamil and English) mobile application in a bid to use technology benefit to farmers. It offers 12 key agricultural services to farmers including real time information on crop prices, marketing linkages

### **3.8 NAPANTA APP**

Digital agricultural platform to address the inefficiencies in pre harvest management for agri produce with superior market linkages across villages in Telengana and Andhra Pradesh. Farmer can access real time information pertaining to daily market prices of 3500+agri markets and 3 year price trend of 300+commodities. It is bilingual with Telugu and English.

## **4. CONCLUSION**

Smartphones could be a true breakthrough for smallholder farmers where apps are used for agricultural marketing. It creates an awareness on the market prices and the demand of the crop produce. Despite all these opportunities, it is worthwhile reinforcing the fact that there is no single best solution for all circumstances. More refined marketing skills will likely recap more benefits than without. Agriculture extension mechanism is becoming dependent on IT to provide appropriate answers to farmers. To encourage digital agripreneurship, companies need to create pool of digitally skilled employees. Young agripreneurs have a key role to play in digitization of agriculture sector. The government and many companies are investing in agriculture marketing

solution for welfare of farmers. Digital Agricultural Marketing will play a vital role in the years to come in doubling the farmers produce and tripling the Income of the farmers.

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