

Study on Awareness about Agri-Supply Chain Management Among Farmers of Uttar Pradesh

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In India a lot of changes have taken place in the domain of agricultural commodities business operations especially in horticulture. While deciding on the purchase of these commodities, besides the price of the product, a number of factors have been taken into consideration, such as appearance, convenience and also the perceived quality. It is critically important to understand the process of supply chain management at primary level which maintains the quality of horticultural commodities, since it contributes in the production, packing, storage, transport, and distribution processes. Those who understand how the supply chain can be optimised, they can improve logistic processes to get enhanced customer satisfaction, loyalty, lower costs and also maximum share in end users' price. This study was conducted in two districts of Uttar Pradesh, in an effort to know the farmers' awareness about horticultural supply chain management. Using data from a questionnaire survey conducted among 120 respondents, the study assesses the level of awareness about five aspects of horticultural supply chain management. The study indicates that maximum farmers (32.5 per cent) in Uttar Pradesh are aware of the fact that packaging and transportation are the main components of supply chain management in horticulture. Therefore, from the practical standpoint of view, it is needed to increase awareness among farmers in Uttar Pradesh about importance and holistic approach in horticultural supply chain management.

Keywords: Agri., horticultural, supply chain, management, farmers, awareness.

INTRODUCTION

The agriculture especially horticulture is being considered an engine of growth as it provides nutrition to the masses. The contribution of the state of Uttar Pradesh is 19.41% in fruits and 29.55% of vegetables in our country's horticultural production. It ranks 1st in mango, aonla and 4th in guava production, (Food Processing Policy, 2012). The Horticulture in India contributes about 30 % to the Agricultural GDP and the share of horticultural food has increased to more than 50 percent in the food basket of consumers. The post-harvest horticultural losses worth over Rs 2 lac crore each year in our country due to the absence of proper awareness and supply chain management facilities.

The horticultural farmers tends to be characterized by small and marginal growers in dispersed locations with disparate products of variable quality. Hence, the farmers share in consumers' rupee is only about 30-40% due to the in-efficient supply chain management, comprising of multilayer channels and large number of intermediaries.

Therefore, this sector needs more attention by policy makers, research institution and the corporate sectors, (ASSOCHAM, 2013). To prevent post harvest losses and maintain the quality of horticultural commodities, the awareness about various aspects of supply chain management of farmers is critically important, which contributes in the production, packing, storage, transport,

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distribution and marketing of horticultural commodities and to deal with everything properly in the supply chain from field to the end users. Keeping this in view, the potential background of Lucknow and Kanpur districts of the Uttar Pradesh was found quite suitable for the study on awareness about agri-supply chain management among farmers of Uttar Pradesh.

OBJECTIVES

The study was an attempt to explore the awareness about the following aspects of agri-supply chain management among the farmers' of Uttar Pradesh:-

- (i) Crop Harvesting,
- (ii) Primary Processing,
- (iii) Packaging and Transportation,
- (iv) MIS and Storage,
- (v) All of Above.

REVIEW OF LITERATURE

The Supply Chain Management is an important issue facing farmers and farmers cannot themselves easily assess quality risks. The farmers' know how about supply chain management is a part, a matter of awareness in horticultural supply chain management. The review of work previously done is mentioned in the following sections:-

The term 'supply chain' is regarded as being synonymous with value chain or demand chain. It is defined as 'a chain of events which initiates the process of Source, Make and Deliver a product to customer to satisfy the ever changing needs of a customer in the Market place' Sangam (2002).

According to Ricks et al., (2002) supply chain management [SCM] 'represents a collection of management activities exercised between vertically related firms to improve efficiency, vertical integration, and overall performance of the participating firms within an industry'. Bowersox et al., (2002) defined SCM as 'consisting of firms

collaborating to leverage strategic positioning and to improve operating efficiency'.

The logistics is that part of the supply chain process that plans, implements, and controls the efficient, effective flow and storage of goods, services and related information from the point of origin to the point of consumption in order to meet customer's requirements' (Bowersox, et al., 1992). The horticultural supply chain management in the Uttar Pradesh is too complex and challenging with numerous parties involved, which often do not possess knowledge of the best practices. The farmers tend to be of an independent mindset, selling their products to agents who tend to offer the best price (Kumar, 2013).

Horticulture sector do experiences fluctuations in volume and quality between seasons, much of which is driven by variations or extremes in weather patterns and also is characterized by many small producers, often in dispersed regions throughout the state with many different market outlets, ranging from road side sales to domestic market stores, to international chains of supermarkets in diverse countries. The grower also develops awareness of the demands of the customer, the importance of product quality and maintenance of optimal postharvest shelf life conditions in order to ensure maintenance of quality for the marketing period, (Hewett, E.W., 2002)

RESEARCH METHODOLOGY

The study titled "Awareness about agri-supply chain management among framers of Uttar Pradesh" was carried out in the month of June; 2013. The research methodology followed to accomplish the objectives was divided into three sub-sections. The first sub-section deals with the study area, the second one describes the data collection and the final sub-section deals with the statistical tools adopted for analysis of data.

Study Area

The study area selection was based on the production of horticultural commodities,

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considering its share in the production and the strategic position in the intra and inter state horticultural business. Therefore, Lucknow and Kanpur Nagar districts were purposely selected for the study.

Sample Size

The samples of 120 horticultural farmers were selected randomly for the study area, i.e. 60 farmers from each Lucknow and Kanpur.

Data Collection

The study is based mainly on the primary data, collected from selected horticultural farmers through field survey through using structured and close ended questionnaires.

The study also utilizes the secondary data collected from Journals, books, reports and publications of

various departments and websites of Government of Uttar Pradesh, Central Government and international organizations.

Statistical Tools Used

Simple descriptive statistical techniques like averages, percentages, graphical analysis, etc have been used to describe the basic features of the data collected, (Kothari, 2005)

FINDINGS AND DISCUSSION

The findings of “study on awareness about agri-supply chain management among farmers of Uttar Pradesh” based on observations recorded, arranged, analysed and presented in following Table:-

It is evident from the table and Figure-1 that there were much variability in awareness about agri-supply chain management aspects among farmers in Lucknow and Kanpur Nagar.

Table: Awareness about Agri-supply Chain management components among farmers of Lucknow, Kanpur Nagar and Uttar Pradesh.						
Supply Chain aspects	Lucknow		Kanpur Nagar		Uttar Pradesh	
		%		%		%
Crop Harvesting	07	11.67	06	10.00	13	10.83
Primary Processing	09	15.00	13	21.66	22	18.33
Packaging and Transportation	19	31.66	20	33.34	39	32.50
MIS and Storage	14	23.34	16	26.67	30	25.00
All of above	11	18.33	05	08.33	16	13.34
Total Respondent	60	100.00	60	100.00	120	100.00

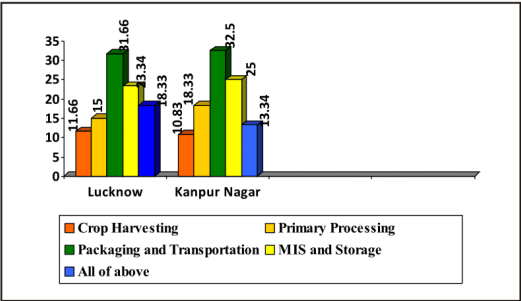


Figure 1: Bar diagram of awareness about various aspects of agri-supply chain management among farmers in Lucknow and Kanpur Nagar.

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The understanding of farmers in Lucknow about agri-supply chain management aspects like Crop Harvesting, Primary Processing, Packaging and Transportation, MIS and Storage and about all of these aspects were analysed and findings reveal that 31.66 per cent farmers reported that Packaging and Transportation is the major component of agri-supply chain followed by MIS and Storage (23.34 percent), Primary Processing (15 per cent), and Crop harvesting by 11.67 per cent farmers, while only 18.33 per cent farmers reported all the aspects of agri-supply chain management i.e. Crop Harvesting, Primary Processing, Packaging and Transportation, MIS and Storage. In Kanpur Nagar, understanding of farmers regarding same aspects of agri-supply chain management were analysed and it was found that 33.34 per cent farmers do understand that Packaging and Transportation is the major component of agri-supply chain followed by MIS and Storage (26.67 percent), Primary Processing (21.66 per cent) and Crop harvesting by 10.00 per cent farmers, while 8.33 per cent farmers reported that Crop Harvesting, Primary Processing, Packaging and Transportation, MIS and Storage all are important aspects of horticultural supply chain management. It is obvious from the above table and Figure-1 that 11.67 per cent farmers in Lucknow reported that Crop Harvesting, Primary Processing, Packaging and Transportation, MIS and Storage all are important aspects of supply chain in

horticulture, while only 8.33 per cent farmers reported the same in Kanpur Nagar.

The understanding of farmers in Uttar Pradesh, is obvious from average data of Table and Figure-2 which highlights that there was variable awareness of farmers about different aspects of agri-supply chain management . It showed that 32.50 per cent farmers perceived that Packaging and Transportation is the main component of agri-supply chain followed by MIS and Storage (25.00 percent), Primary Processing (18.33 per cent), and Crop harvesting by 10.83 per cent farmers. Where as 13.34 per cent farmers reported other aspects i.e. Crop Harvesting, Primary Processing, Packaging and Transportation, MIS and Storage are important components of supply chain management in agriculture particularly in horticulture.

CONCLUSIONS

The majority of farmers (32.5 per cent) in Luckow and Kanpur understood that Packaging and Transportation were the major component of supply chain management in horticulture and only 13.34 per cent farmers understand all the aspects i.e. Crop Harvesting, Primary Processing, Packaging and Transportation, MIS and Storage which are vry important for supply chain management in horticulture.

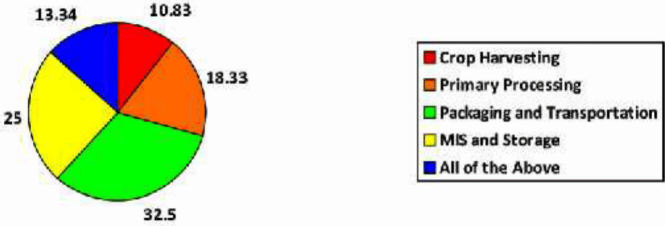


Figure-2: Pie diagram of awareness about various aspects of agri-supply chain management among farmers of Uttar Pradesh.

LIMITATIONS

The findings of the study were based on the survey conducted in Lucknow and Kanpur Nagar, therefore, it will not be sufficient to portray exact picture of awareness about horticultural supply chain management among farmers in the entire state.

RECOMENDTIONS

It is evident from the findings of the study that farmers were not fully aware about the complete agri-supply chain management and were also unaware about the importance and contribution of supply chain management in maintaining quality.

Therefore, from the practical standpoint of view, it is essential to generate awareness amongst the farmers of Uttar Pradesh about the relevance and holistic approach in agri-supply chain management.

REFERENCES

- Hewett, E. W., 2002. Perceptions of Supply Chain Management for Perishable Horticultural Crops: an Introduction, International Society for Horticultural Science (ISHS), Auckland, New Zealand.
- ASSOCHAM, 2013, India incurs Rs 2 trillion/year post harvest loss of fruits, veggies, <http://economictimes.indiatimes.com/topic/assocham>. September 1st
- Bowersox, D. J., Closs, D. J. and Cooper, M. B. 2002. Supply Chain Logistics management. McGraw Hill Higher Education, New York.
- Bowersox, D. J., Daugherty, P. J., Droge, C. L., Germain, R. N. and Roger, D. S. 1992. Logistical Excellence its not business as usual. Digital Press, Burlington, MA, USA, pp.246.
- Food Processing Policy, 2012. Directorate of Horticulture and Food Processing, Government of Uttar Pradesh.

Kothari, C.R., 2005. Research Methodology-Mthods and Techniques, 2ed. New Age International Publishers, New Delhi.

Kumar, R.K., 2013. Horticultural supply chain management in Uttar Pradesh. Compendium on Agricultural Supply Chain Management, National Academy of Agricultural and Rural Management, Rajendra Nagar, Hyderabad.

Ricks, D., Woods, T. and Sterns, J. 2002. Chain management and marketing performance in fruit industry. Acta Horticulturae 536:661-668.

Sangam, V. K. 2002. Know your supply chain. Pp. 16. <http://scm.massey.ac.nz>

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He has about 16 years of corporate experience and more than 5 years of teaching experience. His research papers have been published in reputed journals of Progressive Horticulture, and Food Safety. He has done research work in agricultural marketing, supply chain and post harvest management in Reliance Food Processing Ltd. Gurgaon, (India) while being in the corporate world. His research interests are in the area of Agribusiness management, domestic and international marketing.