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Marketing problems of Kohlrabi, Carrot and Cauliflower: A case study of Lakhipur community development block of Goalpara district, Assam, India

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ABSTRACT

Lakhipur Community Development block of Goalpara district of Assam has been selected for the study. The reason behind selection of the area is that Kohlrabi, Carrot and Cauliflower play a significant role in the economy of the district. Growing vegetables sector provides opportunities for employment generation, attain income and food security and increase income through value addition. However, due to the absence of efficient marketing facilities and processing units farmers do not receive remunerative prices. As most of the vegetable crops are perishable, their harvest and marketing are very crucial for boosting the development of these crops. It was observed that about 4.03 per cent of Kohlrabi, 3.57 per cent of Carrot and 3.22 per cent of Cauliflower's scope for increasing producer's share in consumer's price. And also seen that absence of proper marketing facilities in the post harvest operations from the farmers to the consumers are found responsible for the wide price spread.

Keywords: Marketing efficiency, Remunerative prices, Perishables, Price spread.

INTRODUCTION

India's age-old farming practices have taken a turn in recent years. The technological breakthrough has led a substantial increase in the production of farms and the largest marketable and marketed surplus. To maintain this tempo and pace of increased production through technological development, an assurance of remunerative prices to the farmers is a prerequisite, and this assurance can be given to the farmer by developing an efficient marketing system (Acharya and Agarwal, 2001). Market functionaries or institutions move the commodities from the producers to consumers through different marketing channels. Every function or service performed in various marketing channels involves cost. The intermediaries or middlemen make some profit to remain in the trade after meeting the cost of the function performed. In the marketing of the agricultural commodities, the difference between the price paid by the consumer and the price received by the producer for an equivalent quantity of farm produce is often known as price spread.

Studies on marketing margins and costs are important, for they reveal many facets of marketing and price structure, as well as the efficiency of the system (Acharya and Agarwal, 2001). By performing the major functions of marketing, transport plays a dominant role in the exchange of wealth between the nations (Devi, 2002). Therefore, disposal of the produce is as important as the adoption of cultivation practice for improving its productivity (Singh, *et al.*, 2005). Thus, efficient marketing system is crucial to support farmers and earn reasonable returns, marketing of agricultural commodities faces various obstacles due to their bulky nature, seasonality and high degree of perishability, major parts of production are sold by the farmers to middlemen or commission agents, who dominate the trade and earn huge profits. Marketing cost for some farm produce so high which accounted for more than 50 per cent of the cost of production (Kulkarni, 1959), thus reducing farmers' income. Whenever there is glut, the farmer is compel to dispose of his products at a throw away price. Such circumstances results in a switch over to cultivation of non-perishable crop.

An efficient marketing system is an effective agent of change and a crucial ways for raising the income levels of the farmers and the levels of satisfaction of the consumers. In the planning of agricultural production, the role of marketing of agricultural produce is very important. It is a well established fact that efforts for increasing agricultural production cannot be sustained for a long time unless and until the farmers are ensured the remunerative price for their products and also a legitimate share in the price paid by the consumers. One of the main reasons advocated for lower share of producers in the consumers' rupee is the larger magnitude of the price-spread of agricultural commodities. Keeping in view the aforesaid facts, the present study has been undertaken to examine the relative efficiency of marketing system for the Kohlrabi, Carrot and Cauliflower.

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Marketing of vegetables is not similar from marketing of other farm products because of their high perishability, concentration of business in a few hands and a large number of producers. India is the second largest producer of vegetables after China. As per National Horticulture Database published by National Horticultural Board, during 2015-16, India produced 169.1 million metric tonnes of vegetables. The area under cultivation of vegetables was cultivated at 10.1 million hectares. The cultivation of vegetables is most suitable in India because prevalence of small land holding with varied climatic conditions and surplus manpower. However, the level of profitability of the vegetables crops depends upon how marketing of vegetables is undertaken by the farmers in addition to technology in growing them. Time of sale, price of sale and agency through whom these are sold are some of the factors which influence the net prices received by the farmers for their surplus vegetables. High transport and packing costs, malpractices by the middlemen and existence of a large number of intermediaries reduce the producer's share in the consumer's rupee. To achieve the broad objectives, the study selects the two specific objectives such as to assess the marketing cost and margins of Kohlrabi, Carrot and Cauliflower and to work out the price-spread of these crops.

MATERIALS AND METHODS

As the objectives suggest, the present paper is an evaluation and descriptive type of research, based on both secondary and primary information. Secondary information was gathered from published sources such as statistical hand book of Assam, books, journals and PhD thesis. And the primary data were collected through a case study in the selected area of Goalpara district.

Goalpara district of Assam has been selected for the study. The reason behind selection of the district is that vegetables play a significant role in the economy of the district. Out of eight Community Development (CD) blocks in Goalpara district, one block i.e, Lakhipur CD block was selected for the study, keeping in view of its major share i.e. 51 per cent of total vegetable production of the district (Statistical Hand Book, Assam, 2013). From the selected block area, village Joybhum was purposively selected. From the selected village a sample size of 60 households comprising of 20 farmers each of Kohlrabi, Carrot and Cauliflower were randomly chosen. Besides ten numbers of market functionaries were interviewed to identify market channels and to gather information about the market process. Further, the collection points in the farmer's field and the market places were visited physically to observe the marketing process. The primary field data for the study area pertain to the agricultural year 2015-2016.

Some of the important marketing channels for Kohlrabi, Carrot and Cauliflower are mentioned as follows:

Channel I: Producer- Consumer
Channel II: Producer- Retailer- Consumer
Channel III: Producer- Wholesaler- Retailer- Consumer

Marketing efficiency, price-spread and producer's share in consumer's rupee in marketing channels II and III have been calculated by using the following formula:

Shepherd formula: $ME = \frac{V}{I} - 1$

Where,
ME= Marketing Efficiency
V= Value of the Kohlrabi, Carrot and Cauliflower sold as price paid by the consumer
I= Total marketing cost
Cr- Pf =Price spread
Consumer's price (Cr) = producer's price + marketing cost+ marketing margin
(Pf + Cr) 100 = Producer's share in consumer's price.
Where,
Pf = Producer's price
Cr = Consumer's price

RESULTS AND DISCUSSION

It is clear from the Table 1 that producer's marketing cost which involves transportation, palledari and market fee etc. was work out to be ` 32 per quintal showing 4.02 per cent, 3.57 per cent and 3.21 per cent of the consumer's price paid in buying Kohlrabi, Carrot and Cauliflower from the farmer's field to the road head. At this place wholesaler brings the produce at the mandi (Market) after paying ` 80 per quintal for Kohlrabi, Carrot and Cauliflower, which consists of 7.41, 6.78 and 6.25 percents of consumer price as marketing charges. The retailer's also pays some of the charges like transportation, weighing, palledari, arhat and tax in the market to the extent of `46 per quintal for both channels of Kohlrabi, Carrot and Cauliflower products, which are 5.77 and 4.25 per cent of Kohlrabi, 5.13 and 3.90 per cent of Carrot and 4.61 and 3.59 of Cauliflower of the consumer's price in channel II and channel III, respectively. The table further reveals that the retailer's margin in the market is that `250 per quintal (31.40%) in channel II and ` 184 per quintal (17.03%) in channel III from the Kohlrabi produce. In case of Carrot and Cauliflower products, the retailer's margins are 27.90 per cent in channel II and 15.59 per cent in channel III and 25.10 per cent in channel II and 14.37 in channel III, respectively. The retailer's sale the Kohlrabi, Carrot and Cauliflower products to the consumer in channel III, at the rate of ` 1080, ` 1180 and ` 1280 per quintals leaving 52.59 per cent, 56.61 per cent and 60.00 per cent of the consumer's price paid for the producers.

Marketing costs, margins and marketing efficiency in Kohlrabi, Carrot and Cauliflower marketing in the two channels are presented in Table 2. It may be seen from the table that cost of marketing of Kohlrabi, Carrot and

Table 1: Price-Spread of Consumer's Price in Kohlrabi, Carrot and Cauliflower marketing.

(`/ quintal)

Name of the functionaries	Kohlrabi		Carrot		Cauliflower	
	Channel II	Channel III	Channel II	Channel III	Channel II	Channel III
1. Net price received by the producer	568	568	668	668	768	768
	(71.35)	(52.59)	(74.55)	(56.61)	(77.10)	(60.00)
2. Total marketing cost paid by the producer	32	32	32	32	32	32
	(4.02)	(2.96)	(3.57)	(2.71)	(3.21)	(2.50)
(i) Transportation cost	2	2	2	2	2	2
	(0.25)	(0.19)	(0.22)	(0.17)	(0.20)	(0.16)
(ii) Palledari	10	10	10	10	10	10
	(1.26)	(0.93)	(1.12)	(0.85)	(1.00)	(0.78)
(iii) Market fee	20	20	20	20	20	20
	(2.51)	(1.85)	(2.23)	(1.69)	(2.00)	(1.56)
3. Producer sale price/ wholesaler purchase price/ Retailer purchase price	500	500	600	600	700	700
	(62.81)	(46.30)	(66.96)	(50.85)	(70.28)	(54.69)
4. Marketing charges paid by the wholesaler	—	80	—	80	—	80
		(7.41)		(6.78)		(6.25)
(i) Transportation cost	—	15	—	15	—	15
		(1.39)		(1.27)		(1.17)
(ii) Octori	—	25	—	25	—	25
		(2.31)		(2.11)		(1.95)
(iii) Palledari	—	15	—	15	—	15
		(1.39)		(1.27)		(1.17)
(iv) Commission charges	—	15	—	15	—	15
		(1.39)		(1.27)		(1.17)
(v) Miscellaneous	—	10	—	10	—	10
		(0.93)		(0.85)		(0.78)
5. Wholesaler's margin	—	270	—	270	—	270
		(25.00)		(22.88)		(21.09)
6.Wholesaler's sale price/Retailer's purchase price	—	850	—	850	—	850
		(78.70)		(72.03)		(66.40)
7. Marketing charges paid by retailer	46	46	46	46	46	46
	(5.77)	(4.25)	(5.13)	(3.9)	(4.61)	(3.59)
(i) Weighing	8	8	8	8	8	8
	1.00)	-0.74	-0.89	-0.67	-0.8	-0.62
(ii) Transportation	10	10	10	10	10	10
	(1.25)	(0.92)	(1.11)	(0.84)	(1.00)	(0.78)
(iii) Palledari	12	12	12	12	12	12
	(1.50)	(1.11)	(1.33)	(1.02)	(1.20)	(0.93)
(iv) Arhat	9	9	9	9	9	9
	(1.13)	(0.83)	(1.00)	(0.76)	(0.90)	(0.70)
(v) Purchase tax	7	7	7	7	7	7
	(0.87)	(0.64)	(0.78)	(0.59)	(0.70)	(0.54)
8. Retailer's margin	250	184	250	184	250	184
	(31.40)	(17.03)	(27.90)	(15.59)	(25.10)	(14.37)
9. Retailer's sale price/ Consumer's price	796	1080	896	1180	996	1280
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Note: Figure in the brackets represents percentages to the consumer's price.

Source: Field survey

Table 2: Marketing cost, margins and marketing efficiency of the Kohlrabi, Carrot and Cauliflower.

(`/quintal)

Particulars	Kohlrabi		Carrot		Cauliflower	
	Channel II	Channel III	Channel II	Channel III	Channel II	Channel III
Producer's share	568	568	668	668	768	768
Wholesaler's margin	—	270	—	270	—	270
Retailer's margin	250	184	250	184	250	184
Cost of marketing	78	158	78	158	78	158
Total costs and margins	328	612	328	612	328	612
Retailer's sale price/ consumer purchase price	796	1080	896	1180	996	1280
Net price received by the producer	568	568	668	668	768	768
Shepherd's index of marketing efficiency	2.43	1.76	2.73	1.93	3.04	2.09
Modified method	1.43	0.76	1.73	0.93	2.04	1.09

Source: Field survey

Table 3: Price-spread and producer's share in different marketing channels of Kohlrabi, Carrot and Cauliflower.

(`/quintal)

Particulars	Kohlrabi		Carrot		Cauliflower	
	Channel II	Channel III	Channel II	Channel III	Channel II	Channel III
Producer's price	568	568	668	668	768	768
Consumer's price	796	1080	896	1180	996	1280
Price-Spread	328	612	328	612	328	612
Percentage of price spread in consumer's price	41.20	56.67	41.20	56.67	41.20	56.67
Marketing cost share in consumer's price in per cent	9.79	14.62	8.70	13.80	7.83	12.34
Producer's share in consumer's rupee in per cent	73.86	52.59	74.55	56.61	77.1	60.00

Source: Field survey

Cauliflower are accounted to be ` 158 per quintal in channel III, which is higher than channel II. The marketing efficiency of Kohlrabi, Carrot and Cauliflower were worked out with the help of Shepherd's Index Method, which shows that it is higher such as 2.43 per cent , 2.73 per cent and 3.04 per cent, respectively in channel II than that of 1.76 per cent, 1.93 per cent and 2.09 per cent, respectively in channel III. It may, thus, concluded from the table that channel II was the most efficient channel as compared to others.

The comparative analysis of price-spread and producer's share in Kohlrabi, Carrot and Cauliflower marketing in channel II and Channel III was done with the help of results shown in Table 3. The Table shows that price-spread in Kohlrabi, Carrot and Cauliflower marketing is the same as ` 328 and ` 612 per quintals in channel II and Channel III for each produce, respectively. This means that price-spread is higher in channel III, where wholesaler was involved in marketing of Kohlrabi, Carrot and Cauliflower. The percentage of price-spread in consumer's price was also higher, which is 56.67 per cent for each produce in channel III. The proportion of marketing cost in consumer's price were 9.79 per cent, 8.70 per cent and 7.83 per cent, respectively in channel II and 14.62 per cent, 13.38 per cent and 12.34 per cent in channel III, which indicates that the marketing cost was higher in channel III due to having large number of intermediaries. The shares of producer in consumer's price were 73.86 per cent, 74.55 per cent and 70.10 per cent in Channel II and 52.59 per cent, 56.61 per cent and 60 per cent in channel III, respectively.

CONCLUSION

The present study of marketing problems of Kohlrabi, Carrot and Cauliflower in Lakhipur CD block leads

to a logical conclusions that there exists a vast scope for increasing producer's share in consumer's price. Absence of proper marketing facilities in the post harvest operations from the farmers to the consumers are found responsible for the wide price spread. The analysis above shows that the major components contributing the price spread are margins to market functionaries and transportation costs. Also by ascertaining the view of the farmer's, it was felt necessary to strengthen the marketing cooperatives which can play a vital role in providing marketing facilities to farmers at their own level for efficient disposal of their products.

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