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RESEARCH ARTICLE

AN ECONOMIC ANALYSIS OF MARKETING OF MAJOR VEGETABLES IN CUDDALORE DISTRICT

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ABSTRACT

Vegetables play an important role in the development of our country by improving the economic and social status of the people. Vegetables constitute an important component of a balanced diet for human. Many of the vegetables are of the nature of roughage aiding in digestion. Due to unique geographical and climatic conditions, India is endowed with a wide variety of vegetables. Cuddalore District was purposively selected since the vegetable growers are facing the problem of high commission charge and more number of middlemen. Vegetable Marketing is highly risky due to wide yield and price variation and need quick disposal because of the perishable nature of vegetables. For all these reasons, marketing system of vegetables need to be alert and pay personal attention to production and marketing aspects. The first hypothesis of the study was their exits a direct relationship between total marketing cost and the number of middlemen involved in the identified marketing channel. It was clear from the results that the total marketing cost of Tomato and Brinjal was observed as the highest in the marketing channel I. The second hypothesis of the present study was current arrivals of vegetables is an important source of information for determining the current wholesale price. The result of the regression analysis showed that there was a significant and negative relationship between current price and current market arrivals of Tomato and Brinjal. Thus, market arrivals play an important role in fixing current wholesale price rather than lagged price. The vegetable market is an unregulated market and due to the lack of organized marketing, the vegetable grower get low share for their produce. Therefore it is suggested that establishment of cooperatives in the district will go a long way in the eradication of malpractices in the marketing of vegetables.

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INTRODUCTION

In India, the small size of farms is striking feature of farming. This creates difficulties in introducing better methods of cultivation and marketing. For this, the successful vegetable growing requires specific knowledge, skill, accuracy and thoroughness in production and marketing. With the gradual displacement of subsistence farming by commercialized agriculture, marketing of farm products has assumed greater importance in recent years. For the farmer, disposal of his produce has become as important as the adoption of modern practices for improving yield from agriculture. Unless the marketing efficiency improves, no incentives to increase the production will attract the cultivators. Only better returns, relatively stable prices and attractive terms of trade will motivate the cultivators for commercial agricultural production. Though the vegetable crops hold a great promise for fostering economic growth and improving the diet of the people, they have received limited attention in marketing research programmes in India. In view of this, the present investigation was attempted to identify the different marketing channels in disposal of Brinjal and to work out the price spread in different marketing channels.

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MATERIALS AND METHODS

Cuddalore district was purposively selected since the vegetable growers are facing the problem of high commission charge and more number of middlemen and also for researcher's convenience. Cuddalore District consists of 13 blocks the first block namely Panruti Block was selected and it constituted the universe of the study. Total area under vegetables in Panruti Block was 1144 ha in 2002-03. Panruti Block consists of 44 revenue villages. In these villages top five villages were selected for the present study. A sample of 20 vegetable growers were selected from each village by simple random sampling method with the help of pre tested questionnaire. Thus, a three stage sampling technique was adopted for the selection of vegetable growers. In the first stage, block with the highest percentage of area under vegetable was selected and in the second stage villages with sufficiently large area under vegetables were selected purposively to ensure the adequate number of vegetables growers from revenue villages to be selected randomly in final stage. The ultimate sample consists of 100 Vegetable growers, every one cultivating more than one vegetable. Thus it was possible to get adequate sample size for major vegetables. From these selected growers their market outlets were traced. Among the vegetables, Tomato and Brinjal were selected for

this study because of the reason that these two vegetables occupied more than 70 per cent of total area under vegetable in this Block. The Details about Operational area of selected Farms are presented in Table 1.

Table 1. Distribution of operational area of sample farms

S.No	Group	Range of operational area (ha)	Number of farms
1	Group I	0.5-2.00	51
2	Group II	2.01-5.6	49
	Total	0.5-5.6	100

Price spread (PS)

This represented the difference between the net price received by the producer-seller (PNP) and the price paid by the ultimate consumer i.e. difference between Producer's Net Price (PNP) and Retailer's Selling price (RP).

$$PS=RP-PNP$$

In other words, it includes (I) the total costs of marketing (TMC) incurred by producer-sellers and market intermediaries excluding the commission agent and (ii) the net profit (NP) accrued to the intermediaries in the process of moving the

Table 2. Modified Marketing Efficiency

Sl.No	Particulars	Channel I		Channel II		Channel III	
		Tomato	Brinjal	Tomato	Brinjal	Tomato	Brinjal
1	Producer's net price	342.64 (39.57)	296.22 (45.03)	342.64 (53.54)	296.29 (69.72)	112.64 (93.87)	96.29 (96.29)
2	Marketing cost	56.99 (6.58)	37.93 (5.77)	53.47 (8.35)	36.41 (8.57)	7.36 (6.13)	3.71 (3.71)
3	Marketing Margin	466.37 (53.85)	323.78 (49.20)	243.89 (38.11)	92.3 (21.77)	-	-
4	Consumer rupee	866 (100.00)	658 (100.00)	640 (100.00)	425 (100.00)	120 (100.00)	100 (100.00)
5	Efficiency Index	0.65	0.82	1.15	2.30	15.30	25.95

Table 3. Marketing cost incurred by the producer

Sl.No	Particulars	Brinjal		Tomato	
		Amount (Rs/Q)	Percentage to total	Amount (Rs/Q)	Percentage to total
1	Transport Cost	2.5	67.38	4.6	62.5
2	Loading and un loading	0.01	0.27	0.01	0.14
3	Commission charge	0.7	18.87	1.25	16.98
4	Wastage	0.5	13.48	1.5	20.38
	Total	3.71	100	7.36	100

Table 4. Marketing cost incurred by the commission agent cum whole saler

Sl.No	Particulars	Brinjal		Tomato	
		Amount (Rs/Q)	Percentage to total	Amount (Rs/Q)	Percentage to total
1	Loading and un loading	4.10	12.54	6.50	14.09
2	Shop rent	3.00	9.18	3.00	6.52
3	Transport cost	12.50	38.22	15.36	33.52
4	Wastage	1.50	7.65	6.50	14.09
5	Labour charge for cleaning	10.60	32.41	14.75	31.98
	Total	32.70	100.00	46.11	100.00

Table 5. Marketing cost incurred by Retailer

Sl.No	Particulars	Brinjal		Tomato	
		Amount(Rs/Q)	Percentage to total	Amount(Rs/Q)	Percentage to total
1	Loading and un loading	0.06	3.95	0.06	1.70
2	Shop rent	0.76	50.00	1.76	50.00
3	Wastage	0.70	46.05	1.70	48.30
	Total	1.52	100.00	3.52	100.00

The Mean size of Operational area was 1.73 ha and 5.34 ha in group I and group II respectively. Results indicated that when size of holding increased, the proportion of area leased also increased. Hence, there might be a chance for increasing area under vegetables. The Marketing System of Selected Vegetables Composed of Different Marketing Channels. The identified Marketing Channels for tomato and brinjal were:

- Channel I Producer – Commission agent cum Wholesaler-Retailer – Consumer
- Channel II Producer – Commission agent cum Wholesaler - Consumer
- Channel III Producer – Consumer

produce from the producer-seller to consumer.

$$PS=TMC+NP$$

Producer's share in consumer's rupee (PSCR)

This is the price received by the farmer expressed as a percentage of the retail price (i.e., price paid by the consumers)

$$Ps = \frac{Pf}{Pr} \times 100$$

Where,

- Ps = Producer's share in consumer's rupee
 Pf = Producer's price (Rs/qtl)
 Pr = Retail price (Rs/qtl)

Marketing Efficiency Index (MEI)

The ratio of the total value of goods marketed to the total marketing costs is issued as a measure of efficiency. The higher the ratio, the higher is the efficiency and vice-versa. Shepherd's equation

$$MEI = \frac{V}{I}$$

MEI = Index of Marketing Efficiency

V = Value of the goods sold (Consumer's price)

I = Total marketing cost and marketing margins

RESULTS AND DISCUSSION

The channel selected for the study indicates that the farmers sell their produce to the wholesalers and wholesalers in turn sell the produce to retailers. The retailers sell their produce to Consumers. The detailed analysis of price spread, marketing costs and margins were presented in Table 2. Price spread is the difference between the price paid by the consumer and that received by the producer of a commodity. The cost incurred by different marketing functionaries is given in Table 2. It is observed from the Table 2. It could be observed from the table, the producer's net price for tomato was 39.57 per cent, 53.54 per cent and 93.87 per cent of consumer rupee in channel I, II and III respectively. In channel III, the farmers had more than 90 per cent of consumers' rupee. The modified marketing efficiency index showed that in channel II, the index was greater than unity which indicated that the producers' net price was greater than marketing cost and margin. Though the producer's net price was low in channel III, the index was very high. It showed that the channel III where there was a direct contact between grower and consumer was the most efficient channel. The results of the table 3 reflect it could be seen from the table 3 that the producers had incurred an expenditure of Rs.3.71 per quintal of Brinjal and Rs.7.36 per quintal of tomato. It could also be seen that the cost of transportation constituted a major share (above 60 per cent) of the total cost of marketing i.e., Rs. 2.5/quintal for Brinjal and Rs.4.60/quintal for tomato. Next to transportation cost, commission charges occupied the second position. More than 15 per cent of producers marketing cost were realized as the commission charge. From the table 4 it is evident that the commission agent cum wholesaler incurred Rs.32.70/quintal and Rs.46.11/quintal as marketing cost for Brinjal and Tomato respectively. Transport constituted major share of total marketing cost. Secondly labour charge for cleaning occupied 32.41 per cent of total cost in Brinjal and 31.98 per cent of total cost in tomato. This might be due to bulk handling of produce and perishable nature of Brinjal and tomato which lead to wastage of produce. Hence, value of damaged/physical loss in Brinjal and tomato also occupied considerable percentage in total marketing cost.

A glance of table 5 would indicate that the retailer incurred Rs.1.52 per quintal of Brinjal and Rs.3.52 per quintal of tomato as marketing cost. It should also be noted that the shop rent constituted a major share of (50 per cent) marketing cost both for Brinjal and tomato. Next to shop rent the wastage account for 46.05 per cent and 48.30 per cent of the marketing cost incurred by the retailer for Brinjal and tomato respectively

Conclusion

In case of Brinjal and Tomato following three channels were patronized by the vegetable growers for marketing of their produce: Channel-I (Producer – Commission agent cum Wholesaler- Retailer – Consumer), Channel-II (Producer-Commission agent cum Wholesaler-Consumer) Channel-III (Producer - Consumer). It could be observed from the table, the producer's net price for tomato was 39.57 per cent, 53.54 per cent and 93.87 per cent of consumer rupee in channel I, II and III respectively. In channel III, the farmers had more than 90 per cent of consumers' rupee. The modified marketing efficiency index showed that in channel II, the index was greater than unity which indicated that the producers' net price was greater than marketing cost and margin. Though the producer's net price was low in channel III, the index was very high. It showed that the channel III where there was a direct contact between grower and consumer was the most efficient channel. Commission agent cum wholesaler incurred Rs. 32.70/quintal and Rs 46.11/Quintal as marketing cost for Brinjal and tomato respectively. Transport cost constituted major share of total marketing cost. In Channel I the marketing margin share was more than 50 per cent but in channel II it was less than 50 per cent. It could further be seen that the marketing cost and marketing margin accounted for 60.43 per cent, 40.46 per cent and II respectively for tomato .While in Brinjal marketing it accounted for 54.97 per cent and 30.34 per cent in Channel I & II respectively. The price of Brinjal was higher in the peak season, i.e., from October to December whereas it was lower in the month of April to June which was referred as lean season. The price of tomato was higher in the peak season, i.e., in the month of May, June and November, whereas it was lower in the month of February to April.

The influence of current arrivals and lagged price were higher in Brinjal than in tomato. This result would inferred that the current price of tomato and Brinjal were highly influenced by current arrivals of these two products rather than lagged price. Comparatively with small marketable surplus and their urgent need for cash, sometime advances received from commission agent forced to sell their produce to the same agent. Hence, forced sale ranks first for group I farmers. For group II farmers, Perishability nature of vegetables was the major problem with the highest mean score of 76.32. Forced rank ranked second and the other important major problems were price fluctuation, high commission charge and lack of finance. There were other problems of lesser importance.

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