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AN ECONOMIC ANALYSIS OF MARKETING OF TOMATO IN VARANASI DISTRICT OF UTTAR PRADESH

Lata Mishra* and Ramchandra
Department of Agricultural Economics, Sam Higginbottom University of Agriculture, Technology and Sciences, Allahabad, 211007 (U.P.) India
Research Scholar* E-mail: mishralata22@gmail.com

ABSTRACT: The present study entitled "An Economic Analysis of Marketing of Tomato in Varanasi District, Uttar Pradesh" was conducted in the year 2018-19 with a sample of 120 respondents. The results indicated that the three marketing channels were identified in Varanasi regulated market, of the channel– III, i.e. Producer-Wholesaler-Retailer-Consumer was found more popular in marketing of tomato. The average per hectare yield and gross return were maximum on large size farm followed by small and medium Size respondents. In channel –I, Producer sale price to the consumer was Rs. 1000/qtl and the price spread was Rs. 142.00/ha with marketing efficiency of 1.04per cent. In channel-II, the producer net share was 64.70 In consumer price; Producer sale price to the consumer was Rs. 1700/qtls and the price spread was Rs. 742.00/qtls. In channel –III, Price spread 1206 and sale price of retailers to consumers and producer share in consumer rupee is 45.91and. The marketing efficiency is 1.62per cent.

Key words: Tomato, marketing, cost, returns producer, consumers.

Tomato is an herbaceous sprawling plant growing to 1-3 m in height with a weak woody stem. The flowers are yellow in color and the fruits of cultivated varieties vary in size from cherry tomatoes, about 1–2 cm in size to beefsteak tomatoes, about 10 cm or more in diameter. Most cultivars produce red fruits when ripe. Indeterminate tomato plants are perennials in their native habitat but are cultivated as annuals.

The marketing component is important to ensure remunerative prices to the farmers which will eventually work as an incentive for them to bring more area under cereals. Marketing can also help in inducing an element of incentive to fanner through participation in processing and distribution of pearl millet through direct marketing, farmers markets or cooperative marketing to get higher share in the consumer's price. Marketing innovations and group marketing was helpful in improving the bargaining powers of small and marginal farmers.

Tomato is one of the major horticulture crops of the country. With an estimated production of 20.51 MT in 2017-18, India is one of the largest producers of tomatoes in the world, second only to China. Around 11 per cent of the total world production of tomatoes is cultivated in India.

The major Tomato producing States in the country are Andhra Pradesh, Madhya Pradesh, Karnataka, Gujarat, Odisha, West Bengal, Chhattisgarh, Maharashtra, Bihar, Haryana, Uttar Pradesh, Telangana, and Tamil Nadu. These States are account for 91per cent of the total production of the country. The production of Tomato during the year 2017-18 (First Advance Estimate) is estimated to be 2per cent (20.51 MT) higher as compared to the previous year (19.76 MT). However, as compared to the past 5 year's average production, it is 20per cent higher.

Tomato is one of the essential commodities of the Indian market. The total area under tomato cultivation in India is about 4.97 lakh hectares, which is about 7.3per cent of the total cropped land under vegetables. The annual production of tomatoes in India is 16,826.38 thousand tons. India is ranked 3rd after China and the US as far as the production of tomatoes is concerned. India has experienced a considerable increase in the production of tomatoes over the past 10 years.

RESEARCH METHODOLOGY

The data on area, production and productivity was collected from Varanasi District, Uttar Pradesh. Out of which Harhua and Baragaon Mandals from Varanasi district is the major tomato growing Mandals. Therefore, these two Mandals were purposively selected for the present study. For selection of respondents 10 per cent sample through random sampling procedure was selected from different villages. The respondents were categorized into three groups on the basis of area under tomato cultivation in all the selected villages.

1. Small size farm group -having area of cultivation less than 1 ha
2. Medium size farm group- having area of cultivation of 1-2 ha
3. Large size farm group- having area of cultivation more than 2ha

There were three marketing channels in tomato marketing in Varanasi are given below

Channel –I: producer – consumer

Channel – II: producer – village merchants/ retailer – consumer

Channel –III: Producer – commission agent/ wholesaler – retailer - consumer

The interview method used for data collection. Interview schedule was divided into major parts. First section included profile of respondents and second section was questions related to economic analysis of production of tomato. Data were analyzed by using Input Output Ratio (B.C Ratio), Gross income, Marketing cost, Marketable surplus.

RESULTS AND DISCUSSIONS

It is depicted in Table- 1 that the average marketing cost of tomato for the channel (I) in the study area was Rs. 142.00/qtl. Sorting and grading (Rs. 30.00/qtl) and transportation (Rs. 40.00/qtl) charges were among the highest percentage of the total cost. Higher transportation costs adversely affect the profit of the respondents. Others are the miscellaneous charges which were Rs. 20.00/qtls loading and unloading cost Rs. 12.00/qtl, market fee Rs. 20.00/qtl, respectively. The producer net share was 85.80per cent in consumer's price. Producers sale price to the consumer was Rs. 1000/qtl and the price spread was Rs. 142.00/ha with marketing efficiency of 1.04per cent.

The average marketing cost of tomato incurred by the producer and village merchant for the channel (II) in the study area as Rs. 142.00/qtl and Rs. 160.00/qtl respectively. The producer net share was 64.70 In consumer price; Producer sale price to the consumer was Rs. 1700/qtls and the price spread was Rs. 742.00/qtls. This channel was also considered as the good channel with a minimum number of market functionaries hence the marketing efficiency was 2.29per cent better than the channel III as stated in table-2.

The channel (Channel-III) is longest channel for tomato marketing. Therefore, most of the growers do not prefer to sale their produce through this channel due to the maximum involvement of middlemen's. Four intermediaries (Producer, Village merchant, wholesaler and retailers finally to consumer) were identified in this channel through which tomato produce reaches the consumers. This is identified as the longest channel in the study area. The producer sells his produce to the village merchant who sell to the wholesalers, who in turn sell it to retailers in the market and finally the retailer sell to ultimate consumer. The average marketing cost when producers sold their produce to the wholesaler Rs. 146.00/qtl, wholesaler to retailer was Rs. 185.00/qtl, retailer to ultimate consumer was found to be Rs. 175.00/qtl respectively. Price spread 1206 and sale price of retailers to consumers and producer share in consumer rupee is 45.91and the marketing efficiency (1.62per cent) of channel-III is very low if compared to the channel-I and channel-II respectively. Hence, this channel was considered as the poorly performing channel to follow for the producer.

Estimated marketing cost marketing efficiency and price spread in different channels of the study areas:

Table 4 below reveals that the total marketing cost marketing margin, price spread, Producers share in consumer rupee and marketing efficiency in all the three marketing channels. The total market cost was higher in channel III (Rs.506.00) compared to channel-I (Rs.142.00) and channel-II (Rs. 302.00) respectively. A total marketing margin and price spread of Rs. 742.00 and Rs. 1206.00 was realized in channel II and III respectively, which happens to be higher in channel-III than channel-II. This is because in channel-III there are three intermediates, whereas in the channel-I and channel-II. This is because in channel-III there are three intermediates, where as in the channel-I and channel-II there is only one, and two intermediate. The producer share in consumer rupee was also higher in channel-I (85.80per cent) than channel-II (64.70per cent) and channel-III (45.91per cent) respectively. Likewise the marketing efficiency it was found to be higher in channel-I (7.04per cent) than channel-II (2.29per cent) and channel-III (1.62per cent) respectively.

CONCLUSION

The study shows that the marketing of Tomato in Varanasi is to analyze, socio economic characteristic of sample respondents, economics of Pearl millet production and price spread in production of Tomato. Economics of tomato production is more profitable in large farms as compared to medium size farms and small size farms.

Among the Three marketing channels identified in Varanasi regulated market, the channel–III, i.e. Producer-Wholesaler-Retailer-Consumer was found more popular in marketing of tomato. The average per hectare yield and gross return were maximum on large size farm Followed by small and medium Size respondents. The prices of tomato have not influenced by the arrivals in Varanasi market. The maximum prices of tomato were observed during the month of January Thus, the sellers prefer these months for selling of tomato in Varanasi market. The important constraints faced by the sample tomato cultivators were high wages for labor, non-availability of labor in peak period, high costs of seed, high costs of manures and fertilizer, incidence of pests and diseases and non-availability of loan in time While, in case of marketing of tomato, the problems faced by the farmers were problems of high commission charges, price variation in the different markets followed by high transport charges, high market commission rates. Tomato growers faced various financial, social and infrastructural constraints. The adoption behavior in the marketing practices was also found to be less because of similar type of constraints.

Table- 1: Marketing cost, marketing efficiency and price spread in the study area. (Rs./qtl).

Particulars	**Rs/quintal**
(A) The cost incurred by the producer	
Transport charges	40 (4.0)
Sorting and grading charges	30 (3.0)
Loading and unloading charges	12 (1.2)
Packaging charges	20 (2.0)
Mandi fees	20 (2.0)
miscellaneous charge	20 (2.0)
The total cost incurred by the producer (1-7)	142
Producer sale price to consumer	1000 (100)
Net price received by the producer	858
Price spread	142
Producer share in consumer rupee	85.80
Marketing efficiency	7.04

Table- 2: Marketing cost, marketing efficiency and price spread in the study area. (Rs./qtl)

Particulars	**Rs./quintal**
(A) The cost incurred by the producer	
Transport charges	40 (2.35)
Sorting and grading charges	30 (1.76)
Loading and unloading charges	12 (0.70)
Packaging charges	25 (1.47)
Mandi fees	20 (1.17)
miscellaneous charge	20 (1.17)
The total cost incurred by producer (1-6)	142
Net price received by producer	958
The sale price of the producer to village merchant	1100
(B)Cost incurred by the village merchant	
Transport charge	40 (2.35)
Weighing charges	20 (1.17)
Loading /Unloading charge	15 (0.88)
Market Fees	20 (1.17)
Sorting charges	30 (1.76)
Miscellaneous charges	35 (2.05)
The total cost incurred by village merchants (1-6)	160
Village merchant margin	440
The sale price of village merchant to consumer	1700
Price spread (Total marketing cost +margins)	742
Producer share in consumer rupee	64.70
Marketing efficiency	2.29

Table 3 Marketing cost, marketing efficiency and price spread in study area. (Rs./qtl).

Particulars	**Rs./quintal**
(A) Cost incurred by the producer	
Transport charges	40 (2.04)
Sorting and grading charges	30 (1.53)
Weighing charges	20 (1.02)
Mandi fees	20 (1.02)
Loading and un loading charges	16 (0.81)
miscellaneous charge	30 (1.53)
Total cost incurred by producer (1-6)	146
Net price received by producer	754
Sale price of producer to village merchant	900
B. cost incurred by the wholesaler/Commission agent	
Transport charges	40 (2.04)
Gunny bag charges	15 (0.76)
Sorting and grading charges	20 (1.02)
Weighing charges	20 (1.02)
Loading and un loading charges	30 (1.53)
Mandi commission	15 (0.76)
Other	45 (2.29)
Total cost incurred by wholesaler (1-7)	185
Wholesaler margin	400
Sale price of wholesaler to retailers	1485
c. cost incurred by the retailers	
Transport charges	40 (2.04)
Sorting and grading charges	30 (1.53)
Weighing charges	15 (0.76)
Loading and un loading charges	20 (1.02)
Mandi commission	20 (1.02)
Other	50 (2.55)
Total cost incurred by retailer (1-6)	175
Retailes margin	300
Sale price of retailers to consumers	1960
Price spread (total marketing cost + margin)	1206
Producer share in consumer rupee	45.91
Marketing efficiency	1.62

Table 4 Marketing cost marketing efficiency and price spread for different channels in study area. (Rs. /qtls)

Particulars	**Channel-I**	**Channel-II**	**Channel-III**
Total marketing cost	142	302	506
Total marketing margins	0	440	700
Price spread	142	742	1206
Producer share in consumer rupee in per cent	90	64.70	45.91
Marketing efficiency in per cent	7.04	2.29	1.62

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