An Economic Analysis of Price Spread, Marketing Efficiency and Marketing Cost of Tomato in Prayagraj District of Uttar Pradesh

Abstract

This investigation was carried out to study the price spread, marketing efficiency and marketing cost of tomato. The study was conducted in Prayagraj District of Uttar Pradesh was selected purposively because of large amount of tomato production. Due to the perishable nature of tomato the farmers couldn't stock up and had to sale in lean month. So, there wasn't much difference in marketable and marketed surplus of tomato. highest percentage marketable surplus was found in medium size farm group i.e., 95.28 percent followed by small farm group with 94.94 percent and large size farm group with 94.02 percent. This makes the sample average for marketable surplus of 320.09 quintals with 94.75 percent. The average total marketing cost was Rs 800/qtls, the average net price received by the farmers was Rs 2000/qtls the average price spread was Rs 800/qtls, and the average Marketing efficiency was Rs 2.5/qtls.

Keywords: Price spread, marketing efficiency, marketing cost, market surplus

Introduction

Tomato is originated in Peru of South America. It is the second important crop of world after potato. Fruits are eaten raw or in cooked form. It is rich source of vitamin A, C, potassium and minerals. It is used in soup, juice and ketch up, powder. The major tomato producing states are Bihar, Karnataka, Uttar Pradesh, Orissa, Maharashtra, Andhra Pradesh, Madhya Pradesh and West Bengal.

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Tomato ranks third in priority after Potato and Onion in India but ranks second after potato in the world. India ranks second in the area as well as in production of Tomato. The major tomato growing countries are China, USA, Italy, Turkey, India and Egypt. Total area under tomato is 4582438 thousand ha with production of 150513813 thousand tons and with productivity of 32.8 tons/ha (Indian Horticulture Database 2011). There is a sizeable increase in acreage and production of tomato in India. There is an increase from 596.0 thousand ha in 2006-07 to 865.0 thousand ha in 2010-11, while in terms of production it has increased from 10055.0 to 16826.0 thousand tons. India stands at fourth position in production of tomatoes

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next to China, U.S.A. aAnd Turkey (National Horticulture Board -2011).

Comment [GB3]: Recent data reference better

Maximum production of tomatoes takes place in Andhra Pradesh, Orissa, Karnataka, Maharashtra, West Bengal, Bihar, Gujarat etc. Tomatoes are available for export throughout the year. High yielding F1 hybrids are being cultivated by farmers on a quite good scale. There is excellent research support from all the SAUs and National Research Institutes like IIHR, Bangalore and IIVR (Indian Institute of Vegetable Research), Varanasi. Distribution of raised seedlings of F1 hybrids is quite prevalent and is getting popular among vegetable farmers. APEDA has established a number of Agri Export Zones for vegetables namely in Punjab, U.P., Gujarat, Bihar, Jharkhand and West Bengal for promoting exports of vegetables and infrastructure for the same is being/has been set up. Export of tomatoes has increased from 1, 34,845.15 tons in 2007-08 to 2, 66,986.38 tons in 2011-12. A significant increase has been recorded of more than 97 %. (APEDA Database, 2011-12).

Research Methodology

Source of data

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The study was conducted in Prayagraj District of Uttar Pradesh was selected purposively because of large amount of tomato production takes place in Prayagraj. There were 20 Blocks in Prayagraj district out of those present Prayagraj districts Chaka and Karchana has been selected purposively for present study as the selected species i.e. Tomato is extensively grown in this specific area. A list of 10 villages falling under selected block was prepared village namely Baswar, Mohabbatganj, Merauke, Mahewa West and Dandi from Chaka Block and Barawan, Dewari, Kherwa, Numaiya and Bisauna from Karchana Block were selected purposively where maximum number of farmers grow Tomato on large scale.

A separate list of tomato growers of selected villages was prepared along-with their size of holding and further it was grouped into three categories *i.e.*

Comment [GB4]: Add reference for this categorization weather eg. Gov of India or Govt of UP regulations

1. Marginal farmer (< 1 ha)
2. Small farmer (1-2 ha)
3. Medium farmer (2-10ha)

At last, 60 respondents were selected following the proportionate random sampling technique.

2.1 Primary Data

The data on production aspects was collected on well prepared schedule in advanced by survey method. Frequent visits were done by the investigator to the selected respondents and required data were recorded by personal interview. Accuracy of the data was assumed through cross-checking.

2.2 Secondary Data:

The secondary information was compiled from the published report at Block, Tehsil and District offices.

3 Period of Enquiry:

The data was collected to the main-season crop of the agriculture year 2020-2021.

Analytical Tools Used

Producer's Share in Consumer's Rupee is calculated using the below formula:

1.Marketing cost:

The total cost incurred on marketing by various intermediaries involved in the sale and purchase of the commodity till it reaches the ultimate consumer was computed as follow:

M =Cf+Cm1+Cm2+Cm3+……+Cmn

Where,

M = Total cost of marketing

Cf= Cost borne by the producer farmer from the produce leaves the farm till the sale of the produce, and

C_{mn}= Cost incurred by the i^{th} middlemen in the process of buying and selling.

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2. Marketable surplus

MS=P-C

Where,

MS= Marketable surplus

P= Total Production

C= total requirements (family and farm)

3. Marketing Margin of Middlemen:

(a) Absolute margin = PRi– (Ppi+ Cmi)

(b) Per cent margin = $\frac{PRi – (Ppi + Cmi) \times 100}{}$

PRi

4. Producer's share in Consumer's Rupee:

$$P = \frac{(C - M) \times 100}{M}$$

Where,

P = Producer's share in Consumer's Rupee

C =Consumers' rupee

M = Marketing cost

5.Price Spread = Total Marketing Cost+ Total Marketing Margin

6. Marketing Efficiency (Acharya & Agrawal)

$$\text{Marketing Efficiency} = \frac{\text{Consumer price}}{\text{Total marketing cost + marketing margin}}$$

Result and Discussion

Table 1 Disposal Pattern of Tomato per hectare in different Size of Farms Group in Prayagraj district (Qtl. /ha)

Particular	Size of farm groups			Sample Average
	Marginal	Small	Medium	
Total yield	307.33	329	337.71	324.68
Home consumption	6.15	7.57	8.10	7.27
Kind payments as wages	0.63	1.34	1.68	1.22
Relatives and religious person	7.7	7.84	7.84	7.79
Total retention	14.5	16.75	17.62	16.29
Marketable surplus	292.83	312.25	320.09	308.39

Table 1 revealeds the disposable pattern of tomato shown in the table reveals that Total production of tomato was highest in medium size farms (337.7 quintals) as compared to small size farms (329 quintals) and marginal size farms (307.33 quintals). Home consumption is mostly in small size farms as compared to medium and large size farms. Kind payment as

wages is highest in large size farms as compared to small and medium size farms. Quantity used as gift for religious purpose is highest in medium size farms. The highest percent of produce was retained by medium size farms (17.62 quintals) followed by small (16.75 quintals) and marginal size farms (14.5 quintals) respectively. This also indicated that highest percentage marketable surplus was found in medium size farm group i.e. 95.28 percent followed by small farm group with 94.94 percent and large size farm group with 94.02 percent. This makes the sample average for marketable surplus of 320.09 quintals with 94.75 percent.

Table 2 Marketing Cost/Qtl

S.No.	Particulars	Total Cost (Rs/qtl)
1	**Packaging material**	**184**
2	**Packaging charges**	**73**
3	**Transportation**	**350**
4	**Loading Un-loading Charges**	**117**
5	**Weighing Charges**	**76**
	Total	**800**

Table 2 revealeds that marketing cost/ha 1st packaging material 184 2nd Packaging charges 73 ,3rd Transportation 350 ,4th Loading Un-loading charges 117 ,5th Weighing charges 76. Total is Rs-800/Qtl.

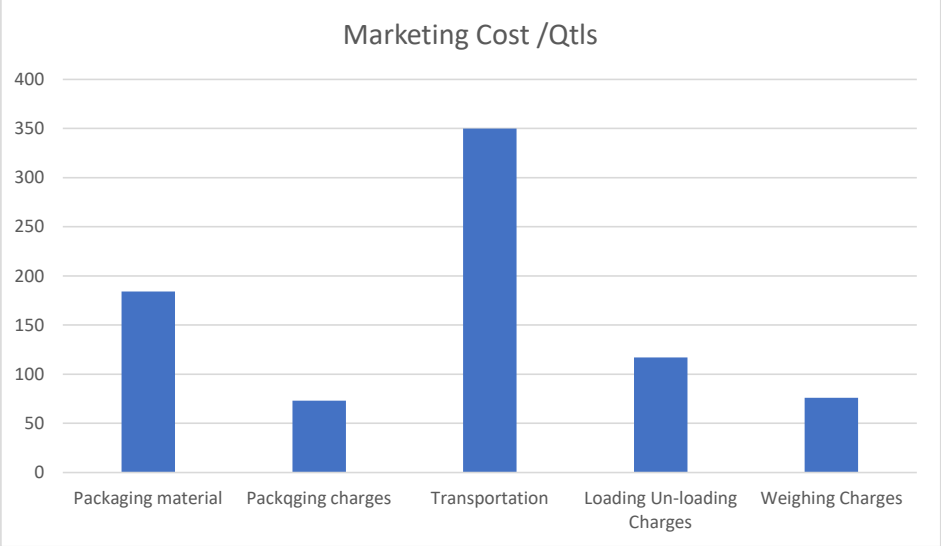

Figure 1 Differences in Marketing cost and qualities

Table 3: Comparison of total marketing cost, total marketing margin, price spread, producer share in consumer rupee (%) and marketing efficiency (Rs/qtls)

S.No	Particulars	(Rs/qtls)
1	Net price received by farmer/qtl	2000
2	Total marketing cost	800
3	Price spread	800
4	Marketing efficiency	2.5

Table 3 reveals that comparison of total marketing cost, total marketing margin, price spread, producer share in consumer rupee and marketing efficiency (Rs/qtls) – 1st Net price received by farmer/qtl – 2000, 2nd Total marketing cost – 800, 3rd Price spread – 800, 4th Marketing efficiency – 2.5.

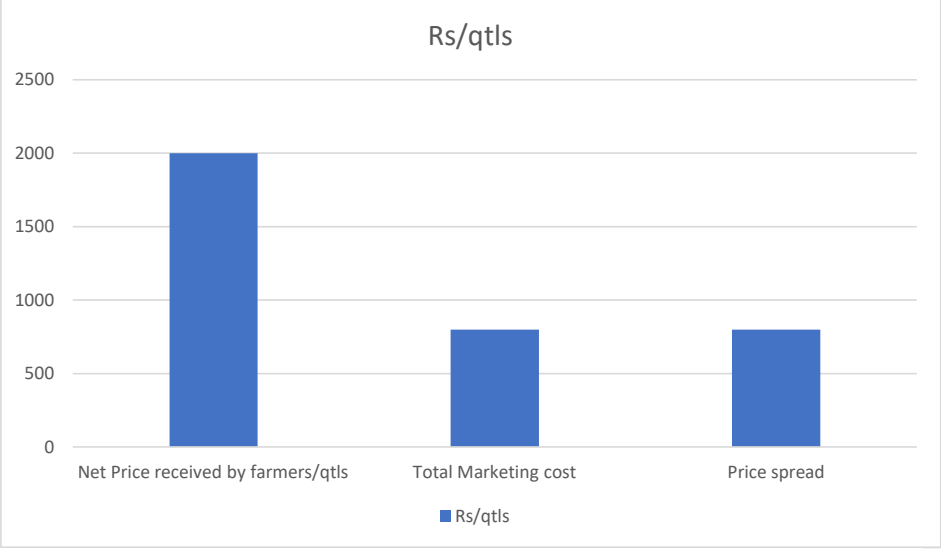

Fig 2: Comparison of total marketing cost, total marketing margin, price spread, producer share in consumer rupee (%)

CONCLUSION

The study reveals that the disposable pattern of tomato ~~shown in the table reveals~~

that Total production of tomato was highest in medium size farms (337.7 quintals) as compared to small size farms (329 quintals) and marginal size farms (307.33 quintals). Home consumption is mostly in small size farms as compared to medium and large size farms. Kind payment as wages is highest in large size farms as compared to small and medium size farms. Quantity used as gift for religious purpose is highest in medium size farms. The highest percent of produce was retained by medium size farms (17.62 quintals) followed by small (16.75 quintals) and marginal size farms (14.5 quintals) respectively. This also indicated that highest percentage marketable surplus was found in medium size farm group i.e., 95.28 percent followed by small farm group with 94.94 percent and large size farm group with 94.02 percent. This makes the sample average for marketable surplus of 320.09 quintals with 94.75 percent.

The comparison of total marketing cost, total marketing margin, price spread, producer share in consumer rupee and marketing efficiency (Rs/qtls) – 1st Net price received by farmer/qtls – 2000, 2nd Total marketing cost – 800, 3rd Price spread – 800, 4th Marketing efficiency – 2.5.

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