

Marketing of tomato : A study in Agra district of Uttar Pradesh

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ABSTRACT

A study was conducted in the sample villages of Bichpuri block of Agra district during 2007-08 on the marketing of tomato during the *Rabi* season. Besides 33 villages, 05 wholesalers and 30 retailers were selected from the wholesale and retail markets. The data showed that per holding production of tomato was 40.36 quintals, while its consumption was only 3.10 per cent about 85 per cent tomato was sold in the wholesale market while the sale at the farm was 3 per cent only. The producer's share was the highest in the direct sale, which decreased with the inclusion of intermediaries. Channel I (producer-consumer) was better than the other channels. The farmers were finally advised to organize self-help groups and co-operative societies to get rid of superfluous marketing charges.

KEY WORDS : Marketing of tomato

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India is the second largest producer of fruits and vegetables next to China. India contributes 10 and 13.7 per cent of global production in fruits and vegetables, respectively. The area under vegetables in India is more than 78 lakh hectares producing about 126 million tonnes of vegetables (2007-08). The all India productivity of vegetables was 16.1 tonnes/ha during the year 2007-08. The production of tomato in India was 102.61 lakh tonnes from an area of 5.72 lakh hectares during 2007-08 (National Horticultural Board Data Base). The all India productivity of tomato was 17.9 tonnes/ hectare during the year 2007-08. The vegetable crops not only enhance income of the cultivators but also generate more employment through diversified farming being labour intensive crops. These crops are more beneficial for the small and marginal farmers whose family labour availability per unit of land is high. Thus, poverty as well as the nutritional insecurity of large number of farm holdings can be reduced with the introduction of high value

crops on these holdings.

It is often complained that the vegetable growers do not get remunerative prices for their produce while the consumers have to pay higher prices for the vegetables. The market intermediaries are blamed for this phenomenon. Any reduction in the producer-consumer price gap will eventually benefit the growers as well as consumers and give boost to further production. In the light of these facts, the present study was attempted for accomplishing the following specific objectives:

- To estimate the marketing cost and marketing margin of different functionaries for tomato under different marketing channels.
- To analyse the price spread, marketing efficiency and farmers share in consumer's rupee in different channels.
- To know the constraints faced by the tomato growers in production and marketing of vegetables.

METHODOLOGY

The present study was conducted in Agra district of western U.P. where tomato crop is grown at large scale. Multistage stratified random sampling technique was used to select the block, villages and tomato growers. The community development block Bichpuri was selected

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purposively as it is one of the leading blocks in tomato production in the district. Five villages out of 33 villages in the sample block on the basis of maximum area under tomato cultivation were selected. Then in the selected villages, the list of tomato growing farmers in *Rabi* season was prepared. In all 75 tomato growing farmers in *Rabi* season were selected from the sample villages in proportion to their number in each of three farm size groups *viz.*, small, medium and large. Five wholesalers and 10 retailers were selected from wholesale and retail vegetable market of Agra. The data on relevant aspects of the study for the year 2007-08 for *Rabi* season were collected by personal interview with the help of specially designed schedules and questionnaire.

ANALYSIS AND DISCUSSION

The findings of the present study as well as relevant discussion have been presented under following heads :

Marketed surplus:

The information regarding per holding production, consumption and marketed surplus of tomato is given in Table 1.

Table 1 shows that the per holding the production of tomato was 40.36 quintals and its consumption was 3.10 per cent of the production. The marketed surplus of tomato was 96.90 per cent. The consumption of tomato was low due to its perishable nature.

Sale pattern:

The information regarding sale pattern of the selected tomato growers is shown in Table 2.

Table 2 shows that maximum quantity of tomato (about 85 %) was sold by the growers in the wholesale market. The sale at the farm was about 3 per cent only. About 1 per cent of tomato was sold by the growers in the village to the petty shopkeepers and non-vegetable growing rural households.

Price spread of tomato:

Price spread is defined as the difference between the price paid by the consumer and price received by the producer of the farm product. It includes market cost and margins of the market intermediaries also. The marketing channels play an important role in marketing process. As it is well known that the producer's share is higher in direct sale. It tends to decline with the increase in the number of intermediaries in the marketing process. It was further found that there were following three main channels in the marketing of tomato:

Channel – I Producer – Consumer

Channel –II Producer – Retailer – Consumer

Channel–III Producer– Wholesaler (Through
Retailer-Consumer.

The price spread through above three channels of tomato has been worked out in the study. The second price spread of the tomato in marketing channel I (Producer – Consumer)

Table 1: Per holding marketed surplus of tomato of the selected tomato growers

Sr. No.	Particulars	Quantity (qtls)
1.	Area (ha)	0.16
2.	Production (q)	40.36
3.	Family consumption	0.15 (0.37)
4.	Quantity kept for seed	-
5.	Payment in kind to labour	0.45 (1.11)
6.	Miscellaneous uses	0.65 (1.61)
7.	Total consumption (3 to 6)	1.25 (3.10)
8.	Marketed surplus (2-7)	39.11 (96.90)

Figures in parentheses are percentages to total production

Table 2: Sale pattern of tomato of the selected growers

Sr.No.	Particulars	Quantity (qtls.)
1.	Sale at the farm	1.11 (2.83)
2.	Sale in the village	0.36 (0.92)
3.	Sale in the wholesale market	33.16 (84.79)
4.	Sale in the retail market	4.48 (11.45)
5.	Per holding marketed surplus	39.11

Figures in parentheses indicate percentage to the marketed surplus

is presented in Table 3.

It may be stated that there was no middleman involved in channel I. There was direct sale of the produce by the producer to consumer. A perusal of Table 3 reveals that producer's sale price/consumer's purchase price was Rs. 1200 per quintal in direct sale. The expense borne by the producer were Rs. 136.70 per quintal which were 11.39 per cent of the consumer's price. The net price received by the producer was 88.61 per cent of the consumer's price.

The price spread of tomato in channel II (Producer – Retailer – Consumer) has been presented in Table 4 and discussed accordingly.

Table 4 shows that the producer's sale price of tomato was Rs. 1000 per quintal which was 71.43 per cent of the consumer's purchase price (Rs. 1400 per quintal). The expenses borne by the producer were about Rs. 77 per quintal which were about 5.50 per cent of the consumer's purchase price. The net

price received by the producer was about Rs. 923 per quintal which was about 66 per cent of the consumer's price. The expenses borne by the retailer were about Rs. 81 per quintal which were 5.78 per cent of the consumer's price. The retailer's margin was about Rs. 319 per quintal which in percentage term was about 23 of the consumer's purchase price.

The price spread of tomato in channel III (Producer – Wholesaler (through commission agent) – Retailer – Consumer) is shown in Table 5.

Table 5 shows that producer's sale price of tomato was Rs. 940 per quintal which was 65.73 per cent of the consumer's purchase price. The expenses borne by the producer were about Rs. 104 per quintal which were 7.27 per cent of the consumer's price. The net price received by the producer was about Rs. 836 per quintal which was 58.46 per cent of the consumer's price. The expenses borne by the wholesaler and retailer were about Rs. 115.58 and Rs. 64.60

Table 3: Price spread of tomato in marketing channel I (Producer-consumer)

Sr.No.	Particulars	Rs./quintal	% age share in consumer's price
1.	Producers sale price	1200.00	100.00
2.	Expenses borne by the producer	136.70	11.39
3.	Grading filling and stitching etc.	9.20	0.77
	Cost of packing	30.00	2.50
	Transportation cost	18.45	1.54
	Wastage	1.25	0.10
	Labour cost	70.00	5.83
	Miscellaneous	7.80	0.65
4.	Net price received by producer	1063.30	88.61
5.	Consumer's purchase price	1200.00	100

Table 4: Price spread of tomato through channel II (Producer –Retailer – Consumer)

Sr. No.	Particulars	Rs. per quintal	% age share in consumer's price
1.	Producer's sale price /retailer's purchase price	1000.00	71.43
2.	Expenses borne by the producer	76.98	5.50
	Grading, filling, stitching etc.	9.75	0.70
	Cost of packing	41.00	2.93
	Transportation cost	19.50	2.93
	Loading, unloading land wastage	6.73	0.48
3.	Net price received by the farmer	923.02	65.93
4.	Expenses borne by the retailer	80.95	5.78
	Transportation cost	20.50	1.11
	Labour	5.40	0.34
	Loss wastage and spoilage 3%	42.00	3.00
	Rent of shop	2.40	0.17
	Miscellaneous	10.65	0.76
5.	Margin of retailer	319.05	22.78
6.	Retailer's sale price/consumer's purchase price	1400.00	100.00

per quintals, respectively which were about 8.10 per cent and 4.52 per cent of the consumer's price. The margin of the wholesaler was about 8.35 per cent whereas this figure was 13.31 per cent in case of retailer. The retailer's margin was high on account of his low volume of business in comparison to the wholesaler.

Marketing efficiency:

The marketing efficiency of tomato under different channels has been worked out by Acharya's modified method (Acharya and Agarwal, 2007) and it is shown in Table 6. A perusal of the table reveals that channel I was the cost efficient one, because marketing efficiency was 7.78 in this

Table 5: Price spread of tomato through channel III (Producer –Wholesaler (Through Commission agent) – Retailer – Consumer)

Sr. No.	Particulars	Rs. per quintal	%age share in consumer's price
1.	Producer's sale price/wholesaler's purchase price	940	65.73
2.	Expenses borne by producer	104.02	7.27
	Grading filling, stitching etc.	20.30	1.42
	Cost of packing	44.80	3.13
	Transportation cost	31.22	2.18
	Loading, unloading and wastage	7.70	0.54
3.	Net price received by the farmer	835.98	58.46
4.	Expenses borne by the wholesaler	115.58	8.10
	Market fee and development charge	28.60	2.00
	Commission	71.50	5.00
	Miscellaneous expenses	15.48	1.8
5.	Margin of wholesaler	119.42	8.35
6.	Wholesaler's sale price/retailer's purchase price	1175.00	82.17
7.	Expenses borne by retailer	64.60	4.52
	Transportation cost	3.18	0.22
	Labour	8.72	0.61
	Rent of shop	0.56	0.04
	Packing cost	2.94	0.21
	Loss, wastage and spoilage 3%	42.90	3.00
	Miscellaneous cost	6.30	0.44
8.	Margin of the retailer	190.40	13.31
9.	Retailer's sale price/consumer's purchase	14.30	100.00

Table 6: Marketing efficiency of tomato under different marketing channels

Sr.No.	Particulars	Channel I	Channel II	Channel III
1.	Consumer's purchase price	1400	1400	1430
2.	Producer's sale price	1200	1000	940
3.	Total marketing cost	136.70	80.95	180.18
4.	Total margins of intermediaries	-	319.05	309.82
5.	Net price received by farmer marketing efficiency	1063.30	923.02	835.98

Table 7: Production and marketing constraints of tomato as reported by the sample farmers

(n=75)

Sr. No.	Constraints	No. of farmers	Per cent
1.	High yield uncertainty in tomato production due to severe attack of insect-pests and diseases	75	100.00
2.	Non-availability of insecticides and pesticides	60	80.00
3.	High cost of insecticides/pesticides	56	74.67
4.	High transportation cost	35	46.67
5.	High margin of middlemen	33	44.00
6.	Unremunerative price	31	41.33
7.	Fluctuations in price	30	40.00
8.	Inadequate storage facilities	29	38.67
9.	Inadequate facilities in the market	16	21.33

channel as compared to 2.3 in channel II and 1.71 in channel III. The low marketing efficiency in channel III was on account of more number of market intermediaries in this channel.

Production and marketing constraints as perceived by the selected farmers:

Table 7 shows production and marketing constraints reported by sample farmers. This table reveals that all 75 sample farmers reported that there was high yield uncertainty due to attack of insect-pests and diseases. Eighty per cent of the farmers reported non-availability of insecticides and pesticides followed by their high cost (about 75 %), high transportation cost (about 47%), high margin of middlemen (44 %), unremunerative price (about 41%), fluctuation in price (40 %), inadequate storage facilities (about 39 %) and inadequate facilities in the market (about 21 %).

Conclusion:

The holding production of tomato was about 40 quintals. The total consumption was only 0.37 per cent. The consumption of tomato was low due to its perishable nature. The marketed surplus of tomato was 96.90 per cent. The sale pattern of tomato revealed that its maximum quantity was sold by the growers in the wholesale market (about 85 %). The rest of the sale was in retail market (11.45 %) at the farm (2.83%) and in the village (0.92%).

There is direct sale of the produce by the producer in retail market (Marketing channel – I). The study indicated that producer's price/consumer's purchase price was Rs. 1200 per quintal. The expenses borne by the producer were Rs. 136.70 per quintal which were 11.39 per cent of the consumer's price. The price spread in channel II revealed that the net price received by the producer was about Rs. 923 per quintal which was 65.93 per cent of the consumer's purchase price. The expenses and margins of retail were 5.78 per cent and 22.78 per cent, respectively of the consumer's purchase price. The price spread of tomato in channel – III brought out that the net price received by the producer was Rs. 835.98 per quintal which was about 58.46 per cent of the consumer's price. The expenses borne by the wholesaler and retailer were about Rs. 116 and Rs. 64.60 per quintal, respectively which were 8.10 per cent and 4.52 per cent of the consumer's price (Rs. 1430 per quintal). The margin of the wholesaler was less on account of high volume of business as compared to retailer who handles low volume of business. The margin of the retailer was high in channel II as compared to the channel III because of the wholesaler was not there in the farmer. As compared to the marketing channel II and III, the producer's share in channel was more on account of direct sale by the producer to the consumer. The channel I was the most efficient one because marketing efficiency was 7.78 in this channel as compared to

231 in channel II and 1.71 in channel III. The low marketing efficiency in channel III was on account of more number of market intermediaries in this channel. The constraints reported by the sample farmers in order of importance were high yield uncertainty, non-availability of insecticides and pesticides, high cost of insecticides/pesticides, high transportation cost, high margin of middlemen, unremunerative price, fluctuations in price, inadequate storage facilities and inadequate facilities in the market.

Recommendation:

The most important constraint reported by the farmers is high yield uncertainty in vegetable production due to attack of insect-pests and diseases. Thus there is needed to make timely availability of insecticides/pesticides at reasonable price. The high commission charges are also discouraging the growers to sell their vegetables in the market. The lack of effective regulation in the market system prevents the farmers in getting remunerative prices for their produce. Due to inadequate transportation facility farmers have to bear high transportation cost. Therefore, besides developing transports means and infrastructural facilities, better marketing arrangements for vegetable disposal are to be taken into account while formulating a programme for vegetable development in the area. The farmers can organize self-help groups and cooperative societies in their areas to get rid of the superfluous marketing charges being charged by the middleman and thus, can get higher share in the consumers price.

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