

Marketing and Constraints Faced by Brinjal Growers in Maharashtra in the Wake of Covid-19 Pandemic

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ABSTRACT

The COVID-19 pandemic has brought the difficulties faced by farmers into sharp focus, particularly in countries with an agrarian economy. Brinjal is the major vegetable crop of Vidarbha region in Maharashtra state. The present study was carried out to study marketing and the constraints faced by farmers in marketing of brinjal in the wake of COVID-19. The study was conducted in *kharif* season during the year 2020-2021. Primary data was collected from 90 brinjal growers of three tehsils *i.e.* Amravati, Anjangan Surji and Achalpur of Amravati district. Marketing aspects was studied by calculating producer's share in consumer's rupee. The farmers were asked to rank the constraints faced during the lockdown in the order of significance. Garrett's ranking technique was used to examine the farmers' opinion. The investigation revealed that the Channel III (*i.e.* Producer - Wholesaler - Retailer - Consumer) was observed major channel of distribution. Producer's share in consumer's rupee was the highest in channel I (94.84%). In marketing of brinjal, uncertainty of prices (56.70) ranked first and high commission charges (51.40) ranked II are the major constraints perceived by the brinjal growers. Study recommended that, the government should take proactive measures like establishment of price stabilization mechanisms and strengthen marketing channels.

Keywords: Marketing, constraints, brinjal, Garrett ranking, COVID-19

The COVID-19 pandemic is the world's greatest worldwide threat since World War II. Especially India was badly hit by the pandemic. In India, the pandemic crisis also exposed severe food insecurities, with 8 in 10 people eating less food than before (Kesar *et al.* 2021). Vegetables play a significant part in the agricultural sector both regional and national economy. Total horticulture production in 2021-22 is estimated to be 341.63 Million Tonne, an increase of about 7.03 Million Tonne (increase of 2.10%) over 2020-21 and the production of vegetables was estimated to be 204.61 Million Tonne (GoI, 2020). In India, brinjal (*Solanum melongena*) was grown over an area of 7,46,095 hectares in India during the 2019-20

season, with a yield of 12,724.97 thousand MT and productivity of 17.05 MT per hectare. In Maharashtra, area under brinjal in 2019-20 was 16,870 hectares, production 276.66 thousand MT and productivity was 16.40 MT per hectare. In Maharashtra, Pune, Jalgaon, Nashik, Aurangabad and Satara were the top districts in terms of brinjal production. Out of 11 districts in Vidarbha region of Maharashtra, per

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cent share of Amravati district area under brinjal cultivation was 8.18 percent (485 ha) and in terms of production the per cent share was 10.39 per cent (10.26 MT) (GoI, 2021).

Horticultural crops were adversely affected during the lockdown even though there was no restriction on sale of vegetables and fruits in the market, excluding the ban on operations of rural haats and restriction in transportation. Further, the impact of COVID-19 in prices of horticultural commodities was irregular. Though in some states in India there were reports on increase in the prices of horticultural commodities, majority of the states have reported a decline in prices of horticultural commodities in India with a decrease of 7.6 per cent in prices of horticultural products (NABARD, 2020). It is also reported that cultivators had a variety of challenges in marketing of brinjal. Therefore, in the backdrop of this situation it becomes worthwhile to conduct study on marketing of brinjal and to identify the constraints in marketing of brinjal, from the producer's perspective and suggest measures to improve the systems.

METHODOLOGY

Keeping in view of the objective of the study, primary data was collected for the year 2020-21 of *kharif* season. The list of brinjal growers was obtained from the office of Panchayat Samiti (Talathi), Krishiseva Kendra and Seed Shops of the Amravati, Anjangan Surji and Achalpur tehsil of Amravati district. From each tehsil three villages selected and from each village ten farmers were selected randomly. For the study of marketing 10 wholesalers and 10 retailers were selected from Amravati market.

Table 1: Distribution of brinjal growers according to size of land holding in Amravati

Size of holding	Area in hectare	No. of cultivators
Small	Upto 2.00 ha	47
Medium	2.01 to 4.00 ha	24
Large	4.01 ha and above	19
Total		90

Market margins

It refers to difference between the prices prevailing

as successive stages of marketing at given period of time. Profits of the various market functionaries involved in moving the produce for the initial point of production till it reaches to the ultimate consumer. The absolute value of the marketing margin varies from channel to channel, market to market and time to time.

Marketing cost

Total marketing cost incurred by producer and various intermediaries involved in the sale and purchased of commodity till the commodity reaches to the ultimate consumer.

Price spread

Price spread indicates shares of various agencies involved in the marketing along with the cost incurred by them. The price spread of the produce shows the difference between net price received by the producers in the assembling market and price paid by the ultimate consumers or produce in the retail market. It includes all the market charges incurred by producers, wholesalers and retailers as well as profit margins of wholesalers and retailers.

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

It is the price received by the farmers expressed as a percentage of the retail price (*i.e.* the price paid by the consumer). If it is the retail price the producers share in the consumers rupee (Ps) be expressed as follow:

$$P_s = \frac{\text{Net price received by the producer (Pf)}}{\text{Price paid by consumer (Pc)}} \times 100$$

The different term used in price spread are defined as follows:

- (i) **Gross price of producer:** This is equal to wholesale price at the primary assembling centre or the price at the time of the first sale received by the producer.
- (ii) **Net price of producer:** It is equal to gross price received by producer minus all expenses incurred by him on marketing the produce.

Garrett's ranking technique

Farmers' problems with brinjal marketing were

investigated. Farmers were asked to rank the constraints accordingly. Garrett's ranking technique provides the change of orders of constraints and advantages into numerical scores. The prime advantage of this technique over a simple frequency distribution is that the constraints are ordered according to the severity of the limitations from the respondents' perspective. Ranking have been converted into score value with the help of the following formula:

$$\text{Percent Position} = \frac{100(R_{ij} - 0.5)}{N_j}$$

Where,

R_{ij} = Rank given for the i^{th} variable by j^{th} respondent.

N_j = Number of variables ranked by j^{th} respondent.

The result which is required for study is provided in the following table.

RESULTS AND DISCUSSION

Marketing channels of brinjal

Following channel of distribution have been found while marketing of brinjal in Amravati district of Maharashtra.

Channel I: Producer – Consumer

Channel II: Producer-Retailer– Consumer

Channel III: Producer-Wholesaler-Retailer – Consumer

Table 2 revealed that channel III (Producer – Wholesaler – Retailer – Consumer), was the major channel of distribution and overall 53 (58.89 %) farmers sold their produce by this channel followed by channel II (21.11 %) and channel I (20.00 %). In channel I i.e. (Producer – Consumer) quantity sold was low i.e. 18.24 per cent and this channel was mainly followed by small farmers. In channel III i.e. (Producer– Wholesaler – Retailer– Consumer) quantity sold was 6560.00 quintals i.e. 60.53 per cent. The producer's share in consumers rupee is maximum when less intermediaries are included. It was observed that channel III i.e. (Producer – Wholesaler – Retailer – Consumer) is the major channel of distribution.

Table 2: Quantity of brinjal sold through different channel in Amravati

Channels	No. of farmers	Quantity Sold (Qt.)
Channel I (producer-consumer)	18.00 (20.00)	1977.00 (18.24)
Channel II (sale through retailer)	19.00 (21.11)	2300.00 (21.22)
Channel III (sale through wholesaler)	53.00 (58.89)	6560.00 (60.53)
	90.00 (100.00)	10837.00 (100.00)

Source: Field survey 2020-21; Based on authors calculation.

Marketing cost of brinjal

It is evident from Table 3 that the per quintal marketing cost incurred by the brinjal growers was found highest in channel III (₹ 126.11) followed by channel II (₹ 50.89) and channel I (₹ 46.31). The total marketing cost incurred by brinjal growers in channel I was ₹ 46.31. Marketing cost incurred by brinjal grower and retailer in channel II was ₹ 50.89 and ₹ 27.37 and in channel III marketing cost incurred by brinjal grower, wholesaler and retailer was ₹ 126.11, ₹ 24.34, ₹ 26.67 respectively. Total marketing cost incurred in channel I, Channel II, and Channel III was found ₹ 46.31, ₹ 78.26, ₹ 177.12, respectively.

Table 3: Marketing of brinjal in Amravati (₹/qt)

	Channel I	Channel II	Channel III
(A) Marketing cost incurred by producer			
Cost of Polybag	10.00	10.00	10.00
Packing	3.42	3.61	3.73
Loading charges	6.00	7.37	7.98
Transportation charges	6.22	9.74	8.92
Weighing Charges	2.56	2.47	2.45
Hamali	9.50	9.23	9.45
Dalali @ 10%	—	—	75.09
Unloading charges	8.61	8.47	8.49
Sub-total	46.31	50.89	126.11
Selling Price of Producer	897.27	892.00	891.50
(B) Marketing cost incurred by Wholesaler			
Weighing charges	—	—	2.38
Hamali	—	—	9.28

Cess fund	—	—	12.68
Sub-total			24.34
Selling price of Wholesaler	—	—	1017.00
Marketing margin			101.16
(C) Marketing cost incurred by Retailer			
Cost of Polybag	—	10.00	10.00
Transportation charges	—	4.84	4.74
Hamali	—	10.21	9.57
Weighing charges	—	2.32	2.36
Sub-total		27.37	26.67
Selling Price of retailer	—	1102.58	1222.00
Marketing margin		183.21	178.33
Purchase price of consumer	897.22	1102.58	1222.00
Total marketing cost	46.31	78.26	177.12

Source: Field survey 2020-21; Based on authors calculation.

Price spread in marketing of brinjal in Amravati

Table 4 showed the net price received by the brinjal growers or the producers share in consumer rupee was the highest *i.e.* 94.84 per cent in channel I with followed by channel II (76.29 %) and channel III (62.63 %) while the marketing cost incurred by producer in channel I was 5.16 per cent followed by marketing cost incurred by producer and retailer in channel II was 7.10 per cent and marketing cost incurred by producer, wholesaler and retailer in channel III was 14.49 per cent.

Table 4: Price spread in marketing of brinjal in Amravati (₹/qt)

Particulars	Total Price (₹/qtl.)		
	Channel -I	Channel -II	Channel -III
Net price received by producer	850.96 (94.84)	841.11 (76.29)	765.39 (62.63)
Total Marketing cost	46.31 (5.16)	78.26 (7.10)	177.12 (14.49)
Total market margin	—	183.21 (16.62)	279.49 (22.87)
Selling price of retailer/ purchase price of consumer	897.27 (100.00)	1102.58 (100.00)	1222.00 (100.00)

Source: Field survey 2020-21; Based on authors calculation.

The price paid by the consumer in channel I was ₹ 897.27 per quintal in which producers share was 94.84 per cent. Price paid by the consumer in channel II was ₹ 1102.58 per quintal in which producers share was 76.29 per cent. The price paid by the consumer in channel III was ₹ 1222.00 per quintal in which producers share was 62.63 per cent. Highest market margin was observed in channel III *i.e.* 22.87 per cent. It was found that comparatively channel-I was more profitable than channel II and channel III in marketing of brinjal. These findings align with Imtiyaz *et al.* (2014) and Raut *et al.* (2020) who similarly found that a direct channel from producer to consumer resulted in a higher share for producers in the consumers' rupee.

Constraints in marketing of brinjal in Amravati

All of the selected brinjal growers were interviewed about the problems they are having with brinjal marketing. Table 5 revealed that the constraints faced by the brinjal growers during marketing were inadequate storage facilities, uncertainty of prices, transportation, high commission charges. Among these constraints, uncertainty of prices ranked first (56.70) followed by high commission charges (51.40), inadequate storage facilities (47.08) and transportation (44.57).

Table 5: Ranking constraints in marketing of brinjal in Amravati (Total farmers: 90)

Constraints	Total Score	Total mean	Rank
Inadequate storage facilities	4237	47.08	III
Uncertainty of prices	5103	56.70	I
Transportation	4011	44.57	IV
High Commission Charges	4626	51.40	II

Source: Field survey 2020-21; Based on authors calculation.

CONCLUSION

The Covid-19 pandemic has highlighted the importance of efficient supply chain to connect smallholder farmers with consumers. Channel III (*i.e.* Producer - Wholesaler - Retailer - Consumer) was observed as major channel of distribution in the

district in period of Covid-19 lockdown. However, major constraints such as uncertainty of prices followed by high commission charges have hindered the marketing of brinjal and caused economic losses for farmers. To reduce the economic losses caused by these constraints, relevant stakeholders should take appropriate efforts to eliminate the constraints. A proper supply chain is needed to connect smallholder farmers to market segments. Study recommended that, the government should take proactive measures like establishment of price stabilization mechanisms and strengthen marketing channels.

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