International Journal of Pharmaceutical Research and Applications
Volume 6, Issue 5 Sep-Oct 2021, pp: 282-288 www.ijprajournal.com ISSN: 2249-7781

Price Spread, Market Margin and Marketing efficiency in Jalgaonbrinjal Marketing in Jalgaon district of Maharashtra

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Date of Submission: 01-09-2021 Date of Acceptance: 12-09-2021

ABSTRACT: The study viz. "Economics of production and marketing of JalgaonBrinjal in Jalgaon district of Maharashtra" was conducted in six villages of Yawal and Bhusawal tehsil of Jalgaon district. The objective of the study was to estimate the resource use, cost returns and productivity of brinjal. The study was based on the primary data of brinjal growers for the year 2018-19, spread over the six randomly selected villages of two tehsils. From each selected village, 15 growers, 5 from each size group viz. small, medium and large were randomly selected.

The average per quintal cost of marketing of Jalgaonbrinjal in channel I was □ 65 at the overall level. Major items of marketing cost were packaging charges and transportation charges. It accounted for 61.54 and 38.46 percent respectively, while in the case of channel II and channel III the cost of marketing was □ 108.3 and □ 231.75 respecticttively which is greater than that of channel Ⅰ. Price spread in marketing of Jalgaonbrinjal was minimum in channel Ⅰ due to intermediaries. In channel Ⅰ, the producer's share in consumer's rupee was highest (98.56 per cent). In channel Ⅱ, it was (67.83) per cent and (54.09) per cent in channel Ⅲ. The net price received by the producer was maximum (□ 4435/quintal) in channel Ⅰ than that of channel Ⅱ (□ 3391.7/quintal) and channel Ⅲ(□ 3218.25 /quintal)

Key words: Cost, JalgaonBrinjal, Price spread, Market margin.

I. INTRODUCTION

India is second largest producer of vegetables next to China. India grows the maximum number of vegetables in one or the other parts of the country. Vegetable cultivation is spread all over the country and is no more confined to rural areas. Vegetable cultivation has become commercial venture since it provided to be intellectually satisfying and economically rewarding.

Brinjal has origin in India. Its botanical name is Solanummelongena L. It belongs to family Solanceae. Different varieties of brinjal from private sector are bioseedcompanys-brinjaltrishul, Ankur-Ajay, Mauli-Vishal, Gaurav-Panchganga etc. and released by various agricultural universities are Pusapurle Long, Bhagyamathi, Green Spiny, Polur, SwarnaShobha (HABR-4), KashiPrakash (IVBR-1), Krishna, Mnjarigota, Vaishali, Pragati, Phuleharit. In brinjal no endogenous toxins or significant levels of anti-nutritional factors have been found till date. It is so not considered a pathogen and is not capable of causing any disease in humans, animals or plants. Brinjal fruit are available throughout the year. It is used in curry preparation giving the taste of non-vegetable food. The Bhurta is common dish in North India, prepared from brinjal. Bhurta is also famous in Khandesh region. Apart from this it is used as medicine to cure toothache and for diabetic patient. Besides from fruit leaves and seeds used in medicine. It has about 1.4 per cent protein, 4 per cent carbohydrate, 0.3 per cent fat, 0.3 per cent minerals and 1.3 per cent fibre. Vitamin C content is around 6mg/100g and vitamin A is 30 I.U. White cultivars contain twice as much crude fibre as the purple and green cultivars. The amino acid content is more in the purple cultivars than the white varieties. On the contrary, potassium and chloride content is highest in green and lowest in purple variety. Sometimes brinjal fruits taste bitter which is due to the presence of glycoalkaloids that are of wide occurrence in plants belonging to Solanaceae family. Generally, high amount of glycoalkaloids (20 mg/100g fresh wt.) produces a bitter taste and off flavour. In most of the commercial cultivars of India, usually glycoalkaloid contents vary from 0.37 to 4.83 mg/ 100g fresh weight. Studies on organic and mineral element analysis of matured brinjal fruits revealed that copper content and polyphenol oxidase activity is higher in the purple coloured fruits than in white cultivars, whereas iron content and catalase activity is highest in the green and lowest in white cultivars. Studies also suggested that the green cultivar had better

International Journal of Pharmaceutical Research and Applications
Volume 6, Issue 5 Sep-Oct 2021, pp: 282-288 www.ijprajournal.com ISSN: 2249-7781

processing properties than the more popular purple cultivars. The white cultivars, long white and round white, lack anthocyanins.

The production and consumption of vegetables has expanded enormously in recent years, with the global growth in the production of more than 50% in the last decade. The rate of increasing is much higher than for other commodities. Vegetables constitute important part of varied and healthy diet and provides significant amount of vitamin, antioxidants and other substances that prevent disease and contribute to an improvement in the quality of life. As a consequence, It is expected that in the coming years, Vegetable crop production will continue its expansion.

Brinjal is native of India. Brinjal or eggplant is an important crop of sub-tropics and tropics. The name brinjal is popular in Indian subcontinent and is derived from Arabic and Sanskrit whereas the name eggplant has been derived from the shape of the fruit varieties which are white and resemble in shape to chicken eggs. It is also called aubergine (French word) in Europe. The brinjal is of much importance in the warm areas of Far East, being grown extensively in India, Bangladesh, Pakistan, China and the Philipines. It is also popular in Egypt, France, Italy, and United states. In India, it is one of the most common, popular and principal vegetable crop grown throuout the country except in higher altitudes, It is a versatile crop adopted in different agro-climatic regions and can be grown throughout the year. It is a perennial but grown commercially as an annual crop. A number of cultivars are grown in India, consumer preference being dependent upon fruit colour, size and shape.

Brinjal fruit (unripe) is primarily consumed as cooked vegetable in various ways and dried shoots are used as fuel in rural areas. It is low in calories and fats, contains mostly water, some protein, fibre and carbohydrates. It is a good source of minerals and vitamins and is rich in total water soluble sugars, free reducing sugars, amide proteins among other nutrients. Jalgaon is known as city of Brinjals .Jalgaon received special recognition because of this vegetable. Light Green color brinjals from jalgaon are famous for bharit (mashed brinjal). Yaval and Bhusavaltalukas in Jalgaon district are very famous for the brinjals that are specifically used for preparing bharit and hence they are locally known as “Bharitvanga”.

Bamnod village in YawalTaluka is famous for large-sized variety of BharitBrinjals. Farmers in this region specifically cultivate bharitvangi (mashed brinjal). Village rejoices unique medium spicy taste of Bharit in the form of small group parties and get-togethers. These bharitbrinjals are grown in the area near Tapi river basin. Asoda is a village in Jalgaon District; Maharashtra state in western India, which itself is located on the northern Deccan Plateau. It is 5 km from Jalgaon, located within the productive, irrigated agricultural region of Khandesh. Asoda is famous for bharitbrinjal cultivation. Other villages in which cultivation of bharitbrinjal occurs are Mamurabad, Bhadli and Bhalod. Soil in Jalgaon which is black and well drained makes brinjal cultivation most favourable in this region. Bharitbrinjal cultivars prefer small-sized seeds to get large brinjal crop from Khandesh's rich medium-black fertile soil. These large-sized bharitbrinjals have now turned popular throughout the State.

JalgaonBrinal recently got GI tag because of its uniqueness and to know the existing production level and marketing efficiency.

Objective

1. To estimate the marketing costs, market margin and price spread of JalgaonBrinjal.
2. To identify the problems in production and marketing and suggest the measures

Methodology

The sampling design adopted for the investigation was two stage purposive and random sampling with sample tahsil as a primary unit of sampling and village as a secondary unit of sampling. Three villages each from Yawal and Bhusaval tehsil were selected purposively from for study on the basis of area under brinjal cultivation. The list of brinjal growers along with their operational area and area under brinjal cultivation for each of the selected villages were prepared on the basis of information obtained from village revenue office. The Brinjal growers were then arranged in descending order of their operational area for each of the selected villages and five growers from each of the three predetermined size classes (i.e. area under Brinjal cultivation) viz., Group I (up to 0.40ha), Group II (0.41 to 0.80ha) and Group III (0.81 ha and above) thereby making a total of 15 growers for each village were selected randomly. Thus, the total sample size for the study was consists of 90 brinjal growers comprising 30 each size group.

To fulfil the specific objectives of the study, based on the nature and extent of availability of data, analytical tools and techniques viz., tabular analysis was adopted to compile the general

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Volume 6, Issue 5 Sep-Oct 2021, pp: 282-288 www.ijprajournal.com ISSN: 2249-7781

characteristics of the sample farmers, Resource use efficiency-Marginal value product (MVP), Market margin, Price Spread (Price spread= Consumer's price – Price received by farmer), Total marketing cost, Marketing efficiency.

II. RESULTS AND DISCUSSION

Production and Disposal Pattern of Jalgaonbrinjal

The total produce of brinjal was disposed off as home consumption, gratis, losses due to pests and diseases and rest was marketed. The information regarding disposal pattern of brinjal is given in table 1.

At an overall level total quantity of brinjal produced was 225.99 q per hactere. Out of this total production 0.15 per cent, 0.81 per cent and 1.22 per cent were used for home consumption, gratis and losses due to pests and diseases, respectively. Marketed surplus at the overall level was 97.82 per cent.

It can be seen from the table that, total quantity of brinjal produced per farm were 194.23q, 216.32q and 267.43q in small, medium and large size groups, respectively and in case of small size group home consumption, gratis, losses due to pests and diseases and marketed surplus was 0.16, 0.94, 1.16 and 97.74 percent, respectively.

In medium size group total production (216.32q) includes home consumption (0.20%), gratis(0.79%), losses due to pests and diseases (1.32%) and marketed surplus (97.69%) and in case of large size group total production was (267.43q), home consumption (0.09%), gratis (0.69%), losses due to pests and diseases (1.20%) and marketed surplus (98.02%), respectively to total production.

Table 1. Production and disposal pattern of Jalgaonbrinjal(q / farm)

Sr. No.	Particulars	Group			
		small	medium	Large	Overall
1	Total production	194.23 (100.00)	216.32 (100.00)	267.43 (100.00)	225.99 (100.00)
2	Home consumption	0.31 (0.16)	0.43 (0.20)	0.25 (0.09)	0.33 (0.15)
3	Gratis	1.83 (0.94)	1.72 (0.79)	1.85 (0.69)	1.8 (0.81)
4	Losses due to pests and diseases	2.25 (1.16)	2.85 (1.32)	3.2 (1.20)	2.76 (1.22)
	Marketed surplus	189.84 (97.74)	211.32 (97.69)	262.13 (98.02)	221.09 (97.82)

(Figures in parentheses are the percentage to the total)

Marketing Channel of JalgaonBrinjal

Marketing channels state that how produce passes through different marketing agencies from producer till it reaches to the consumer. It is essential to point out different marketing channels used in brinjal marketing during present study. Following were different marketing channels observed during the study.

Channel-I :Proucer – Consumer

Channel-II : Producer – Retailer – Consumer

Channel-III : Producer – Wholesaler – Retailer – Consumer

The detailed information on the quantity of produce sold through different marketing channels by the brinjalgrowers presented in table. It could be seen that there are three marketing channels were observed in brinjal marketing. The marketing channel-III (Producer –Wholesaler – Retailer – Consumer) was the most preferred

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Volume 6, Issue 5 Sep-Oct 2021, pp: 282-288 www.ijprajournal.com ISSN: 2249-7781

Table 2. Channelwise quantity sold (q / ha)

sr no	Marketing channel	group			
		small	medium	large	overall
1	I (P-C)	11.95 (6.29)	9.18 (4.34)	7.25 (2.76)	9.46 (4.47)
2	II (P-R-C)	34.8 (18.33)	30.76 (14.56)	28.85 (11.01)	31.47 (14.63)
3	III (P-W-R-C)	143.09 (75.38)	171.38 (81.10)	226.03 (86.23)	180.1667 (80.90)
	Total quantity marketed	189.84 (100.00)	211.32 (100.00)	262.13 (100.00)	221.09 (100.00)

(Figures in parentheses are the percentage to total)

(P-C=Producer-Consumer,P-R-C=Producer-Retailer-Consumer,P-W-R-C=Producer-Wholesaler-Retailer-Consumer)

Channel among the other two marketing channel and through which 80.90 per cent of the total produce was marketed followed by channel-II (Producer – Retailer – Consumer) through which 14.63 per cent of the total produce was marketed. Quantity marketed through channel -I (Producer – Consumer) constituted 4.47 per cent of the total produce.

In case of small size group, the maximum quantity 75.38 per cent were marketed through channel-III (Producer –Wholesaler – Retailer – Consumer) followed by channel – II (Producer – Retailer – Consumer)18.33 per cent and channel – I (Producer – Consumer) 6.29 per cent.

The brinjal growers from medium size group sold the highest quantity of produce 81.10 per cent through channel-III (Producer –Wholesaler – Retailer – Consumer) followed by channel-II (Producer – Retailer – Consumer) 14.56 per cent and channel-I (Producer – Consumer) 4.34 per cent.

In case of large group, the maximum quantity 86.23 per cent of total produce was marketed through channel-III(Producer – Wholesaler – Retailer – Consumer) followed by channel-II (Producer – Retailer – Consumer) 11.01 per cent and channel-I (Producer – Consumer) 2.76 per cent.

Cost of Marketing through Different Channels of JalgaonBrinjal

Various marketing functions viz., packing, transportation and handling of produce, etc. are required to be performed in the marketing of JalgaonBrinjal. The cost incurred for performing these operations are very important in JalgaonBrinjal marketing.

Table 3.Channelwise marketing cost (□ / q)

Sr. No.	**Particulars**	**channel I P-C**	**channel II P-R-C**	**Channe-lIII (P-W-R-C)**		
				Nashik	**Mumbai**	**Overall**
1	Packaging charges	40 (61.54)	42 (38.78)	41 (19.66)	40 (15.69)	40.5 (17.48)
2	Transport charges	25 (38.46)	66.3 (61.22)	155 (74.34)	200 (78.43)	177.5 (76.59)
3	Hamali	0.00 (0.00)	0.00 (0.00)	10.00 (4.79)	12.5 (4.90)	11.25 (4.85)
4	Weighing charges	0.00	0.00	2.5	2.5	2.5

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		(0.00)	(0.00)	(1.21)	(0.98)	(1.08)
	Total marketing cost	65 (100.00)	108.3 (100.00)	208.5 (100.00)	255 (100.00)	231.75 (100.00)

(Figures in parentheses are the percentage to the total)

The per quintal marketing cost of JalgaonBrinjal in different marketing channels on performing the operations such as packing transportation and commission charges are worked out and presented in table 3.

It can be seen from the table that, the per quintal cost of marketing of JalgaonBrinjal for channel-I, Channel-II and Channel-III was □ . 65, □ .108.3, □ . 231.75 respectively. Thus, per quintal cost of marketing was highest in Channel-III (Producer – Wholesaler – Retailer – Consumer). Among the marketing cost transport charges and packing charges were the major items and contributed highest share in the total cost of marketing. Transport charges are contributed maximum cost in Channel-II and Channel-III. Transport charges contributed 76.59 per cent in Channel-III.

Price spread and Marketing Efficiency in Different Marketing Channels

Price spread is the difference between the price paid by the consumer and price received by the producer. This consists of marketing costs and margins of the different channels. The costs and margins of agency in different channels were worked out and details are presented in Table 4. It is observed from the table 4.13, the net price realized by the producer was □ . 4435, □ . 3391.70 And □ . 3218.25 in Channel-I, Channel-II and Channel-III, respectively. Price spread was the minimum (□ . 65.00) in channel-I (Producer – Consumer). As there no market margins between producer and consumer. Price spread was maximum in channel-III (□ . 2731.75), followed by channel-II (□ 1608.30). This is due to fact that with increases in internediatories price spread also increases. The price paid by consumer was highest in channel-III followed by channel-II. Table 4.shows that Producer's share in consumer's rupee was the highest (98.56%) in channel-I followed by channel-II (67.83%) and channel-III (54.09%).

Table 4.Channelwise price spread (□ / q)

Sr. No	Particulars	channel I	channel II	Channel III (P-W-R-C)		
		(P-C)	(P-R-C)	Nashik	Mumbai	Overall
1	Gross price received by the producers	4500.00 (100.00)	3500.00 (70.00)	3400.00 (57.63)	3500.00 (58.33)	3450.00 (57.98)
	Market expenses incurred by producer	65.00 (1.44)	108.30 (2.17)	208.50 (3.53)	255.00 (4.25)	231.75 (3.89)
	Net price received by the producers	4435.00 (98.56)	3391.70 (67.83)	3191.50 (54.09)	3245.00 (54.08)	3218.25 (54.09)
2	Wholesaler					
	Purchase price of wholesaler			3400.00 (57.63)	3500.00 (58.33)	3450.00 (57.98)
	Expenses incurred by the wholesalers			530.00 (8.98)	510.00 (8.50)	520.00 (8.74)
	Commission			680.00	690.00	685.00

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	received by the wholesalers			(11.53)	(11.50)	(11.51)
	Price received by the wholesalers			4610.00	4700.00	4655.00
3	Retailer					
	Purchase price of retailer		3500.00 (70.00)	4610.00 (78.14)	4700.00 (78.33)	4270.00 (71.76)
	Expenses incurred by the retailer		570.00 (11.40)	530.00 (8.98)	525.00 (8.75)	527.50 (8.87)
	Commission received by the retailer		930.00 (18.60)	760.00 (12.88)	775.00 (12.92)	767.50 (12.90)
	Price received by the retailer		5000.00	5900.00	6000.00	5950.00
4	Price paid by the consumer	4500.00 (100.00)	5000.00 (100.00)	5900.00 (100.00)	6000.00 (100.00)	5950.00 (100.00)
5	Price spread	65.00	1608.30	2708.50	2755.00	2731.75

(Figures in parentheses are the percentage to total)

Table 5.Channelwise Marketing Efficiency (□ / q)

Channel		**Price paid by consumer**	**Net price realized by producer**	**Marketing cost**	**Marketing margin**	**MC+MM**	**MME %**
channel I		4500.00	4435.00	65.00		65.00	68.23
channel II		5000.00	3391.70	678.30	930.00	1608.30	2.11
	Nashik	5900.00	3191.50	1268.50	1440.00	2708.50	1.18
Channel III	Mumbai	6000.00	3245.00	1290.00	1465.00	2755.00	1.18
	Overall	5950.00	3218.25	1279.25	1452.50	2731.75	1.18

Marketing efficiency was worked out by using modified method as suggested by Acharya and Agrawal from the table 5. it was seen that, the marketing efficiency was maximum for Channel-I (68.23%), followed by Channel-II (2.11%) and Channel-III (1.18%) respectively. Channel-I was the most efficient channel in marketing of JalgaonBrinjal.

III. CONCLUSION

97.89 per cent of Brinjal were sold indicating high marketable surplus.The producer's share in consumer's rupee was high in channel I followed by channel II and channel III.The marketing efficiency was high in channel I and low in channel II and channel III.Results revealed that Jalgaonbrinjal cultivation is highly profitable

Policy Implication

The producer's share in consumer's rupee was more in channel I as compared to channel II and channel III due to involvement of middlemen, therefore study suggest that farmer should be motivated to form JalgaonBrinjal Producers Organization to minimise number of middlemen in distant marketing and accrue more share in consumers rupee.

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