The Pharma Innovation Journal 2023; 12(6): 2906-2909

www.ThePharmaJournal.com

The Pharma Innovation

ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2023; 12(6): 2906-2909

www.thepharmajournal.com
Received: 08-03-2023
Accepted: 11-04-2023

Soumya Singh
Research Scholar (P.G), Department of Agricultural Economics, SHUATS, Naini, Prayagraj, Uttar Pradesh, India, India

Dr. Mukesh Kumar Maurya
Assistant Professor Department of Agricultural Economics, SHUATS, Naini, Prayagraj, Uttar Pradesh, India, India

Avinash Mishra
Ph.D. Scholar, Department of Agricultural Economics, SHUATS, Naini, Prayagraj, Uttar Pradesh, India, India

Corresponding Author:
Soumya Singh
Research Scholar (P.G), Department of Agricultural Economics, SHUATS, Naini, Prayagraj, Uttar Pradesh, India, India

Study on supply chain management and marketing of brinjal in Varanasi district of Uttar Pradesh

Soumya Singh, Dr. Mukesh Kumar Maurya and Avinash Mishra

Abstract
The Present study entitled "Study on supply chain management and marketing of brinjal in Varanasi district of Uttar Pradesh." Was carried out during the year 2022-2023 in the VARANASI district of the Uttar Pradesh state. The main objective of the study is to analyze, socio-economic characteristic of sample respondents, its economics of Brinjal marketing disposal pattern price spread and constraints and marketing of Brinjal Cholapur block is more potential for Brinjal production in comparison to other blocks. Out of the total villages of Cholapur blocks total 5 villages selected randomly. The major findings of this study revealed that the average holding size of the sampled house hold was 1.52 hectares and average literacy percentage was 88.03 percent. Overall on an average cropping intensity was found 247.48 percent. The major crops grown by the farmers were Brinjal and wheat in rabi and Paddy in kharif season. The average yield of Brinjal was observed 255.83 quintal per farm level. The average marketable surplus between the different size of farm household (196.31 qt). Major problem faced by the producer were crop insurance charges and transportation of Brinjal. The credit facility was too poor for the producers. Improper weighment was another major problem faced by the producers.

Keywords: Supply chain, marketing efficiency, marketing cost, producer's share

Introduction
Brinjal (*Solanum melongena* L.) belongs to the family Solanaceae and is one of the popular vegetable crops grown in India, as well as, other parts of the world. It is known as Brinjal in India and Aubergine in Europe. Brinjal is also known as eggplant because of its resemblance to the shape of egg. Overall, this favourite vegetable is counted in the top ten vegetables of the world. Around one quarter of the world production is occupied by India. In the world area, production and productivity of brinjal in year 2016 was 1.79 million ha, 51.29 million tons and 28.59 tons per ha, respectively. It is widely grown in India, China, Egypt, Turkey, Iran, Indonesia, Iraq, Japan, Italy, Philippines and several African countries. Brinjal being the most important to the growers and consumers, there is pressing need to increase its productivity to fulfil the increasing demands round the year. Therefore, it is necessary to evolve high yielding varieties or hybrids to its high yield potential, earliness, quality and resistance attitudes to meet the demand of increasing population. Brinjal is one of the important vegetable crops of Varanasi district of Uttar Pradesh.

Research methodology
Selection of the District
A total of 75 districts in Uttar Pradesh from which Varanasi district was purposively selected. The total area of the district Varanasi is 1535 per.sq.km.

Selection of Block
Selection of the block is the second stage of sampling. Out of 8 blocks present in Varanasi districts, Cholapur was selected purposively.

Selection of Village
All the list of villages was prepared, out of which 5% villages were selected randomly.

Selection of Respondents
All the list of villages was prepared, out of which 5% villages were selected randomly.
1. Marginal size farms group - < 1 ha.
2. Small size farms group - 1 to 2 ha.
3. Semi-Medium farms group - 2 to 4 ha.
4. Medium size farms group - 4 to 10 ha.
5. Large size farms group - more than 10 ha

Analytical Tools

Chi-Square

A chi-square ($\chi 2$) statistic is a test that measures how a model compares to actual observed data. The data used in calculating a chi-square statistic must be random, raw, mutually exclusive, drawn from independent variables, and drawn from a large enough sample.

Marketing Efficiency

$$\frac{\text{Consumer paid price}}{\text{Total marketing cost + Total marketing margin}}$$

Marketing Cost

$$\text{Marketing Cost (MC)} = \frac{\Delta TC}{\Delta Q}$$

Producers Share in Consumer's Rupees

$$\frac{\text{Net price received by producer x 100}}{\text{Consumer Price}}$$

Result and Discussion

Table 1: Distribution of respondents based on their preference on marketing channels

Sr. No	Channel	Respondent No.	Respondent					Percentage
			Marginal	Small	Semi- Medium	Medium	Large	
1	Channel 1	41	10	13	9	6	3	41%
2	Channel 2	36	9	12	6	5	4	36%
3	Channel 3	23	5	7	6	3	2	23%
		100	24	32	21	14	9	100%

Reveals the marketing cost, marketing efficiency and Producer's share in consumer rupee in marketing of brinjal through channel 1.

Channel-I = Producer – Consumer

Table 2: Reveals that average marketing cost when producers sold their product to customer in the market

Sr. No	Description	₹ /ql.
1	Producer's sale price	650
2	Expenses borne by the producer	160
I	Cost of loading	10
II	Cost of Transportation	40
III	Grading, filling, stitching, etc.	25
IV	Cost of Unloading	20
V	Packing material	20
VI	Miscellaneous expenses	45
3	Net price received by the producer	490
4	Producer purchase price	650
5	Price spread	160
6	Producer's share in consumer's rupee	75.38%
7	Marketing efficiency	4.06

Table 2. Reveals that average marketing cost when producers sold their product to customer in the market was ₹ 650/qt. Among these cost of loading ₹ 10.00/ha, Grading, Filling, Stitching, etc. was ₹ 25.00/qt., unloading cost ₹ 20.00/qt., transportation cost ₹ 40.00/qt., miscellaneous expenses ₹ 45.00/qt., packing material was ₹ 20.00/qt., The total Price spread was ₹ 160.00/qt, producer's share in consumer's rupee 75.38 and market efficiency was 4.06% respectively.

Channel-II = Producer -Retailer –Consumer

Table 3: Reveals that average marketing cost when producer sold to village Retailers in the market

Sr. No	Description	₹ /ql.
1	Producer sale price to Retailer's	650
2	Cost incurred by the producer	
I	Cost of gunny bag	25
II	Grading, Filling	20
III	Load & Transportation cost	30
IV	Unloading charges	15
V	Total cost incurred by producer(i-v)	90
3	Net price received by producer	560
4	Sale price of producer to Village Merchant/ Retailer's	650
5	Cost incurred by the Retailer	
I	Transportation cost	30
II	Labour	15
III	Loss, wastage and spoilage	25
IV	Miscellaneous charges	20
V	Market fee	10

VI	Total cost incurred	100
6	Village Merchant/Retailer Margin	30
7	Sale price of Retailer to Consumer	780
8	Price spread (Total Marketing cost + Margin)	130
9	Producer‘s share in consumer‘s rupee	83
10	Market Efficiency	6

Table 3. Reveals that average marketing cost when producer sold to village Retailers in the market was ₹ 780.00/ql. Among these cost of Gunny bag was ₹ 25.00/ql., loading and transportation cost ₹ 30.00/ql., unloading charges ₹ 15/ql. and grading & filling cost. The average marketing cost sold to their produce through village retailers to the consumers, was observed 15.38%, among these cost transportation was the most important 4.61%, followed by loss, wastage and spoilage 3.84%, labour 2.30% and miscellaneous cost 3.07% respectively. The total price spread was ₹ 130.00/ql., producer sale in consumer rupee 83.33 and market efficiency was 6.00% respectively.

Channel-III = Producer –Commission agents/Wholesaler - Retailer –consumer

Table 4: Reveals that marketing cost, marketing margin, and price spread

Sr. No	Description	₹/ ql.
1	Producer‘s sale price/ wholesaler‘s purchase price	620
2	Expenses borne by the producer	100
I	Cost of gunny bag	25
II	Grading, Filling	20
III	Transportation cost	30
IV	Miscellaneous cost	25
3	Net price received by producer	520
4	Sale price of producer to wholesale	620
Cost incurred by wholesaler		
I	Market fee (2.5%)	15.05
II	Transportation cost	20
III	Storage cost	15
IV	Labour charges	10
V	Losses, wastage cost	10
VI	Miscellaneous expenses	15
VII	Total cost incurred by wholesaler	85.05
5	Wholesaler‘s margin	30(4.83)
6	Sale price of wholesaler to retailer	735.05
Cost incurred by retailer		
I	Transportation cost	20
II	Labour	15
III	Packing cost	15
IV	Loss, wastage and spoilage @ 2.50%	10
V	Miscellaneous cost	10
7	Total cost incurred by retailer	70
8	Margin of retailer	30
9	Retailer‘s sale price/ consumer‘s purchase price	835.05
10	Price spread	315.05
11	Producer‘s share in consumer‘s rupee	62.27
12	Marketing Efficiency	3.27

Table 4. Reveals that marketing cost, marketing margin, and price spread for channel-III is important because lots of farms i.e. 83.87% of growers preferring sale of their produce through this channel.

Summery

The study shows that all production and marketing of Brinjal in all Varanasi district. The main objective of the study is to analyze, socio economic characteristic of sample respondents, price spread and constraints in production and marketing of Brinjal. The results revealing that the socio economics back ground and greater access to all the assets. Economics of Brinjal production is more profitable in large farms as compared to medium size farms and small size farms. The study indicated that there is scope to increase the producer's share in consumer's rupee by making the market more effective so that the number of intermediaries is to be restricted and marketing costs of marketing margins to be reduced. Major constraints in marketing of different farms size group followed by a huge price fluctuation was the major marketing constraints in Brinjal.

Conclusion

Brinjal is considered to be an important crop to achieve nutritional security of the nation. India is the second largest producer of vegetables crop in the world and China is the first largest producer of vegetable crop in the world. Brinjal is one of the most commonly grown vegetable crop of the country. India produces about 7.676M mt of brinjal from an area of 0.472 M ha with an average productivity of 16.3 mt/ha the brinjal producing states are Orissa, Bihar, Karnataka, West Bengal, Andhra Pradesh, Maharashtra and Uttar Pradesh, the

major brinjal producing in west Bengal.

Acknowledgement
Words cannot express my gratitude to my professor Dr. Mukesh Kumar Maurya (Associate Professor, SHUATS) for his invaluable patience and feedback. I am also grateful to my classmates for their editing help, late-night feedback sessions and moral- support. Lastly, I would be remiss in not mentioning my family, especially my parent. Their belief in me has kept my spirits and motivation high during this process.

Reference

1. Alstad DN, Andow D. 'Managing the Evolution of Insect Resistance to Transgenic Plants, Science. 1995;268:1894-1896.
2. Amendola C, Pereira M, Sanchez J, Mayet M, Bebb A, Freese B, *et al*. Who Benefits from Gm Crops? Monsanto and the corporate-driven genctically modified crop revolution, Executive Summary, Friends of the Earth International, Secretariat Issue. 2006;1:10. ISBN: 90-0914913-9.
3. Donald Ricks, Timothy Woods, James Stern 20), Chain management and marketing performance in fruit industry. Acta Hort. 536:661-65%.
4. Julie Kenett, Murray Fulton, Harvey Brookes Pauline Molder. 199%. Supply chain management in vegetable crop: A case study from the US. Can. J Agric. Econ. 46:549-558.
5. Kumar Bhatia Jitender *et al.* The study revealed that producers obtained maximum share in consumer rupee (93.46 percent) from direct marketing of Brinjal which may be due to non- existence of market intermediaries between producers and consumers. Journal of Applied and Natural Science. 2017;9(1):402-405.
6. Yadav Anurag. The study was carried out in Prayagraj district, India from November, 2019 to March, 2010 to examine the existing four marketing supply chains. Oxford and IBH Publishing co., PVT., Ltd., New Delhi, India; c2019.