



STUDY ON FARMERS BUYING BEHAVIOUR FOR TOMATO SEEDS IN BAREILLY DISTRICT UTTAR PRADESH

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ABSTRACT

This study established attractive attributes and consumer desires for fresh tomatoes. Three focus groups (n = 28 participants) were conducted to explore how consumers perceived tomatoes, including how they purchased and consumed them. Subsequently, an Adaptive Choice Based Conjoint (ACBC) survey was conducted to understand consumer preferences toward traditional tomatoes. The ACBC survey with Kano questions (n = 1037 consumers in Raleigh, NC) explored the importance of colour, firmness, size, skin, texture, interior, seed presence, flavour, and health benefits. The most important tomato attribute was colour, then juice when sliced, followed by size, followed by seed presence, which was at parity with firmness. An attractive tomato was red, firm, medium/small sized, crisp, meaty, juicy, flavourful and with few seeds. Deviations from these features resulted in a tomato that was rejected by consumers. Segmentations of consumers were determined by patterns in utility scores. External attributes were the main drivers of tomato liking, but different groups of tomato consumers exist with distinct preferences for juiciness, firmness, flavour, and health benefits. Face-to-face interviews of produce customers at Markets in UP yielded data on consumers tastes and preferences, quantities purchased, and prices paid for fresh tomatoes. Purchase behaviour indicated that during the local season, consumers preferred tomatoes grown in UP to tomatoes from other origins. Data were fitted to demand equations to determine the factors affecting demand for fresh tomatoes. Tomato origin significantly influenced consumer purchases. Consumer perceptions of product characteristics such as colour, freshness, nutrition, and appearance do not appear to significantly influence tomato purchase patterns. However, prices of the tomatoes or substitutes and income were important determinants for quantity purchased.

Keywords: To find out the market share, marketing cost, marketing margin and marketing efficiency in different marketing channels involving in marketing of tomato seed in study area.

INTRODUCTION

Agriculture holds a prime importance in the socio-economic fabric of India. The sector has remained backbone of the Indian economy and presently accounts for ~17.3% of the country's GDP. Nearly 54% of the rural households rely on agriculture as their principal means of livelihood. Being a source of livelihood and food security of the nation, higher growth in agriculture assumes great importance and is a matter of concern. Thus to accelerate high growth and ensure sustainability, combined effort in terms of technology, policies and institutional support has to be adopted. The Indian food industry is poised for huge growth, increasing its contribution to world food trade every year due to its immense potential for value addition, particularly within the food processing industry. Indian food and grocery market is the world's sixth largest, with retail contributing 70% of the sales. The Indian food processing industry accounts for 32% of the country's total food market, one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth. The total agricultural and allied products exports stood at US\$ 49.6 billion in FY22.

Tomato (*Lycopersicon esculentum*) typically constitute an essential part of the daily diet in India. It has great demand round the year. The commercial value of tomato in terms of direct consumption, processing as well as trade has risen substantially in recent years. Their economic importance has also increased by hybrid tomato replacing the open pollinated varieties. Hybrids produce higher yields, mature earlier with uniformity and which resulted in better fruit quality and resistance to disease. With all these advantages, majority of the farmers prefer to cultivate hybrid in spite of higher seed cost. Therefore, the market share for tomato seed has also increased over the years. The top ten countries producing tomato are China, India, USA, Turkey, Italy, Egypt, Spain, Iran, Brazil and Mexico of the world area and production. China ranks first in an area with 10 lakh hectares and the annual production of 5 crores' metric tonnes followed by India which ranks second in an area with 8.8 lakh hectares and the annual production of 1.8 crore metric tonnes. With intensive cultivation of hybrid the average year yield under open field condition in India has steadily increased and the yield difference with developed countries' was getting narrower. The consumers were benefited by better quality of hybrids, in terms of eye appeal, keeping quality and all-important nutritional value. Realizing the benefits that accumulate in terms of productivity and the possibility of enhanced income.

SEED: A seed is an embryonic plant enclosed in a protective outer covering. The formation of the seed is part of the process of reproduction in seed plants, the spermatophytes, including the gymnosperm and angiosperm plants.

Indian Seed Industry Current Status and Future Growth

Indian seed industry is one of the most mature and vibrant one in the world currently occupying the 6th position with nearly 9000 Crore turnover. During the past 5 years the Indian Seed Industry has been growing at a CAGR of 12% compared to global growth of 6-7%. In value terms the major growth has come from the

increased adoption of Bt cotton hybrids, single cross corn hybrids and hybrid vegetables. The volume growth has mainly come through increased Seed Replacement Rate in crops like Paddy and Wheat. Indian seed industry is undergoing wide ranging transformation including increased role of private seed companies, entry of MNCs, joint ventures of Indian companies with multinational seed companies and consolidations. Indian Seed Industry is poised to grow at a CAGR of 17% for next 4 years. By 2014, India was rank at No 3 or 4 in the Global Seed Business.

Consumer Buying Behaviour

Consumer Buying Behaviour refers to the buying behaviour of the ultimate consumer. Many factors, specificities and characteristics influence the individual in what he is and the consumer in his decision-making process, shopping habits, purchasing behavior, the brands he buys or the retailers he goes. A purchase decision is the result of each and every one of these factors. An individual and a consumer is led by his culture, his subculture, his social class, his membership groups, his family, his personality, his psychological factors, etc. and is influenced by cultural trends as well as his social and societal environment.

MATERIALS AND METHODS

The study entitled **“To find out the market share, marketing cost, marketing margin and marketing efficiency in different marketing channels involving in marketing of tomato seed in study area”**.

Was undertaken to assess the consumer preference of Toxi pro Insecticide. The study was conducted in Sambhal District of Uttar Pradesh.

The present study was mainly based on primary data. The required primary data were collected from selected farmers and Agri-input shops for the Agricultural year 2021-2022, the required secondary data were collected from various published records of government offices, books, block development offices, reports, related websites, and other related sources. The consumer behaviour and product preference were identified through personnel interview of Neosafe chemical users, for achieving the stated objective, the analytical tools such as tables, charts, simple ranking, percentage method were used. Multistage stratified random sampling procedure was adopted for the present investigation to select the ultimate unit of the sample. From the selected village list of the Neosafe chemical users obtained from the village development office each selected village. For the selection of cultivators from families were listed about 5% farmers were randomly selected.

The study was entirely based on primary data collected from the selected farmers and different market functionaries. Well-constructed and pre-tested questionnaire and scheduled (appendix) were used to collect the data on marketing. For collecting the data, personal interviews were arranged and reconnaissance study were also conducted to collect the data regarding quality, price, packaging and Brand awareness etc. from growers, different market functionaries and Asmoli growers. Further the required secondary data to supplement the primary data and to support the study were collected from different sources like block office and district office, relevant magazines and internet etc.

Study Design and place of the study

Multi stage stratified random sampling procedure was adopted for the present investigation to select the

ultimate unit of the sample. Sambhal district was selected purposively for the present study on the basic large area of sugarcane cultivation

RESULT AND DISCUSSION

The study entitled “To find out the market share, marketing cost, marketing margin and marketing efficiency in different marketing channels involving in marketing of tomato seed in study area”.

TABLE 4.4: Marketing cost, marketing efficiency and marketing margin

Channel – I Producer – Wholesaler – Farmer

S.N.	PARTICULARS	VALUE IN RUPEES
A	Producer sale price to Wholesaler	140
1.	Cost incurred by the Producer	
i	Packing material cost	1.50 (0.88)
ii	Transportation cost	2.50 (1.47)
iii	Market cost	1 (0.58)
iv	Labor cost	0.60 (0.35)
v	Loading and unloading charges	1.20 (0.70)
vi	Weighing charges	1 (0.58)
vii	Miscellaneous charges	1.20 (0.70)
viii	Packing cost	3 (1.76)
2.	Total cost (i-viii)	12 (7.05)
3.	Net price Received by Producer	128 (75.29)
B	Wholesaler purchase price	140
i	Cost incurred by Wholesaler	
ii	Loading and unloading charges	2 (1.17)
iii	Carriage up to shop	1.5 (0.88)

iv	Weighing charges	1 (0.58)
v	Market charges	2.5 (1.47)
vi	Transportation	1.5 (0.88)
vii	Losses and Miscellaneous charges	1.5 (0.88)
4.	Total cost	10 (5.88)
5.	Sale price of Wholesaler	170
6.	Marketing margin	17.64
7.	Farmer paid price	170 (100)
8.	Marketing efficiency	5.66

Note; Figures in the parenthesis indicates percentage to the of total consumer price.

From the table 4.4, it can be observed that the total charges borne by Producer was Rs.12/10g whereas wholesaler was paid Rs.10 as marketing cost. After paying those Expenses the absolute wholesaler margin was Rs.8/10g respectively. Marketing margin 17.64 And marketing efficiency is 5.66. This result is supported to the review **Suryavanshi et al. (2006)**.

**Table 4.5 Marketing Cost, Marketing Efficiency and Marketing Margin
Channel – II = Producer – Wholesaler – Retailer – Farmer**

S.N.	PARTICULARS	VALUE IN RUPEES
A	Producer sale price to wholesaler	140
1.	Cost incurred by the Producer	
i	Packing material cost	1.50 (0.67)
ii	Transportation cost	2.50 (1.12)
iii	Market cost	1 (0.45)
iv	Labour cost	0.60 (0.27)
v	Loading and unloading charges	1.20 (0.54)

vi	Weighing charges	1 (0.45)
vii	Miscellaneous charges	1.20 (0.54)
viii	Packing cost	3 (1.35)
2.	Total cost (i-viii)	12 (5.40)
3.	Net price Received by manufacturer	128 (57.65)
4.	wholesaler purchase price	140
5.	Cost incurred by wholesaler	
i	Loading unloading charges	3 (1.35)
ii	Grading	2 (0.90)
iii	Packing	3 (1.35)
iv	Market fee	1 (0.45)
v	Commission of wholesaler	14 (6.30)
vi	Loses and miscellaneous charges	1 (0.45)
vii	wholesaler margin	14 (6.30)
6.	Total cost (i-vii)	24 (10.81)
7.	Sale price of wholesaler to retailer	164 (73.87)
8.	Cost incurred by the retailers	
i	Weighing charges	1 (0.45)
ii	Loading and unloading charges	2 (0.90)
iii	Town charges	1.20 (0.54)
iv	Carriage up to shop	2.70 (1.21)
v	Miscellaneous charges	1.10 (0.49)
vi	Retailers margin	50 (22.52)
9.	Total cost(i-vi)	58 (26.12)

10.	Sale price of retailers to Farmers	222
11.	Marketing Margin	26.12
12.	Farmer paid price	222 (100)
13.	Marketing efficiency	2.70

Note; Figures in the parenthesis indicates percentage to the of total consumer price.

From the table 4.5, it can be observed that the total charges borne by the retailer were Rs 10 rupees whereas that of retailer was also paid 8 rupees per 10g as marketing cost. After paying these charges the absolute margin earned by wholesaler and retailer 14 (6.30) and 50 (22.52) rupees per 10g respectively. However, market efficiency is 2.70. This result is supported to the review **Sharma et al. (2006)**.

Table 4.6 Marketing cost, Marketing efficiency and Price spread in all channels

S.N.	PARTICULARS.	CHANNEL I	CHANNEL II
1.	Marketing cost	22	30
2.	Market efficiency	5.66	2.70
3.	Marketing Margin	17.64	26.12

4.5 Market share of Various Seed Brands.

Table 4.7 Market share of Various Tomato Seed Brands

Company name	Size of Respondents					Total no. of sales	Percentage
	Marginal	Small	Semi Medium	Medium	Large		
Hybrid seeds	310 (4.60)	240 (3.56)	210 (3.12)	190 (2.82)	229 (3.40)	1179	18
Syngenta seeds	250 (3.71)	210 (3.12)	190 (2.82)	160 (2.37)	152 (2.25)	962	14
Shanker seeds	210 (3.12)	140 (2.08)	130 (1.93)	120 (1.78)	151 (2.24)	751	11
Kalash seeds	240 (3.56)	205 (3.04)	185 (2.74)	170 (2.52)	141 (2.09)	941	14
Kaveri seeds	190 (2.82)	170 (2.52)	150 (2.22)	90 (1.33)	73 (1.08)	673	10
Krishidhan seeds	140 (2.08)	120 (1.78)	110 (1.63)	105 (1.56)	86 (1.27)	561	8
Nuziveedu seeds	240 (3.56)	190 (2.82)	170 (2.52)	120 (1.78)	94 (1.39)	814	12
Rasi seeds	220 (3.26)	190 (2.82)	160 (2.37)	140 (2.08)	137 (2.03)	847	13
Total	1800	1465	1305	1095	1063	6728	100

	(26.75)	(21.77)	(19.39)	(16.27)	(15.79)		
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(Source; Researcher's computation from field data)

Table 4.6 reveals about the market share of various seed companies in the study area in which 18% of the respondents responded for hybrid seeds followed by 14% for syngenta seeds, 11% for Shanker seeds, 14% for Kalash seeds, 10% for Kaveri seeds, 8% for Krishidhan seeds, 12% for Nuziveedu seeds and 13% for seeds Rasi seeds. This result is supported by the review of **Dinesh Kumar, N., & Prathap Kumar, M. (2019).**

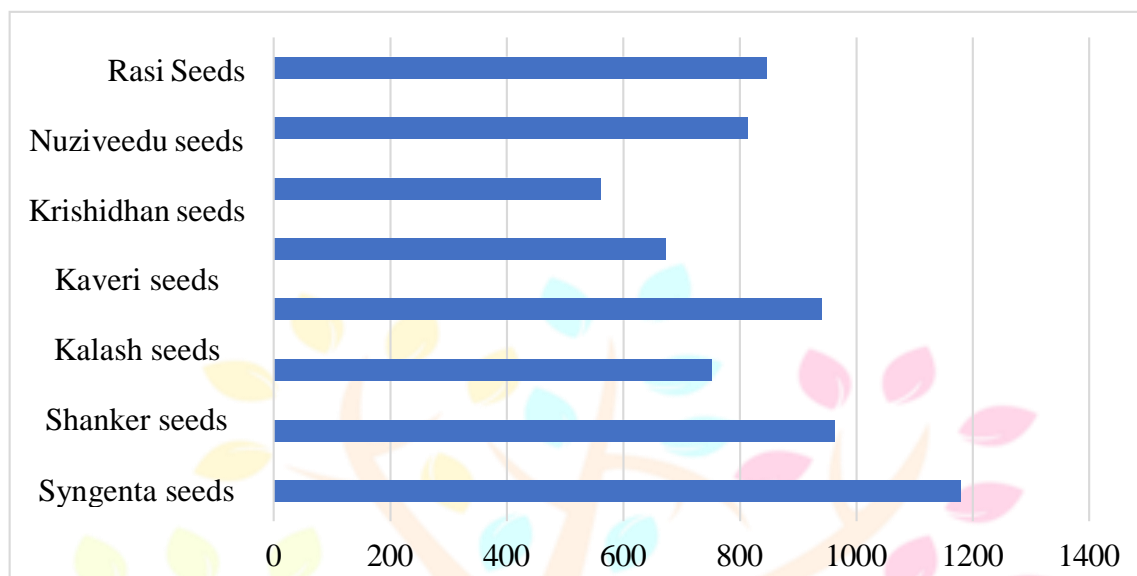


Fig. 4.4 Market share of Various Tomato Seed Brand

Conclusion

Tomato is one of the major cash crops, which is of considerable social and economic significant to the world at large and India in particular, especially in term of employment creation to people at the rural areas. Based on the findings of the study it was concluded that in order to improve production levels in Tomato production it is needed to increase seeds quality, fertilizer and agro chemicals used, expanding land size, access to credit facilities, modernized agricultural mechanism etc. were all required. The study revealed that socio- economic characteristics of Tomato farmers need to be considered as very important variables impacting and enhancing effectiveness and inefficiency in production of Tomato in the study area. Based on the analysis of the present study it is indicated that there were ample avenue to improve the present level of effectiveness and efficiency of Tomato production in the study area. This can be realised through improved farmer-specific input factors which comprised educational level, access to credit, extension contract, access to government and non-governmental supports especially in terms of fertilizer and pests control. It was revealed that there were high commission charge on the producers and sellers of Tomato seeds. Based on the findings of the study it was indicated that to tackle the problems of Tomato seed marketing all mentioned variables such as better physical activities in the market, better access to the Tomato seed market, access to adequate information about Tomato price, also based on the findings of the study in order to improve or increase in the supply of quality Tomato seeds at subsidized price is needed, more supply of fertilizer and pesticides at subsidized prices were required,

credit distribution to Tomato farmers in the study area was needed, provisions of compensated prices to Tomato seed is required, extensive activities were required and 100 respondents representing 83.33% said that all options are required. Hence, to tackle the problems of Tomato seed production alternatives mentioned above were extremely required.

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