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Study on marketing and consumer's preference towards value added products (Jam, Jelly & Candy) of Guava in Katni district of Madhya Pradesh

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Abstract

A research trail was conducted in 2022, at Guava value added product research form, SHUATS, Prayagraj. To Study the "Effect Study on Marketing And Consumer's Preference Towards Value Added Products (Jam, Jelly & Candy) Of Guava In Katni District Of Madhya Pradesh". Value addition favours the availability of guava beyond the seasons, geographic areas innovative and convenient products. Guava is very popular as a fresh and provides consumers with fruit because of its excellent taste, high vitamin content and 100% edibility. This fruit is equally important technologies have been developed in guava for value for the processing industry. Several advanced additions and there is immense scope for diversified value added products of guava. Due to presence of guava. Processed guava pulp is a rich amount of pectin, a high quality natural jelly, jam and candy is obtained from excellent raw material for preparation of various other guava products.

Keywords: Consumer preference, marketing, value added product, Jam, Jelly & Candy, Katni, M.P.

Introduction

Guava (*Psidium guajava*) is a member of the large Myrtaceae or Myrtle family, believed to be originated in Central America and the southern part of Mexico. It is claimed to be the fourth important fruit in term area and production after mango, banana and citrus. India is the major world producer of guava. It has been in cultivation in India since early 17th century and gradually become crop of commercial importance. Guava is quite hardy, prolific bearer and highly remunerative even without much care.

It is widely grown all over the tropics and sub-tropics including India viz., Uttar Pradesh Bihar, Madhya Pradesh, Maharashtra, Andhra Tamil Nadu, West Bengal, Assam, Orissa, Karnataka, Kerala Rajasthan and many more states. In the production of sugar, tea, milk, fruits and vegetables and rice, India ranks either first or second with a share of world production ranging from 10 percent to 30 percent. In India. Presently about 3210517 MT fruits covering the area of 315089 hectare and 13842422 MT potatoes and vegetables covering the area about 688918-hectare arc produced in UP plains during 2008-09. Guava is often marketed as "super-fruits" which has a considerable nutritional importance in terms of vitamins A and C with seeds that are rich in omega-3, omega-6 polyunsaturated fatty acids and especially dietary fiber, riboflavin, as well as in proteins, and mineral salts. The high content of vitamin C (ascorbic acid) in guava makes it a powerhouse in combating free radicals and oxidation that are key enemies that cause many degenerative diseases. Total area under guava was estimated to be 150.9 thousand hectares (4.20 percent of total area under fruits) with the production of 1710.5 thousand tons (3.30 percent of the total production of fruits) and the productivity reported to be 11.3 MT per hectare during 2008-09. The highest productivity since 1999-2000.

Material and Method

Selection of District: There are 52 districts and 10 divisions in M.P. Out of which Katni district was selected on the basis Of maximum area under guava production. The total area of Katni district is 4.949 km² as per land record of 2015-2016.

Selection of Block: In Katni division there are 6 blocks. Out of these Murwara was selected purposively for the study. The climate and weather condition of the block is suitable.

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Selection of Villages: A Selection of the village is the third stage of the sampling. There are 116 Villages in Murwara Block from that 5% Villages was selected randomly.

Selection of Respondents: From the selected village list of all the guava producers' farmers obtained from the village development office, cultivators from families were listed and 10% farmers will randomly select from each village and then farmers were classified in to three groups.

Tools and Techniques of Analysis

Chi-square formula-is a statistical formula to compare two or more statistical data sets. It is used for data that consist of variables distributed across various categories and is denoted by χ^2 .

The chi-square formula is: $\chi^2 = \sum(O_i - E_i)^2/E_i$,

Where,

O_i = Observed Value (actual value) E_i = Expected Value

Marketing efficiency: It is the degree of market performance

Marketing efficiency-Output produced/Input used

Market margin: It is calculated by subtracting the net farm value equivalent of food sold at retail of the farm product from the retail price.

Market margin-Product Price-Raw material

Marketing cost: The total cost incurred on marketing by various intermediaries involved in the sale and purchase of the commodity till it reaches the ultimate consumer.

$$\text{Marketing cost} = C_f + C_{m1} + C_{m2} + C_{m3} + \dots + C_{mn}$$

Where,

C = Total cost of marketing

C_f = Cost produced by the producer farmer till the sale of the produce

C_{mn} = Cost incurred by the middlemen in the process of buying and selling

Price spread: It is the difference between the price paid by consumers and the net price received by the producer for an equivalent quantity of farm produce.

$$\text{Price spread} = \frac{\text{Consumer price} - \text{Net price of producer}}{\text{Consumer price}} \times 100$$

Garrett ranking - To know the acceptance of respondents and constraints in marketing and processing of products, it has been used. It gives the change of orders of constraints and advantages into numerical scores.

$$\text{Percent position} = 100(R_{ij} - 0.5)/N_j$$

Where,

R_{ij} = Rank given for I^{th} factor by J^{th} individual N_j = Numbers of factors ranked by J^{th} individual

Result and Discussion

The result is a presentation of the findings of the given study.

I. Socio-Economic Status of the Respondents

Table 1: Different about sample Size of farm Groups

S. No.	Particulars	Different size farm groups				
		Marginal	Small	Medium	Large	Sample average
1.	Average size of farm families	4.09(100.00)	4.85(100.00)	5.34(100.00)	6.77(100.00)	5.22(100.00)
2.	Male	2.25(54.87)	2.88(59.38)	3.10(58.05)	3.65(53.91)	2.83(54.81)
	Female	1.84(44.87)	1.97(40.59)	2.24(41.92)	3.12(46.08)	2.39(45.77)
3.	Age Composition					
	Below 14 years	0.83(19.51)	0.95(19.58)	1.20(22.47)	1.68(24.81)	1.2(23.04)
	15-59 years	2.95(71.95)	2.97(61.23)	3.55(66.47)	3.58(52.80)	3.30(63.21)
	60 years and Above	0.34(8.29)	0.92(18.96)	0.48(8.98)	1.55(22.82)	0.79(15.13)

The composition of an average size of the farm families according to sex and age composition were indicated in Table1. Average size of the different size farm households in marginal, small, medium and large size farm groups were 4.09, 4.85, 5.34 and 6.77 respectively. The sample average percentage of male and female were 2.83 and 2.39

respectively. It could also be seen from the table that age composition of different size farm groups belongs to the age composition of below 14 years (23.04 percent), between 15 to 59 years (63.21 percent) and above 60 years (15.13 percent) respectively.

Table 2: Description of Occupational Distribution in Different Size Farm Groups. (Values in numbers)

S. No.	Particulars	Different size farm groups				
		Marginal	Small	Medium	Large	Total No. Sample
1.	Size of farm households (in numbers)	35.00(100.00)	24.00(100.00)	19.00(100.00)	12.00(100.00)	90.00(100.00)
2.	One occupation (Primary occupation)	16.00(45.71)	10.00(41.67)	7.00(36.84)	6.00(50.00)	39.00(43.33)
3.	Two occupations (Secondary occupation)	12.00(35.29)	8.00(33.33)	6.00(31.57)	4.00(33.33)	30.00(33.33)
4.	Three occupations (Tertiary occupation)	7.00(20.59)	6.00(25.00)	6.00(31.58)	2.00(16.67)	21.00(23.33)

Table 2. reveals that size of the farm households in numbers in marginal, small, medium and large size of farms were 35.00, 24.00, 19.00 and 12.00 respectively. The sample average of Primary occupation was highest with 43.33 percent. The sample average of Secondary occupation was 33.33 percent and Tertiary occupation was lowest with 20.59 percent.

II. Marketing cost, Marketing efficiency, Market margin Price spread for Different marketing channel of value-added product of guava

Table 3: Price Spread for Jam Marketing in Channel I

S. No.	Particular	Value in Rupees kg
1.	Producer sale price to wholesaler	630
2.	Cost incurred by the producer	
i	Packing cost	15
ii	Packing material cost	10
iii	Transportation cost	10
iv	Market cost	15
v	Labour cost	10
vi	Loading and Unloading cost	15
vii	Miscellaneous charges	5
	Total cost (i-vii)	80
3.	Margin of Producer	17
	Margin of Wholesaler	15
4.	Net price received by producer	613
5.	Wholesaler sale price to Consumer	645
6	Marketing cost	80
7.	Marketing Efficiency	5.7%
8	Market margin	32
9.	Price Spread	4.96

Table 3. Above table reveals the marketing cost, marketing margin, marketing efficiency and price spread of the product in channel-I, Producer sale price to Wholesaler was 630 rupees while consumer paid price was 645 rupees.

Table 4: Price Spread for Jam Marketing in Channel II

S. No.	Particulars	Jam
		Value in Rs. Kg
1.	Producer sale price to Wholesaler	630
	Marketing cost incurred by producer	10
	Margin of Producer	17
2.	Cost incurred by the Wholesaler	
i	Loading and unloading charges	15
ii	Carriage up to shop	10
iii	Transportation charges	10
iv	Miscellaneous charges	5
#	Total cost (i-iv)	40
	Wholesaler price to Retailer	672
4	Margin of Wholesaler	15
5	Retailer price to Consumer	680
6	Margin of Retailer	10
7	Net price received by producer	613
8	Total Marketing cost	50
9	Total Market margin	42
10	Marketing efficiency	7.3
11	Price Spread	9.85

Table 4. Above table reveals the marketing cost, marketing margin, marketing efficiency and price spread of the product in channel-II, wholesaler sale price to Retailer was 630 rupees while consumer paid price was 680 rupees.

Channel 1. Producer- Wholesaler- Consumer

Table 5: Price Spread for Jelly Marketing in Channel I

S. No.	Particular	Value in Rupees/kg
1.	Producer sale price to wholesaler	650
2.	Cost incurred by the producer	
i	Packing cost	15
ii	Packing material cost	10
iii	Transportation cost	10
iv	Market cost	15
v	Labour cost	10
vi	Loading and Unloading cost	15
vii	Miscellaneous charges	5
	Total cost (i-vii)	80
3.	Margin of Producer	15
	Margin of Wholesaler	13
4.	Net price received by producer	635
5.	Wholesaler sale price to Consumer	663
6	Marketing cost	80
7.	Marketing Efficiency	5.75%
8	Market margin	28
9.	Price Spread	4.22

Table 5. Above table reveals the marketing cost, marketing margin, marketing efficiency and price spread of the product in channel-I, Producer sale price to Wholesaler was 650 rupees while consumer paid price was 663 rupees.

Channel 2. Producer-Wholesaler-Retailer-Consumer

Table 6: Price Spread for Jelly Marketing in Channel II

S. No.	Particulars	Jelly
		Value in Rs. / Kg
1.	Producer sale price to Wholesaler	650
	Marketing cost incurred by producer	10
	Margin of Producer	17
2.	Cost incurred by the Wholesaler	
i	Loading and unloading charges	15
ii	Carriage up to shop	10
iii	Transportation charges	10
iv	Miscellaneous charges	5
#	Total cost (i-iv)	40
	Wholesaler price to Retailer	680
4	Margin of Wholesaler	15
5	Retailer price to Consumer	700
6	Margin of Retailer	10
7	Net price received by producer	633
8	Total Marketing cost	50
9	Total Market margin	42
10	Marketing efficiency	7.60
11	Price Spread	9.57

Table 6. Above table reveals the marketing cost, marketing margin, marketing efficiency and price spread of the product in channel-II, wholesaler sale price to Retailer was 680 rupees while consumer paid price was 700 rupees.

Channel 1. Producer-Wholesaler-Consumer

Table 7: Price Spread for Candy Marketing Channel I

S. No.	Particular	Value in Rupees/kg
1.	Producer sale price to wholesaler	360
2.	Cost incurred by the producer	
i	Packing cost	15
ii	Packing material cost	10
iii	Transportation cost	10
iv	Market cost	15
v	Labour cost	10
vi	Loading and Unloading cost	15
vii	Miscellaneous charges	5
	Total cost (i-vii)	80
3.	Margin of Producer	10
	Margin of Wholesaler	9
4.	Net price received by producer	350
5.	Wholesaler sale price to Consumer	369
6.	Marketing cost	80
7.	Marketing Efficiency	3.72%
8.	Market margin	19
9.	Price Spread	5.14

Table 7. Above table reveals the marketing cost, marketing margin, marketing efficiency and price spread of the product in channel-I, Producer sale price to Wholesaler was 360 rupees while consumer paid price was 369 rupees.

Channel 2. Producer-Wholesaler- Retailer-Consumer

Table 8: Price Spread For Candy Marketing in Channel I

S. No.	Particulars	Candy
		Value in Rs. / kg
1.	Producer sale price to Wholesaler	360
	Marketing cost incurred by producer	10
	Margin of Producer	10
2.	Cost incurred by the Wholesaler	
i	Loading and unloading charges	15
ii	Carriage up to shop	10
iii	Transportation charges	10
iv	Miscellaneous charges	5
#	Total cost (i-iv)	40
	Wholesaler price to Retailer	405
4	Margin of Wholesaler	9
5	Retailer price to Consumer	415
6	Margin of Retailer	10
7	Net price received by producer	350
8	Total Marketing cost	50
9	Total Market margin	29
10	Marketing efficiency	5.25%
11	Price Spread	15.6

Table 8. Above table reveals the marketing cost, marketing margin, marketing efficiency and price spread of the product in channel-II, wholesaler sale price to Retailer was 405 rupees while consumer paid price was 415 rupees.

III. To identify the constraints in marketing of value-added products of guava. Constraints in marketing.

Table 9: Constraint in marketing

S. No.	Particulars	Frequency	Ranking
1.	Market is far from production point	30	I
2	High cost of transportation	35	II
3.	Malpractices in weighing	27	III
4.	Price fluctuation	18	IV
5.	Illegal deductions	10	V

From table 9, it was revealed that price fluctuation were the first marketing constraints, followed by illegal deduction, market is far from production point, high cost of transportation and malpractices in weighing were the 2nd, 3rd, 4th and 5th marketing constraints respectively.

Table 10: Constraint in marketing of Jam, Jelly and Candy, (N=90)

S. No.	Constraint	Frequency	Ranking
1	Self-life	40	I
2	Flavors	25	II
3	Packaging	10	III
4	Packing material	10	IV
5	Transportation cost	5	V

Table 10 It was revealed that Self life were the first marketing constraints, followed by flavour, packaging, packing material and Transportation cost were the 2nd, 3rd, 4th and 5th marketing constraints respectively.

Table 11: Suggestive measures to overcome constraints

S. No.	Particulars	Frequency	Percentage
1.	Providing subsidies	35	38.8
2	Regulating Labour charges	20	22.2
3.	Providing quality inputs	10	11.1
4.	Providing credit in timely manner	10	11.1
5.	Maintaining standards	15	16.6

Table 11, it was reported that most of the respondents suggested providing credit in timely manner (11.1%) was the most suggested measure, followed by maintaining standards (16.6%), providing subsidies (38.8%), providing quality inputs (11.1%) and regulating labour charges (22.2%) were the suggestions given to overcome the constraints respectively.

Summary

Value addition favours the availability of guava beyond the seasons, geographic areas and provides consumers with innovative and convenient products. Guava is very popular as a fresh fruit because of its excellent taste, high vitamin content and 100% edibility. This fruit is equally important for the processing industry. Several advanced technologies have been developed in guava for value addition and there is immense scope for diversified value-added products of guava. Due to presence of rich amount of pectin, a high-quality natural jelly is obtained from guava. Processed guava pulp is an excellent raw material for preparation of various other guava products. The study analyzed the marketing margin, efficiency and spice spread of guava to identify major constraints and opportunities in order to develop efficient marketing system.

Conclusion

The results show that the Socio-economic status of the respondents found to be moderate with good economic background and great access to all the assets. The study shows that there is immense scope to increase marketing of Value-added product of guava and manage it effectively so that the number of intermediaries is to be restricted and marketing costs and market margins to be reduced.

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