

Purchasing behaviour of the Consumers towards the Nendran Variety of Banana in Thrissur District

Dr. Haritha Paul¹, Dr. Ushadevi K.N²

¹ Dr. Haritha Paul, Assistant professor (on Contract), Department of Rural Marketing Management, College of Co-operation, Banking and Management, Kerala Agricultural University, Vellanikkara, Thrissur 680 656, India

² Dr. Ushadevi K. N, Professor & Head, Department of Rural Marketing Management, College of Co-operation, Banking and Management, Kerala Agricultural University, Vellanikkara, Thrissur 680 656, India

ABSTRACT

Bananas are grown in more than 150 countries, and 105 million tones of fruits are produced each year, which are grown for local consumption. Nedunendran and Changanalikkodan banana are Kerala's most famous variety. In view of the capable potential market of nendran variety the study aimed to analyse the purchasing behaviour of consumers towards the Nendran variety of banana. The study confined to Thrissur district of Kerala state and primary source of data were the basis of the analysis. Two major nendran varieties like changalikkodan and nedunendran were selected. For the purpose of the study 80 consumers (40 changalikkodan consumers and 40 nedunendran consumers) were surveyed. Primary survey was conducted through a structured interview schedule. The involvements of intermediaries still exist in the nendran varieties of Kerala. Consumers aware about the value added products of Nendran banana. Taste, price, freshness and family preferences are the major determinants of consumers for purchasing the banana.

Key Words: Value chain, nendran varieties, Changanalikkodan, Nedunendran, purchasing behaviour.

INTRODUCTION

Bananas are grown in more than 150 countries, and 105 million tones of fruits are produced each year, which are grown for local consumption. Today, they are the most popular fruit in the world: in fact, over 100 billion bananas are eaten around the world every year, and around 51 percent of these are eaten at the time of breakfast. Banana (*Musa* sp.) is the second most important fruit crop in India next to mango. Main banana growing states are Kerala, Tamil Nadu, Maharashtra, Gujarat, Andhra Pradesh and Karnataka. Nendran is one of the most important commercial varieties of banana grown in Kerala. The variety is grown for both fruit and vegetable purpose. The long and thick fruits with good keeping quality make nendran widely acceptable among consumers. Nendran varieties like Nedunendran, Changanalikkodan, Zanzibar and table varieties like monsmarie, robusta, giant governor, dwarf Cavendish, chenkadali, poovan, palyamkodan, njalipovan, amritsagar,

The nendran varieties are grown mostly in Kerala and Tamil Nadu in South India. Nedunendran and changalikkodan varieties are the most popular varieties grown in Kerala. This variety is mainly used for cooking and dessert. The nendran banana originated and cultivated in Chengazhikodu village of Thrissur district in Kerala state of India is known as Changanalikkodan nendran and approved as GI product in the year 2015 due to its unique features. It differs from other varieties of nendran as the hands of the bunch bear 20 to 25 kg golden yellow coloured fruits if properly taken care of. Traditional farmers cover the banana bunches with old banana leaves so that it get the colour and special shape. In addition to this it is used by some devotees offering to Guruvayoor temple as Kaazhchakula. Kerala has a good potential for banana cultivation, due to mishandling of produce about 25-40 percent is being wasted and only 2-3 percent is processed as value added products, the remaining being used in the raw form (Report of department of agriculture and co-operation 2021-2022). This leads to price imbalance and wide price variations, both spatial and temporal, which disheartens farmers. In order to sustain production and growth potential, it is essential to produce value added products from banana, so that farmers can get an assured price for their produce all the time. Due to inefficiencies at various points in the value chain, the producer gets less than optimal and the consumer pays more than optimal price.

Research objectives

- Purchasing behaviour of the consumers towards Nendran variety of banana

METHODOLOGY

The study confined to Thrissur district of Kerala state and primary source of data were the basis of the analysis. Two major nendran varieties like changalikodan and nedunendran were selected. For the purpose of the study 80 consumers (40 changalikodan consumers and 40 nedunendran consumers) were surveyed. Primary data were collected from the sample respondents by using pre tested structured interview schedule. Index methodology and Anova test were used for analysing the data.

ANALYSIS AND DISCUSSION

Nowadays consumers play an important role in the creation of the value chain. Consumer is the key figure in the value chain and their needs and opinions will affect the supplier's decisions. Retailers are changing the way they operate based on the customers they serve. Table 1 shows the socio economic characteristics of consumers.

Table 1 Socio economic characteristics of consumer

Variables	Category	Chengalikodan (N=40)		Nedunendran (N=40)	
		Frequency	Percentage	Frequency	Percentage
Age	30-40	9	22	9	22
	41-50	15	37	14	35
	51-60	16	40	16	40
	61-70	0	0	1	2
	Total	40	100	40	100
Sex	Male	30	75	40	100
	Female	10	25	0	0
	Total	80	100	40	100
Education	SSLC	5	12	5	12
	Plus Two	9	22	8	20
	Degree	22	55	21	53
	PG	4	10	6	15
	Total	40	100	40	100
Occupation	Govt. Employee	15	37	17	43
	Business	17	43	14	35
	Others	8	20	9	22
	Total	40	100	40	100
Annual income	Less than 50,000	0	0	4	10
	Rs. 50,000 – 1,50,000	16	40	12	30
	1,50,000 – 2,50,000	20	50	15	37
	Above 3,00,000	4	10	9	23
	Total	40	100	40	100

Source: compiled from primary data

Table 1 revealed that most of the respondents (both) (40 percent) were in 51 to 60 age category. Among Chengalikodan consumers 75 percent were male and 25 percent were females whereas nedunendran consumers (100 percent) were from male category. Majority of the respondents (53 percent) education qualification was degree. They were highly educated people. With regard to the occupation of Chengalikodan and nedunendran respondents (43 percent and 35 percent) were doing business. 36 percent of respondents' occupation was govt. employees. The rest of respondents (21 percent) were under other category. Income was another important economic variable which determined the economical status of the respondents as well as the standard of living of the consumers. 50 percent of the Chengalikodan respondents were earning an annual income was in between ₹ 1,50,000 to ₹ 2, 50,000.

Table 2 Banana purchasing details of consumers

Variables	Category	Chengalikodan (N=40)		Nedunendran (N=40)	
		Frequency	Percentage	Frequency	Percentage
Form of purchasing nendran	(vegetable, fruit) All	40	100	40	100
Total		40	100	40	100
Season for purchasing	(on season and off season) Both	40	100	40	100
Total		40	100	40	100
Place of purchasing	Direct from farmer	5	12	5	12
	Wholesalers	4	10	0	0
	Retailers	31	78	35	88
Total		40	100	40	100
Periodicity of purchasing nendran	Twice in a week	15	37	20	50
	Weekly	25	63	20	50
Total		40	100	40	100

Source: Compiled from primary data

The table 2 inferred that 100 percent respondents purchased nendran in all forms, at the same time they purchased nendran in on season and off seasons. Everyone does the payment through cash. Majority consumers of both Chengalikodan and nedunendran (78 percent and 88 percent) were purchasing nendran from retailers. 10 percent and 12 percent purchased nendran from wholesalers and direct from farmers. Majority of the Chengalikodan and nedunendran respondents (63 percent and 50 percent) bought nendran in weekly and the remaining respondents purchased twice in a week.

Awareness of consumers towards value added products from banana

Awareness about a product among the consumers is the prerequisite for the successful marketing. The level of awareness may vary with the product type and consumer characteristics, educational level, occupation, personal characteristics of the consumer etc. conventional and non - conventional source of information, distribution of outlets of the products, promotional activities by the marketers etc. which can influence the awareness creation among the consumers. The below table shows consumer is how much aware about the value added products of banana.

Indices range defining awareness towards VAP of banana

	Total
Fully aware	Greater than 98
Partially aware	78 – 98
Least aware	Less than 78
Standard Deviation	10
Mean	88

Table 3 Awareness of consumers towards value added products from banana

Statements	Total (80)		
	Score	Indices	Indices range
Banana chips	240	100	FA
Pazampori	240	100	FA
Nendran powder	240	100	FA
Dried banana	185	77	LA
Banana pulp	196	82	PA
Banana wine	198	82	PA
Composite score / Indices	1273	88	PA

Source: Compiled from primary data

Analysis of Table 3 revealed that eighty respondents were fully aware about banana chips, pazampori and nendran powder. They always purchased chips and pazampori as snacks to home. They were partially aware about banana pulp, and banana wine. The respondents heard about these products, but were not fully aware of these products. They were not at all aware about dried banana.

Determinants of purchasing Chengalikodan / nedunendran

Determinants refers that a factor which decisively affects the nature or outcome of something. While purchasing product, consumers checked in to so many things especially in food items.

Table 3 Determinants of purchasing Chengalikodan / nedunendran:

Determinants	Chengalikodan		Nedunendran		Total	
	Score	Rank	Score	Rank	Score	Rank
Price	442	2	421	3	863	2
Freshness	396	3	426	2	822	3
Nutrient value	258	7	290	6	548	6
Hygiene	261	6	236	9	497	8
Taste	443	1	441	1	884	1
Organic nature	249	8	249	8	498	7
Easy to prepare	290	5	327	4	617	5
More calories	220	11	221	10	441	10
Family preference	357	4	301	5	658	4
Snack	227	10	253	7	480	9
Health concern	158	12	168	12	326	12
Local grown	108	13	98	13	206	13
Convenient to use	231	9	209	11	440	11

Source: Compiled from primary data

Here the table 3 revealed that what are the factors they are considering before purchasing Chengalikodan and nedunendran. Consumers ranked taste as the first determinant for purchasing nendran followed by price, freshness, family preference and easy to prepare. If consumers get fresh nendran they are ready to pay premium price also. Consumers were not considering the factors like convenient to use, health concern and locally grown nature of banana while buying.

Attitude of consumers towards Chengalikodan / nedunendran

Consumer’s attitude is an expression of inner feelings that reflect whether a person is favourably or unfavourably predisposed to some objects. Attitude research forms the basis for developing new products, repositioning the existing products, creating advertising campaigns and predicting product preference as well as purchase behaviour. Understanding how attitudes influence a consumer’s purchase behaviour to the success of any marketing programme.

As a part of analysing, the attitude of the consumers towards Chengalikodan/ nedunendran was studied. The eight statements thus selected were it was less perishable, nutritious compared to other fruits, chemical free, believes that origin from locally grown, convenient to use, less time to purchase, eating fruits in each day is enjoyable, taste is good, it is an appetizer. Selecting five point likert scale, namely highly favourable, moderately favourable, no specific opinion, moderately unfavourable, and highly unfavourable the data were analysed. The details are given below.

Indices range defining attitude of consumers towards Chengalikodan / Nedunendran

	Chengalikodan	Nedunendran	Total
Highly favourable (HF)	Greater than 96	Greater than 98	Greater than 98
Moderately favourable (MF)	90-96	91-98	91-98
No specific opinion (NSP)	78-90	77-91	77-91
Moderately unfavourable (MUF)	72-78	70-77	70-77
Highly unfavourable (HUF)	Less than 72	Less than 70	Less than 70
Standard Deviation	6	7	7
Mean	84	84	84

Table 4 Attitude of consumers towards Chengalikodan / nedunendran

Statements	Chengalikodan (40)		Nedunendran(40)		Total (80)	
	Score	Indices	Score	Indices	Score	Indices
It is less perishable.	163	81 (NSP)	161	80 (NSP)	324	81 (NSP)
It is nutritious compared to other fruits.	173	86 (NSP)	182	90 (NSP)	355	89 (NSP)
These varieties are chemical free.	143	71 (HUF)	137	68 (HUF)	280	69 (HUF)
Believes that origin from locally grown.	154	79 (NSP)	152	78 (NSP)	306	76 (MUF)
Convenient to use.	168	84 (NSP)	168	84 (NSP)	336	84 (NSP)
It needs less time to purchase.	176	88 (NSP)	174	87 (NSP)	350	87 (NSP)
These varieties taste is good.	181	91 (MF)	182	91 (MF)	363	91 (MF)
It is an appetizing.	172	86 (NSP)	177	88 (NSP)	349	87 (NSP)
Composite score / Indices	1330	84	1331	84	2661	84

*(HF- highly favourable, MF- moderately favourable, NSP – no specific opinion, MUF – moderately unfavourable, and HUF – highly unfavourable)

Table 4 discovered that consumers of both Chengalikodan and nedunendran banana were moderately favourable towards taste of banana. Consumers showed no specific opinion attitude towards less perishable, nutritious compared to other fruits, believes in origin from locally grown, convenient to use, needs less time to purchase, and it is an appetizing feature. Regarding the chemical content of banana, consumers were unfavourable. Consumers never believed that it cannot be grown without application of chemicals.

ANOVA

For testing whether there is any difference in between attitude of consumers towards Chengalikodan and nedunendran, ANOVA method is undertaken in the table 5.

Table 5 Attitude of consumers towards nendran varieties – ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.548	1	1.548	.040	.842
Within Groups	3034.477	78	38.904		
Total	3036.025	79			

Result of ANOVA showed that there was no difference in the attitude of consumers regarding Chengalikodan and nedunendran.

Satisfaction of consumers towards Chengalikodan / Nedunendran

Consumer satisfaction defined as it is a measure of how products and services supplied by a company to meet customers expectation. It depends on the balance between customer's expectations and experiences with the products and services. The only theme of the study was to know satisfaction towards Chengalikodan and nedunendran of consumers. For data analysis selected a 5 point scale of Highly satisfied, Moderately satisfied, resigned, Moderately dissatisfied, and Highly dissatisfied were used. The details are given below.

Indices range defining satisfaction of consumers towards Chengalikodan /Nedunendran

	Chengalikodan	Nedunendran	Total
Highly satisfied (HS)	Greater than 91	Greater than 96	Greater than 91
Moderately Satisfied (MS)	86 – 91	90 – 96	86 – 91
Resigned (R)	76 – 86	78 – 90	76 – 86

Moderately dissatisfied (MDS)	71- 76	72 – 78	71 – 76
Highly dissatisfied (HDS)	Less than 71	Less than 72	Less than 71
Standard Deviation	5	7	5
Mean	81	82	81

Table 6 Satisfaction of consumers towards Chengalikodan / Nedunendran

Statements	Chengalikodan (40)		Nedunendran(40)		Total (80)	
	Score	Indices	Score	Indices	Score	Indices
Price	159	79 (R)	159	79 (R)	318	79 (R)
Taste	170	85 (R)	174	87 (R)	344	85 (R)
Nutrient value	167	83 (R)	174	87 (R)	341	85 (R)
Freshness	169	84 (R)	170	85 (R)	339	85 (R)
Hygiene	166	83 (R)	165	82 (R)	331	83 (R)
Availability	167	83 (R)	164	82 (R)	331	83 (R)
Chemical, pesticide free	144	72 (MDS)	133	66 (MDS)	277	69 (MDS)
Shelf life	162	81 (R)	168	84 (R)	330	82 (R)
Composite score / Indices	1304	81	1307	82	2611	81

*(HS- Highly Satisfied, MS- Moderately Satisfied, R- Resigned, MDS- Moderately Dissatisfied, HDS- Highly Dissatisfied) Table 6 clearly depicted that Chengalikodan and nedunendran consumers had resigned stage in respect to price, taste, nutrient value, freshness, hygiene, availability and shelf life of the nendran banana as it changed every time. Consumers were moderately dissatisfied with chemical/ pesticide free of both Chengalikodan and nedunendran. Even though organic manures were used in nendran cultivation, high level usage of chemicals and pesticides made the nendran variety as inorganic in nature.

ANOVA

For testing whether there is any difference between satisfaction of consumers towards Chengalikodan and nedunendran, ANOVA method is undertaken in the table 7.

Table 7 Satisfaction of consumers towards nendran varieties – ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.703	1	.703	.024	.878
Within Groups	2314.844	78	29.677		
Total	2315.547	79			

Analysis of variance results indicates that Chengalikodan and nedunendran were similar with respect satisfaction of consumers towards purchase of nendran.

CONCLUSION

The present study focused on the purchasing behaviour of the consumers towards Nendran variety of banana. Consumers of both Chengalikodan and nedunendran expressed moderately favourable attitude towards taste of banana. ANOVA results showed that there was no difference in the attitude of consumers towards Chengalikodan and nedunenthran. Chengalikodan and nedunendran consumers had a resigned stage in respect to price, taste, nutrient value, freshness, hygiene, availability and shelf life of the nendran banana. Analysis of variance result indicated that the satisfaction level of consumers was similar for both Chengalikodan and nedunendran.

REFERENCES

[1]. Ann, P.D. and Ajjan, N. 2014. Banana value chain in South India. *Int. J. Com. Bus.Mgmt.* Vol.7 (2), pp. 367-371.
 [2]. DFID [Department for International Development] 2008. *Making value chain work better for the poor: A tool book for practitioners of value chain analysis* (version 3). Department for international Development, Phnom Penh, Cambodia.
 [3]. Garmin. H., Castellon, N., Grote, U., and Staver,C. 2013. Banana Value chains in Central America – options for small holders on domestic regional markets. Leibniz University Hannover, Germany.



- [4]. GOI [Government Of India] Government of India. 2018. *Report of Department of Agriculture and co-operation 2017-2018*. Department of Agriculture, Cooperation & Farmers Welfare Ministry of Agriculture & Farmers Welfare, India. pp.10-12.
- [5]. Saurav – Neji and Neeraj- Anand. 2015. Supply chain of fruits and vegetables in agribusiness in Uttarakand, India. Major issues and challenges. *J.Supply Chain Management*. Syst.4 (1)43-57.
- [6]. Swetha, M.K. and Naik, B.K .2016.Value chain management in banana and sapota fruits and its supply forecast in India. *Int. J.Of Agri. And Statistical Sci.*12:59 – 63.