

# Motivational Factors to Purchase Eco-Friendly Millets in Tirunelveli District

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## Abstract

Millets are among the crops that are the simplest to grow in a field. Because it is a crop that is fed through rain, it requires less care and fertilizer than wheat and rice. Millets were among the first crops farmed for food. Millets grow more quickly, fit into a range of cropping plants, and are particularly good at adapting to changing climatic and environmental circumstances. As a result, they are easy to plant and care for. This article examines the factors that influence individuals in the Tirunelveli district to purchase environmentally friendly millets. The present paper highlights the satisfactory level and motivational factors to purchase eco-friendly millets in Tirunelveli district. The data was collected from 460 consumers by applying a multistage stratified proportionate random sampling method and analysed the collected data by using statistical tools including Percentage analysis, One-sample t-test and Factor analysis. The results of the factor analysis shows that promotion, personal and reference groups, and product positioning are some of the key factors that influence Tirunelveli consumers' decision to purchase eco-friendly millets.

**Keywords:** Eco-friendly millets, Satisfaction level, Motivational factor promotion, personal, reference groups, product positioning.

## 1.1 Introduction

In recent years, millets have made a powerful comeback. Since the declaration of “2023 as an “International Year of Millets”, people across the globe are making conscious efforts to include millets in their diets. Millets are small-sized, round-shaped grains belonging to the Paniceae family. They are ancient grains, and we can find evidence of millet consumption in the prehistoric era too. Millets come in various varieties such as little millet, Kodo millet, Finger millet and foxtail millet etc. India itself has around seven popular millet varieties. Millets are environment-friendly grains and require less water and pesticides to grow and survive. Increasing millet production and consumption can be a great way to promote sustainable agriculture and reduce the carbon footprint on the environment. This is one of the reasons for millets to be considered as the new-age global grain.

## 1.2 Objectives of the study

- To analyze the satisfactory level of consuming eco-friendly millets
- To analyze the motivational factors to purchase the eco-friendly millets by the sample respondents.

### 1.3 Research methodology

Data from primary and secondary sources will be combined to create the data set for the proposed study. A multistage stratified proportional random sample technique will be used to gather primary data from the respondents. 460 respondents were chosen from the Tirunelveli district as a sample for this study. Motivational factors to buy eco-friendly millets have been examined by using factor analysis.

### 1.4 Review of Literature

**Vanitha & Dr.P. Jesintha Ijfans (2022)**<sup>1</sup> the article titled "*A study on consumer awareness towards eco- friendly products in Coimbatore City*". The survey examines into more detail about the preferences of consumers for eco-friendly foods. The study reveals that satisfaction towards eco-friendly foods depict the consumers have strongest intention to consume eco-friendly food and products believing that consumption of eco-friendly food will provide a significant nutritional advantage and it also helps in preserving the environment. The authors suggested increasing consumer knowledge about eco-friendly foods through schools, colleges, public institutions, and public places by conducting several campaigns, since consumers were less aware about these eco-friendly products. **Mr. SV Suresh Raju & Dr.K Rukman (2021)**<sup>2</sup> the article titled "*A study on consumer awareness, perception and level of satisfaction towards eco-friendly food products*". In this survey, consumers in the twin cities of Telangana were asked to rate how satisfied they were with eco-friendly food. Health, safety, flavour, and green issues were between the variables that influenced consumer attitudes towards natural products. The potential for producing eco-friendly food in India's agriculture are excellent. Customers' opinions of natural foods were influenced by four variables: awareness of one's own wellbeing, familiar with natural food sources, abstract customs, and perceived value. However, qualitative attributes such as health and nutritional value, flavour, freshness, and overall appearance influence consumer preferences for eco-friendly products. **Dr. S.M. Venkatachalam & P. Senthilkumar (2019)**<sup>3</sup> the article titled "*Consumer Perception towards Eco-Friendly Products in Namakkal District*". This article focused the consumer perception on eco-friendly products in Namakkal District. The investigation has shown that eco-friendly items are excellent for consumers as well as the environment. Products that are environmentally friendly are of high quality and perform superior to traditional products. Sample respondents should be aware of the significance of protecting the environment. Eco-friendly items are widely available today and using them is a good way to protect the environment. To satisfy consumers, eco-friendly manufacturers and marketers must be aware of their demands and encourage them to address them by offering good information on eco-friendly products and high-quality eco-friendly items.

### 1.5 Results and Discussion

The goal of the study is to examine the motivational factors for buying eco-friendly products as well as their level of satisfaction with the market. With the use of a five-point Likert scale, the degree of satisfaction with eco-friendly millets is evaluated. A one-sample t-test is then used to determine whether there is a statistically significant difference in the mean scores for purchasing eco- friendly millets. The satisfaction rating with buying eco-friendly millets is displayed in the table below.

Satisfactory level of purchasing the eco-friendly millets

Table 1.5.1

Items	Highly Dissatisfied		Dissatisfied		Neutral		Satisfied		Highly satisfied			
	NO	%	NO	%	NO	%	NO	%	NO	%	Total	%
Sorghum	135	29.3	86	18.7	45	9.8	116	25.2	78	17	460	100

Banyard millet	31	6.7	76	16.5	<b>158</b>	<b>34.3</b>	110	23.9	85	19	460	100
Pearl millet	152	33	70	15.2	43	9.3	110	23.9	85	19	460	100
Little millet	30	6.5	75	16.3	84	18	105	22.8	<b>166</b>	<b>36.1</b>	460	100
Proso millet	37	8	76	16.5	107	23.3	<b>158</b>	<b>34.3</b>	82	18	460	100
Foxtail millet	25	5.4	69	15	170	37	113	24.6	83	18	460	100
Kodo millet	<b>163</b>	<b>35.4</b>	80	17.4	35	7.6	110	23.9	72	16	460	100
Finger millet	36	7.8	<b>100</b>	<b>21.7</b>	144	31.3	103	22.4	77	17	460	

Source: Primary data

The table above displays the respondent's choice to purchase various eco-friendly millets that are eco-friendly. Out of 8 eco-friendly Millets the study shows that 163 (35.4%) respondents were highly dissatisfied with their Koda millet. Whenever it came to their purchases of 100 (21.7%) of them were dissatisfied Finger millet, while 170 (37%) were unsure (Neutral) about their eco-friendly Foxtail millet, 158 (34.3%) of them were satisfied with their monthly purchases of Proso millet and 166 (36.1%) of them were highly pleased with their monthly purchases of Little millet.

#### Null hypothesis

**H<sub>0</sub>:** There is no significant difference among mean value towards the purchase of Eco-friendly Millets.

**Result of One sample t-test for significant difference among mean rank towards the purchase of eco-friendly millets**

Table 1.5.2

Eco-friendly Millets	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Foxtail millet	45.656	459	.000	2.348	2.25	2.45
Little millet	44.112	459	.000	2.657	2.54	2.77
Banyard millet	43.088	459	.000	2.309	2.20	2.41
Proso millet	42.928	459	.000	2.374	2.27	2.48
Finger millet	39.705	459	.000	2.185	2.08	2.29
Sorghum	39.093	459	.000	2.209	2.10	2.32
Pearl millet	24.779	459	.000	1.796	1.65	1.94
Kodo millet	23.347	459	.000	1.670	1.53	1.81

Source: Derived

The 't' test indicates that each item is significant because its 'p' value is less than 0.05, but the 't' value varies for each item. Based on the 't' values, Eco-friendly millet ranked. Accordingly, the respondent rated their level of satisfaction with their purchase of Foxtail millet (45.656) as being the highest, with a 't' value of little millet (44.112), followed by

Banyard millet (43.088), Proso millet (42.928), Finger millet (39.705), Sorghum (39.093), Pearl millet (24.779), and Kodo millet (23.347), which ranked last.

### 1.5.3 Motivational factors to purchase eco-friendly millets

Factor analysis helps in putting many variables into a small number of latent factors with meaningful association. Therefore, factor analysis seeks to simplify all the factors into a small number of components. The factorability of the correlation matrix is essential for the application of factor analysis. The factorability of the correlation matrix is determined using the Bartlett's Test of Sphericity and the KMO criteria of sample adequacy. The following table shows the results of the analysis.

**KMO and Bartlett's Test**  
**Motivational factors for purchasing eco-friendly millets**  
**Table 1.5.3 a**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		<b>.602</b>
Bartlett's Test of Sphericity	Approx. Chi-Square	3240.386
	Df	231
	Sig.	0.000

The twenty-two components have been reduced down to twelve, which have been divided into four groups to enable further analysis: promotion, personal, reference group, and product positioning. A component has been deleted if its factor loading value is less than .05.

**Rotated factor matrix for the motivational factors to purchase the eco-friendly millets**  
**Table 1.5.3 b**

Factors	Component			
	1	2	3	4
Rebate Offers	<b>.670</b>	.053	.142	-.052
Price Coupons	<b>.668</b>	-.144	.086	-.032
Free gifts	<b>.666</b>	.048	.063	.128
Exhibition Demos	-.466	.059	-.110	.175
Discount Offers	.441	-.032	.100	-.087
Reasonable Price	.425	-.150	.170	.075
Shoppers Recommendations	.388	-.085	-.020	.213
All-time Availability of Brands	.387	.035	-.113	.297
Referrals	.257	.094	.194	.131
Environmental Concern	-.033	<b>.898</b>	.276	.140

Satisfaction	-.035	<b>.898</b>	.278	.134
Social Activists	.080	<b>.540</b>	.172	.130
Family Members	-.213	-.310	<b>.731</b>	.140
Celebrity endorsement	-.095	-.339	<b>.650</b>	.163
Friends	-.199	-.321	<b>.643</b>	.129
Market Leader	.047	.013	-.188	.187
Brand Positioning	.074	.101	.105	.057
Advertisement Content	-.062	-.097	-.134	<b>.663</b>
Packaging and Logo	-.017	-.173	-.158	<b>.605</b>
Brand Image	.044	-.103	-.336	<b>.501</b>
Reputation of the Brand	-.268	.091	.028	.378
Good Quality	.059	-.050	.042	.254

#### Extraction Method: Principal Component Analysis.

##### a. 4 components extracted.

The twenty-two components have been reduced to 12, which have been categorized under four headings: Promotion, Personal, Reference Group, and Product Positioning, for further analysis. Components having factor loading values of less than .05 have been eliminated.

#### Motivational factors for purchasing eco-friendly millets

Table 1.5.3 c

Statements	Factors			
	1	2	3	4
Price coupons	.685			
Rebate offers	.673			
Free gifts	.656			
Environmental concern		.941		
Satisfaction		.940		
Social activists		.583		
Family members			.833	

Friends			.754	
Celebrity endorsement			.753	
Advertisement content				.680
Packaging and logo				.642
Brand image				.583

Source: Derived

**Motivational factors to purchase eco-friendly millets - Factor wise analysis**  
**Table 1.5.3 d**

Sl. No	Factors	Eigen values	Percentage of variance	Cumulative percentage of variance
F1	Promotion	2.487	11.305	11.305
F2	Personal	2.361	10.734	22.039
F3	Reference Group	1.891	8.597	30.636
F4	Product positioning	1.635	7.432	38.068

Source: Computed Data

Promotion, Personal, Reference Group, Product Positioning, are the four key elements identified by the factor analysis that was carried out.

#### **Factor 1 - Promotion**

This is the first important factor with an eigen value of 2.487, which consists of the components, price (0.685), coupon, rebate offers (0.673) and free gifts (0.653) that were the motivational for the respondents to make purchase of eco-friendly Millets . It has a variance of 11.305 percent and contributes 29.70 percent to the total.

#### **Factor 2 -Personal**

This is the second factor with an eigen value of 2.361, which consists of the components, environmental concern (0.941), satisfaction (0.940) and social activists (0.583) that were the motivational for the respondents to make purchase of eco-friendly products. It has a variance of 10.734 percent and contributes 28.20 percent to the total.

#### **Factor 3- Reference Group**

This is the third factor with an eigen value of 1.891 which consists of the components, family members (0.833), friends (0.754) and celebrity endorsement (0.753) that were the motivational for the respondents to make purchase of eco-friendly products. It has a variance of 8.597 percent and contributes 22.58 percent to the total.

#### Factor 4 -Product positioning

This is the fourth and final factor with an eigen value of 1.635, which consists of the components, advertisement content (0.680), packaging and logo (0.642) and brand image (0.583) that were the motivational for the respondents to make purchase of eco-friendly products. It has a variance of 7.432 percent and contributes 19.52 percent to the total.

#### 1.6 Conclusion

The purpose of the present study was to examine consumer intentions in the Tirunelveli District regarding buying eco-friendly millets. Customers like environmentally friendly millets and are willing to pay more for them. In terms of consumer preferences for buying environmentally friendly millet, foxtail millet comes on the top, followed by tiny millet, banyard millet, proso millet, finger millet, and so forth. According to the results of the factor analysis, promotion, personal and reference groups, and product positioning are some of the key factors that influence Tirunelveli consumers' decision to purchase environmentally friendly millets products.

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