



## A study on customer preference on the dairy products in Madurai district, Tamil Nadu

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### ABSTRACT

*India, one of the developing economies where agriculture is a predominant occupation of a large number of masses. Agriculture in India is a gamble of monsoon. Though it provides employment to nearly 50% of the population, the farmers are in plightful situations. The farmers are poor and debt-ridden. They commit suicides as unable to cope up the adversaries of man and nature. In such a scenario they need to have another option of earning. Dairy provides the way to come out from the adverse situations. In the present research, article efforts are made to highlight the dairy business as one of the promising allied sectors of agriculture.*

**Keywords**— Dairy product, Agriculture, Farmers

### 1. INTRODUCTION

India dairying is emerging as a successful industry. India represents one of the world's largest and fastest growing markets for milk and milk products due to the increasing disposable incomes among the 250 million strong middle class. The world dairy is zooming around India for its rapidly growing markets that promise the 'moon'. The changing international dairy trade pattern, following GATT and the emergence of the World Trade Organization (WTO), offers to the Indian dairy industry an opportunity to take its bow as an exporter. India's enthusiasm to integrate with the world economy is reflected in technological upgradation, professional excellence, and cost-effective approach. In India, dairying occupies a prominent place in rural life and provides not only a subsidiary occupation and better nutritional standards but also a source of organic manure and draught power. Though the contribution of overall agriculture to the Gross Domestic Product (GDP) of the country has declined during the last decade, the contribution of the livestock sector to the Gross Domestic Product has improved from about 6 to 8.5 percent. It is also pertinent to note that milk is the single largest contributor in the agriculture sector to the national Gross Domestic Product. The growth of dairying in India with the total milk production of 74.3 million tones and per capita milk availability of 214 gm/day has been a commendable achievement and well recognized. The Indian dairy sector is vibrant with an exciting future and the world dairy industry is also zooming on India for its rapidly growing markets.

### 2. OBJECTIVE OF THE STUDY

The study has been carried out in order to know the consumption pattern of milk and milk products in Madurai district with the following objectives.

- To study the profile of dairy sector at the global, national, state and district levels.
- To examine the socio-economic profile of the respondents.
- To discuss the consumption pattern of the respondents towards milk and dairy products.
- To analyze the brand preferences and influencing factors of the respondents towards dairy products.
- To examine the satisfaction level of the respondents.
- To estimate the cost and productivity of the milk products.
- To go into the problems faced by respondents in dairy products. To offer suggestions for the development of the dairy sector.
- To offer suggestions for the development of the dairy sector.
- To carry out activities for promoting production, procurement processing and marketing of milk and milk products for the economic development.
- To trace the development of dairy industry in India and Tamil Nadu in general and with particular reference to Madurai District.
- To study the marketing system of Madurai District Co-operative Milk Producers 'Union Limited and to predict the sale of dairy products in the future.

### 3. STATEMENT OF THE PROBLEM

The milk processing industry is small compared to the huge amount of milk produced every year. Only 10 percent of all the milk is delivered from some 400 dairy plants. A specific Indian phenomenon is the unorganized sector of milkmen, vendors who

collect the milk from local producers and sell the milk in both, urban and non-urban areas, which handles around 65-70 percent of the national milk production. In the organized dairy industry, the cooperative milk producers have a 60 percent market share. The cooperative dairies process 90 percent of the collected milk as liquid milk whereas the private dairies process and sell only 20 percent of the milk collected as liquid milk and 80 percent for other dairy products with a focus on value-added products.

One of the major reasons for the poor shelf life of traditional dairy products is that there exists either no packaging or inadequate packaging. The challenge to the packaging fraternity is to deliver the nutritious dairy foods to the consumer in most economical, hygienic, safe and environmentally friendly packages.

**4. SCOPE OF THE STUDY**

The study that covers the attitude and perception of the consumer’s preference for dairy products in Madurai district. This will be of immense use to the marketers in the dairy industry. This study will help the private brands to improve and to bring some innovation in their products which will fulfill the needs and desires of the consumers. Moreover, this study will help the policymakers to frame the policies to improve the productivity of milk based on the increasing demand for milk and dairy products.

**5. METHODOLOGY**

In this study, the descriptive research design was adopted. The researcher has collected both primary and secondary data. For the purpose of collecting primary data with regard to the behavior of consumers, the researcher has designed a comprehensive interview schedule which is duly pretested. Those who consume milk and milk products have been considered as sample respondents for the present analysis. The secondary data was collected from the books, journals, magazines, newspapers, periodicals, theses and websites.

**6. RESEARCH DESIGN AND RESEARCH TECHNIQUE**

The sample study is preferred for this study is 200 respondents. This study is both descriptive and analytical. For achieving the objective both primary and secondary data have been used in this study. A comprehensive interview schedule, duly pre-tested, has been designed for collecting primary data. The non-probability method of convenience sampling was followed to choose the sample respondents.

**7. FRAMEWORK OF ANALYSIS**

With reference to the objective of the study, factors are taken into consideration as such gender of the respondents, the age of the respondents, marital status of the respondents, educational qualification of the respondents, and occupation of the respondents, area of residence of the respondents and monthly income of the respondents. The data which were collected from the respondents were analyzed by using percentage analysis. Five-point scales that are Likert’s percentage, scale analysis, rank correlation, Garrett’s ranking and chi-square test. This study also uses comparison table as a tool in order to study the various factors.

**8. RESULT AND DISSERTATION**

**Table 1: Results**

<b>Findings</b>	<b>Sub-categories</b>	<b>No. of Respondents</b>	<b>Percentage (%)</b>
Gender	Male	92	46
	Female	108	54
	<b>Total</b>	200	100
Age	Below 20years	28	14
	20 years-40 years	128	64
	40years- 60years	40	20
	Above 60 years	4	2
	<b>Total</b>	200	100
Educational qualification	Illiterate	18	9
	School level	36	18
	Graduate	100	50
	Post- Graduate	40	20
	Professionals	6	3
	<b>Total</b>	200	100
Occupation	Agriculture	18	9
	Business	26	13
	Government employee	36	18
	Private employee	44	22
	Self- employed	44	22
	House-wife	32	16
	<b>Total</b>	200	100
Annual Income	Below Rs.15000	70	35
	Rs.15000-Rs.30000	82	41
	Rs.30000-Rs.45000	36	18
	Above Rs.45000	12	6
	<b>Total</b>	200	100

Marital status	Married	92	46
	Unmarried	94	47
	Widow	8	4
	Widower	6	3
	<b>Total</b>	200	100
Type of family	Joint	122	61
	Nuclear	78	39
	<b>Total</b>	200	100
Size of family	Below 4 members	92	46
	4-6 members	90	45
	Above 6 members	18	9
	<b>Total</b>	200	100
Food habits	Vegetarian	58	29
	Non-vegetarian	142	71
	<b>Total</b>	200	100
Milk consumption per day	Below 500ml	14	7
	500mk-1000ml	104	52
	1000-1500ml	74	37
	Above 1500ml	8	4
	<b>Total</b>	200	100
Milk consumption per month	Below Rs.1000	38	19
	Rs.1000-Rs.1500	106	53
	Rs.1500-Rs.2000	42	21
	Above Rs.2000	14	7
	<b>Total</b>	200	100
Fat content	3.5g	82	41
	4.5g	86	43
	8g	32	16
	<b>Total</b>	200	100
Source of information	Television	54	27
	Radio	10	5
	Newspaper	28	14
	Magazine	12	6
	Friends and relatives	96	48
	<b>Total</b>	200	100
Influence to buy milk chocolates	Husband	14	7
	Wife	18	9
	Children	44	22
	Friends and relatives	62	31
	Advertisement	62	31
	<b>Total</b>	200	100
Brand of milk biscuits	Husband	6	3
	Wife	8	4
	Children	34	17
	Friends and relatives	54	27
	Advertisement	98	49
	<b>Total</b>	200	100
Brand of ice-creams	Husband	4	2
	Wife	4	2
	Children	26	13
	Friends and relatives	68	34
	Advertisement	98	49
	<b>Total</b>	200	100
Brand of paneer	Husband	12	6
	Wife	8	4
	Friends and relatives	62	31
	Advertisement	118	59
	<b>Total</b>	200	100
Brand of ghee	Husband	4	2
	Wife	8	4
	Friends and relatives	82	41
	Advertisement	106	53
	<b>Total</b>	200	100
Brand of curd	Husband	10	5
	Wife	8	4
	Friends and relatives	78	39
	Advertisement	104	52

	<b>Total</b>	200	100
Preference of milk	Fresh	102	51
	Branded	98	49
	<b>Total</b>	200	100

Source: Primary data

## 9. FINDINGS

- It is significant to note that out of 200 respondents 46% of the respondents are male and 54% of the respondents are female.
- From the analysis, it was found that 64% of the respondents belong to the age of 20 to 40 and only 2% of the respondents belong to the age group of above 60.
- As regards the educational qualification 50% of the respondents are Graduate, 20% of the respondents are Post Graduate, 18% of the respondents belongs to School level, 9% of the respondents are Illiterate and only 3% of the respondents belong to professionals.
- It is found that 22% is by the Government employee and Self-Employee respectively and only 9% are Agriculturist occupies in Madurai.
- It's found that the 61% of the respondents are joint family and 39% of the respondents are a nuclear family in Madurai.
- As regards the family size 46% of the respondents have 4 to 6 members only 9% of the respondents have above 6 members.
- It is found that most of the 52% of the respondents are consume a quantity of milk 500ml to 1000ml and only 4% of the respondents are consumed a quantity of milk above 1500ml.
- It observed that 54% of the respondents are normally spending dairy products Rs.500 to Rs.1000 per months and only 13% of the respondents are normally spending dairy products above Rs.1000 per months.
- In this significant to note that out of 200 respondents 31% of the respondents got an opinion from friends and relatives and advertisement respectively and 9% of the respondents got an opinion from wives to influence the brand of chocolate.
- In this significant to note that out of 200 respondents 48% of the respondents got the source of information from television and only 6% of the respondents got the source of information from magazines.
- In this significant to note that out of 200 respondents 49% of the respondents got an opinion from advertisement and only 3% of the respondents got an opinion from husbands to influence the brand of milk biscuits.
- In this significant to note that out of 200 respondents 49% of the respondents got an opinion from advertisement and only 2% of the respondents got an opinion from husbands and wives respectively to influence the brand of ice-creams.
- In this significant to note that out of 200 respondents 53% of the respondents got an opinion from advertisement and only 4% of the respondents got an opinion from wives to influence the brand of ghee.
- In this significant to note that out of 200 respondents 59% of the respondents got an opinion from advertisement, 31% of the respondents got an opinion from friends and relatives, 6% of the respondents got an opinion from husbands and only 4% of the respondents got an opinion from wives to influence the brand of paneer.
- In this significant to note that out of 200 respondents 51% of the respondents got an opinion from advertisement, 39% of the respondents got an opinion from friends and relatives, 6% of the respondents got an opinion from husbands and only 4% of the respondents got an opinion from wives to influence the brand of butter
- It is found that the 51% of the respondents mostly prefer fresh milk.
- It is observed that the problem of 'easy access' is ranked first with the Garret mean score of 54.97 and the problem with least Garret mean score 43.78 of 'Storage Hygiene' is ranked ninth.
- It is observed that the problem of 'improper packing' is ranked first with the Garret mean score of 55.55 and the problem with least Garret mean score 43.06 of 'price rice' is ranked fifth.
- It is found that there is a relationship between age-wise classification and attitude towards expired dairy products. Thus, the null hypothesis is accepted.
- It is found that there is a relationship between gender and attitude of customers towards quick spoilage of milk. Thus, the null hypothesis is rejected.
- It is found that there is a relationship between marital status and attitude of customers towards adulteration of milk powder. Thus, the null hypothesis is rejected.
- It is found that there is a relationship between educational qualification of the respondents and their attitude of customers towards damage milk products due to transportation. Thus, the null hypothesis framed as rejected.
- It is found that there is a positive relationship between the type of family and attitude of customers towards low fat (high in sugar) increase calorie intake. Thus, the null hypothesis is accepted.
- It is found that there is a positive relationship between food habits and attitude of customers towards a mixture of low milk with buffalo milk. Thus, the null hypothesis is accepted.
- It is found that there is a relationship between the fat content of the respondents and their attitude of customers towards excessive fat content. Thus, the null hypothesis framed as rejected.
- It is found that there is a relationship between annual income and attitude towards high price. Thus, the null hypothesis is rejected.
- It is found that there is a relationship between the brand of paneer of the respondents and their attitude of customers towards the low supply of branded products. Thus, the null hypothesis framed is rejected.
- It is found that there is a relationship between the quantity consumption of milk per day of the respondents and their attitude of customers towards a high ratio of water proportion in milk. Thus, the null hypothesis framed is rejected.
- It is found that there is a relationship between the opinion of the respondents and their attitude of patients towards 'doctors' treatment of illness is good'. Thus, the null hypothesis framed is rejected.

- In this significant to note that out of 200 respondents, Aavin prefers milk and milk products due to their price, taste/flavors, availability, and place of purchase and Hatsun prefer milk and milk products for quantity and brand of the image.

## 10. SUGGESTION

Certain suggestions that have come up in the wake of the study are given as follows:

- “Excessive fat content” in milk should be reduced as it is a health issue which does not suit the children and elders. The brands should reduce the fat content so as not to harm the health of the people.
- The price of some of the milk brands seems to be a little high.
- The milk brands have to reduce the price of the products based on the affordability of all the care of people.
- The milk vendors have to ensure that the milk is not adulterated with milk powder and water.
- The brand players have to ensure the availability of the products at all times for the convenience of the people.
- The sales of expired dairy products have to be avoided by the players of dairy products. ISO certification is to be obtained to ensure the quality of the product by the brand players.
- Dairy products should always be stored in a hygienic place and at a cool temperature.
- Awareness has to be created in the midst of the public to check the manufacturing date and expiry date before the purchase of dairy products.
- To develop the awareness among the rural areas to increase the strength of dairy products.
- The government should give most important in dairy products to development of rural peoples.
- The advanced breeding technologies to accelerate the development of our high potential Indian cattle and buffalo breeds are to be developed.
- Transportation facilities can be developed in certain rural areas to speed up the supply of milk in India.
- Quality control methods are to be developed since milk is supplied from a large number of farmers in our country.
- Adequate nutrition for the animals is to be provided to improve the milk productivity.
- Proper care has to be taken and preventive measures are to be adopted to avoid the diseases in the animals.
- Rural farmers are to be educated to use advanced technologies in milking cows and to increase the milk productivity of animals.
- The Government can invite foreign investment so that the foreign investors can introduce new technologies and produce a new type of dairy products which can be exported.
- Raw milk handling: It needs to be upgraded in terms of physicochemical and microbiological attributes of the milk collected. The use of clarification and bactofugation in raw milk processing can help improve the quality of the milk products.
- Milk processing: Better operational efficiencies are needed to improve yields and reduce wastage, minimize fat/protein losses during processing, control production costs, save energy and extend shelf life. The adoption of Good Manufacturing Practices (GMP) and Hazard Analysis Critical Control Points (HACCP) would help manufacture milk products conforming to International standards.

## 11. CONCLUSION

Our nation’s milk producers have transformed Indian dairying from stagnation to world leadership. The dairy cooperative movement has been central to the development of dairying in India. Nowadays the rural farmers in India are involved in dairying as they find it as an alternative source of livelihood. The government of India sponsored a scheme called 'Strengthening Infrastructure for quality and clean milk production' to strengthen infrastructure facilities and to ensure clean milk production at the village level. The government of India so far has sanctioned Rs.1224.21 lakhs to Vellore, Villupuram, Trichy, Dharmapuri, Salem, Kancheepuram-Thiruvallur, Erode, Nigari’s and Madurai milk Unions for the implementation of the scheme. So, the Government takes almost all the measures and implements various policies and regulatory laws for the development of the dairy sector in our country. The private sector plays a pivotal role in the development of the Indian dairy industry as well as produces various value-added products to meet the growing demands of the consumers.

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