A Study on Marketing Problems Faced By Neera Tappers in Malappuram District of Kerala State

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Abstract: Tapping of Neera is intrinsically related to the life of the people of Kerala. Tapping is usually done during September to December. Tapping is done at the auspicious of the Agriculture Department and is included under the coconut development programme. It is one of the traditional, prominent perennial products associated with heritage and culture of India for the last 3000 years. It is preferred and cultivated by all the categories of farmers irrespective of their land holding and economic and social status. Amidst huge production and demand, it suffers with the bottlenecks of low level of production technology, high degree of pest and disease, land fragmentation, obsolete irrigation system conventional arrangements in marketing, lock of proper financing institution etc. Neera production is seasonal in nature while its demand is inelastic. This also affects the price fixation. Due to the prevalence of high level of illiteracy, most of the tappers are unable to follow the literature available on marketing rules and the relevant act. The processing of Neera into jaggery is labour intensive and consumes expensive and scarce firewood. Women and children in the family were left with the take of boiling Neera for hours together. Considering the extent of the risk in collecting Neera and the labour involved in processing, monetary benefits were rather insignificant. Climbing the tree is both dangerous and hazardous. Each year, many of the climbers, no matter how skillful, fall from the trees to die or to remain crippled for life. Moreover, this research examines the problems of Neera tappers in Malappuram District of Kerala State. This district was chosen because it is the major area of occurrence of the Neera tapping in India.

Keywords: promotion of Neera, marketing problems and tapping.

1. Introduction

Product diversification and by product utilisation is one of the thrust areas identified by the Board for promoting coconut industry. The Coconut Development Board has been making several efforts to promote product diversification in coconut to reduce dependency on copra and coconut oil market and enable coconut farmers to get more remunerative price for coconut. Promotion of Neera as Nutritious health drink has been identified as an important marketing strategy for ensuring remunerative price to coconut farmers. Neera and its downstream products like coconut palm sugar, jaggery and syrup are some of the viable products for commercial exploitation to augment income for coconut farmers. Neera is sweet, oyster white in colour, translucent, high in nutrititional value, and susceptible to natural fermentation at ambient temperature within a few hours of extraction. On fermentisation, Neera becomes toddy. The immature inflorescence which is about to burst is the stage at which Neera tapping is done. It takes 12 to 15 days for the sap to exude from the inflorescence tip. Tapping is done usually for a period of six months only. A coconut palm can yield, on an average two litres of Neera per day, which may go even up to 4.5 litres per day based on the health of the palm and management of the garden. Neera tapping requires adherence to strict procedures right from the collection of the first drop. This is because the sap on extruding comes into contact with air and the process of fermentation is initiated.

Technologies have been developed by institutions like Kerala Agricultural University, Central Food Technological Research Institute and Defence Food Research Laboratory for arresting the fermentation process. The collected Neera is then subjected to filtration, refrigeration, centrifuging, processing and packaging. The processed product has a shelf life up to one year. Apart from this, value added products like palm syrup, palm jaggery and palm sugar are produced from Neera.

2. Review of literature

PalaniVelu et. al. (2015) in their study palm Neera is a nutritional drink, which is especially very popular during the flowering season. The Neera season begins in January when the palm trees start budding. In this period, juice is obtained only from the male palm trees. The female palm trees start giving sap in the last week of March or the first week of April.

Chandrasekhar et. al. (2014) Palm wine is the fermented sap of various palm trees especially Palmyra, silverdatepalm and coconut palms Palm wine can be obtained from the young inflorescence either male (or) female ones palm wine is alcoholic beverage that are made by fermenting the sugary sap from various palm plants. It is collected by tapping the top of the trunk by felling the palm tree and boring a hole into the trunk, it is a cloudy whitish beverage with a sweet alcoholic taste and very short shelf life of only one day.

Ashraf Padanna (2014) The Kerala government has launched Neera, a sweet, non-alcoholic sap tapped from the coconut tree, and its value-added products that are expected to help hundreds of thousands of farmers in the state. Chief Minister Oommen Chandy officially launched the product and distributed tapping licenses at a function held in Kottayam yesterday. It is being marketed as an energy drink, rich in sugars, minerals and vitamins, with a low glycemic index of 35. The state hopes to launch the product in the international market as a diabetes-friendly food. It is also claimed to be good for digestion, which facilitates clear urination and prevents jaundice. Neera is the raw material for many value-added products such as palm syrup, palm jaggery and palm sugar having high domestic and International demand.

3. Objectives of the study

❖ To analyze the marketing problems faced by the Neera tappers in the study area.
❖ To evolve suggestions for the better performance and solution to the problems of Neera tappers.

4. Hypothesis framed

❖ There is no significant relationship between the mean score of the age of the respondents and the variables of marketing problems.
❖ There is no significant relationship between the mean score of the religion of the respondents and the variables of marketing problems.
❖ There is no significant relationship between the mean score of the marital status of the respondents and the variables of marketing problems.

5. Research Methodology

The researcher used both primary and secondary methods of data collection. The primary data was collected by using interview schedule technique. A pilot study administering the interview schedule with 24 respondents (20 per cent of the total sample) in the all selected areas and assessing its feasibility was also done. Based on the pilot study necessary modifications were made in the interview schedule.

Secondary data were collected through various books, journals, articles, published and unpublished records and internet publications. The researcher used the simple random sampling methods for the research from the total population. The size of the sample was finalized to 120 samples after considering the factors like the extent of error, degree of confidence etc. On the basis of the answers given by the respondents a null hypotheses was framed which involves statistical tools for test hypothesis, such as Percentage analysis, coefficient of variation, Average, Fitness Test, Analysis of Variance, Chi-square analysis and Factor analysis.

Table – 1.1 Distribution of the respondents on their age

S.No	Age in Year	Frequency	Per cent
1	18-30	40	33
2	31-40	32	27
3	41-50	20	17
4	51-and above	28	23
	Total	**120**	**100**

Source: Compiled from collected data

Above table shows, the researcher has to take the age limits of minimum 18 – 30 to maximum age of 51 and above. This age of 18 – 30 has 33 per cent of respondents, the medium age of 31 – 40 has 27 per cent, and the above age of 51 has 23 per cent of respondents. This shows the difference of 10 per cent when comparing to maximum and minimum age.

Table – 1.2 Distribution of the respondents on their marital status

S.No	Marital Status	Frequency	Per cent
1	Married	72	60
2	Unmarried	36	30
3	Widower	12	10
	Total	**120**	**100**

Source: Compiled from collected data

Above table deals with the marital status of respondents. In this, the married respondents are 60 per cent unmarried are 30 per cent and widows are 10 per cent of total respondents. This shows the higher per cent of respondents status has sent to married.

Table – 1.3 Distribution of the respondents on their religion

S.No	Religion	Frequency	Per cent
1	Hindu	56	47
2	Christian	42	35
3	Muslim	22	18
4	Others	-	-
	Total	**120**	**100**

Source: Compiled from collected data

Above table shows with the distribution of religion of the respondents. All over the population, Hindu religion covers 47 per cent, Muslims has covered 35 per cent, Christians has 18 per cent and other religion occupies the remaining per cent of total population. This data shows the majority of Hindu religion.

Table – 1.4
ANOVA test for religion of the respondents and marketing problems

Variables of marketing problems	F	Sig.	Result
Local competition	.565	.638	(0. 638 > 0.05) Hypothesis accepted
Fixation of Pricing	1.782	.149	(0. 149 > 0.05) Hypothesis accepted
Storage cost	1.677	.171	(0. 171>0.05) Hypothesis accepted
Price level changes	2.236	.083	(0. 083 > 0.05) Hypothesis accepted
Government control	**3.797**	**.010**	**(0. 010 < 0.05) Hypothesis rejected**
Honey bee leads to loss of Neera	1.677	.171	(0. 171> 0.05) Hypothesis accepted
Bumblebee affects the tappers life	2.236	.083	(0. 083 > 0.05) Hypothesis accepted
Poor quality	.565	.638	(0. 638 > 0.05) Hypothesis accepted
Marketing Information	1.782	.149	(0. 149 > 0.05) Hypothesis accepted
Lack of sales forecasting	1.355	.256	(0. 256 > 0.05) Hypothesis accepted
Lack of market intelligence	**3.760**	**.011**	**(0. 011 < 0.05) Hypothesis rejected**
Equalization of production and sales	**.565**	**.638**	**(0. 638 < 0.05) Hypothesis rejected**
Seasonal pricing	**3.760**	**.011**	**(0. 011 < 0.05) Hypothesis rejected**
Length of time for selling	.565	.638	(0. 638 >0.05) Hypothesis accepted
Time gap between production and sales	1.355	.256	(0. 256> 0.05) Hypothesis accepted

Source: Compiled from collected data and Output generated from SPSS 19

Based on the result generated by SPSS 19, the significant of some of the values of the variable of the marketing problems of Neera tappers in respect of Government control, Lack of market intelligence, Equalization of production and sales and Seasonal pricing are less than 0.05. So the null hypothesis is rejected. Hence, there is a significant relationship between the mean score of religion of the respondents and Government control, Lack of market intelligence, Equalization of production and sales and Seasonal pricing. The other significant values of variables of the marketing problems of Neera tappers in respect of Local competition, Fixation of Pricing, Price level changes, Honey bee leads to loss of Neera, Bumblebee affects the tappers life Poor quality, Marketing Information, Lack of sales forecasting, Length of time for selling, Time gap between production and sales are greater than 0.05. So the null hypothesis is accepted. Hence there is no significant relationship between the mean score of religion of the respondents and Local competition, Fixation of Pricing, Price level changes, Honey bee leads to loss of Neera, Bumblebee affects the tappers life Poor quality, Marketing Information, Lack of sales forecasting, Length of time for selling, Time gap between production and sales.

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Table – 1.5

ANOVA test for age of the respondents and marketing problems

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Variables of marketing problems	F	Sig.	Result
Local competition	3.447	.008	**(0.008 < 0.05) Hypothesis rejected**
Storage cost	2.833	.024	**(0.024< 0.05) Hypothesis rejected**
Honey bee leads to loss of Neera	2.833	.024	**(0.024< 0.05) Hypothesis rejected**
Poor quality	3.447	.008	**(0.008 < 0.05) Hypothesis rejected**
Equalization of production and sales	3.447	.008	**(0.008 < 0.05) Hypothesis rejected**
Length of time for selling	3.447	.008	**(0.008 < 0.05) Hypothesis rejected**

Source: Compiled from collected data and Output generated from SPSS 19

Based on the result generated by SPSS 19, the significant of some of the values of the variable of the marketing problems of the Neera tappers in respect of Local competition, Storage cost, Honeybee leads to loss of Neera, Poor quality, Equalization of production and sales and Length of time for selling are less than 0.05. So the null hypothesis is rejected. Hence, there is a significant relationship between the mean score of age of the respondents and of Local competition, Storage cost, Honey bee leads to loss of Neera, Poor quality, Equalization of production and sales, Length of time for selling. The other significant values of variables of the marketing problems of Neera tappers in respect of Fixation of Pricing, Price level changes, Government control, Bumblebee affects the tappers life, Marketing Information, Lack of sales forecasting, Lack of market intelligence, Seasonal pricing, Time gap between production and sales are greater than 0.05. So the null hypothesis is rejected. Hence there is a significant relationship between the mean score of age of the respondents and Fixation of Pricing, Price level changes, Government control, Bumblebee affects the tappers life, Marketing Information, Lack of sales forecasting, Lack of market intelligence, Seasonal pricing, Time gap between production and sales.

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Table – 1.6

ANOVA test for marital status of the respondents and marketing problems

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Variables of marketing problems	F	Sig.	Result
Local competition	.684	.409	(0. 409> 0.05) Hypothesis accepted
Fixation of Pricing	.001	.976	(0. 976> 0.05) Hypothesis accepted
Storage cost	1.002	.317	(0. 317> 0.05) Hypothesis accepted
Price level changes	1.650	.199	(0. 199> 0.05) Hypothesis accepted
Government control	.388	.534	(0. 534> 0.05) Hypothesis accepted
Honey bee leads to loss of Neera	1.002	.317	(0. 317> 0.05) Hypothesis accepted
Bumblebee affects the tappers life	1.650	.199	(0. 199> 0.05) Hypothesis accepted
Poor quality	.684	.409	(0. 409> 0.05) Hypothesis accepted
Marketing Information	.001	.976	(0. 976> 0.05) Hypothesis accepted
Lack of sales forecasting	.244	.622	(0. 622> 0.05) Hypothesis accepted
Lack of market intelligence	.837	.361	(0. 361> 0.05) Hypothesis accepted
Equalization of production and sales	.684	.409	(0. 409> 0.05) Hypothesis accepted
Seasonal pricing	.837	.361	(0. 361> 0.05) Hypothesis accepted
Length of time for selling	.684	.409	(0. 409> 0.05) Hypothesis accepted
Time gap between production and sales	.244	.622	(0. 622> 0.05) Hypothesis accepted

Source: Compiled from collected data and Output generated from SPSS 19

Based on the result generated by SPSS 19, the significant values of variables of the marketing problems of Neera tappers in respect of Local competition, Fixation of Pricing, Price level changes, Government control, Honey bee leads to loss of Neera, Bumblebee affects the tappers life Poor quality, Marketing Information, Lack of sales forecasting, Lack of market intelligence, Equalization of production and sales, Seasonal pricing, Length of time for selling, Time gap between production and sales are greater than 0.05. So the null hypothesis is accepted. Hence there is no significant relationship between the mean score of marital status of the respondents and of Local competition, Fixation of Pricing, Price level changes, Government control, Honey bee leads to loss of Neera, Bumblebee affects the tappers life Poor quality, Marketing Information, Lack of sales forecasting, Lack of market intelligence, Equalization of production and sales, Seasonal pricing, Length of time for selling, Time gap between production and sales.

5.1 Factor analysis for marketing problems of Neera tappers KMO and Bartlett's Test

The dimensionality of Marketing Problems was examined using factor analysis based on 12 individual statements and the reliability of the subsequent factor structures was then tested for internal consistency of the grouping of the items.

Table – 1.7
KMO and Bartlett's Test for Marketing Problems

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.832
Bartlett's Test of Sphericity	Approx. Chi-Square	1723.977
	df	15
	Sig.	.000

Source: Output generated from SPSS 19

High value of KMO (0.832> .05) of indicates that a factor analysis is useful for the present data. The significant value for Bartlett's test of Sphericity is 0.000 and is less than .05, which indicates that there exist significant relationships among the variables (Table-1.7). The resultant value of KMO test and Bartlett's test indicate that the present data is useful for factor analysis. Eigen Value represents the total variance explained by each factor. Percentage of the total variance attributed to each factor. One of the popular methods used in Exploratory Factor Analysis is Principal Component Analysis, Where the total variance in the data is considered to determine the minimum number of factors that will account for maximum variance of data. All the statements are loaded on the two factors.

Table – 1.8
Total variance explained for Marketing Problems

Marketing Problems	Rotation Sums of Squared Loadings					
	% of Variance	Cumulative %	% of Variance	Cumulative %	% of Variance	Cumulative %
Local competition	34.215	34.215	34.215	34.215	14.975	14.975
Fixation of Pricing	20.359	54.575	20.359	54.575	14.775	29.750
Storage cost	10.137	64.712	10.137	64.712	13.868	43.618
Price level changes	7.224	71.936	7.224	71.936	12.782	56.399
Government control	2.929	89.938	2.929	89.938	4.539	89.938
Honey bee leads to loss of Neera	2.614	92.551	*	*	*	*
Bumblebee affects the tappers life	2.287	94.838	*	*	*	*
Poor quality	2.066	96.904	*	*	*	*
Marketing Information	1.459	98.363	*	*	*	*
Lack of sales forecasting	1.260	99.623	*	*	*	*
Lack of market intelligence	3.033E	100.000	*	*	*	*
Equalisation of production and sales	7.451E	100.000	*	*	*	*
Seasonal pricing	6.307E	100.000	*	*	*	*
Length of time for selling	-1.311E	100.000	*	*	*	*

Source: Output generated from SPSS 19

6. Major findings of the study

❖ In the primary source data, we have to take the age limits of minimum 18 – 30 to maximum age of 51 and above. This age of 18 – 30 has 33 per cent of respondents, the medium age of 31 – 40 has 27 per cent, and the above age of 51 has 23 per cent of respondents. This shows the difference of 10 per cent when comparing to maximum and minimum age.

❖ The status of respondents shows the per cent of married respondents are 60 per cent unmarried are 30 per cent and widows are 10 per cent of total respondents. This shows the higher per cent of married status has sent to married.

❖ All over the population, Hindu religion covers 47 per cent, Muslims has covered 35 per cent, Christians has 18 per cent and other religion occupies the remaining per cent of total population. This data shows the majority of Hindu religion.

❖ There is a significant relationship between the mean score of age of the respondents and of Local competition, Storage cost, Honey bee leads to loss of Neera, Poor quality, Equalization of production and sales, Length of time for selling.

❖ There is a significant relationship between the mean score of religion of the respondents and Government control, Lack of market intelligence, Equalization of production and sales and Seasonal pricing.

❖ There is no significant relationship between the mean score of marital status of the respondents and of Local competition, Fixation of Pricing, Price level changes, Government control, Honey bee leads to loss of Neera, Bumblebee affects the tappers life Poor quality, Marketing Information, Lack of sales forecasting, Lack of market intelligence, Equalization of production and sales, Seasonal pricing, Length of time for selling, Time gap between production and sales.

7. Suggestions

❖ The Neera tappers, were struggling even to feed their children properly and could not ensure quality based education due to skyrocketing price rise. Hence, the government should consider their demands positively.

❖ Lack of finance and inadequate facilities are the main problem faced by the Neera tappers. Government should take strong action against proper cold storage facilities and introducing minimum support price.

❖ Government and voluntary organizations have to take necessary steps to develop the life of Neera tappers and use of Neera products.

❖ The poor were squandering their precious income in Indian Made Foreign Liquor (IMFL) shops and if the government permit for toddy, it would increase employment opportunities thereby helping to create equal distribution of wealth in the rural areas and it can be accepted as a natural drink with medicinal value.

❖   The government may liberalize its restrictions on the marketing of Neera products in the form of exemption from license/approval/clearance from various government departments. This kind of relaxation may lead the marketing of Neera products as easy and simple.

8. Conclusion

Marketers of Neera products need help in formal marketing planning and in marketing in general. Tapping is among the most dangerous occupations in the world. In India generally, Neera tappers live on the verge of extreme poverty. The problem is lack of initiative both from the government and the private growers and the non-existence of a proper marketing network. The challenge facing scientists, researchers, extension workers and farmers in the next millennium is to find appropriate ways of utilizing the earth's resources to feed the predicted doubling of the human population while at the same time improving the living standards of rural people. Directly, it provides employment to the Neera tappers, indirectly a significant section of people who lives in the rural segment get livelihood through abundant source of coconut palm by marketing the products and products of the tree. In addition, it is a tree of eco-friendly and ultimately most economical one. According to the interviews, their marketing even though they do not always appreciate these themselves. The marketing planning is often informal and based on intuition. A lack of formalised planning is a typical problem of marketers of Neera products. However, those marketers of Neera products do marketing planning and have formal marketing practices. This issue is still open for interpretation and needs more investigation. They are the outliers of mainstream development process.

9. References

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