

A Study on the Prospects of Neera as an Agro-Based Industry

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Abstract: *Agro-based industry plays very important role in the process of growth and development of industries in state as well as in the countries. It creates demand for the food products and generates employment opportunity for those people who belong to the rural and urban areas of the state.*

Keywords: Agro based industry, Neera

1. Introduction

Agro industry means post-harvest activities involved in the transformation, preservation and preparation of agricultural production for intermediary or final consumption. B. A Iqbal defines agro-based industries as industries manufacturing input for agriculture or processing agricultural output or those industries which are supported by agriculture product.

Agro-based industry plays very important role in the process of growth and development of industries in state as well as in the countries. It creates demand for the food products and generates employment opportunity for those people who belong to the rural and urban areas of the state.

The demand and necessity of agro-based processing increases as agricultural production rises. Agro-based industry playing a pivotal role in rural industrialization provides significant and long term development stimulus to rural population. It is one of the important components of industrialization which promotes small scale and cottage industries in the rural areas. The benefit of industrialization may be shared by rural population through agro-based industries.

The need for reviving coconut sector has therefore become imperative and ways and means for a revival is on the agenda of all stakeholders and policy makers. Delinking coconut economy from the clutches of copra coconut oil over dependency, coupled with developing and popularizing more value added products from coconut has been brought out as a viable strategy for regaining the last glory of coconut.

Neera is the sweet, oyster white colored sap trapped from the immature inflorescence of coconut. It is a delicious health drink and a rich source of natural sugars, minerals and vitamins. It contains substantial amounts of iron, phosphorus and ascorbic acid. The immature inflorescence which about to burst is the stage at which Neera trapping is done. It takes 12 to 15 days for the sap to exude from the inflorescence tip. Trapping is done usually for a period of

six months only. A coconut palm can yet, on an average two liters of Neera per day, which may go even up to 4.5 liters per day based on the health of the palm and management of the garden.

Nutritional Composition of Neera

Total solids (g/100ml)	15.2-19.7
PH	3.9-4.7
Specific gravity	1.058-1.077
Total sugars (g/100ml)	14.40
Original reducing sugars (g/100ml)	5.58
Total reducing (g/100ml)	9.85
Total ash	0.11-0.41
Citric acid (g/100ml)	0.50
Alcohol in %	nil
Iron (g/100ml)	0.15
Phosphorus(g/100ml)	7.59
Ascorbic acid (mg/100ml)	16-30
Total protein (g/100ml)	0.23-0.32

Source: Indian coconut journal may 2013

Neera tapping require adherence to strict producer's 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 the subjected to filtration, processing and packaging. The processed product has a shelf life up to one year. Apart from this, value added products like palm sugar, palm jaggery and palm syrup are produced from Neera.

Neera and its value added products are manufactured by all the major coconut producing countries. The major players in the field are Indonesia, Philippines, Thailand, Malaysia, SriLanka and Vietnam. The major destinations are USA, Canada, Norway, France, Middle East, South Korea etc...Export of Neera and its products, especially palm sugar has shown a surging trend in production and marketing demand as a healthy and natural products. Neera is stored in large plastic containers with a clean netted cover allowing aeration and prevent entry of dirt and other foreign objects.

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Earlier earthen pots were used for making Neera. After 40 days of fermentation in a well-ventilated room, the sap is harvested as vinegar. After the evaporation loss around 95 liter vinegar can be produced from 100 liter Neera. Vinegar is having good demand in Island since it is an Ingredient in all seafood dishes. Lakshadweep vinegar is popular in Kerala especially in Malabar areas. Vinegar is produced by the department as well as private parties. The department is selling vinegar @Rs.22 per liter while private parties are selling it @ Rs.30 per liter.

Objective of the Study

- To analyze the sale and usage of Neera in Ernakulam District.
- To study the opinion of the people about Neera as a health drink.

2. Research Methodology

The study was based on both primary and secondary data. The primary was collected using questionnaires which are distributed to a sample of respondents and the secondary data was obtained from Indian coconut journal, published books and newspapers. The relevant data collected from 300 respondents on the basis of random sampling. Field observation and personal interview method was used to collect data. Percentage method was used for analyzing the data and tables and graphs were also used to represent the data.

The field survey was carried out during the period January 2015 to March 2015. The area of study selected is the Ernakulam District in Kerala. Samples are taken from the Vyttila region which is one of the largest as well as the busiest intersections in Kerala.

3. Literature Review

Deepthi,(2014) stated that major coconut producing countries have moved miles ahead in processing, marketing and export of Neera and can be done in a systematic manner exploiting the various strategies for market penetration.¹

Sreekumar(2014) studied about the major technologies for the production and preservation of coconut neera. 3 main technologies which are used in the production and preservation of coconut neera; such as DRDO technology, KAU technology and CDB technology. The Defense Research Development Organization (DRDO) has developed a technology for processing and preservation of neera in its natural form. The technology adopted by KAU is used for the preservation of neera. And the coconut development board has developed a new technology for collection and processing of coconut neera in hygienic condition without the application of lime.²

Ajith (1995) remarked that development of agriculture in modern times marked by the growth of agro industries

which on the one hand provide machine and material needed for achieving higher agricultural yields and on the other process farm produce in to finished and semi-finished goods.³

Manjunath (2014) stated that the Palakkad Coconut production company has been able to realize around Rupees 6 lakhs in the month of October through sales revenue. Out of the total sales revenue, around 90% was realized through the sales of neera alone, while the rest 10% was through the sale of other coconut based value added products like coconut chips, coconut vinegar, tender coconut squash etc.⁵

4. Data Analysis and Interpretation

Sales Data per Month of Neera

Month	Total Quantity(L)	Good Neera Quantity(L)
June & July	2399	2159
August	4918	4454
September	5976	5086
October	7155	5412

Sale is an important factor which leads to the profit of a company. The above data shows the sales of 5 months. In June and July out of 2399 L, good neera for sale is 2159 L. Out of 4918 L, good neera for sale is 4454 L in August. In September good neera sale is 5086 L out of 5876 L. In October out of 7155 L, good neera for sale is 5412 L.

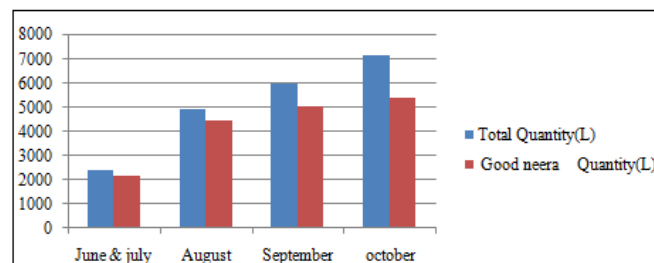


Figure 4:1: Sales data per month

The figure shows that the highest neera sales is in the month of October and lowest sales of neera is in the month of June & July.

Average Neera sales through various stalls under PCPCL.

No.	Coconut points-locations	Average Neera sales/day (ltr.)
1	Vyttila Mobility Hub	110
2	High court, Ernakulum	20
3	Pallassana stall	10
4	Malampuzha stall	16
5	Kanjikkode stall	16
6	Mannarkkad stall	20
7	Cherppulassery stall	30
8	Kadampazhipuram stall	15
9	Vadakkanchery stall	15
Total neera sales per day		252

The above table shows the average neera sales through various stalls under Palakkad Coconut Production Company

Limited. The highest neera sales per day are in the Vyttila mobility hub of about 110 L. The lowest neera sale per day is in the Pallassana stall of about 10 L. The second highest neera sale per day is in Cherppulassery stall of about 30 L. In High court and Mannarkkad stall, the neera sales per day is 20 L both. Neera sales per day are about 16 L each in Malampuzha and Kanjikkode stall. In Kadampazhipuram and Vadakkanchery stall, the average neera sales per day is 15 L each. The total neera sale per day is about 252 L.

Idea about Neera

Option	Frequency	Percentage
Yes	160	53.33%
No	140	46.66%
Total	300	100%

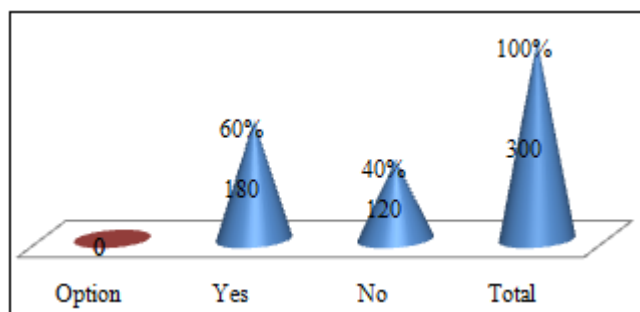
About of 160 users out of 300 (53.33%) have idea about Neera and about 140 out of 300(46.66%) have no idea about Neera

Preference for Neera

Options	Frequency	Percentage (%)
Cheap	40	13.33%
Nutritious	180	60%
Others	80	26%
Total	300	100%

Out of 300, 180 respondents prefer Neera because it is a nutritious drink, 40 respondents prefer Neera because of its cheaper rate and the remaining 80 prefer Neera for other reasons.

Using neera for the first time



The above figure shows that 60% of respondents are using Neera for the first time and 40% of respondents using many times.

Opinion about Neera

Option	Frequency	Percentage (%)
Good	160	53.33%
Bad	140	46.66%
Total	300	100%

More than 50% of the respondents suggest Neera as a good drink for health whereas the remaining considered it as bad.

Satisfaction regarding the price

Option	Frequency	Percentage (%)
Yes	160	53.33%
No	140	46.66%
Total	300	100%

53.33% of respondents were satisfied about the price and 46.66% of respondents not satisfied with its price.

Neera equivalent to other drinks

Options	Frequency	Percentage (%)
Yes	120	40%
No	180	60%
Total	300	100%

Majority feel that Neera is not equivalent to other drinks and 40% opined that Neera is equivalent to other drinks

Neera usage

Options	Frequency	Percentage (%)
Daily	50	16.66%
Occasionally	250	83.33%
Total	300	100%

Only 16% use Neera daily whereas 83% use Neera occasionally.

Findings of the Study

- The sales data given by the PCPCL Company was high in the month of October and low in June and July.
- According to the average neera sales data, PCPCL Company in highest neera sales per day are in the Vyttila mobility hub and lowest neera sales per day is in Pallasana stall.
- The study found that 53.33% of the respondents have the idea about neera and 46.66% have no idea about neera.
- The study founded that 60% of respondents prefer neera due to neera is nutritious drink and 13.3% prefer neera because of its cheaper rates.
- 60% of respondents using neera for the first time and 40% respondents is using neera many times.
- 53.33% of the respondents give good idea about neera and 46.66% of the respondents give bad opinion about neera.
- 53.33% of the respondents satisfied about the price for neera and 46.66% of respondents against this.
- 40% of the respondents favour other drink equivalent to neera and 60% of the respondents against this opinion.
- 16.66% of the respondents use neera daily and 83.33% of the respondents use neera occasionally.

Conclusion

Now-a-days the people especially the children depend more on unhealthy drink which is very dangerous for their health. The availability of Neera should be increased. The production and marketing of Neera as a health drink has to be permitted in the major coconut growing states of India.

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