

Brief Project Report for establishment of a Coconut Neera unit for 10000 litres per day capacity

1. Introduction

India stands first in productivity (8323 nuts/ha), *second in production (15730 millionnuts)* and *third in area under coconut*. The crop contributes more than Rs 8000 crores annually to the GDP and earns valuable foreign exchange to the extent of Rs 2000 crores by way of export of coconut products. The contribution of the crop to the vegetable oil pool in the country is about 5 per cent and the crop sustains 10 million people of the country through cultivation, processing, marketing and trade related activities. Under these circumstances, the crop holds much value in the Indian economy. Kerala has the *largest area under cultivation of coconut at 7.7 lakh Ha* and has the *number one position in production* among the Indian states. The state produces 52,870 lakh nuts per year (2010-11) and around 60% of this production occurs in the peak producing months from January to July. The crop also ranks second in the Gross Value Output (GVO) in Kerala. Around 42 lakh households in the state are engaged in coconut cultivation. Coconut cultivation in the state is undertaken mainly in small and marginal scattered holdings. This hampers the prospects of processing and value addition in coconut. Further, the mindset of the traditional coconut grower is attuned to processing for copra and coconut oil that their thoughts do not go out of this oil circle. But coconut is not just an oilseed crop. Exploiting the potentials of this crop to enable production of value added products will help in protecting the farmers from the annually recurring price fall during the peak production months.

It is in this context that products from the coconut inflorescence sap like Neera, coconut palm syrup, jaggery, coconut sugar etc gain importance. Neera is the non-alcoholic and nutritious drink from the immature inflorescence of coconut which can be promoted due to its potential for value addition, employment generation and better returns to the coconut farmers. Products like coconut flower syrup, jaggery and coconut palm sugar are produced from Neera.

The processing and nutritional attributes Neera is detailed below.

I. Neera

The vascular sap collected from immature unopened coconut inflorescence is popularly known as "**Neera**" in fresh form. It is a sugar containing juice and is a delicious health drink and a rich source of sugars, minerals and vitamins. It is sweet and oyster white in colour and translucent. It is tapped from the coconut inflorescence and is filtered, pasteurized, and bio preservatives added to preserve the product. Treated Neera can be preserved in cans upto 2 months at room temperature. It can also be packed in tetra packs or glass bottles. Tapping can be done for 6 months in an year. The cost of processing was found to be Rs. 3.80 in the case of bottled Neera (200 ml), Rs. 8.10 in case of canned Neera (200 ml) and Rs. 5.30 in flexible packages.

Uses of Neera :

Neera is popular as a **delicious health** drink. It is good for digestion, facilitates clear urination and prevents jaundice. The nutrient-rich "sap" is **has low Glycemic Index** (GI of only 35) and

hence **diabetic-friendly** since very low amounts of the sugar is absorbed into the blood. It is an **abundant source of minerals, 17 amino acids, vitamin C, broad-spectrum B vitamins**, and has a nearly neutral pH. Coconut crystals can be made out of this pure, low glycemic natural sap. While most brown sugar is boiled at temperatures up to 221 degrees F with the end product containing 93% sucrose, sap crystals contain only 0.5% glucose, 1.5% fructose, 16% sucrose and 82% inulin - a prebiotic that promotes digestive health. It can be used as an ideal sweetener. Neera fetches much better returns compared to copra.

Composition of Neera

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

2. The Project:

This project proposal envisages the establishment of a coconut neera unit for the production of 10000 litres of coconut neera per day.

3. LAND AND BUILDING:

Land requirement	--- 60 cents
Building Requirement	
Process Area + lab	--- 6000 sq ft
Storage Area	— 3000 sq ft
Utility Area	---1000 sq ft
Total Area	---10000 sq ft

4. INSTALLED CAPACITY:

Installed capacity of the plant is to process 10000 litres of coconut neera per day.

5. RAW MATERIAL REQUIREMENT AND COST OF RAW MATERIAL:

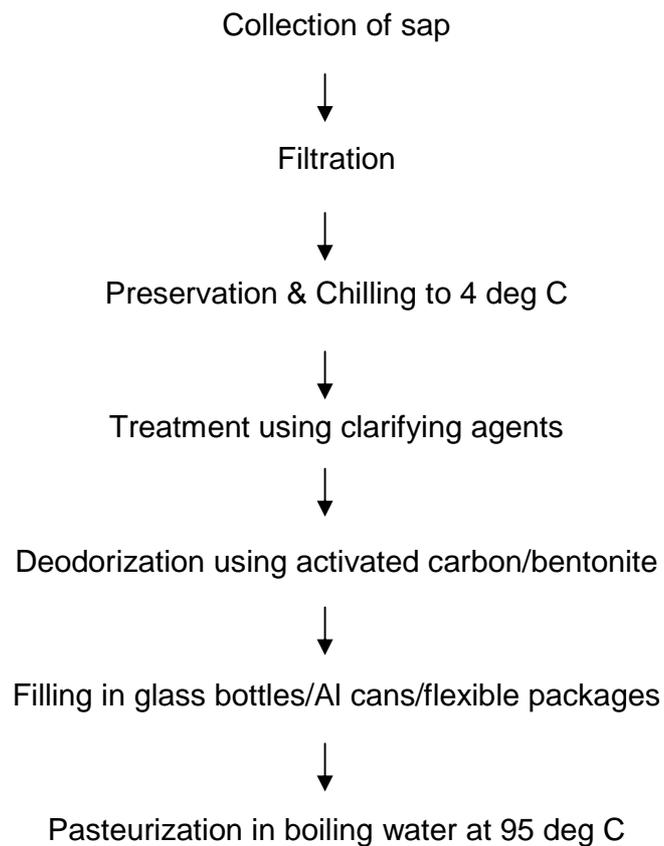
At the rate of 1000 litres per day, the Monthly requirement of raw material would be 3 lakh litres of freshly tapped coconut neera. The cost of raw material along with incidentals

such as transportation, loading and unloading at the plant site, taxes etc., would work out to Rs. 99.56 lakhs at 100% capacity utilisation stage.

6. PROCUREMENT OF RAW MATERIAL:

As far as possible raw material will be procured from Coconut Producer Federations by making advance arrangements.

Process flow chart for the production of Neera



PROJECT SUMMARY:

The proposed unit is for the production of 10000 litres of coconut neera per day. The total Capital Investment Cost of the Project is Rs.3Cr (300lakhs), the details of which are given below.

STATEMENT I
CAPITAL COST ESTIMATED

(Rs. in lakhs)

Sl .No.	Item	Amount in lakh
1.	Land (60 cent)	-----
2.	Building and other civil works (10000s sq ft	88.00
	Process area + lab (RCC) = 6000sqft @1000/ sq ft	60.00
	Storage go down = 3000@ 700/ sq ft	21.00
	Utility = 1000 @ 700/ sq ft	07.00
3.	Plant & Machinery	175.00
4.	Office equipments & Furniture	05.00
5.	Preliminary & preoperative Expenses	07.00
6.	Unforeseen contingencies	08.00
7.	Working capital margin	17.00
TOTAL		300.00

Mode of financing:

Equity : Rs.75 lakhs

Long Term Loan: Rs.225 lakhs

STATEMENT II
Operating Cost

(Rs. in lakhs)

Sl .No.	Item	Amount
I	Manufacturing Cost	
	a. Tapping cost	75.00
	b. Transportation charges	04.50
2	Tapping Devices and processing Devices	
	a. PP bottles	00.06
	b. Hypo chloride	10.50
	c. Peptide	04.50
	d. Cleaning	03.00
3	Other man power	02.00
Total		99.56

STATEMENT III

Sales Turnover

(Rs. in lakhs)

Sl .No.	Item / Product	Rate	Amount
1.	Neera	125/liter	375
Total			375

STATEMENT IV

NET INCOME STATEMENT

(Rs. in lakhs)

Sl .No.	Item	Amount
1.	Value of sales	375
2.	Less operating cost	99.56
3.	Less interest on	
	Lang term Loan	27
	Short term Loan	7.65
4.	Less depreciation	22.00
5.	Gross profit/loss	218.79
6.	Less corporative Tax (40%)	87.516
7.	Net profit after Taxation	131.274
Net Profit		131.274 Lakhs

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