

PROJECT REPORT OF COCONUT MILK PROCESSING UNIT PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Coconut Milk Processing Unit.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

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PROJECT AT GLANCE

1 Name of Proprietor/Director	XXXXXXXXXX
2 Firm Name	XXXXXXXXXX
3 Registered Address	XXXXXXXXXX
4 Nature of Activity	XXXXXXXXXX
5 Category of Applicant	XXXXXXXXXX
6 Location of Unit	XXXXXXXXXX
7 Cost of Project	22.44 Rs. In Lakhs
8 Means of Finance	
i) Own Contribution	2.24 Rs. In Lakhs
ii) Term Loan	16.20 Rs. In Lakhs
iii) Working Capital	4.00 Rs. In Lakhs
9 Debt Service Coverage Ratio	3.07
10 Break Even Point	0.28
11 Power Requirement	25 KW
12 Employment	8 Persons
13 Major Raw Materials	Dried coconut with husk shell and the core, Preservatives and Packing material
14 Details of Cost of Project & Means of Finance	

Cost of Project

Particulars	Amount in Lacs
Land	Owned/Leased
Building & Civil Work	Owned/Leased
Plant & Machinery	17.00
Furniture & Fixture	-
Other Misc Assets	1.00
Working Capital Requirement	4.44
Total	22.44

Means of Finance

Particulars	Amount in Lacs
Own Contribution	2.24
Term Loan	16.20
Working capital Loan	4.00
Total	22.44

1. INTRODUCTION



Coconut milk is a thick, white milky liquid produced from grated coconut after it has been soaked in boiling water. Its high oil content provides rich taste and color to the milk. It also offers health benefits, such as improving immunity, reducing the risk of cholesterol and heart attacks, and controlling blood pressure. Coconut milk is the liquid in the color of white, which is obtained manually or by mechanical extraction from comminuted coconut meat with or without adding water. Coconut milk is a common ingredient in many tropical cuisines, and It may be consumed raw by itself, or used as a milk substitute in tea, coffee. Coconut milk is rich in proteins such as albumin, globulin, prolamin, and glutelin. Emulsifying agents help in increasing the dispersibility and stability of food emulsions; examples of such are phospholipids, cephalin, and lecithin which have been found in coconut milk. Coconut Milk products are prepared using a significant amount of comminuted coconut meat are expressed, where most filterable fibers and residues are excluded, with or without coconut water, and/or with additional water, thermally processed and hermetically sealed in a container to prevent spoilage.

2. PRODUCT DESCRIPTION

2.1 PRODUCT USES

Coconut milk is healthy, vegan alternative to dairy milk. Coconut milk does not contain lactose and is lower in carbohydrates than dairy milk, which can be consumed by people who are lactose-intolerant or just don't enjoy the taste of dairy milk. Although regular canned coconut milk is higher in calories and fat than whole dairy milk, the plant-based saturated fat in coconut milk may provide health benefits not found in the animal-based saturated fat in dairy milk.

2.2 PRODUCT RAW MATERIAL

- **Coconuts:** Dried whole coconut with husk shell and the core can be procured for coconut milk processing.



- **Other:** Preservatives, Packing Material, etc.

2.3 MANUFACTURING PROCESS

This process can be broken down into the following steps-

- **Raw material procurement**
- **Milk Processing**
- **Packing**
- **Testing**

Raw Material Procurement

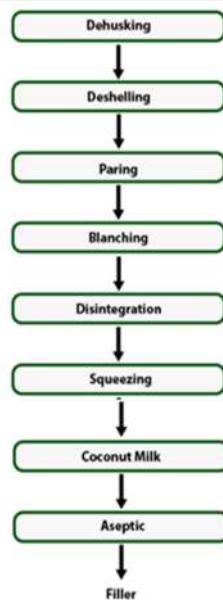
The raw materials are checked strictly as per established quality standards and requirements. Individual supplier assessment and supplier rating are done depending upon the rejection levels at the incoming quality control stage. Sorting of raw material will be done. And it will be stored in a neat and clean area for further processing.

Milk Processing

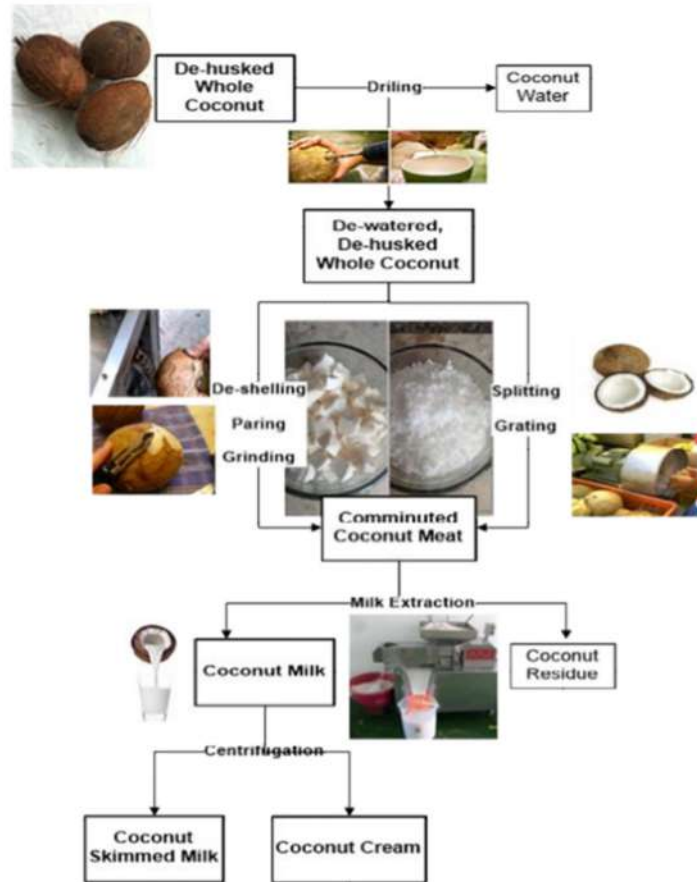
- **De-husking:** Dried coconut with husk will be collected at the de-husking area. Coconut DE husking involves removing the husk from the coconut. Traditional DE husking is time consuming and difficult process. The DE husking or husk peeler machine comprises the usage of two horizontal rollers with a series of sharp tools which would shear the husk from coconut when rolling against each other.
- **De-shelling:** In this process, cracking the outer coconut shell of the fruit after DE husking the coconut will be done. Coconut brown shell will be removed using a coconut de-shelling machine.
- **Paring:** Paring is the process of removing or scrapping off the brown skin from the coconut after cutting the kernel into pieces. This process is done using the coconut paring machine.
- **Blanching or washing:** Pared coconuts are dipped in boiling water for a few minutes in a blanching tank. In this process, the material will be cleaned.
- **Disintegration/ Coconut Grinding:** Desiccated coconut is the disintegrated and dehydrated coconut kernel or pulp largely comprising the white portion of the kernel, after removing the brown Testa or parings. The coconut pieces are ground to a smooth paste called the desiccated coconut. This process is done using a coconut grinding machine.
- **Coconut Milk Extraction:** The shredded or ground desiccated coconut is squeezed completely until all the milk is extracted. A coconut milk extracting machine is employed in this process of extracting coconut milk.
- **Filtration:** the extracted coconut milk is filtered using a vibro screen with a stainless filter of 100 mesh or finer.

- **Pasteurization:** Filtered coconut milk is pasteurized indirectly by double boiling at 70°C for 15 minutes
- **Packing:** once pasteurization temperature is achieved, the coconut milk is removed from the heat source, immediately transferred to stainless steel filling vessels hot-filled in appropriate containers, and sealed. For coconut liquid products, aseptic packaging can help distribute and store these perishable goods without refrigeration for more than six months. The aseptic packaging system achieves room temperature shelf stability by filling a sterilized package with sterilized coconut liquid products, all within the confines of a hygienic environment. This is different from other systems that use preservatives and refrigeration to prolong the product's shelf life. Laminated carton packages are the predominant form of packaging for coconut liquid products. Most of these are aseptically packed. Non-aseptically packed coconut liquid products using chilled distribution can also be found. Packed coconut milk is immersed in a cooling tank water bath to bring down the temperature. Storage: coconut milk packed in plastic bottles or pouches is subjected to blast freezing and transferred to freezers for cold storage. Canned coconut milk undergoes sterilization and remains stable at ambient storage after cooling.

Production Process for Coconut milk



PROCESSING OF COCONUT MILK AND COCONUT MILK PRODUCTS



Testing

Quality control

3. PROJECT COMPONENTS

3.1 Land & Building

The land required for this manufacturing unit will be approx. around 4000 square feet. Land Purchase and Building Civil Work Cost have not been considered as part of the cost of project. It is expected that the premises will be on rental and approximate rentals assumed of the same will be Rs.20,000 per month.

Land and building requirement may vary depending on the size of project.

3.2 Plant & Machinery

This is a semi-automatic type of plant and the production capacity is set to be 280 Kg of Coconut Milk per day.

Machines-

- **Coconut Husk Peeling Machine**

Coconut DE husking machine is used to remove the husk from the coconut. Traditional DE husking is time consuming and difficult process. This DE husking machine comprises the usage of two horizontal rollers with a series of sharp tools which would shear the husk from coconut when rolling against each other.



- **Coconut De-shelling Machine**

This machine is used for the coconut de-shelling process.



- **Coconut Paring Machine**

Paring is the process of removing or scrapping off the brown skin from the coconut after cutting the kernel into pieces. This process is done using the coconut paring machine.



- **Coconut Blanching Machine**

This machine is used for the coconut cleaning or blanching process.



- **Coconut Disintegrator/ Pasteurization or Milk Extraction Machine**

Coconut Milk Extractor machine is used to extract milk and low-fat desiccated coconut powder. The machine comes in various capacities from 10kg to 1000kg depending on the requirement. The fully automatic machine also comes with filters and pasteurization machines.



- **Coconut Milk Packing Machine**

This machine is used for coconut milk filling and sealing.



4 LICENSE & APPROVALS

Basic registration required in this project:

- Company registration/Partnership Firm Registration
- GST registration
- MSME Udyam registration
- BIS certification
- Trademark registration

PROJECTED BALANCE SHEET						(in Lacs)
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year	
<u>Liabilities</u>						
Capital						
Opening balance		5.32	8.79	11.97	16.22	
<i>Add:- Own Capital</i>	2.24					
Add:- Retained Profit	5.08	6.97	9.18	12.75	15.75	
Less:- Drawings	2.00	3.50	6.00	8.50	10.50	
Closing Balance	5.32	8.79	11.97	16.22	21.47	
Term Loan	14.40	10.80	7.20	3.60	-	
Working Capital Limit	4.00	4.00	4.00	4.00	4.00	
Sundry Creditors	1.53	1.81	2.11	2.44	2.79	
Provisions & Other Liability	0.40	0.48	0.58	0.80	0.96	
TOTAL :	25.66	25.88	25.85	27.06	29.22	
<u>Assets</u>						
Fixed Assets (Gross)						
Gross Dep.	2.70	5.00	6.95	8.60	10.01	
Net Fixed Assets	15.30	13.01	11.05	9.40	7.99	
Current Assets						
Sundry Debtors	3.09	3.74	4.36	5.03	5.76	
Stock in Hand	3.42	4.00	4.62	5.31	6.04	
Cash and Bank	1.85	2.84	3.32	3.32	3.93	
Loans & Advances	2.00	2.30	2.50	4.00	5.50	
TOTAL :	25.66	25.88	25.85	27.06	29.22	

PROJECTED PROFITABILITY STATEMENT					(in Lacs)
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
Capacity Utilisation %	40%	45%	50%	55%	60%
<u>SALES</u>					
Gross Sale					
COCONUT MILK PROCESSING UNIT	92.82	112.14	130.73	150.95	172.90
Total	92.82	112.14	130.73	150.95	172.90
<u>COST OF SALES</u>					
Raw Material Consumed	65.66	77.44	90.36	104.54	119.66
Electricity Expenses	1.92	2.16	2.40	2.64	2.88
Depreciation	2.70	2.30	1.95	1.66	1.41
Wages & labour	7.68	8.06	8.47	8.89	9.34
Repair & maintenance	0.93	1.12	1.31	1.51	1.73
Packaging	1.86	2.80	3.27	3.77	4.32
Cost of Production	80.75	93.88	107.75	123.02	139.34
Add: Opening Stock	-	1.88	2.19	2.51	2.87
Less: Closing Stock	1.88	2.19	2.51	2.87	3.25
Cost of Sales	78.86	93.57	107.43	122.66	138.96
GROSS PROFIT	13.96	18.56	23.30	28.29	33.94
GROSS PROFIT RATIO	15.04%	16.55%	17.83%	18.74%	19.63%
Salary to Staff	3.96	4.55	5.24	6.02	6.93
Interest on Term Loan	1.59	1.40	1.01	0.61	0.21
Interest on working Capital	0.44	0.44	0.44	0.44	0.44
Rent	2.40	3.00	3.75	4.50	4.95
Selling & Administrative Exp.	0.46	1.68	2.61	2.26	2.59
TOTAL	8.86	11.08	13.05	13.84	15.12
NET PROFIT	5.10	7.48	10.26	14.45	18.81
Taxation	0.02	0.52	1.08	1.70	3.06
PROFIT (After Tax)	5.08	6.97	9.18	12.75	15.75
NET PROFIT RATIO	5.47%	6.21%	7.02%	8.45%	9.11%

PROJECTED CASH FLOW STATEMENT					(in Lacs)
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
<u>SOURCES OF FUND</u>					
Own Margin	2.24				
Net Profit	5.10	7.48	10.26	14.45	18.81
Depreciation & Exp. W/off	2.70	2.30	1.95	1.66	1.41
Increase in Cash Credit	4.00	-	-	-	-
Increase In Term Loan	16.20	-	-	-	-
Increase in Creditors	1.53	0.27	0.30	0.33	0.35
Increase in Provisions & Oth labilities	0.40	0.08	0.10	0.22	0.16
	-				
TOTAL :	32.18	10.13	12.60	16.67	20.73
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	18.00				
Increase in Stock	3.42	0.58	0.63	0.69	0.73
Increase in Debtors	3.09	0.64	0.62	0.67	0.73
Repayment of Term Loan	1.80	3.60	3.60	3.60	3.60
Increase in Loans & Advances	2.00	0.30	0.20	1.50	1.50
Drawings	2.00	3.50	6.00	8.50	10.50
Taxation	0.02	0.52	1.08	1.70	3.06
TOTAL :	30.33	9.14	12.13	16.66	20.13
Opening Cash & Bank Balance	-	1.85	2.84	3.32	3.32
Add : Surplus	1.85	0.99	0.48	0.00	0.61
Closing Cash & Bank Balance	1.85	2.84	3.32	3.32	3.93

CALCULATION OF D.S.C.R					
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
CASH ACCRUALS	7.78	9.26	11.13	14.41	17.16
Interest on Term Loan	1.59	1.40	1.01	0.61	0.21
Total	9.37	10.67	12.13	15.02	17.37
REPAYMENT					
Instalment of Term Loan	1.80	3.60	3.60	3.60	3.60
Interest on Term Loan	1.59	1.40	1.01	0.61	0.21
Total	3.39	5.00	4.61	4.21	3.81
DEBT SERVICE COVERAGE RATIO	2.76	2.13	2.63	3.57	4.55
AVERAGE D.S.C.R.	3.07				

REPAYMENT SCHEDULE OF TERM LOAN

Interest 11.00%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	Closing Balance
1st	Opening Balance						
	1st month	-	16.20	16.20	-	-	16.20
	2nd month	16.20	-	16.20	0.15	-	16.20
	3rd month	16.20	-	16.20	0.15	-	16.20
	4th month	16.20	-	16.20	0.15		16.20
	5th month	16.20	-	16.20	0.15		16.20
	6th month	16.20	-	16.20	0.15		16.20
	7th month	16.20	-	16.20	0.15	0.30	15.90
	8th month	15.90	-	15.90	0.15	0.30	15.60
	9th month	15.60	-	15.60	0.14	0.30	15.30
	10th month	15.30	-	15.30	0.14	0.30	15.00
	11th month	15.00	-	15.00	0.14	0.30	14.70
	12th month	14.70	-	14.70	0.13	0.30	14.40
					1.59	1.80	
2nd	Opening Balance						
	1st month	14.40	-	14.40	0.13	0.30	14.10
	2nd month	14.10	-	14.10	0.13	0.30	13.80
	3rd month	13.80	-	13.80	0.13	0.30	13.50
	4th month	13.50	-	13.50	0.12	0.30	13.20
	5th month	13.20	-	13.20	0.12	0.30	12.90
	6th month	12.90	-	12.90	0.12	0.30	12.60
	7th month	12.60	-	12.60	0.12	0.30	12.30
	8th month	12.30	-	12.30	0.11	0.30	12.00
	9th month	12.00	-	12.00	0.11	0.30	11.70
	10th month	11.70	-	11.70	0.11	0.30	11.40
	11th month	11.40	-	11.40	0.10	0.30	11.10
	12th month	11.10	-	11.10	0.10	0.30	10.80
					1.40	3.60	
3rd	Opening Balance						
	1st month	10.80	-	10.80	0.10	0.30	10.50
	2nd month	10.50	-	10.50	0.10	0.30	10.20
	3rd month	10.20	-	10.20	0.09	0.30	9.90
	4th month	9.90	-	9.90	0.09	0.30	9.60
	5th month	9.60	-	9.60	0.09	0.30	9.30
	6th month	9.30	-	9.30	0.09	0.30	9.00
	7th month	9.00	-	9.00	0.08	0.30	8.70
	8th month	8.70	-	8.70	0.08	0.30	8.40
	9th month	8.40	-	8.40	0.08	0.30	8.10
	10th month	8.10	-	8.10	0.07	0.30	7.80
	11th month	7.80	-	7.80	0.07	0.30	7.50
	12th month	7.50	-	7.50	0.07	0.30	7.20
					1.01	3.60	

4th	Opening Balance						
	1st month	7.20	-	7.20	0.07	0.30	6.90
	2nd month	6.90	-	6.90	0.06	0.30	6.60
	3rd month	6.60	-	6.60	0.06	0.30	6.30
	4th month	6.30	-	6.30	0.06	0.30	6.00
	5th month	6.00	-	6.00	0.05	0.30	5.70
	6th month	5.70	-	5.70	0.05	0.30	5.40
	7th month	5.40	-	5.40	0.05	0.30	5.10
	8th month	5.10	-	5.10	0.05	0.30	4.80
	9th month	4.80	-	4.80	0.04	0.30	4.50
	10th month	4.50	-	4.50	0.04	0.30	4.20
	11th month	4.20	-	4.20	0.04	0.30	3.90
	12th month	3.90	-	3.90	0.04	0.30	3.60
					0.61	3.60	
5th	Opening Balance						
	1st month	3.60	-	3.60	0.03	0.30	3.30
	2nd month	3.30	-	3.30	0.03	0.30	3.00
	3rd month	3.00	-	3.00	0.03	0.30	2.70
	4th month	2.70	-	2.70	0.02	0.30	2.40
	5th month	2.40	-	2.40	0.02	0.30	2.10
	6th month	2.10	-	2.10	0.02	0.30	1.80
	7th month	1.80	-	1.80	0.02	0.30	1.50
	8th month	1.50	-	1.50	0.01	0.30	1.20
	9th month	1.20	-	1.20	0.01	0.30	0.90
	10th month	0.90	-	0.90	0.01	0.30	0.60
	11th month	0.60	-	0.60	0.01	0.30	0.30
	12th month	0.30	-	0.30	0.00	0.30	-
					0.21	3.60	
	DOOR TO DOOR	60		MONTHS			
	MORATORIUM PERIOD	6		MONTHS			
	REPAYMENT PERIOD	54		MONTHS			

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