

Project Profile On Desiccated Coconut Powder



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Introduction

India is the third largest coconut producing country in the world. As per the survey reports conducted by coconut development board in 2013-14 the annual production of coconut in Kerala is 5798.04 million nuts and the state has become the 3rd largest coconut producing state in the country. In Kerala about 60% of the coconuts are used for the manufacturing of oil and the rest for the preparation of food. Copra and coconut oil are the two major products of the coconut processing industry. Nearly 60% of the total production of nuts is utilized for food uses and the rest goes in for oil extraction. In spite of the fact that Kerala has the necessary raw material to launch new product lines, minimum efforts has been taken place for producing more value added products like coconut chips. Coconut vinegar, desiccated coconut powdered has taken place in the application of modern technology for full utilization of various coconut products such as desiccated coconut, coconut cream powder, partially defatted coconut gratings, bottled coconut water, etc., Desiccated coconut is widely used in the preparation of sweets, confectionery, curry preparation etc. At present about 4000 tones of desiccated coconut is produced annually. The main concentration of units producing desiccated coconut is in Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, Orissa and Maharashtra. Desiccated coconut is not only a value

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added product but it being a labor intensive industry will also generate a large number of employment opportunities.

Market Potential

Being a mass consumption item, desiccated coconut has a good market. At present about 4000 tones of desiccated coconut is manufactured annually and used mainly by confectionery and biscuit industry. In Kerala coconut is the major ingredient used in the preparation of Breakfast lunch and Dinner. In the preparation of curries coconut paste is usually added. Instead of that desiccated coconut powder may be added. Desiccated coconut may find good market in areas where coconuts are not produced particularly in Northern India. Now-a-days food habits of our people are changing very fast and a number of food items are being introduced every day where desiccated coconut may also find use. So there is a good scope for new small scale units to come up in this line of manufacture.

Basis and Presumptions

The Project Profile is based on the following presumptions:

- (i) Working hours/shift : 8 hrs
- (ii) No. of shift/day : 1
- iii) (Working days : 300
- iv) Labor charges : As per State Government's Minimum Wages Act.
- v) Rate of interest : 15%
- vi) Value of machinery and equipments : Taken on the basis of a particular supplier
- vii) Value of raw material : As per local market Packing material/others rate (on whole sale rate)
- viii) Land : owned
- ix) Building Construction charge : @Rs. 2000 per sqft
- x) Break-even Point Calculated on full capacity utilization basis
- (xi) Pay-back period 7 years

Implementation Schedule

The project implementation schedule

- (i) Project preparation 0-1 month
- (ii) Site selection, acquisition of 1-2 months land and land development
- (iii) Sanction of loan 1-3 months
- (iv) Construction of building 3-4 months (v) Sanction of electric power, water 4-5 months vi) Procurement of Machinery 5-6 months and Equipments
- (vii) Electrification & installation 6-7 months
- (viii) Recruitment of staff and labour 7-8 months
- (ix) Trial run 8-10 months
- (x) Commercial production 10-11 months

The project could yield result by the end of the 12th month.

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Government Policy

Being a food processing unit it will be eligible to get 25-to30% subsidy on the total fixed capital investment under ESS Scheme and 15-35% subsidy on the total project cost under PMEGP Scheme.

Technical Aspects

Process of Manufacture First step in the manufacture of desiccated coconut is the selection of coconuts. The quality of desiccated coconut depends upon the quality of coconuts used. Fully matured coconuts of about 12 months are used for the preparation of desiccated coconut. Fully matured nuts are stored with the husk for about one month so that the water inside the kernels is absorbed. This also facilitates coconut kernels to get separated from shell walls. The coconuts are dehusked and their shells are removed. The brown portion of nuts called tasta is removed by scrapping it off. About 10-15% of the kernel goes as paring by this process. These parings can be pressed out after drying to get oil which can be used for soap making. Deshelled coconuts are broken into pieces, washed properly and disintegrated into powders of various grades. The powder is then dried in a drier by spreading it out uniformly in trays. The temperature in the drying chamber is maintained at about 180O F and the powder is stirred occasionally during the drying process to ensure uniform drying. Great care should be taken during drying. When powder is dried, it is cooled and passed through a vibratory screen having different sizes (12, 14 and 16 mesh). The segregated material is packed in oil proof, moisture proof polythene lined plywood boxes of 25 kgs. It may also be packed in polybags of 250 gms, 500 gms for retail sale. During the process of manufacturing desiccated coconut, a number of byproducts such as coconut shell, parings, and husks are obtained which may be converted into various items of great importance. It has been worked out that 100 kgs of desiccated coconut is obtained from 1000 coconuts.

Quality Control and Standards

The unit should obtain licence under the Food Safety and Standards Authority of India.

Pollution Control

The main effluent produced in the process of desiccated coconut is the after wash water having dissolved solids and coconut oil. The level of dissolved solids and oil is not significant and the effluent water could be safely used for irrigation purpose or drained out after trapping solids and oils. The water having detergent used for cleaning equipments should be disposed off separately. Proper disposal facility should be made available for dumping refuse and perishable spoiled products and a separate pit constructed for this purpose. Proper hygiene and sanitation will ensure environment free of pollution. However, a no objection certificate is required to be obtained from State Pollution Control Board and care should be taken to control pollution Energy Conservation Electrical energy is the main energy source in the process of desiccated

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coconut manufacturing. Efforts should be made to keep power load at the minimum at a time. Capacitors should be fitted for motors to keep power factor to its maximum. Improved designs of tube light with electronic choke should be fitted for lighting purposes for getting efficient light with less electric energy consumption. Factory shed should be constructed in such a way that natural light could be utilized, optimum temp. should be maintained in the drying chamber to get desired product with less energy. Proper maintenance of electrical equipments and machinery will further ensure energy conservation. Proper monitoring should be done in the operation of machinery and equipment particularly drier and when not required, it should be switched off.

The financial aspects are detailed below.

FINANCIAL ASPECTS		
A	FIXED CAPITAL	
i)	Land and Building	
Sl.No	Particulars	Amount(in Rs)
1	Land	Owned
2	Building 2000sqft @Rs.2000per Sqft	400000
3	Over Head Tank	40000
	Total	440000

ii)	Machinery and Equipments	
Sl.NO	Particulars	Amount(in Rs)
1	Cabinet type hot air drier with blower, motor and other accessories	185000
2	Disintegrator 12" size with 10HP motor and accessories	105000
3	Vibratory sifting machine fitted with GI wire mesh and 2 Hp motor	50000
4	Aluminium Trays 10 nos	15000
5	Platform weighing Balance	10000
6	Polythene sealing machine 2 nos	5000
7	Other misc items like scrapping knives, trolleys etc	10000
8	working tables	20000
9	Lab testing equipments	20000
10	Electrification and installation	50000
11	Essential Office furniture	25000
	Total	495000

iii)	pre Operative Expenses		25000
	TOTAL FIXED CAPITAL (i+ii+iii)		960000

B	WORKING CAPITAL		(For one month)
i)	RAW MATERIALS		
1	coconut with husk 75000nos 2 Rs 10		750000
2	Polythene bags 75 kg @ Rs120 per bag		9000
3	Plywood Boxes of 25kg capacity 300nos @ Rs.100 per box		30000
4	Labels, gums and other packing aids L.S		10000
	Total		799000

ii)	SALARIES AND WAGES	
I	Manager cum Food technologist	
1		20000
2	sales man	10000
3	Skilled workers-2	30000
4	Helpers 10 nos	50000
	Total	110000
iii)	utilities	
1	Electricity charges	4000
2	water	300
3	Firewood	7000
	Total	11300

iv)	Other Contingencies	
1	Printing postage, telephone	400
2	Repair and maintenance	1000
3	Transportation	5000
4	Advertisement and publicity	5000
5	Insurance	1000

6	Misc	1300
	Total	13700
	Total working capital(i+ii+iii+iv)	934000

C	TOTAL CAPITAL INVESTMENT		
	a)	Fixed Capital	960000
	b)	working Capital	934000
	Total		1894000
D	Source of Fund		
	a	Term loan	720000
	b	working Capital Loan	700500
	c	Own fund	473500
	Total		1894000

E **Total loan required** **1420500**

	The Capacity utilization in this project has been worked out to be 60% in the 1st year 70% in the 2nd year		
F	cost of production		
1	Total recurring expenditure		934000
2	Depreciation on Building and tank @5%		1833
3	Depreciation on machinery and equipments @10%		2917
4	Depreciation on hand tools@15%)		438
5	Depreciation on Office equipments@20%		1000
6	Interest on loan(15%)		17756
	Total production cost		957944
	Say		958000

G	Turnover (per month) in Rs		
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1	Desiccated Coconut		975000
	7.5 Tone @ Rs.130000 per ton)		
2	Coconut shell		
	2 MT @35000per mt		70000
3	Coconut husk 75000 nos @ 40ps)		30000
	TOTAL		1075000

Net profit per month 117000

Annual profit **1404000**

(Before tax)

Net profit Ratio on sales 11%

The above net profit is sufficient for the repayment of loan amount of Rs. 1420500 @ Rs. 16920 per month with interest and also to meet the monthly living expenses of the promoter and his family. The project is found to be technically feasible, economically viable and eligible for being financed. BEP and viable and eligible for being financed. BEP and repayment schedule are shown below

K	BREAK EVEN POINT			
	I)	FIXED COST		
		a)	Depreciation	6188
		b)	Interest	17756
		c)	40% of salary and wages	44000
		d)	40% Of other expenses	5480
	Total			73424
	2)	Net profit		117000
	BEP	$\frac{\text{FIXED COST} \times 100}{(\text{FIXED COST} + \text{NET PROFIT})}$		38.56%

REPAYMENT SCHEDULE
Basis; Interest rate 15%, period of repayment 7yrs

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Year	Opening Balance	Amount repayable			Closing Balance	
		principal	Interest	Total		
1st	1420500	202930	213825	416755	1217570	
2nd	1217570	202930	182636	385566	1014640	
3rd	1014640	202930	152196	355126	811710	
4th	811710	202930	121757	324687	608780	
5th	608780	202930	91317	294247	405850	
6th	405850	202930	60878	263808	202920	
7th	202920	202920	30438	233358	0	

LIST OF MACHINERY SUPPLIERS

- 1) M/s. Avery India Ltd. Falnir Road Cross, Mangalore - 1.
- 2) M/s. GanapathiBhandarkar and Company Azizuddin Road, Mangalore - 1.
- 3) Premier Engg. Products, 3rd floor, C.R.C. Building, M.G. Road, Cochin - 682 011. (Dryer) Heat Flow Engineers, Plot 305, Netaji Nagar, Perungadi, Madras - 600 096. (Dryer)