

CASHEW PROCESSING

1. INTRODUCTION

Cashewnut processing units in Andhra Pradesh and Orissa are mainly concentrated in few districts. These units have a capacity from 12 MT's to 150 MT's of Raw Cashewnut Processing. Most of the units have investment ranging from Rs 1.00 lakh to Rs 43.00 Lakhs. Number of employees in the unit's range from 20 to 60 persons, mostly women. Almost all the units use the well-known drum roasting method for cashew kernal extraction. These units operate intensively on manual labour comprising of skilled women.

There exists good potential for cashew processing in AP and Orissa.

2. MARKET

There exists good market in India for Cashewnut and tremendous export potential. The Markets for Processed cashew Nuts is growing.

3. MANUFACTURING PROCESS

(a) Drum Roasting

In this process the nuts (without any conditioning) are fed into a rotating drum, which is heated initially to red hot sufficiently to allow the shell portion of the nut to ignite and burn. Once ignition starts no further heating is necessary and the drum maintains the temperature on its own because of the burning of oil, which oozes out of the nuts. The temperature of the drum is fairly high. It is stated that in this method of roasting shell becomes very brittle and the rate of shelling and out-turn of whole kernal is higher compared to other methods. The roasting generally takes about 3-5 minutes and the drum is rotated by hand.

The roasted nuts, which are still burning are removed from the discharge end and immediately covered by ash to absorb the oil that is found on the surface. Kernels obtained in this process have a better color than in the other processes. However, a disadvantage of this method of roasting is the total loss of shell liquid, which has a good commercial value. Any little advantage in percentage of better quality kernal claimed to be obtained by this process cannot offset the additional income that one can

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This method of roasting is finding increasing acceptance in all parts of India. In this method, the raw cashewnuts are treated in a cooker filled with steam at 100-110 Kg./Cm² for about 15 minutes. The treated raw nuts are spread out on the floor for cooling and then sent to the shelling section the next day. The turnout and appearance of whole kernels from raw nuts treated in this method are said to be better than in any other method. The cashewnut shell liquid (CNSL) obtained in this method from the shells is very clear and command a premium price. About 75% of the CNSL can be extracted from the shells.

Storage

The Cashewnut along with shell is unloaded from the wooden boxes and the nuts are manually separated from the apple. The cashewnuts are dried in an open air if not intended for immediate processing and drying normally takes about 24 hours.

Cleaning and Sizing

Nuts must be cleaned before they are separated and grouped according to size.

Conditioning

Conditioning is done by adding water for 10 minutes and then draining. This operation is done several times until the cashewnuts have absorbed the required moisture. Conditioning is not required in case if the raw cashewnut is immediately processed without storage.

Roasting

Roasting is carried out at a temperature of 185°C to 190°C to remove the moisture from the nuts. After roasting, the nuts are cooled using cooled water spray and centrifuged in order to remove the excess liquid.

Shelling

Shelling is the removal of dry roasted shell. By striking the head of the nut, the natural line of cleavage is broken. It is important when shelling the nut that the kernal is not broken as whole nuts command a higher price in the market. This operation is done manually mostly by skilled women.

Wood ash is applied to the hands to prevent damage to the hands and kernel.

4. PRODUCTION CAPACITY PER ANNUM

Capacity

36000 Kgs Cashew Nuts per

Selling Price

Rs.

280 Rs Per Kg

5. PROJECT COST/CAPITAL INVESTMENT

S.No	Description	Amount Rs.
1	Preliminary & Preoperative Expns	5000
2	Fixed Capital	2450000
3	Working Capital for 1 month(s)	807000
	Total Project Cost	3262000

6. MEANS OF FINANCE

S.No	Description	%age	Amount Rs.
1	Promoter Contribution	15%	489300
2	Subsidy /Soft Loan	20%	652400
3	Term Loan	65%	2120300
	Total		3262000

7. FINANCIAL ASPECTS

A. FIXED CAPITAL

i. Land and Buildings Rented 4000 per month

ii. Machinery and Equipment

S.No	Description	Qty.	Rate	Amount Rs.
1	Drum Rpasting Machinery Lum	1	600000	600000
2	Steam Roasting Machinery	1	1200000	1200000
3	Packing machine	2	300000	600000
4	Other equipments and tools Lum	1	50000	50000
	Total			2450000

B. WORKING CAPITAL

i. Salaries & Wages (per month)

S.No	Description	Nos.	Sal/mon.	Amount Rs.
1	Supervisor/Entrepreneur	1	2500	2500
2	Skilled workers	20	2000	40000
3	Workers	10	1500	15000
	Total			57500

ii. Raw Material (per month)

S.No	Description	Unit	Qty.	Rate	Amount Rs.
1	Raw Cashew	Kgs	28000	26	728000
	Total				728000

iii. Utilities (per month)

S.No	Description	Unit	Amount Rs.
1	Power	LS	1000
2	Fuel	Ls	4000
3	Water	LS	500
	Total		5500

iv. Other Expenses (per month)

S.No	Description	Amount Rs.
1	Postage & Stationery Expenses	2000
2	Transportation Expenses	2000
3	Advertisement Expenses	3000
4	Consumable Stores	1000
5	Miscellaneous Expenses	5000
	Total	13000

v. Total Working Capital (per month)

S.No	Description	Amount Rs.
1	Rent	3000
2	Salaries and Wages	57500
3	Raw Material	728000
4	Utilities	5500
5	Other Expenses	13000
	Total	807000

8. COST OF PRODUCTION (PER ANNUM)

S.No	Description	Amount Rs.
1	Total Working Capital	9684000
2	Depreciation @ 15%	367500
3	Interest @ 12%	254436
	Total	10305936

9. TURNOVER (PER YEAR)

S.No	Description	Unit	Qty.	Rate Rs.	Amount Rs.
1	Cashew nuts	Kgs	36000	310	11160000
	Total				11160000

10. FIXED COST (PER YEAR)

S.No	Description	Amount Rs.
1	Depreciation	367500
2	Interest	254436
3	Rent	48000
4	Salaries & Wages @ 40%	276000
5	Other Expenses incl. Utilities @ 40%	88800
	Total	1034736

11. PROFIT ANALYSIS & RATIOS

1	Net Profit	Rs.	854064
2	Percentage of Profit on Sales		8%
3	Percentage of Return on Investment		26%
4	Break Even Point		55%