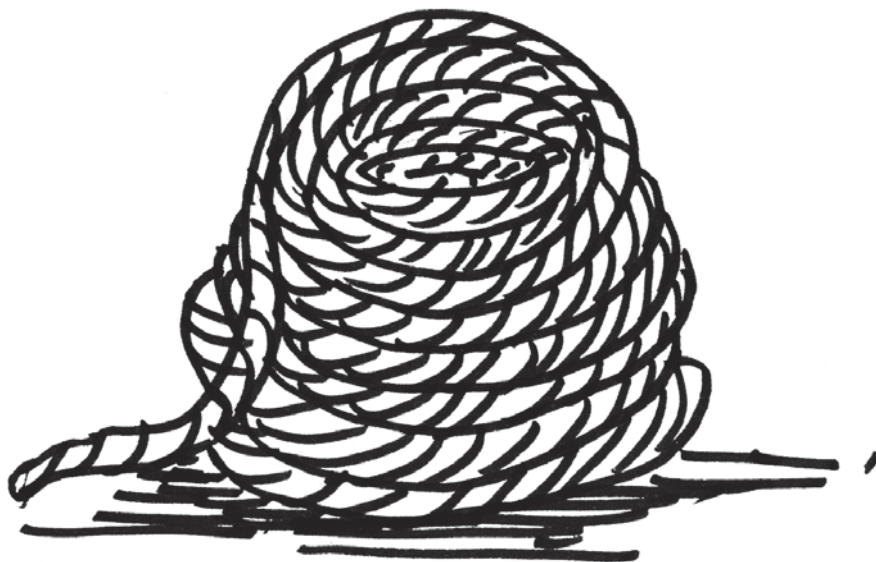


COIR ROPE



1.0 INTRODUCTION

India is the largest coir producer in the world accounting for more than 80 per cent of the total world production of coir fibre. Historically, the coir industry started and flourished in Kerala which has a long coast line, lakes, lagoons and backwaters providing natural conditions required for retting. However, with the expansion of coconut cultivation, coir industry has picked up in the States of Tamil Nadu, Karnataka, Andhra Pradesh, Orissa, West Bengal, Assam, Tripura, Pondicherry and the Union Territories of Lakshadweep and Andaman & Nicobar Islands. There is significant production of coconuts in Tripura also. This could form the basis for development of the coir industry in the North East which can generate substantial employment. The main uses of coir rope/yarn are in the construction of houses, industrial building, tying ladders, packing of large boxes and also for drawing water from wells.

This project profile is for setting up of a Coir Rope Making unit with installed capacity of producing 100 Ton Coir

Rope per annum, based on 300 working days per annum and 8 working hours per day.

2.0 MARKET POTENTIAL

Due to tremendous rise in the construction of Multi-storied building, ownership flat, shopping mall in the city and urban areas, stadium, Govt. and Private offices and RCC construction in the rural areas the demand of coir yarn or rope has been increasing drastically.

3.0 PROCESS DETAILS

The main process steps involved are;

A. Collection and storage of husk.

B. Extraction of fibre.

C. Spinning of extracted fibre.

D. Conversion of spun fibre to yarn/rope in machine.

4.0. COST OF THE PROJECT

The estimated project cost is given below:

		(Rs. in lacs)
Particulars	Amount (Rs)	
Land & Site Development	Own Land/ On Lease	
Building & Civil works	4.74	
Plant & Machinery	7.10	
Misc. Fixed assets	2.60	
Preliminary & pre-operative expenses	0.88	
Contingencies & escalation @ 3%	0.43	
Working capital	0.85	
TOTAL	16.60	

4.1 Land & Site Development: Nil.

Total Land: 3,000 Sq. Ft. ; Covered Area: 1,200 Sq. Ft.

4.2 Building & Civil Works: Details of building & civil works are given below.

Particulars	Area (Sq ft.)	Rate (Rs)	Amount (Rs)
Work Shed, Storage and Office	1500	275	412500
Sub total			412500
Add: Water supply and sanitation @ 10%			61875
TOTAL			474375
Say (Rs. in lacs)			4.74

4.3 Plant & Machinery: Details of plant & machinery are given below.

Particulars	Qty	Amount (Rs)
Buster 15 HP	1	625000
Decorticator	1	
Shifter	1	
Baling Press 2 HP	1	
Willowing Machine	1	
Traditional Motorised Ratts	20	
Re-hanking Frame & Accessories	15	
Miscellaneous items	LS	20000
Sub total		645000
Add: Installation, transportation, etc @ 15%		64500
TOTAL		709500
Say (Rs. in lacs)		7.10

4.4 Misc. Fixed assets: Details of miscellaneous fixed assets are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Electrification and Transformer	1	200000	200000
Furniture & fixtures	LS	--	6000
Miscellaneous items like Water Pump etc	LS	--	30000
Sub total			236000
Add: Installation, transportation, etc @ 10%			23600
TOTAL			259600
Say (Rs. in lacs)			2.60

4.5 Contingencies & escalation: Contingencies & escalation has been assumed at 3% of the cost of land & site development, building & civil works, plant & machinery and miscellaneous fixed assets.

4.6 Preliminary & pre-operative expenses: Details of preliminary & pre-operative expenses are given below.

(Rs. In lacs)	
Particulars	Amount (Rs)
Travelling expenses	10000
Professional & other fees	25000
Interest during implementation	38357
Miscellaneous expenses	15000
TOTAL	88357
Say (Rs. in lacs)	0.88

4.7 Working capital: Details of working capital are given below.

(Rs. in lacs)				
	Period (Days)	Total Current Assets		
		Year 1	Year 2	Year 3
Raw materials	30	0.39	0.45	0.52
Power & utility	30	0.07	0.08	0.10
Salary	30	0.52	0.53	0.53
Finished Goods	15	0.51	0.55	0.59
Receivables	15	0.63	0.73	0.84
Total		2.12	2.34	2.57
Working capital margin in Year 1 (40%)	0.85			

5.0 MEANS OF FINANCE

The means of finance for the project is estimated as below.

(Rs. in lacs)		
Particulars	Percent	Amount
<u>EQUITY</u>		
A. Equity from Promoters	40%	6.64
B. Subsidy from Central/State Govt.	-	
<u>DEBT</u>		
Term Loan from Banks/Financial Institutions	60%	9.96
TOTAL	100%	16.60

6.0 PROFITABILITY STATEMENT

(Rs. in lacs)						
Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
<u>A. INCOME</u>						
Production Capacity (Ton/annum)	100	100	100	100	100	100
Capacity utilisation	60%	70%	80%	80%	80%	80%
Production/annum at capacity utilisation	60	70	80	80	80	80
Total income/annum	15.30	17.85	20.40	20.40	20.40	20.40

B. OPERATING EXPENSES						
Raw Materials	4.72	5.51	6.29	6.29	6.29	6.29
Power & Utility	0.87	1.02	1.17	1.17	1.17	1.17
Salary	6.36	6.39	6.42	6.46	6.49	6.52
Repair & Maintenance	0.23	0.23	0.24	0.24	0.25	0.25
Other Expenses	0.15	0.18	0.20	0.20	0.20	0.20
Total Operating Expenses	12.33	13.33	14.32	14.36	14.40	14.43
Operating profit	2.97	4.52	6.08	6.04	6.00	5.97
C. FINANCIAL EXPENSES						
Depreciation	0.70	0.70	0.70	0.70	0.70	0.70
Interest on Term Loan	0.80	0.72	0.56	0.41	0.25	0.09
Interest on Working Capital Loan	0.10	0.11	0.12	0.12	0.12	0.12
Net Profit	1.37	2.99	4.69	4.81	4.94	5.06
Net cash accruals	2.07	3.68	5.39	5.51	5.63	5.76
Principal Repayment	0.00	1.99	1.99	1.99	1.99	1.99

6.1 Production capacity and Sales Realisation: Total production of **Coir Rope** at 100% capacity utilization is estimated as below.

Coir Rope	100 Ton
Total production per annum at 100% capacity	100 Ton

Products	Qty	Average Rate Per Unit (Rs.)	Amount (Rs)
Coir Rope	100 Ton	25500	2550000
Total Sale Turnover per annum at 100% capacity			2550000

6.2 Raw materials: Total expenses on raw materials at 100% capacity utilization are estimated as below.

Products	Qty	Average Rate Per Unit (Rs.)	Amount (Rs)
Coconut Husk	143 Ton	5500	786500
Total Raw Material per annum at 100% capacity			786500

6.3 Power & Utility: Total expenses on power & utility at 100% capacity utilization is estimated as below.

Particulars	Quantity	Power (Kw)	Total (Kw)
Plant & Machinery (Total HP of 20)	--	14.92	14.92
General Lighting	10	0.10	1.00
Total power requirement/ day (Kw)			15.92
No. of hrs/day	8		
No. of days/annum	300		
Annual power requirement (kwh)	38208		
Rate per unit (Rs)	3.50		
Expenses on Power (Rs)	133728		
Expenses on other Utility (Rs)	12000		
Expenses on power & utility at 100% capacity (Rs)	145728		

- 6.4 Salary:** Total expenses on salary in the 1st year are estimated as given below. It is assumed that salary expenses will increase @ 0.5% every subsequent year.

Particulars of Employees	Numbers	Salary/ Month (Rs)	Cost/ annum (Rs)
Manager	1	8000	96000
Technicians/ machine operators	2	5000	120000
Skilled workers	5	4000	240000
Unskilled workers	5	3000	180000
Expenses on salary in the 1st year (Rs)			636000

- 6.5 Repair & Maintenance:** Total expenses on repair & maintenance in the 1st year is estimated as given below. It is assumed that expenses on repair & maintenance will increase @ 2% every subsequent year

(Rs. in lacs)

Particulars	Cost (Rs)	Rate	Amount (Rs)
Building & Civil works	4.74	1.00%	0.05
Plant & Machinery	7.1	2.00%	0.14
Misc. Fixed assets	2.60	1.50%	0.04
Expenses on repair & maintenance in year 1			0.23

- 6.6 Other Expenses:** Other expenses have been assumed at 1% of sales realisation.

- 6.7 Depreciation:** Depreciation has been calculated by straight line method. The details of calculation are given below.

(Rs in lacs)

Description	Cost (Rs)	Rate	Amount/ annum (Rs)
Building & Civil works	4.74	3.34%	0.16
Plant & Machinery	7.10	5.28%	0.37
Misc. Fixed assets	2.60	6.33%	0.16
TOTAL			0.70

- 6.8 Interest on term loan & principal repayment:** Interest rate has been assumed at 8%. Duration of Loan repayment has been considered for a period of 6 years including moratorium period of 1 year with equal monthly instalments. The details of calculation are given below.

(Rs in lakh)

Month	Year	1	2	3	4	5	6
Month 1	Opening balance	9.96	9.96	7.97	5.98	3.98	1.99
	Repayment	0.00	0.17	0.17	0.17	0.17	0.17
	Interest (8%)	0.07	0.07	0.05	0.04	0.03	0.01
	Closing balance	9.96	9.80	7.80	5.81	3.82	1.83
Month 2	Opening balance	9.96	9.80	7.80	5.81	3.82	1.83
	Repayment	0.00	0.17	0.17	0.17	0.17	0.17
	Interest	0.07	0.07	0.05	0.04	0.03	0.01
	Closing balance	9.96	9.63	7.64	5.65	3.65	1.66
Month 3	Opening balance	9.96	9.63	7.64	5.65	3.65	1.66
	Repayment	0.00	0.17	0.17	0.17	0.17	0.17
	Interest	0.07	0.06	0.05	0.04	0.02	0.01
	Closing balance	9.96	9.46	7.47	5.48	3.49	1.49
Month 4	Opening balance	9.96	9.46	7.47	5.48	3.49	1.49

	Repayment	0.00	0.17	0.17	0.17	0.17	0.17
	Interest	0.07	0.06	0.05	0.04	0.02	0.01
	Closing balance	9.96	9.30	7.31	5.31	3.32	1.33
Month 5	Opening balance	9.96	9.30	7.31	5.31	3.32	1.33
	Repayment	0.00	0.17	0.17	0.17	0.17	0.17
	Interest	0.07	0.06	0.05	0.04	0.02	0.01
	Closing balance	9.96	9.13	7.14	5.15	3.15	1.16
Month 6	Opening balance	9.96	9.13	7.14	5.15	3.15	1.16
	Repayment	0.00	0.17	0.17	0.17	0.17	0.17
	Interest	0.07	0.06	0.05	0.03	0.02	0.01
	Closing balance	9.96	8.97	6.97	4.98	2.99	1.00
Month 7	Opening balance	9.96	8.97	6.97	4.98	2.99	1.00
	Repayment	0.00	0.17	0.17	0.17	0.17	0.17
	Interest	0.07	0.06	0.05	0.03	0.02	0.01
	Closing balance	9.96	8.80	6.81	4.82	2.82	0.83
Month 8	Opening balance	9.96	8.80	6.81	4.82	2.82	0.83
	Repayment	0.00	0.17	0.17	0.17	0.17	0.17
	Interest	0.07	0.06	0.05	0.03	0.02	0.01
	Closing balance	9.96	8.63	6.64	4.65	2.66	0.66
Month 9	Opening balance	9.96	8.63	6.64	4.65	2.66	0.66
	Repayment	0.00	0.17	0.17	0.17	0.17	0.17
	Interest	0.07	0.06	0.04	0.03	0.02	0.00
	Closing balance	9.96	8.47	6.48	4.48	2.49	0.50
Month 10	Opening balance	9.96	8.47	6.48	4.48	2.49	0.50
	Repayment	0.00	0.17	0.17	0.17	0.17	0.17
	Interest	0.07	0.06	0.04	0.03	0.02	0.00
	Closing balance	9.96	8.30	6.31	4.32	2.32	0.33
Month 11	Opening balance	9.96	8.30	6.31	4.32	2.32	0.33
	Repayment	0.00	0.17	0.17	0.17	0.17	0.17
	Interest	0.07	0.06	0.04	0.03	0.02	0.00
	Closing balance	9.96	8.14	6.14	4.15	2.16	0.17
Month 12	Opening balance	9.96	8.14	6.14	4.15	2.16	0.17
	Repayment	0.00	0.17	0.17	0.17	0.17	0.17
	Interest	0.07	0.05	0.04	0.03	0.01	0.00
	Closing balance	9.96	7.97	5.98	3.98	1.99	0.00
	Principal Repayment	0.00	1.99	1.99	1.99	1.99	1.99
	Interest	0.80	0.72	0.56	0.41	0.25	0.09

7.0 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

Year	1	2	3	4	5	6
Profit After Tax (Net Profit)	1.37	2.99	4.69	4.81	4.94	5.06
Depreciation	0.70	0.70	0.70	0.70	0.70	0.70
Interest	0.80	0.72	0.56	0.41	0.25	0.09
Total	2.86	4.41	5.95	5.92	5.88	5.84
Interest	0.80	0.72	0.56	0.41	0.25	0.09
Loan repayment	0.00	1.99	1.99	1.99	1.99	1.99
Total	0.80	2.72	2.56	2.40	2.24	2.08
DSCR	3.59	1.62	2.33	2.47	2.63	2.81

Average DSCR = 2.87

8.0 BREAK EVEN POINT (BEP)

(Rs. in lacs)

Year	1	2	3
A. Net sales	15.30	17.85	20.40
B. Variable cost			
Raw Materials	4.72	5.51	6.29
Power & Utility	0.87	1.02	1.17
Other expenses	0.15	0.18	0.20
Interest on Working Capital Loan	0.10	0.11	0.12
Total variable cost	5.85	6.82	7.79
C. Contribution (A-B)	9.45	11.03	12.61
D. Fixed & Semi-fixed Costs			
Salary	6.36	6.39	6.42
Repair & maintenance	0.23	0.23	0.24
Interest on Term Loan	0.80	0.72	0.56
Depreciation	0.70	0.70	0.70
Total fixed cost	8.08	8.05	7.92
E. BREAK EVEN POINT	85.52%	72.93%	62.81%
F. BEP at operating capacity	51.31%	51.05%	50.25%
G. Cash BEP	46.88%	46.62%	45.82%

9.0 INTERNAL RATE OF RETURN (IRR)

(Rs. in lacs)

Year	0	1	2	3	4	5	6
CASH OUTFLOW							
Capital Expenditure	14.87	0.00	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	2.12	0.22	0.22	0.00	0.00	0.00
Total (A)	14.87	2.12	0.22	0.22	0.00	0.00	0.00
CASH INFLOW							
Profit After Tax		1.37	2.99	4.69	4.81	4.94	5.06
Add: Depreciation		0.70	0.70	0.70	0.70	0.70	0.70
Add: Interest		0.80	0.72	0.56	0.41	0.25	0.09
Add: Salvage Value							
Total (B)	0.00	2.86	4.41	5.95	5.92	5.88	5.84
NET FLOW (B-A)	-14.87	0.75	4.18	5.73	5.92	5.88	5.84

IRR = 26%