

PROJECT PROFILE FOR COIR PITH BRIQUETTE UNIT

PRODUCT	:	COIR PITH BRIQUETTE
PRODUCTION CAPACITY (P.A) (100% CAPACITY)	:	700 TONS
VALUE	:	RS.126 LAKHS
MONTH & YEAR OF PREPARATION	:	JUNE 2018
PREPARED BY	:	COIR BOARD, MINISTRY OF MSME, GOVT OF INDIA

• INTRODUCTION

Eco friendly product is said to be replacing many traditional product as an effective soil bed under Green House conditions. Coir pith is a by-product of the coir fibre processing industry. The composition and properties of coir pith vary depending on maturity of coconut, method of extraction and disposal, period between extraction and use and environmental factors. In the process of extraction of coir fiber from husk generally about one third of it is obtained as fiber and two third of it is obtained as coir waste. Coir pith has got many enviable characteristics, making it a highly potential resource if used after proper composting. Coir pith has very high moisture retention capacity of 500- 600 per cent and can be as high as 1100 per cent of dry weight. It has high potassium content and low bulk density and particle density. High CEC, which varies from 38.9- 60 meq/100 g, enables it to retain large amounts of nutrients and the absorption complex has high contents of exchangeable K, Na, Ca and Mg. All these characteristics make it ideal for use as a mulch and soil amendment, especially for dry and sandy areas with low water retention. Industry sources say that, the plants yield potential record is significant when Coir Pith Briquettes are used as a Cultivation medium.

Coir Pith Briquettes exhibits following salient attributes

- a) Water retention power
- b) Eco friendly
- c) Moisture retention
- d) Dimensional accuracy

- **PROCESS OF MANUFACTURE**

The coir dust is washed, heat treated, screened and graded before being processed into various coir pith briquettes. Coir Pith Briquettes are made by compressing Coir Pith. The coir pith briquettes are 100% natural organic growing medium which gives a higher volume if it is in a compressed form. The one liter block can be expanded up to 8 liters by adding 2 liters water. They are individually shrinking wrapped for export with or without labels as per the specification.

Coir Pith Briquettes are natural organic growing medium and extensively used in Nurseries, Home gardens, Green houses and other farming communities.

- **BASIS AND PRESUMPTIONS**

- The Project profile is based on 8 working hours in a day and 200 days in a year and the Break Even efficiency has been calculated at 70%, 75%, 80%, 90% and 100% capacity utilization.
- The rate of interest both for fixed asset and working capital have been taken as 12.5% p.a.

- **TECHNICAL ASPECTS**

Installed Production capacity per shift/machine	:	63.5MT per shift
Number of machine	:	1
Number of Shift per day	:	1
Working days p.a	:	200 days
Yield wastage	:	85%
Capacity Utilization		
-First year	:	70%
-Second year	:	75%
-Third year	:	80%
-Fourth year	:	90%

-Fifth year	:	100%
Rate of Average Sales Realization	:	Rs. 18000/- per ton
Rate of Average cost of raw material	:	Rs. 6000/- per ton
Interest on term loan	:	12.50%
Interest on working capital	:	12.50%

Manpower requirement

Supervisor	:	1
Skilled worker	:	5
Semi/Unskilled worker	:	15
Total HP required	:	25 HP

All the machineries and equipments mentioned in the Project profile are of indigenous make and are of medium price.

• FINANCIAL ASPECTS

i) Cost of Project

	Amount
• Land	: Lease/owned
• Work shed	: Rs. 400000/-
• Machinery & Equipments	: Rs.1605000/-
• Working Capital	: Rs. 495000/-
Total	: Rs. 2500000/-

Sl. No	Description of machines & equipments	Qty	Amount (Rs)
1	Briquette 650 gm Briquette making machine	1	1300000.00
2	Screener 10 Feet 2 HP	1	160000.00
3	Other accessories including Well & Pump set 3 HP		145000.00
Total			1605000.00

ii) Means of Finance

• Promoters Capital	5%	:	Rs.125000/-
• Bank Term loan	95%	:	Rs.1905000/-
• WC Loan from Bank	95%	:	Rs.470000/-

Total		:	Rs.2500000/-

• **DETAILS OF THE PROFITABILITY OF THE PROJECT**

Rs.in Lakhs

Years		1	2	3	4	5
Installed Production capacity/machine/shift	Tons	3.50	3.50	3.50	3.50	3.50
Number of machines		1	1	1	1	1
Number of shift/day		1	1	1	1	1
Working days per annum		200	200	200	200	200
Installed production capacity per annum		700	700	700	700	700
Capacity utilization		70%	75%	80%	90%	100%
Annual production quantity	Tons	490	525	560	630	700
Annual Sales Realization	Rs. 18000	88.20	94.50	100.80	113.40	126.00
Cost of Production						
Raw material requirement	Tons	906.50	971.25	1036.00	1165.50	1295.00
Cost of raw material	Rs.5000	54.39	58.28	62.16	69.93	77.70
Power cost		1.86	2.00	2.13	2.40	2.66
Spares, Repairs & maintenance	2%	0.32	0.39	0.46	0.55	0.67
Wages & salary		19.21	20.58	21.95	24.70	27.44
Cost of Production		75.78	81.24	86.70	97.58	108.47
Gross Profit		12.42	13.26	14.1	15.82	17.53
Administrative & Selling expenses		1.76	1.89	2.02	2.27	2.52
Interest on Term Loan		1.99	2.11	1.76	0.62	0.27
Interest on Working capital		0.59	0.59	0.59	0.59	0.59
Depreciation of machinery		1.61	1.61	1.61	1.61	1.61
Depreciation of building		0.20	0.20	0.20	0.20	0.20
Total		6.15	6.4	6.18	5.29	5.19
Net Profit		6.27	6.86	7.92	10.53	12.34

- **ESTIMATION OF BREAK EVEN POINT**

Rs in Lakhs

Particulars	1	2	3	4	5
	70%	75%	80%	90%	100%
Break-even point	50%	48%	44%	33%	30%
Break even Production	243	253	245	210	207

- **DEBT SERVICE COVERAGE RATIO**

Rs in Lakhs

Particulars	1	2	3	4	5
	70%	75%	80%	90%	100%
DSCR	2.89	2.13	2.45	3.68	4.57
Average DSCR	3.15				
DSCR weighted average	3.00				

- **WORKING CAPITAL REQUIREMENTS**

Rs in Lakhs

Particulars	1	2	3	4	5
	70%	75%	80%	90%	100%
Variable Cost	75.78	81.24	86.70	97.58	108.47
Fixed Cost	6.15	6.4	6.18	5.29	5.19
Working capital Gap	4.95	5.32	5.69	6.42	7.15