

PROJECT PROFILE FOR COIR PITH BLOCK MAKING UNIT

PRODUCT	:	COIR PITH BLOCK
PRODUCTION CAPACITY (P.A)		
(100% CAPACITY)	:	1050 TONS
VALUE	:	RS.131.25 LAKHS
MONTH & YEAR OF PREPARATION	:	JUNE 2018
PREPARED BY	:	COIR BOARD, MINISTRY OF MSME, GOVT OF INDIA

• INTRODUCTION

Coir pith or dust is a biomass residue generated during the extraction of coir fibre from coconut husk and is a byproduct of the coir industry. The coir pith is a very light and compressible material. It is highly hygroscopic and holds water of 7 to 8 fold by weight. Coir pith has an ability to be compressed into a wide range of added value products such as seed cells, propagation modules all the way.

The major properties of coir pith are:

- High water holding capacity, i.e., 6-8 times than its weight.
- Excellent moisture retention even after drying.
- Slow degradation due to high lignocellulose bonding.
- High porosity, stores and releases nutrients over extended periods of time.
- Greater physical resiliency that with stands compression better.
- Excellent aeration / oxygenation providing enhanced root penetration.
- Acceptable Electrical Conductivity (EC), pH and Cation Exchange Capacity CEC).
- 100% degradable, organic and a renewable resource.

It is more suitable for growing media (in agriculture). Most of the Green houses are using this media for various cultivation like flowers, fruits, vegetables, ornamental plants & medicinal plants etc. throughout the world.

- **PROCESS OF MANUFACTURE**

Coir pith block is specially designed for commercial nurseries and greenhouses. This soil conditioner is suitable for all types of garden plants, lawns, flowers, orchids and vegetables in pots or on the ground. The coir pith is compressed into very small packs of 650 gm, shrink wrapped which is most suitable to the hobby market and home garden owners.

Coir pith Block Specifications

Available Sizes- 5 kg and 650 gm

Parameters	5 Kg Block	650 gm Block
Weight	5 Kg +/- 0.3 Kg	650gm +/- 30gm
Size	30 x 30 x 13 cm	20 x 10 x 5 cm
Compression ratio	5:1	8:1
Moisture content	< 20%	< 20%
Electrical Conductivity	< 0.5 millimhos/cm	< 0.5 millimhos/cm
Expanded Volume	13 to 14 L/Kg	8 to 9 L/Kg

- **BASIS AND PRESUMPTIONS**

- The Project Profile is based on 8 working hours in a day and 175 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	:	6.0 per shift
Number of machine	:	1
Number of Shift per day	:	1
Working days p.a	:	175 days
Yield wastage	:	40%
Capacity Utilization		
-First year	:	70%
-Second year	:	75%
-Third year	:	80%
-Fourth year	:	90%
-Fifth year	:	100%
Rate of Average Sales Realization	:	Rs. 12500 /-per ton
Rate of Average cost of raw material	:	Rs.5000/-per ton
Interest on term Loan	:	12.50%
Interest on working capital	:	12.50%
Manpower requirement		
Supervisor	:	1
Semi/unskilled worker	:	22
Total HP required	:	20 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. 450000/-
• Machinery & Equipments	: Rs.1607000/-
• Working Capital	Rs .443000/-

Total	: Rs. 2500000/-

Sl. No	Description of machines & equipments	Qty	Amount (Rs)
1	Coir pith Compacting machine with electrical (5kg Block) 20 HP	1	1320000.00
2	Screener – 2 HP (8 feet length)	1	120000.00
3	Other accessories	1	167000.00
Total			1607000.00

ii) Means of Finance

• Promoters Capital	5%	: Rs. 125000/-
• Bank Term loan	95%	: Rs.1954000/-
• WC Loan from Bank	95%	: Rs. 421000/-

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	6	6	6	6	6
Number of machines		1	1	1	1	1
Number of shift/day		1	1	1	1	1
Working days per annum		175	175	175	175	175
Installed production capacity per annum		1050	1050	1050	1050	1050
Capacity utilization		70%	75%	80%	90%	100%
Annual production quantity	Tons	735	788	840	945	1050
Annual Sales Realization	Rs. 12500	91.88	98.44	105.00	118.13	131.25
Cost of Production						
Raw material requirement	Tons	1029.00	1102.50	1176.00	1323.00	1470.00
Cost of raw material	Rs.5000	51.45	55.13	58.80	66.15	73.50
Power cost		1.30	1.40	1.49	1.68	1.86
Spares, Repairs & maintenance	2%	0.32	0.39	0.46	0.56	0.67
Wages & salary		24.54	25.77	28.34	31.18	34.30
Lease rent		1.20	1.32	1.45	1.60	1.76
Cost of Production		78.82	84.00	90.55	101.16	112.08
Gross Profit		13.06	14.44	14.45	16.97	19.17
Administrative & Selling expenses		1.84	1.97	2.10	2.36	2.63
Interest on Term Loan		2.05	2.17	1.80	0.65	0.28
Interest on Working capital		0.53	0.53	0.53	0.53	0.53
Depreciation of machinery		1.61	1.61	1.61	1.61	1.61
Depreciation of building		0.23	0.23	0.23	0.23	0.23
Total		6.26	6.51	6.27	5.38	5.28
Net Profit		6.8	7.93	8.18	11.59	13.89

- ESTIMATION OF BREAK EVEN POINT**

Rs in Lakhs

Particulars	1	2	3	4	5
	70%	75%	80%	90%	100%
Break-even point	52%	50%	48%	38%	34%
Break even Production	384	390	407	354	352

- DEBT SERVICE COVERAGE RATIO**

Rs in Lakhs

Particulars	1	2	3	4	5
	70%	75%	80%	90%	100%
DSCR	2.97	2.29	2.44	3.85	4.89
Average DSCR	3.29				
DSCR weighted average	3.14				

- WORKING CAPITAL REQUIREMENTS**

Rs in Lakhs

Particulars	1	2	3	4	5
	70%	75%	80%	90%	100%
Variable Cost	78.82	84.00	90.55	101.16	112.08
Fixed Cost	6.26	6.51	6.27	5.38	5.28
Working capital Gap	4.43	4.75	5.11	5.74	6.39