



MODEL PROJECT REPORT



PROJECT REPORT ON ARECA LEAF CUTLERY

SWAVALAMBI BHARAT ABHIYAN

PROJECT REPORT ON ARECA NUT PALM LEAF CROCKERY



INTRODUCTION :

This Enterprise is a proposed micro enterprise for the manufacture of Palm plates. Now a day the importance of biodegradable materials is very high since polyethylene wastes poses severe threat to the universe. The disposable plates and food packing materials manufactured from easily available areca nut palm leaves is a better substitute for disposable polythene and paper plates. The Govt. is restricting the use of plastic materials and hence eco-friendly products are preferred to plastic products. There is an ever increasing demand for these items. Keeping this in mind, the promoter has ventured this unit.

The raw material Areca nut palm Belongs to the Catechu Family of palm tree species. India leads the production followed by China and Bangladesh. In India it is grown in Karnataka, Kerala, Assam, Maharashtra, West Bengal and parts of Tripura.

In India 4 lack hectors of areca crop has been cultivated. Near about 5400 million areca leaves are shredded and treated as Agro Waste. It is Perfect Alternate to Plastics/Polymer/ Thermocol/ Styrofoam based products and crockery A 100% natural mechanism is followed for manufacturing these plates. Areca Leaves are collected from grounds by farmers.

The thick sheaths of the areca leaf are cleaned and soaked in water for approximately 15 minutes and dried for 30 minutes. They are then compressed to different shapes using the correspondingly shaped dies in different machines. They are then packed as per the customer requirement.

Advantages of Areca Crockery

- Eco-friendly, Bio-degradable and Compostable
- No chopping down of trees, fallen leaves are collected and turned to VALUE ADDED PRODUCTS. 'Waste to Wealth' Concept.
- No Chemicals, Bleaching, PE (Poly Ethylene) Coating, Wax Coating at any stage
- Light weight, Sturdy and Non-crushable.
- Microwave & Refrigerator Safe.
- Holds liquid items for 4 hours without leakage. Good for hot, wet and cold food items.
- Food plates thrown after eating will be naturally degraded within 60 days of time like any plant matter.
- Manufacturing waste of Areca sheaths will be used for vermin compost, dry fodder for animals, bio-fuel bricks.
- Will increase work efficiency and resource optimization: Using Areca ware will save water and human efforts to wash utensils.

MARKETING:

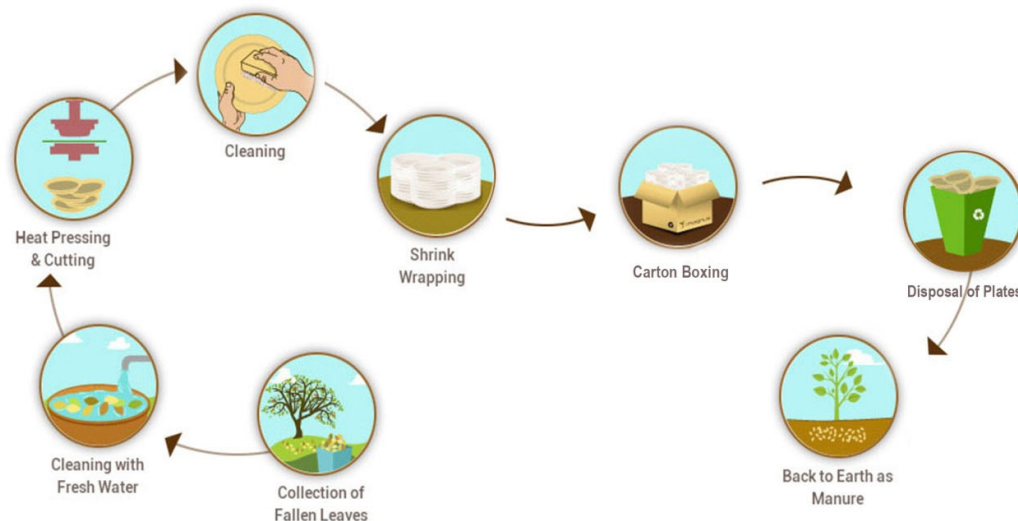
The product has a supply constraint in the market and the demand is very high. The market is expected to have a sustained higher growth for the coming years. The Govt. policies, changing trend and sustainable development concept will increase the importance of the product and its marketability.

Areca nut leaf crockery are targeted towards the high end of the market.

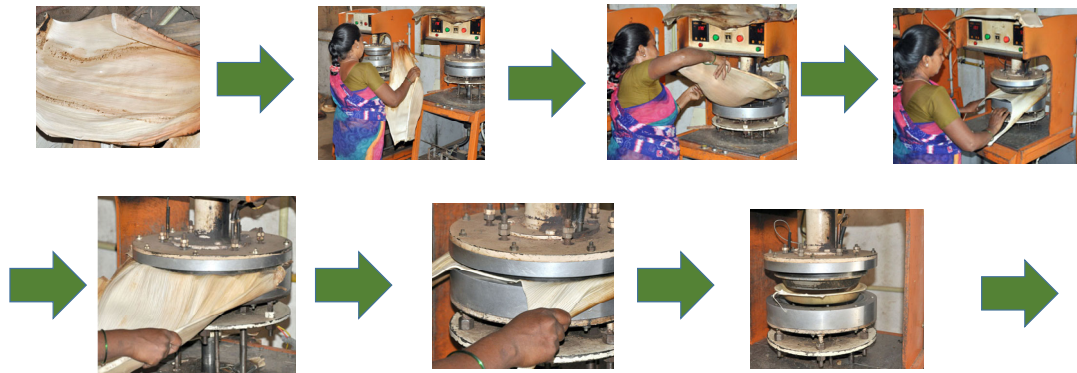
First quality products are targeted for International market

Willingness to buy ecofriendly products is highest in Vietnam and Indonesia, while New Zealand, Thailand and Malaysia prioritize purchase based on value for money and promotions.

JOURNEY OF THE PRODUCT



Manufacturing Process



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Separate dyes are required for producing different products .

INFRASTRUCTURE FACILITIES:

- a) Power: Total Connected load of power estimated is 5 HP.
- b) Water: Water is required for soaking, cleaning and general purpose and it is available in plenty near to the site.
- c) Transport: The proposed project is preferred to be located on the road side for easy transportation of raw material and finished goods
- d) Labour: A total of 4 workers are required in addition to the promoter. All these skilled and unskilled workers can be recruited locally.
- e) Land Required: 2200-2500 sq. ft. Covered Area: 1500- 1700 sq. ft.

PRODUCTION CAPACITY:

The proposed unit is rated for a production capacity of 24,00,000 pieces per annum on single shift basis. The expected capacity utilization is 60%, for the 1st and 70% from the 2nd year onwards. With 10% increase per year

12" Plate
12" Partition
10" plate
8" plate 6" Bowl
4" Bowl
6" Spoon
100 ml Tea Cup

POLLUTION:.

The activity does not produce any pollution

Hydraulic based Automatic machine and Flywheel type Manual machine.

PROJECT AT A GLANCE

- 1 Name of the Entrepreneur XXXXXXXX
- 2 Constitution (legal Status) XXXXXXXX
- 3 Father's/Spouce's Name XXXXXXXX
- 4 Unit Address XXXXXXXX

Taluk/Block: XXXXX
 District : XXXXX
 Pin: XXXXX
 E-Mail XXXXX
 Mobile XXXXX
- 5 Product and By Product : Areca nut Palm Leaf Crockery
- 6 Name of the project / business activity proposed : Areca nut Palm Leaf Crockery
- 7 Cost of Project : Rs16.44lac
- 8 Means of Finance

Term Loan Rs.15.84 Lacs
 KVIC Margin Money As per Project Eligibility
 Own Capital Rs.2.37 Lacs
 Working Capital Rs.5.49 Lacs
- 9 Debt Service Coverage Ratio : 7.94
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 8 Months
- 12 Break Even Point : 13%
- 13 Employment : 6 Persons
- 14 Power Requirement : 5.00 HP
- 15 Major Raw materials : Areca Palm Leaf
- 16 Estimated Annual Sales Turnover : 54.72 Lacs
- 16 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lacs)

Particulars	Amount
Land	Rented/Owned
Building /shed 2000/1250 Sq Ft	3.00
Plant & Machinery	13.50
Furniture & Fixtures	0.50
Pre-operative Expenses	0.60
Working Capital Requireme	6.10
Total	23.70

MEANS OF FINANCE

Particulars	Amount
Own Contribution @10%	2.37
Term Loan	15.84
Workign Capital Finance	5.49
Total	23.70

Beneficiary's Margin Money General 10% Special 5%

PLANT & MACHINERY

PARTICULARS	QTY.	RATE	AMOUNT IN RS.
3 Hydraulic Cylinder, 3MS Frame & 6 Aluminium dies (inches) 12*1,10*1, 8*1 set for round regular plate dies & a 12 inch round partition plate die, bowls 6 and 4 inch dies, with 2HP Power pack	1		560,000.00
Areca Spoon making machine single die hydraulic machine.	1		285,000.00
Areca 100 ml tea cup making machine 3 hydraulic cylinder.	1		365,000.00
Transportation and Installation	1		140,000.00
Total			1,350,000.00

PROJECTED CASH FLOW STATEMENT

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>SOURCES OF FUND</u>					
Share Capital	2.37	-			
Reserve & Surplus	26.75	31.69	38.18	44.30	50.30
Depreciation & Exp. W/off	2.35	2.04	1.75	1.50	1.29
Increase in Cash Credit	5.49	-	-	-	-
Increase In Term Loan	15.84	-	-	-	-
Increase in Creditors	0.32	0.05	0.05	0.05	0.05
Increase in Provisions	0.36	0.04	0.04	0.04	0.05
TOTAL :	53.48	33.82	40.02	45.90	51.69
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	17.00	-	-	-	-
Increase in Stock	3.69	3.30	1.00	1.00	1.00
Increase in Debtors	2.74	0.43	0.62	0.48	0.48
Increase in Deposits & Adv	2.50	0.25	0.28	0.30	0.33
Repayment of Term Loan	-	3.96	3.96	3.96	3.08
Taxation	2.67	3.17	7.64	8.86	10.06
TOTAL :	28.60	11.11	13.49	14.60	14.95
Opening Cash & Bank Balance	-	24.88	47.59	74.11	105.41
Add : Surplus	24.88	22.70	26.53	31.30	36.74
Closing Cash & Bank Balance	24.88	47.59	74.11	105.41	142.15

PROJECTED BALANCE SHEET

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>SOURCES OF FUND</u>					
Capital Account	2.37	2.37	2.37	2.37	2.37
Retained Profit	24.07	52.59	83.13	118.57	158.81
Term Loan	15.84	11.88	7.92	3.96	0.88
Cash Credit	5.49	5.49	5.49	5.49	5.49
Sundry Creditors	0.32	0.38	0.43	0.48	0.54
Provisions & Other Liab	0.36	0.40	0.44	0.48	0.53
TOTAL :	48.45	73.10	99.78	131.36	168.62
<u>APPLICATION OF FUND</u>					
Fixed Assets (Gross)	17.00	17.00	17.00	17.00	17.00
Gross Dep.	2.35	4.39	6.14	7.64	8.93
Net Fixed Assets	14.65	12.61	10.86	9.36	8.07
Current Assets					
Sundry Debtors	2.74	3.17	3.79	4.27	4.75
Stock in Hand	3.69	6.99	7.99	8.99	9.98
Cash and Bank	24.88	47.59	74.11	105.41	142.15
Deposits & Advances	2.50	2.75	3.03	3.33	3.66
TOTAL :	48.45	73.10	99.78	131.36	168.62
	-	-	-	-	-

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>A) SALES</u>					
Gross Sale	54.72	63.36	75.84	85.44	95.04
Total (A)	54.72	63.36	75.84	85.44	95.04
<u>B) COST OF SALES</u>					
Raw Mateiral Consumed	13.82	16.13	18.43	20.74	23.04
Elecricity Expenses	0.43	0.50	0.57	0.64	0.72
Repair & Maintenance	-	0.63	0.76	0.85	0.95
Labour & Wages	3.70	4.07	4.47	4.92	5.41
Depriciation	2.35	2.04	1.75	1.50	1.29
Consumables,packaging and Other Expenses	2.74	3.17	3.79	4.27	4.75
Cost of Production	23.04	26.54	29.78	32.93	36.16
Add: Opening Stock /WIP	-	2.30	5.38	6.14	6.91
Less: Closing Stock /WIP	2.30	5.38	6.14	6.91	7.68
Cost of Sales (B)	20.73	23.46	29.01	32.16	35.39
C) GROSS PROFIT (A-B)	33.99	39.90	46.83	53.28	59.65
	62%	63%	62%	62%	63%
D) Bank Interest (Term Loan)	1.37	1.65	1.20	0.74	0.30
Bank Interest (C.C. Limit)	0.63	0.63	0.63	0.63	0.63
E) Salary to Staff	2.51	2.76	3.03	3.34	3.67
F) Selling & Adm Expenses Exp.	2.74	3.17	3.79	4.27	4.75
TOTAL (D+E)	7.24	8.21	8.65	8.98	9.35
H) NET PROFIT	26.75	31.69	38.18	44.30	50.30
I) Taxation	2.67	3.17	7.64	8.86	10.06
J) PROFIT (After Tax)	24.07	28.52	30.54	35.44	40.24

COMPUTATION OF MANUFACTURING OF Areca nut palm leaf Crockery**Items to be Manufactured**

12" Plate	6" Bowl
12" Partition	4" Bowl
10" plate	6" Spoon
8" plate	100 ml Tea Cup

Manufacturing Capacity per day		8,000	pcs
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		2,400,000	pcs
Year		Capacity	pcs
		Utilisation	
IST YEAR		60%	1,440,000.00
IIND YEAR		70%	1,680,000.00
IIIRD YEAR		80%	1,920,000.00
IVTH YEAR		90%	2,160,000.00
VTH YEAR		100%	2,400,000.00

COMPUTATION OF RAW MATERIAL

Item Name		Quantity of Raw Material	Recovery	Unit Rate of#	Total Cost Per Annum (100%)
Areca Palm leaf		288,000.00		8.00	2,304,000.00
#Including cost of transportation Rs2/-per leaf					
					2,304,000.00

Total Raw material in Rs lacs

23.04

Raw Material Consumed	Capacity Utilisation	Amount (Rs.)
IST YEAR	60%	13.82
IIND YEAR	70%	16.13
IIIRD YEAR	80%	18.43
IVTH YEAR	90%	20.74
VTH YEAR	100%	23.04

COMPUTATION OF SALE

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>Finished Goods</u>					
(15Days requirement)	2.30	5.38	6.14	6.91	7.68
<u>Raw Material</u>					
(15 Days requirement)	1.38	1.61	1.84	2.07	2.30
Closing Stock	3.69	6.99	7.99	8.99	9.98

COMPUTATION OF WORKING CAPITAL REQUIREMENT

Particulars			Total
			Amount
Stock in Hand			3.69
Sundry Debtors			2.74
		Total	6.42
Sundry Creditors			0.32
Working Capital Requirement			6.10
Margin			0.61
Working Capital Finance			5.49

BREAK UP OF LABOUR

Particulars		Wages	No of	Total
		Per Month	Employees	Salary
Skilled Worker		8,000.00	2	16,000.00
Unskilled Worker		6,000.00	2	12,000.00
				28,000.00
Add: 10% Fringe Benefit				2,800.00
Total Labour Cost Per Month				30,800.00
Total Labour Cost for the year (In Rs. Lakhs)			4	3.70

BREAK UP OF SALARY

Particulars		Salary	No of	Total
		Per Month	Employees	Salary
Manager		self		
Accountant cum store keeper		9,000.00	1	9,000.00
Sales		10,000.00	1	10,000.00
Total Salary Per Month				19,000.00
Add: 10% Fringe Benefit				1,900.00
Total Salary for the month				20,900.00
Total Salary for the year (In Rs. Lakhs)			2	2.51

COMPUTATION OF DEPRECIATION

Description	Land	Building/shed	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		10.00%	15.00%	10.00%	
Opening Balance	Leased	-	-	-	-
Addition	-	3.00	13.50	0.50	17.00
	-	3.00	13.50	0.50	17.00
Less : Depreciation	-	0.30	2.03	0.03	2.35
WDV at end of Ist year	-	2.70	11.48	0.48	14.65
Additions During The Year	-	-	-	-	-
	-	2.70	11.48	0.48	14.65
Less : Depreciation	-	0.27	1.72	0.05	2.04
WDV at end of IIInd Year	-	2.43	9.75	0.43	12.61
Additions During The Year	-	-	-	-	-
	-	2.43	9.75	0.43	12.61
Less : Depreciation	-	0.24	1.46	0.04	1.75
WDV at end of IIIrd year	-	2.19	8.29	0.38	10.86
Additions During The Year	-	-	-	-	-
	-	2.19	8.29	0.38	10.86
Less : Depreciation	-	0.22	1.24	0.04	1.50
WDV at end of IV year	-	1.97	7.05	0.35	9.36
Additions During The Year	-	-	-	-	-
	-	1.97	7.05	0.35	9.36
Less : Depreciation	-	0.20	1.06	0.03	1.29
WDV at end of Vth year	-	1.77	5.99	0.31	8.07

REPAYMENT SCHEDULE OF TERM LOAN

11.5%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
IST YEAR	Opening Balance						
	Ist Quarter	-	15.84	15.84	-	-	15.84
	Iind Quarter	15.84	-	15.84	0.46	-	15.84
	IIIrd Quarter	15.84	-	15.84	0.46	-	15.84
	Ivth Quarter	15.84	-	15.84	0.46	-	15.84
					1.37	-	
IIND YEAR	Opening Balance						
	Ist Quarter	15.84	-	15.84	0.46	0.99	14.85
	Iind Quarter	14.85	-	14.85	0.43	0.99	13.86
	IIIrd Quarter	13.86	-	13.86	0.40	0.99	12.87
	Ivth Quarter	12.87		12.87	0.37	0.99	11.88
					1.65	3.96	
IIIRD YEAR	Opening Balance						
	Ist Quarter	11.88	-	11.88	0.34	0.99	10.89
	Iind Quarter	10.89	-	10.89	0.31	0.99	9.90
	IIIrd Quarter	9.90	-	9.90	0.28	0.99	8.91
	Ivth Quarter	8.91		8.91	0.26	0.99	7.92
					1.20	3.96	
IVTH YEAR	Opening Balance						
	Ist Quarter	7.92	-	7.92	0.23	0.99	6.93
	Iind Quarter	6.93	-	6.93	0.20	0.99	5.94
	IIIrd Quarter	5.94	-	5.94	0.17	0.99	4.95
	Ivth Quarter	4.95		4.95	0.14	0.99	3.96
					0.74	3.96	
VTH YEAR	Opening Balance						
	Ist Quarter	3.96	-	3.96	0.11	0.99	2.97
	Iind Quarter	2.97	-	2.97	0.09	0.99	1.98
	IIIrd Quarter	1.98	-	1.98	0.06	0.55	1.43
	Ivth Quarter	1.43		1.43	0.04	0.55	0.88
					0.30	3.08	

CALCULATION OF D.S.C.R

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>CASH ACCRUALS</u>	26.42	30.56	32.29	36.94	41.53
Interest on Term Loan	1.37	1.65	1.20	0.74	0.30
Total	27.79	32.21	33.49	37.68	41.82
<u>REPAYMENT</u>					
Instalment of Term Loan	3.96	3.96	3.96	3.08	3.08
Interest on Term Loan	1.37	1.65	1.20	0.74	0.30
Total	5.33	5.61	5.16	3.82	3.38
DEBT SERVICE COVERAGE RATIO	5.22	5.74	6.50	9.86	12.38
AVERAGE D.S.C.R.			7.94		

Particulars	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
Op Stock	-	72,000.00	168,000.00	192,000.00	216,000.00
Production	1,440,000.00	1,680,000.00	1,920,000.00	2,160,000.00	2,400,000.00
	1,440,000.00	1,752,000.00	2,088,000.00	2,352,000.00	2,616,000.00
Less : Closing Stock	72,000.00	168,000.00	192,000.00	216,000.00	240,000.00
Net Sale	1,368,000.00	1,584,000.00	1,896,000.00	2,136,000.00	2,376,000.00
Sale Price per MT(Average for all products)	4.00	4.00	4.00	4.00	4.00
Sale (in Lacs)	54.72	63.36	75.84	85.44	95.04

COMPUTATION OF ELECTRICITY**(A) POWER CONNECTION**

Total Working Hour per day		Hours	8	
Electric Load Required		HP	5	
Load Factor			0.7460	
Electricity Charges		per unit	8.00	
Total Working Days			300	
Electricity Charges (8 Hrs Per day)				71,616.00
Add : Minimim Charges (@ 10%)				

(B) DG set

No. of Working Days			300	days
No of Working Hours			-	Hour per day
Total no of Hour			-	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			-	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			-	
Add : Lube Cost @15%			-	
Total			-	
Total cost of Power & Fuel at 100%				0.72

Year		Capacity		Amount (in Lacs)
IST YEAR		60%		0.43
IIND YEAR		70%		0.50
IIIRD YEAR		80%		0.57
IVTH YEAR		90%		0.64
VTH YEAR		100%		0.72

BREAK EVEN POINT ANALYSIS

Year	I	II	III	IV	V
Net Sales & Other Income	54.72	63.36	75.84	85.44	95.04
Less : Op. WIP Goods	-	2.30	5.38	6.14	6.91
Add : Cl. WIP Goods	2.30	5.38	6.14	6.91	7.68
Total Sales	57.02	66.43	76.61	86.21	95.81
Variable & Semi Variable Exp.					
Raw Material & Tax	13.82	16.13	18.43	20.74	23.04
Electricity Exp/Coal Consumption at 85%	0.37	0.43	0.49	0.55	0.61
Manufacturing Expenses 80%	2.19	3.04	3.64	4.10	4.56
Wages & Salary at 60%	3.72	4.09	4.50	4.95	5.45
Selling & administrative Expenses 80%	2.19	2.53	3.03	3.42	3.80
Intt. On Working Capital Loan	0.63	0.63	0.63	0.63	0.63
Total Variable & Semi Variable Exp	22.92	26.86	30.73	34.39	38.09
Contribution	34.10	39.58	45.88	51.82	57.71
Fixed & Semi Fixed Expenses					
Manufacturing Expenses 20%	0.55	0.76	0.91	1.03	1.14
Electricity Exp/Coal Consumption at 15%	0.06	0.08	0.09	0.10	0.11
Wages & Salary at 40%	2.48	2.73	3.00	3.30	3.63
Interest on Term Loan	1.37	1.65	1.20	0.74	0.30
Depreciation	2.35	2.04	1.75	1.50	1.29
Selling & administrative Expenses 20%	0.55	0.63	0.76	0.85	0.95
Total Fixed Expenses	7.36	7.89	7.70	7.52	7.42
Capacity Utilization	60%	70%	80%	90%	100%
OPERATING PROFIT	26.75	31.69	38.18	44.30	50.30
BREAK EVEN POINT	13%	14%	13%	13%	13%
BREAK EVEN SALES	12.30	13.24	12.86	12.51	12.31