

PROJECT REPORT

Of

PP DRINKING STRAW

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **PP Drinking Straw**.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

[Lucknow Office: Sidhivinayak Building ,
27/1/B, Gokhley Marg, Lucknow-226001](#)

[Delhi Office : Multi Disciplinary Training
Centre, Gandhi Darshan Rajghat,
New Delhi 110002](#)

Email : info@udyami.org.in
Contact : +91 7526000333, 444, 555



PROJECT AT A GLANCE

- 1 Name of the Entrepreneur : xxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxx
- Pin: xxxxxx State: xxxxxxxxx
- Mobile xxxxxx
- 5 Product and By Product : **PP DRINKING STRAW**
- 6 Name of the project / business activity proposed : **PP DRINKING STRAW MAKING UNIT**
- 7 Cost of Project : Rs.24.44 Lakhs
- 8 Means of Finance
- Term Loan Rs.18 Lakhs
- Own Capital Rs.2.44 Lakhs
- Working capital Rs.4 Lakhs
- 9 Debt Service Coverage Ratio : 2.35
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 34%
- 13 Employment : 9 Persons
- 14 Power Requirement : 30.00 HP
- 15 Major Raw materials : PP Pellets, Colorants, Packing material
- 16 Estimated Annual Sales Turnover (Max Capacity) : 97.66 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lakhs)

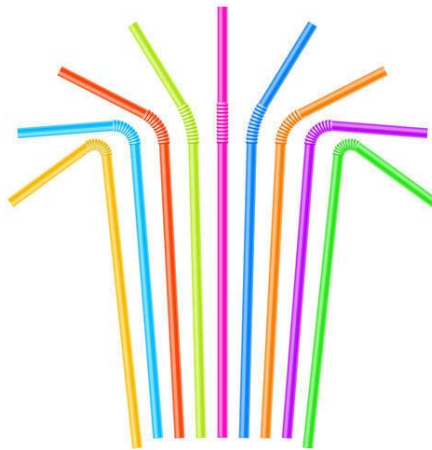
Particulars	Amount
Land	Own/Rented
Building /Shed 1000 Sq ft	4.00
Plant & Machinery	14.70
Furniture & Fixtures	1.30
Working Capital	4.44
Total	24.44

MEANS OF FINANCE

Particulars	Amount
Own Contribution	2.44
Working Capital(Finance)	4.00
Term Loan	18.00
Total	24.44

PP DRINKING STRAW

Introduction: A drinking straw or drinking tube is a small pipe that allows its user to more conveniently consume a beverage. A thin tube of plastic (such as polypropylene and polystyrene), or other material is used by placing one end in the mouth and the other in the beverage. Drinking straws can be straight or have an angle-adjustable bellows segment. PP is quite stable against biodegradation (is a non-biodegradable material), whereas straw is a biodegradable natural composite material. Most single-use plastic straws are made from polypropylene, a type of plastic commonly made from petroleum. Polypropylene is thought to be food-safe in amounts approved by the Food and Drug Administration. PP is not an additive, it is used as continuous phase and matrix of composites made of various reinforcing materials, such as straw, carbon fibers, and glass fibers.



Uses & Market Potential: Paper drinking straw is expected to have the high market growth due to rising demand of the paper drinking straw as the packaging industry is witnessing shift towards non-plastic sustainable materials from plastic products. Consumers are widely using the paper drinking straws at home, parties, on-the-go drinks, concession stands, food service, schools, institutional and others. The global drinking straw market is segmented based on type as plastic drinking straw, and paper drinking straw.

Paper drinking straw is expected to have the high market growth due to rising demand of the paper drinking straw as the packaging industry is witnessing shift towards non-plastic sustainable materials from plastic products. Consumers are widely using the paper drinking straws at home, parties, on the- go drinks, concession stands, food service, schools, institutional and Others .Plastic drinking straw segment is expected to have the negative market growth over the forecasted period due to the banning of the plastic straws. Corporations, municipalities, and governments are imposing bans on the plastic straws.

Raw material: Major raw materials are as follows:

1. PP Pellets
2. Colorants
3. Packing material

Machinery Requirements: Major machines & equipments are as follows:

Description	Set	Amount
PP Straw making machine including Extruder, cooling plant and cutter	1 Set	1420000
Other equipments & hand tools	Ls	50000
Total Amount		1470000

Manufacturing Process: In the first step, the raw materials are procured from the local vendor and stored in the inventory. The PP resins, colorants and stabilizers are added in required proportion.

The profile dies are mounted at the end of extruder. The barrel heaters are started and brought up to the desired melting temperature of PP. The PP resins, colorants and stabilizers are added into the hopper of the extruder manually. From the hopper, these plastic pellets come into the feed section of the barrel. There is a screw inside the barrel which rotates about the horizontal axis and moves the pellets into heating section of barrel where

these plastic pellets melt to a semi-solid state and are ready to be injected into the die mounted at the end of extruder.

There is possibility of making straws having more than one colour. This is performed by adding different colours pellets with PP in one or two extruder. Then the molten flow of all the other two extruders is combined with the main extruder. The rotating speed of the screw of the two colour extruder is lower than the main extruder.

The combined output is allowed to flow out the die of circular shape at desired pressure. The extruder output is allowed to flow through the water tank to gets cool down and solidified.

The solidified straws are cut down as per required length using two wheeled hauled and cutting unit. These straws are collected into the bins are packed and dispatched.

Area: The industrial setup requires space for Inventory, workshop or manufacturing area, space for power supply utilities and auxiliary like Generator setup. Also some of the area of building is required for office staff facilities, documentation, office furniture, etc. Thus, the approximate total area required for complete industrial setup is 1500 to 2000Sqft. Civil work cost will be Rs 4 Lac (Approx.)

Power Requirement: The power consumption required to run all the machinery could be approximated as 30 Hp

Manpower Requirement: There are requirement of skilled machine operators to run the machine set. Experience quality engineers are required for desired quality control. Some helpers are also required to transfer the material from one work station to other. Office staffs are required to maintain the documentation. The approximate manpower required is 9 including 1 Supervisor, 1 Plant operator, 2 unskilled worker, 1 Helper and 1 Security guard. 3 Skilled worker including Accountant, Manager and Sales person.

Bank Term Loan: Rate of Interest is assumed to be at 11%

Depreciation: Depreciation has been calculated as per the Provisions of Income Tax Act, 1961

Approvals & Registration Requirement:

Basic registration required in this project:

- GST Registration
- Udyog Aadhar Registration (Optional)
- Choice of a Brand Name of the product and secure the name with Trademark if require.
- NOC from State Pollution Control Board

Implementation Schedule:

S No.	Activity	Time required
1.	Acquisition of premises	1-2 Months
2.	Procurement & installation of Plant & Machinery	1-2 Months
3.	Arrangement of Finance	1.5-2 Months
4.	Requirement of required Manpower	1 Month
5.	Commercial Trial Runs	1 Month
	Total time Required (some activities shall run concurrently)	5-6 Months

FINANCIALS

PROJECTED BALANCE SHEET					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Capital Account					
Opening Balance	-	4.21	6.98	10.16	13.82
Add: Additions	2.44	-	-	-	-
Add: Net Profit	4.76	6.28	8.18	9.66	10.68
Less: Drawings	3.00	3.50	5.00	6.00	7.00
Closing Balance	4.21	6.98	10.16	13.82	17.49
CC Limit	4.00	4.00	4.00	4.00	4.00
Term Loan	16.00	12.00	8.00	4.00	-
Sundry Creditors	0.73	0.84	0.91	0.98	1.05
TOTAL :	24.94	23.82	23.07	22.79	22.54
APPLICATION OF FUND					
Fixed Assets (Gross)	20.00	20.00	20.00	20.00	20.00
Gross Dep.	2.74	5.09	7.11	8.85	10.35
Net Fixed Assets	17.27	14.91	12.89	11.15	9.65
Current Assets					
Sundry Debtors	2.99	3.50	3.94	4.40	4.88
Stock in Hand	2.80	3.19	3.53	3.90	4.27
Cash and Bank	1.88	2.22	2.70	3.35	3.74
TOTAL :	24.94	23.82	23.07	22.79	22.54

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PROJECTED PROFITABILITY STATEMENT					
PARTICULARS	I	II	III	IV	V
A) SALES					
Gross Sale	59.81	70.01	78.77	87.99	97.66
Total (A)	59.81	70.01	78.77	87.99	97.66
B) COST OF SALES					
Raw Material Consumed	31.35	35.91	38.90	41.90	44.89
Electricity Expenses	2.51	2.74	2.97	3.20	3.42
Repair & Maintenance	2.99	3.50	3.94	4.40	4.88
Labour & Wages	7.81	8.98	10.78	12.94	15.52
Depreciation	2.74	2.35	2.02	1.74	1.50
Cost of Production	47.40	53.49	58.61	64.17	70.22
Add: Opening Stock /WIP	-	1.75	1.99	2.24	2.50
Less: Closing Stock /WIP	1.75	1.99	2.24	2.50	2.77
Cost of Sales (B)	45.65	53.25	58.36	63.91	69.94
C) GROSS PROFIT (A-B)	14.17	16.76	20.41	24.08	27.71
	23.68%	23.93%	25.91%	27.37%	28.38%
D) Bank Interest (Term Loan)	1.95	1.60	1.16	0.72	0.28
ii) Interest On Working Capital	0.44	0.44	0.44	0.44	0.44
E) Salary to Staff	3.78	4.54	5.44	6.53	7.84
F) Selling & Adm Expenses Exp.	2.39	2.80	3.15	3.52	3.91
TOTAL (D+E)	8.57	9.37	10.19	11.21	12.46
H) NET PROFIT	5.60	7.38	10.22	12.88	15.25
	9.4%	10.5%	13.0%	14.6%	15.6%
I) Taxation	0.84	1.11	2.04	3.22	4.58
J) PROFIT (After Tax)	4.76	6.28	8.18	9.66	10.68

PROJECTED CASH FLOW STATEMENT					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Own Contribution	2.44	-			
Reserve & Surplus	5.60	7.38	10.22	12.88	15.25
Depriciation & Exp. W/off	2.74	2.35	2.02	1.74	1.50
Increase In Cash Credit	4.00				
Increase In Term Loan	18.00	-	-	-	-
Increase in Creditors	0.73	0.11	0.07	0.07	0.07
TOTAL :	33.51	9.84	12.31	14.69	16.82
APPLICATION OF FUND					
Increase in Fixed Assets	20.00	-	-	-	-
Increase in Stock	2.80	0.39	0.35	0.36	0.37
Increase in Debtors	2.99	0.51	0.44	0.46	0.48
Repayment of Term Loan	2.00	4.00	4.00	4.00	4.00
Taxation	0.84	1.11	2.04	3.22	4.58
Drawings	3.00	3.50	5.00	6.00	7.00
TOTAL :	31.63	9.51	11.83	14.04	16.43
Opening Cash & Bank Balance	-	1.88	2.22	2.70	3.35
Add : Surplus	1.88	0.34	0.48	0.65	0.39
Closing Cash & Bank Balance	1.88	2.22	2.70	3.35	3.74

COMPUTATION OF MAKING OF PP DRINKING STRAW			
Item to be Manufactured PP Drinking Straw			
Manufacturing Capacity per day		1,500	Packets
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		4,50,000	Pcs
Total Production per Annum		4,50,000	Packet of 100 each
Year		Capacity	PP DRINKING STRAW
		Utilisation	
I		55%	2,47,500.00
II		60%	2,70,000.00
III		65%	2,92,500.00
IV		70%	3,15,000.00
V		75%	3,37,500.00

COMPUTATION OF RAW MATERIAL					
Item Name	Quantity of Raw Material	Unit	Unit Rate	Total Cost Per Annum (100%)	
PP Pellets	50,000.00	Kg	65.00	32,50,000.00	
Colorants	10,000.00	kG	200.00	20,00,000.00	
Packing material				4,50,000.00	
				-	
Total				57,00,000.00	
Total Raw material in Rs lacs				57.00	

Raw Material Consumed	Capacity Utilisation	Amount (Rs.)		
I	55%	31.35		
II	60%	35.91	5% Increase in Cost	
III	65%	38.90	5% Increase in Cost	
IV	70%	41.90	5% Increase in Cost	
V	75%	44.89	5% Increase in Cost	

COMPUTATION OF SALE					
Particulars	I	II	III	IV	V
Op Stock	-	8,250.00	9,000.00	9,750.00	10,500.00
Production	2,47,500.00	2,70,000.00	2,92,500.00	3,15,000.00	3,37,500.00
	2,47,500.00	2,78,250.00	3,01,500.00	3,24,750.00	3,48,000.00
Less : Closing Stock(10 Days)	8,250.00	9,000.00	9,750.00	10,500.00	11,250.00
Net Sale	2,39,250.00	2,69,250.00	2,91,750.00	3,14,250.00	3,36,750.00
Sale Price per Packet	25.00	26.00	27.00	28.00	29.00
Sale (in Lacs)	59.81	70.01	78.77	87.99	97.66

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					
PARTICULARS	I	II	III	IV	V
Finished Goods					
(10 Days requirement)	1.75	1.99	2.24	2.50	2.77
Raw Material					
(10 Days requirement)	1.05	1.20	1.30	1.40	1.50
Closing Stock	2.80	3.19	3.53	3.90	4.27

COMPUTATION OF WORKING CAPITAL REQUIREMENT			
Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	2.80		
Less:			
Sundry Creditors	0.73		
Paid Stock	2.07	0.21	1.86
Sundry Debtors	2.99	0.30	2.69
Working Capital Requirement			4.55
Margin			0.51
MPBF			4.55
Working Capital Demand			4.00

BREAK UP OF LABOUR				
Particulars	Wages	No of	Total	
	Per Month	Employees	Salary	
Supervisor	16,000.00	1	16,000.00	
Plant Operator	12,000.00	1	12,000.00	
Unskilled Worker	10,000.00	2	20,000.00	
Helper	8,000.00	1	8,000.00	
Security Guard	6,000.00	1	6,000.00	
			62,000.00	
Add: 5% Fringe Benefit			3,100.00	
Total Labour Cost Per Month			65,100.00	
Total Labour Cost for the year (In Rs. Lakhs)		6	7.81	

BREAK UP OF SALARY				
Particulars	Salary	No of	Total	
	Per Month	Employees	Salary	
Manager	12,000.00	1	12,000.00	
Accountant cum store keeper	10,000.00	1	10,000.00	
Sales	8,000.00	1	8,000.00	
Total Salary Per Month			30,000.00	
Add: 5% Fringe Benefit			1,500.00	
Total Salary for the month			31,500.00	
Total Salary for the year (In Rs. Lakhs)		3	3.78	

COMPUTATION OF DEPRECIATION					
Description	Land	Building/shed	Machinery	Furniture	TOTAL
Rate of Depreciation		10.00%	15.00%	10.00%	
Opening Balance	Leased		-	-	-
Addition	-	4.00	14.70	1.30	20.00
	-	4.00	14.70	1.30	20.00
		-	-	-	
TOTAL		4.00	14.70	1.30	20.00
Less : Depreciation	-	0.40	2.21	0.13	2.74
WDV at end of Ist year	-	3.60	12.50	1.17	17.27
Additions During The Year	-	-	-	-	-
	-	3.60	12.50	1.17	17.27
Less : Depreciation	-	0.36	1.87	0.12	2.35
WDV at end of IIInd Year	-	3.24	10.62	1.05	14.91
Additions During The Year	-	-	-	-	-
	-	3.24	10.62	1.05	14.91
Less : Depreciation	-	0.32	1.59	0.11	2.02
WDV at end of IIIrd year	-	2.92	9.03	0.95	12.89
Additions During The Year	-	-	-	-	-
	-	2.92	9.03	0.95	12.89
Less : Depreciation	-	0.29	1.35	0.09	1.74
WDV at end of IV year	-	2.62	7.67	0.85	11.15
Additions During The Year	-	-	-	-	-
	-	2.62	7.67	0.85	11.15
Less : Depreciation	-	0.26	1.15	0.09	1.50
WDV at end of Vth year	-	2.36	6.52	0.77	9.65

REPAYMENT SCHEDULE OF TERM LOAN						11.0%	
Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	18.00	18.00	0.50	-	18.00
	IInd Quarter	18.00	-	18.00	0.50	-	18.00
	IIIrd Quarter	18.00	-	18.00	0.50	1.00	17.00
	Ivth Quarter	17.00	-	17.00	0.47	1.00	16.00
					1.95	2.00	
II	Opening Balance						
	Ist Quarter	16.00	-	16.00	0.44	1.00	15.00
	IInd Quarter	15.00	-	15.00	0.41	1.00	14.00
	IIIrd Quarter	14.00	-	14.00	0.39	1.00	13.00
	Ivth Quarter	13.00		13.00	0.36	1.00	12.00
					1.60	4.00	
III	Opening Balance						
	Ist Quarter	12.00	-	12.00	0.33	1.00	11.00
	IInd Quarter	11.00	-	11.00	0.30	1.00	10.00
	IIIrd Quarter	10.00	-	10.00	0.28	1.00	9.00
	Ivth Quarter	9.00		9.00	0.25	1.00	8.00
					1.16	4.00	
IV	Opening Balance						
	Ist Quarter	8.00	-	8.00	0.22	1.00	7.00
	IInd Quarter	7.00	-	7.00	0.19	1.00	6.00
	IIIrd Quarter	6.00	-	6.00	0.17	1.00	5.00
	Ivth Quarter	5.00		5.00	0.14	1.00	4.00
					0.72	4.00	
V	Opening Balance						
	Ist Quarter	4.00	-	4.00	0.11	1.00	3.00
	IInd Quarter	3.00	-	3.00	0.08	1.00	2.00
	IIIrd Quarter	2.00	-	2.00	0.06	1.00	1.00
	Ivth Quarter	1.00		1.00	0.03	1.00	-
					0.28	4.00	

Door to Door Period 60 Months
Moratorium Period 6 Months
Repayment Period 54 Months

<u>CALCULATION OF D.S.C.R</u>					
PARTICULARS	I	II	III	IV	V
<u>CASH ACCRUALS</u>	7.50	8.63	10.20	11.40	12.18
Interest on Term Loan	1.95	1.60	1.16	0.72	0.28
Total	9.45	10.22	11.35	12.11	12.45
<u>REPAYMENT</u>					
Repayment of Term Loan	2.00	4.00	4.00	4.00	4.00
Interest on Term Loan	1.95	1.60	1.16	0.72	0.28
Total	3.95	5.60	5.16	4.72	4.28
DEBT SERVICE COVERAGE RATIO	2.39	1.83	2.20	2.57	2.91
AVERAGE D.S.C.R.			2.35		

COMPUTATION OF ELECTRICITY				
(A) POWER CONNECTION				
Total Working Hour per day		Hours	8	
Electric Load Required		HP	30	
Load Factor			0.7460	
Electricity Charges		per unit	7.50	
Total Working Days			300	
Electricity Charges				4,02,840.00
Add : Minimim Charges (@ 10%)				
(B) DG set				
No. of Working Days			300	days
No of Working Hours			0.3	Hour per day
Total no of Hour			90	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			720	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			0.47	
Add : Lube Cost @15%			0.07	
Total			0.54	
Total cost of Power & Fuel at 100%				4.57
Year		Capacity		Amount (in Lacs)
I		55%		2.51
II		60%		2.74
III		65%		2.97
IV		70%		3.20
V		75%		3.42

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