

# PROJECT REPORT

Of

## LLDPE AGRICULTURAL MULCH FILM

### PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **LLDPE AGRICULTURAL MULCH FILM**.

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.]



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27/1/B, Gokhley Marg, Lucknow-226001

Delhi Office : Multi Disciplinary Training  
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**PROJECT AT A GLANCE**

- 1 Name of the Entrepreneur : xxxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxxxx  
Pin: xxxxxxxx State: xxxxxxxxxx  
Mobile : xxxxxxxx
- 5 Product and By Product : **LLDPE AGRICULTURAL MULCH FILM**
- 6 Name of the project / business activity proposed : **LLDPE AGRICULTURAL MULCH FILM UNIT**
- 7 Cost of Project : Rs.42.78 Lakhs
- 8 Means of Finance  
Term Loan Rs.31.5 Lakhs  
Own Capital Rs.4.28 Lakhs  
Working capital Rs.7 Lakhs
- 9 Debt Service Coverage Ratio : 2.86
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 21%
- 13 Employment : 8 Persons
- 14 Power Requirement : 30.00 HP
- 15 Major Raw materials : LLDPE Granules
- 16 Estimated Annual Sales Turnover (Max Capacity) : 272.30 Lakhs
- 17 Detailed Cost of Project & Means of Finance

**COST OF PROJECT**

(Rs. In Lakhs)

Particulars	Amount
Land	Own/Rented
Plant & Machinery	32.00
Furniture & Fixtures	3.00
Working Capital	7.78
<b>Total</b>	<b>42.78</b>

**MEANS OF FINANCE**

Particulars	Amount
Own Contribution	4.28
Working Capital(Finance)	7.00
Term Loan	31.50
<b>Total</b>	<b>42.78</b>

# **LLDPE AGRICULTURAL MULCH FILM**

**Introduction:** The use of plastic in the agricultural sector has contributed to greater efficiency and crop productivity. That is why the use of plastics in agriculture has significantly increased worldwide in the last 60 years. The main agricultural films are: geomembrane film, silage film, mulch film and film for covering greenhouses. Mulch film is specially designed for those crops that are planted using saplings. The main objective of this film is to protect the crop from the proliferation of weeds, preventing the weeds' growth from hindering the development of the plants. Furthermore, the film protects the crops and the soil from possible adverse weather conditions. Low density polyethylene (LDPE) and lineal low-density polyethylene (LLDPE), which are focussed on translucent or coloured film provides opacity.



**Benefits of Plastic Mulch Film:** Covering the soil around the plant with plastic film results in the following benefits:

1. Moisture retention (particularly valuable in high temperature regions with low rainfall).
2. Weed reduction
3. Increase in soil temperature
4. Less crop contamination
5. Less soil compaction
6. Improved germination rates

These benefits lead to higher yields (by upto 100% for certain crops) earlier crops (by upto one month) and in some cases the ability to grow certain crop, which would not be possible without the mulch film.

**Raw material:** Major raw material that is required is LLDPE Granules.

**Machinery requirements:** Major machines & equipments that are required are as follows:

<b>Description</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount</b>
Extrusion Blown Film Plant (90 mm) capacity 120 kgs./hour	1	2200000	2200000
Cooling Tower	1	300000	300000
Compressor	1	300000	300000
Cost of Mold and Dies	Ls		200000
Other equipments & hand tools	Ls		200000
<b>Total Amount</b>			<b>3200000</b>

**Manufacturing Process:** The manufacturing process used to manufacture LLDPE agricultural film is extrusion. The film thickness range varies between 100-800 gauge and the lay flat tubing width of the film varies between 450 mm to 2100 mm (18" to 84"). LLDPE granules are fed to a single screw extruder, where they are melted & pumped out of a die in the form of a tube.

This is then inflated such that it takes a shape of a bubble. The bubble formed is collapsed & drawn upwards by two nip rolls. Flattened tube is then wound on a winder.

**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 2000 to 2500Sqft.

**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 8 including 1 Supervisor, 1 Plant operator, 1 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.

## **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**

<b>PROJECTED CASH FLOW STATEMENT</b>					
<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>SOURCES OF FUND</b>					
Own Contribution	4.28	-			
Reserve & Surplus	9.93	13.92	21.98	30.31	41.49
Depreciation & Exp. W/off	5.10	4.35	3.71	3.17	2.70
Increase In Cash Credit	7.00				
Increase In Term Loan	31.50	-	-	-	-
Increase in Creditors	2.84	0.47	0.33	0.33	0.33
<b>TOTAL :</b>	<b>60.65</b>	<b>18.75</b>	<b>26.02</b>	<b>33.80</b>	<b>44.52</b>
<b>APPLICATION OF FUND</b>					
Increase in Fixed Assets	35.00	-	-	-	-
Increase in Stock	7.43	1.20	1.10	1.14	1.18
Increase in Debtors	3.65	0.71	0.63	0.66	0.70
Repayment of Term Loan	3.50	7.00	7.00	7.00	7.00
Taxation	1.49	2.09	4.40	7.58	12.45
Drawings	7.00	7.50	12.50	16.00	22.00
<b>TOTAL :</b>	<b>58.07</b>	<b>18.49</b>	<b>25.62</b>	<b>32.38</b>	<b>43.33</b>
Opening Cash & Bank Balance	-	2.58	2.83	3.24	4.66
Add : Surplus	2.58	0.26	0.40	1.42	1.20
Closing Cash & Bank Balance	<b>2.58</b>	<b>2.83</b>	<b>3.24</b>	<b>4.66</b>	<b>5.86</b>

<b>PROJECTED BALANCE SHEET</b>					
<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>SOURCES OF FUND</b>					
<b>Capital Account</b>					
Opening Balance	-	5.72	10.06	15.14	21.87
Add: Additions	4.28	-	-	-	-
Add: Net Profit	8.44	11.83	17.59	22.73	29.04
Less: Drawings	7.00	7.50	12.50	16.00	22.00
<b>Closing Balance</b>	<b>5.72</b>	<b>10.06</b>	<b>15.14</b>	<b>21.87</b>	<b>28.91</b>
CC Limit	7.00	7.00	7.00	7.00	7.00
Term Loan	28.00	21.00	14.00	7.00	-
Sundry Creditors	2.84	3.31	3.64	3.97	4.30
<b>TOTAL :</b>	<b>43.56</b>	<b>41.36</b>	<b>39.78</b>	<b>39.84</b>	<b>40.21</b>
<b>APPLICATION OF FUND</b>					
<b>Fixed Assets ( Gross)</b>	<b>35.00</b>	<b>35.00</b>	<b>35.00</b>	<b>35.00</b>	<b>35.00</b>
Gross Dep.	5.10	9.45	13.16	16.33	19.03
Net Fixed Assets	29.90	25.55	21.84	18.67	15.97
<b>Current Assets</b>					
Sundry Debtors	3.65	4.36	4.99	5.65	6.35
Stock in Hand	7.43	8.62	9.72	10.85	12.03
Cash and Bank	2.58	2.83	3.24	4.66	5.86
<b>TOTAL :</b>	<b>43.56</b>	<b>41.36</b>	<b>39.78</b>	<b>39.84</b>	<b>40.21</b>

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<b>PROJECTED PROFITABILITY STATEMENT</b>					
<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>A) SALES</b>					
Gross Sale	156.60	186.88	213.85	242.33	272.30
<b>Total (A)</b>	<b>156.60</b>	<b>186.88</b>	<b>213.85</b>	<b>242.33</b>	<b>272.30</b>
<b>B) COST OF SALES</b>					
Raw Material Consumed	121.50	141.75	155.93	170.10	184.28
Electricity Expenses	2.05	2.28	2.51	2.74	2.97
Repair & Maintenance	4.70	5.61	6.42	7.27	8.17
Labour & Wages	6.30	7.25	8.69	10.43	12.52
Depreciation	5.10	4.35	3.71	3.17	2.70
<b>Cost of Production</b>	<b>139.65</b>	<b>161.23</b>	<b>177.26</b>	<b>193.71</b>	<b>210.63</b>
<b>Add: Opening Stock /WIP</b>	<b>-</b>	<b>4.59</b>	<b>5.31</b>	<b>6.08</b>	<b>6.89</b>
<b>Less: Closing Stock /WIP</b>	<b>4.59</b>	<b>5.31</b>	<b>6.08</b>	<b>6.89</b>	<b>7.74</b>
Cost of Sales (B)	135.06	160.51	176.49	192.90	209.78
<b>C) GROSS PROFIT (A-B)</b>	<b>21.54</b>	<b>26.36</b>	<b>37.36</b>	<b>49.42</b>	<b>62.52</b>
	<b>13.75%</b>	<b>14.11%</b>	<b>17.47%</b>	<b>20.40%</b>	<b>22.96%</b>
D) Bank Interest (Term Loan )	3.42	2.79	2.02	1.25	0.48
ii) Interest On Working Capital	0.77	0.77	0.77	0.77	0.77
E) Salary to Staff	4.28	5.14	6.17	7.40	8.88
F) Selling & Adm Expenses Exp.	3.13	3.74	6.42	9.69	10.89
<b>TOTAL (D+E)</b>	<b>11.60</b>	<b>12.44</b>	<b>15.38</b>	<b>19.12</b>	<b>21.03</b>
<b>H) NET PROFIT</b>	<b>9.93</b>	<b>13.92</b>	<b>21.98</b>	<b>30.31</b>	<b>41.49</b>
	<b>6.3%</b>	<b>7.5%</b>	<b>10.3%</b>	<b>12.5%</b>	<b>15.2%</b>
I) Taxation	1.49	2.09	4.40	7.58	12.45
<b>J) PROFIT (After Tax)</b>	<b>8.44</b>	<b>11.83</b>	<b>17.59</b>	<b>22.73</b>	<b>29.04</b>

COMPUTATION OF MAKING OF LLDPE AGRICULTURAL MULCH FILM			
<b>Item to be Manufactured LLDPE Agricultural Mulch Film</b>			
Manufacturing Capacity per day		1,000	Kg
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		3,00,000	Kg
Total Production per Annum		3,00,000	Kg
Year		Capacity	LLDPE AGRICULTURAL
		Utilisation	
I		45%	1,35,000.00
II		50%	1,50,000.00
III		55%	1,65,000.00
IV		60%	1,80,000.00
V		65%	1,95,000.00

**COMPUTATION OF RAW MATERIAL**

Item Name	Quantity of Raw Material	Unit	Unit Rate of	Total CostPer Annum (100%)
LLDPE Granules	360.00	MT	75,000.00	2,70,00,000.00
<b>Total</b>				<b>2,70,00,000.00</b>
Total Raw material in Rs lacs				270.00

Raw Material Consumed	Capacity Utilisation	Amount (Rs.)	
I	45%	121.50	
II	50%	141.75	5% Increase in Cost
III	55%	155.93	5% Increase in Cost
IV	60%	170.10	5% Increase in Cost
V	65%	184.28	5% Increase in Cost

<b>COMPUTATION OF SALE</b>					
Particulars	I	II	III	IV	V
Op Stock	-	4,500.00	5,000.00	5,500.00	6,000.00
Production	1,35,000.00	1,50,000.00	1,65,000.00	1,80,000.00	1,95,000.00
Less : Closing Stock(10 Days)	4,500.00	5,000.00	5,500.00	6,000.00	6,500.00
Net Sale	1,30,500.00	1,49,500.00	1,64,500.00	1,79,500.00	1,94,500.00
Sale Price per Kg	120.00	125.00	130.00	135.00	140.00
<b>Sale (in Lacs)</b>	<b>156.60</b>	<b>186.88</b>	<b>213.85</b>	<b>242.33</b>	<b>272.30</b>

<b>COMPUTATION OF CLOSING STOCK &amp; WORKING CAPITAL</b>					
<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>Finished Goods</b>					
(10 Days requirement)	4.59	5.31	6.08	6.89	7.74
<b>Raw Material</b>					
(7 Days requirement)	2.84	3.31	3.64	3.97	4.30
<b>Closing Stock</b>	<b>7.43</b>	<b>8.62</b>	<b>9.72</b>	<b>10.85</b>	<b>12.03</b>

<b>COMPUTATION OF WORKING CAPITAL REQUIREMENT</b>			
<b>Particulars</b>	<b>Amount</b>	<b>Margin(10%)</b>	<b>Net Amount</b>
Stock in Hand	7.43		
Less:			
Sundry Creditors	2.84		
<b>Paid Stock</b>	<b>4.59</b>	<b>0.46</b>	<b>4.13</b>
Sundry Debtors	3.65	0.37	3.29
<b>Working Capital Requirement</b>			<b>7.42</b>
<b>Margin</b>			0.82
<b>MPBF</b>			<b>7.42</b>
<b>Working Capital Demand</b>			<b>7.00</b>

<b>BREAK UP OF LABOUR</b>				
Particulars	Wages	No of	Total	
	Per Month	Employees	Salary	
Supervisor	14,000.00	1	14,000.00	
Plant Operator	12,000.00	1	12,000.00	
Unskilled Worker	10,000.00	1	10,000.00	
Helper	8,000.00	1	8,000.00	
Security Guard	6,000.00	1	6,000.00	
			50,000.00	
Add: 5% Fringe Benefit			2,500.00	
Total Labour Cost Per Month			52,500.00	
Total Labour Cost for the year ( In Rs. Lakhs)		5	6.30	

<b>BREAK UP OF SALARY</b>				
Particulars	Salary	No of	Total	
	Per Month	Employees	Salary	
Manager	12,000.00	1	12,000.00	
Accountant cum store keeper	12,000.00	1	12,000.00	
Sales	10,000.00	1	10,000.00	
Total Salary Per Month			34,000.00	
Add: 5% Fringe Benefit			1,700.00	
Total Salary for the month			35,700.00	
Total Salary for the year ( In Rs. Lakhs)		3	4.28	

<b>COMPUTATION OF DEPRECIATION</b>				
Description	Land	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		15.00%	10.00%	
<b>Opening Balance</b>	Leased	-	-	-
Addition	-	32.00	3.00	35.00
	-	32.00	3.00	35.00
		-	-	
TOTAL		32.00	3.00	35.00
Less : Depreciation	-	4.80	0.30	5.10
WDV at end of Ist year	-	27.20	2.70	29.90
Additions During The Year	-	-	-	-
	-	27.20	2.70	29.90
Less : Depreciation	-	4.08	0.27	4.35
WDV at end of IInd Year	-	23.12	2.43	25.55
Additions During The Year	-	-	-	-
	-	23.12	2.43	25.55
Less : Depreciation	-	3.47	0.24	3.71
WDV at end of IIIrd year	-	19.65	2.19	21.84
Additions During The Year	-	-	-	-
	-	19.65	2.19	21.84
Less : Depreciation	-	2.95	0.22	3.17
WDV at end of IV year	-	16.70	1.97	18.67
Additions During The Year	-	-	-	-
	-	16.70	1.97	18.67
Less : Depreciation	-	2.51	0.20	2.70
WDV at end of Vth year	-	14.20	1.77	15.97

REPAYMENT SCHEDULE OF TERM LOAN							11.0%
Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
<b>I</b>	Opening Balance						
	Ist Quarter	-	31.50	31.50	0.87	-	31.50
	IInd Quarter	31.50	-	31.50	0.87	-	31.50
	IIIRD Quarter	31.50	-	31.50	0.87	1.75	29.75
	Ivth Quarter	29.75	-	29.75	0.82	1.75	28.00
					3.42	3.50	
<b>II</b>	Opening Balance						
	Ist Quarter	28.00	-	28.00	0.77	1.75	26.25
	IInd Quarter	26.25	-	26.25	0.72	1.75	24.50
	IIIRD Quarter	24.50	-	24.50	0.67	1.75	22.75
	Ivth Quarter	22.75		22.75	0.63	1.75	21.00
					2.79	7.00	
<b>III</b>	Opening Balance						
	Ist Quarter	21.00	-	21.00	0.58	1.75	19.25
	IInd Quarter	19.25	-	19.25	0.53	1.75	17.50
	IIIRD Quarter	17.50	-	17.50	0.48	1.75	15.75
	Ivth Quarter	15.75		15.75	0.43	1.75	14.00
					2.02	7.00	
<b>IV</b>	Opening Balance						
	Ist Quarter	14.00	-	14.00	0.39	1.75	12.25
	IInd Quarter	12.25	-	12.25	0.34	1.75	10.50
	IIIRD Quarter	10.50	-	10.50	0.29	1.75	8.75
	Ivth Quarter	8.75		8.75	0.24	1.75	7.00
					1.25	7.00	
<b>V</b>	Opening Balance						
	Ist Quarter	7.00	-	7.00	0.19	1.75	5.25
	IInd Quarter	5.25	-	5.25	0.14	1.75	3.50
	IIIRD Quarter	3.50	-	3.50	0.10	1.75	1.75
	Ivth Quarter	1.75		1.75	0.05	1.75	-
					0.48	7.00	

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

**CALCULATION OF D.S.C.R**

<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b><u>CASH ACCRUALS</u></b>	13.54	16.18	21.30	25.90	31.74
Interest on Term Loan	3.42	2.79	2.02	1.25	0.48
Total	16.96	18.98	23.32	27.15	32.23
<b><u>REPAYMENT</u></b>					
Repayment of Term Loan	3.50	7.00	7.00	7.00	7.00
Interest on Term Loan	3.42	2.79	2.02	1.25	0.48
Total	6.92	9.79	9.02	8.25	7.48
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.45</b>	<b>1.94</b>	<b>2.58</b>	<b>3.29</b>	<b>4.31</b>
<b>AVERAGE D.S.C.R.</b>			<b>2.86</b>		



<b>COMPUTATION OF ELECTRICITY</b>				
<b>(A) POWER CONNECTION</b>				
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	
<b>Electricity Charges</b>				4,02,840.00
Add : Minimim Charges (@ 10%)				
<b>(B) DG set</b>				
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			<b>0.54</b>	
Total cost of Power & Fuel at 100%				4.57
Year		Capacity		Amount (in Lacs)
I		45%		2.05
II		50%		2.28
III		55%		2.51
IV		60%		2.74
V		65%		2.97

## **DISCLAIMER**

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