



MODEL PROJECT REPORT



PROJECT REPORT ON EGG TRAY

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EGG TRAY



Introduction

An egg tray (also known as an egg box in British English) is a tray designed for carrying and transporting whole eggs.

These cartons have a dimpled form in which each dimple accommodates an individual egg and isolates that egg from eggs in adjacent dimples. This structure helps protect eggs against stresses exerted during transportation and storage by absorbing a lot of shock and limiting the incidents of fracture to the fragile egg shells. An egg Tray can be made of various materials, including foamed plastics such as polystyrene foam, clear plastic or may be manufactured from recycled paper and moulded pulp by means of a mechanized papier-mâché process

Functions & Advantages of Egg Tray

Egg tray making machine is used to produce egg trays. Egg trays is used to pack eggs.

1. Protection Function

Egg trays can protect the egg from the external shock. It can also protect the eggs from damaging and going bad due to illumination and dampness so that the loss can be reduced.

2. Convenient Transportation

The purpose of producing eggs is to let them get into market, which is a process of product circulation. In this process, eggs will undergo countless times of transportation, handling, storage, which requires the

egg packing must be able to adapt to the process. Egg trays can satisfy this purpose.

3. Increasing sale

In today's market, great changes have taken place in the way of people's purchasing. With the improvement of people's material standard, more and more people begin to pursue a higher quality of life. The packaging quality of the products has a direct impact on sales. The egg is more typical. If we make the egg packaging exquisite and unique, it will increase the sales of eggs.

Above all is function and advantage of egg packaging. We can find that egg trays have a good market prospect. If the investors have their own egg tray making machine, it will save a lot cost and earn more benefit. It is wise to buy egg tray making machine.

Egg Tray Market Analysis

Over the past few years, egg cartons market has been one of the fastest growing markets supplying packaging solution to the global food & beverages industry. The primary driver in global egg carton packaging market is the convenience in carrying and transporting of eggs. Egg carton manufacturers also implement various innovative ideas for the safe transportation of eggs. Also, egg cartons made of paper are recyclable in nature and thus become a very cost effective solution for the storage of eggs. All such factors fuel up to the growth of global egg cartons market. However, on the other hand, due to stiff competition in the manufacturers of plastic egg cartons and the dynamic change in the cost of raw materials that is required in manufacturing egg cartons, the market for egg cartons has suffered restricted growth. Overall, global egg cartons market is expected to show a considerable growth rate over the forecast period of 2017-2027.

Description of Egg tray Machines

Following machinery are required for Egg tray Manufacturing process:

- Pulper
- Chest Tank

- Agitator
- Water Tank
- Moulding Machine
- Trolley
- Dies

Manufacturing Process

Paper egg trays are everywhere in our daily life.

1. **Collection of Duplex Paper:** Firstly collect the Duplex Paper(30% books & copies can be used as raw material)
2. **Pulp Making:** Put the waste paper into the pulp making machine, then add water and other raw materials into the pulp making machine. Smash them into pulp. This process is equivalent to the recycle of waste paper, which is the first step to make egg trays.
3. **Moulding:** Moulding refers to the step that convey the pulp into moulding machine through pipeline. Paper egg trays molding machine is called egg trays machine for short. Through changing molds, it can produce egg trays with different types. It can also produce apple trays, wine trays and other industrial packaging. After successful molding, the basic shape of egg trays is formed. But, they are wet at this time and needs to go through the next drying step.
4. **Drying:** The drying line is very long. Omni-directional and three-dimensional hot air ensures that the egg trays can be dried in short time. The wet egg trays are conveyed to the drying line and move forward slowly, enjoying the hot air from all directions.
5. **Packing:** This step is tidying up and packaging pieces of newborn egg trays so that they can be transported and carried easily. Dozens of egg trays will be sent to the chicken farm, shopping mall, supermarket to realize their value.

Machinery & Equipment's required:

Name	Cost
Total Machinery Price	20,00,000
GST @ 18%	3,60,000
Total	23,60,000

❖ Cost of the machine is other than transportation cost.

Land & Building required:

Land required 1 acre

Out of which construction area required is 1200 Square Feet (approx.)

Approximate construction cost is Rs. 5 Lacs

Labour Requirement:

5-6 Manpower are required for the Egg Tray unit.

Includes:

2 skilled Labour

3-4 Unskilled Labour

Raw Material Requirement

- Duplex Paper
- 30% Book/Copy Rough Papers

Average raw material (cost per KG): Rs. 13

Egg Tray license & registration**For Proprietor:**

- Obtain the GST registration.
- Fire/ Pollution Registration as required.

- Choice of a Brand Name of the product and secure the name with Trademark if required.

Implementation Schedule

S.N.	Activity	Time Required (in Months)
1	Acquisition Of premises	1
2	Construction (if Applicable)	1- 2 Months
3	Procurement & installation of Plant & Machinery	1
4	Arrangement of Finance	1
5	Requirement of required Manpower	1
	Total time Required (some activities shall run concurrently)	2-3 Months

Conclusion:

After completion of manufacturing process, product is ready to sell in the market. Egg Trays are used for daily routine activities. This machine can be installed with low investment & one can earn a good Margin of profit by doing this business.

PROJECT AT GLANCE

NAME OF FIRM :
CONSTITUTION : Proprietorship
NAME OF PROPRIETOR :
NATURE OF ACTIVITY : Manufacturing of Egg Tray
PRODUCTS :

Product	Capacity
Egg tray	1400 tray/ per Hour

FINANCIAL ASSISTANCE REQUIRED :

Term Loan	23.04	Lacs
Working Capital Loan	2.70	Lacs

PRIMARY SECURITY : Hypothecation of Plant & Machinery
Ist Charge on Current Assets incl stock and book debts

COST OF PROJECT

PARTICULARS	TOTAL COST
Civil Work	
Plant & Machinery	23.60
Office Furniture	2.00
Working Capital required	6.00
Total	31.60

MEANS OF FINANCE

PARTICULARS	TOTAL COST
Own Contribution(10% of Project Cost)	4.06
Term Loan	23.04
Working capial From Bank	4.50
Total	31.60

FINANCIAL ASSISTANCE REQUIRED

Term Loan of Rs 22.95 Lacs and Working Capital limit of Rs. 4.5 Lacs

<u>COST OF PROJECT</u>	PARTICULARS	AMOUNT	AMOUNT	AMOUNT
	Land		25%	75%
	Building Civil Work	5.00	1.25	3.75
	Plant & Machinery	23.60	5.90	17.70
	Furniture & Fixtures and Other Assets	2.00	0.50	1.50
	Working capital	6.00	1.50	4.50
	Total	36.60	9.15	27.45
<u>MEANS OF FINANCE</u>	PARTICULARS	AMOUNT		
	Own Contribution	9.15		
	Bank Loan	22.95		
	Working capital Limit	4.50		
	Total	36.60		

COMPUTATION OF PRODUCTION OF EGG TRAY		
Items to be Manufactured		
Egg tray		
Size 14,16,17 number		
Machine capacity	1400	tray per hour
Machine capacity per annum	3360000	Tray
Raw Material Requirement		
1 Tray consists	70.00	Gram
Total Raw material Required	235200	KG

Production of Egg tray		
Production	Capacity	Tray
1st year	60%	2,016,000
2nd year	65%	2,184,000
3rd year	70%	2,352,000
4th year	75%	2,520,000
5th year	80%	2,688,000
6th year	85%	2,856,000

Raw Material	Capacity Utilisation	Rate per KG	Amount (Rs. in lacs)
1st year	60%	13.00	18.35
2nd year	65%	13.50	20.64
3rd year	70%	14.00	23.05
4th year	75%	14.50	25.58
5th year	80%	15.00	28.22
6th year	85%	15.50	30.99

COMPUTATION OF SALE

Particulars	1st year	2nd year	3rd year	4th year	5th year	6th year
Op Stock	-	168,000	182,000	196,000	210,000	224,000
Production	2,016,000	2,184,000	2,352,000	2,520,000	2,688,000	2,856,000
Less : Closing Stock	168,000	182,000	196,000	210,000	224,000	238,000
Net Sale	1,848,000	2,170,000	2,338,000	2,506,000	2,674,000	2,842,000
sale price per Tray	2.20	2.22	2.24	2.27	2.29	2.31
sales (in Lacs)	40.66	48.22	52.47	56.80	61.22	65.71

<u>BREAK UP OF LABOUR CHARGES</u>			
Particulars	Wages	No of	Total
	Per Month	Employees	Salary
Skilled Labour	12000	2	24000
Unskilled Labour	10000	3	30000
Total Salary Per Month			54000
Total Annual Labour Charges	(in Lacs)		6.48

Utility Charges at 100% capacity (per month)		
Particulars	value	Description
Power connection required	40	KWH
consumption per day	320	units
Consumption per month	8000	units
Rate per Unit	6	Rs.
power Bill per month	48000	Rs.

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	1st year	2nd year	3rd year	4th year	5th year	6th year
Capacity Utilisation %	60%	65%	70%	75%	80%	90%
<u>SALES</u>						
Gross Sale						
Egg Tray	40.66	48.22	52.47	56.80	61.22	65.71
Total	40.66	48.22	52.47	56.80	61.22	65.71
<u>COST OF SALES</u>						
Raw Material Consumed	18.35	20.64	23.05	25.58	28.22	30.99
Electricity Expenses	5.76	6.45	7.23	8.09	9.06	9.97
Repair & Maintenance	0.41	0.48	0.52	0.57	0.61	0.66
Labour & Wages	6.48	7.13	7.84	8.62	9.49	9.96
Depriciation	4.24	3.19	2.72	2.32	1.98	1.69
Consumables	0.81	1.45	1.57	1.70	1.84	1.97
Cost of Production	36.05	39.34	42.93	46.89	51.20	55.24
Add: Opening Stock /WIP	-	3.00	3.28	3.58	3.91	4.27
Less: Closing Stock /WIP	3.00	3.28	3.58	3.91	4.27	4.60
Cost of Sales	33.04	39.06	42.63	46.56	50.84	54.90
GROSS PROFIT	7.61	9.16	9.84	10.24	10.37	10.81
Interest on Term Loan	2.27	2.08	1.62	1.16	0.70	0.23
Interest on working Capital	0.50	0.50	0.50	0.50	0.50	0.50
Selling & Adm Expenses Exp.	0.41	0.96	1.05	1.14	1.22	1.31
TOTAL	3.17	3.54	3.16	2.79	2.42	2.04
NET PROFIT	4.45	5.61	6.67	7.46	7.96	8.77
Taxation	-	0.13	0.35	0.51	0.62	0.78
PROFIT (After Tax)	4.45	5.49	6.32	6.95	7.34	7.99

PROJECTED BALANCE SHEET						
						-
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year	6th year
<u>Liabilities</u>						
Capital						
opening balance		11.60	14.33	17.16	19.60	21.95
Add:- Own Capital	9.15					
Add:- Retained Profit	4.45	5.49	6.32	6.95	7.34	7.99
Less:- Drawings	2.00	2.75	3.50	4.50	5.00	5.50
Closing Blance	11.60	14.33	17.16	19.60	21.95	24.43
Term Loan	20.85	16.65	12.45	8.25	4.05	-
Working Capital Limit	4.50	4.50	4.50	4.50	4.50	4.50
Sundry Creditors	0.92	1.24	1.31	1.36	1.51	1.65
Provisions & Other Liab	0.30	0.40	0.55	0.66	0.83	1.03
TOTAL :	38.16	37.12	35.96	34.38	32.83	31.62
<u>Assets</u>						
Fixed Assets (Gross)	30.60	30.60	30.60	30.60	30.60	30.60
Gross Dep.	4.24	7.43	10.15	12.47	14.45	16.14
Net Fixed Assets	26.36	23.17	20.45	18.13	16.15	14.46
						-
Current Assets						
Sundry Debtors	4.07	6.43	7.00	7.57	7.75	7.89
Stock in Hand	4.53	5.69	6.27	6.89	7.56	8.22
Cash and Bank	3.21	1.84	2.25	1.78	1.36	1.05
TOTAL :	38.16	37.12	35.96	34.38	32.83	31.62

PROJECTED CASH FLOW STATEMENT

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PARTICULARS	1st year	2nd year	3rd year	4th year	5th year	6th year
<u>SOURCES OF FUND</u>						
Own Margin	9.15					
Net Profit	4.45	5.61	6.67	7.46	7.96	8.77
Depreciation & Exp. W/off	4.24	3.19	2.72	2.32	1.98	1.69
Increase in Cash Credit	4.50	-	-	-	-	-
Increase In Term Loan	22.95	-	-	-	-	-
Increase in Creditors	0.92	0.32	0.07	0.06	0.14	0.15
Increase in Provisions & Oth lib	0.30	0.10	0.15	0.11	0.17	0.21
TOTAL :	46.50	9.22	9.61	9.94	10.24	10.81
<u>APPLICATION OF FUND</u>						
Increase in Fixed Assets	30.60					
Increase in Stock	4.53	1.15	0.58	0.62	0.67	0.66
Increase in Debtors	4.07	2.36	0.57	0.58	0.18	0.13
Repayment of Term Loan	2.10	4.20	4.20	4.20	4.20	4.05
Drawings	2.00	2.75	3.50	4.50	5.00	5.50
Taxation	-	0.13	0.35	0.51	0.62	0.78
TOTAL :	43.30	10.59	9.20	10.41	10.66	11.12
Opening Cash & Bank Balance	-	3.21	1.84	2.25	1.78	1.36
Add : Surplus	3.21 -	1.37	0.41 -	0.47 -	0.42 -	0.31
Closing Cash & Bank Balance	3.21	1.84	2.25	1.78	1.36	1.05

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL						
						-
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year	6th year
<u>Finished Goods</u>						
	3.00	3.28	3.58	3.91	4.27	4.60
<u>Raw Material</u>						
	1.53	2.41	2.69	2.98	3.29	3.62
Closing Stock	4.53	5.69	6.27	6.89	7.56	8.22

COMPUTATION OF WORKING CAPITAL REQUIREMENT					
TRADITIONAL METHOD					
Particulars	Amount	Own Margin		Bank Finance	
Finished Goods & Raw Material	4.53				
Less : Creditors	0.92				
Paid stock	3.62	25%	0.90	75%	2.71
Sundry Debtors	4.07	25%	1.02	75%	3.05
	7.68		1.92		5.76
WORKING CAPITAL LIMIT DEMAND (from Bank)				4.50	

2nd Method		
PARTICULARS	1st year	2nd year
Total Current Assets	11.80	13.95
Other Current Liabilities	1.22	1.64
Working Capital Gap	10.59	12.31
Min Working Capital		
25% of WCG	2.65	3.08
Actual NWC	6.09	7.81
Item III - IV	7.94	9.23
Item III - V	4.50	4.50
MPBF (Lower of VI & VII)	4.50	4.50

3rd Method		
PARTICULARS	1st year	2nd year
Total Current Assets	11.80	13.95
Other Current Liabilities	1.22	1.64
Working Capital Gap	10.59	12.31
Min Working Capital		
25% of Current Assets	2.95	3.49
Actual NWC	6.09	7.81
Item III - IV	7.64	8.83
Item III - V	4.50	4.50
MPBF (Lower of VI & VII)	4.50	4.50

COMPUTATION OF DEPRECIATION

Description	Building	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation	10.00%	15.00%	10.00%	
Opening Balance	-	-	-	-
Addition	5.00	23.60	2.00	30.60
Total	5.00	23.60	2.00	30.60
Less : Depreciation	0.50	3.54	0.20	4.24
WDV at end of Year	4.50	20.06	1.80	26.36
Additions During The Year	-	-	-	-
Total	4.50	20.06	1.80	26.36
Less : Depreciation	0.45	3.01	0.18	3.19
WDV at end of Year	4.05	17.05	1.62	23.17
Additions During The Year	-	-	-	-
Total	4.05	17.05	1.62	23.17
Less : Depreciation	0.41	2.56	0.16	2.72
WDV at end of Year	3.65	14.49	1.46	20.45
Additions During The Year	-	-	-	-
Total	3.65	14.49	1.46	20.45
Less : Depreciation	0.36	2.17	0.15	2.32
WDV at end of Year	3.28	12.32	1.31	18.13
Additions During The Year	-	-	-	-
Total	3.28	12.32	1.31	18.13
Less : Depreciation	0.33	1.85	0.13	1.98
WDV at end of Year	2.95	10.47	1.18	16.15
Additions During The Year	-	-	-	-
Total	2.95	10.47	1.18	16.15

Less : Depreciation	0.30	1.57	0.12	1.69
WDV at end of Year	2.66	8.90	1.06	14.46
Less : Depreciation	0.27	1.34	0.11	1.44
WDV at end of Year	2.39	7.57	0.96	13.02
Less : Depreciation	0.24	1.13	0.10	1.23
WDV at end of Year	2.15	6.43	0.86	11.79

CALCULATION OF D.S.C.R

PARTICULARS	1st year	2nd year	3rd year	4th year	5th year	6th year
CASH ACCRUALS	8.69	8.68	9.04	9.26	9.32	9.67
Interest on Term Loan	2.27	2.08	1.62	1.16	0.70	0.23
Total	10.95	10.76	10.66	10.42	10.02	9.91
<u>REPAYMENT</u>						
Instalment of Term Loan	2.08	4.20	4.20	4.20	4.20	4.05
Interest on Term Loan	2.27	2.08	1.62	1.16	0.70	0.23
Total	4.35	6.28	5.82	5.36	4.90	4.28
DEBT SERVICE COVERAGE RATIO	2.52	1.71	1.83	1.95	2.05	2.31
AVERAGE D.S.C.R.	2.06					

REPAYMENT SCHEDULE OF TERM LOAN							
Interest						11.00%	
Year	Particulars	Amount	Addition	Total	Interest	Repayment	Closing Balance
1st	Opening Balance						
	1st month	-	22.95	22.95	-	-	22.95
	2nd month	22.95	-	22.95	0.21	-	22.95
	3rd month	22.95	-	22.95	0.21	-	22.95
	4th month	22.95	-	22.95	0.21		22.95
	5th month	22.95	-	22.95	0.21		22.95
	6th month	22.95	-	22.95	0.21		22.95
	7th month	22.95	-	22.95	0.21	0.35	22.60
	8th month	22.60	-	22.60	0.21	0.35	22.25
	9th month	22.25	-	22.25	0.20	0.35	21.90
	10th month	21.90	-	21.90	0.20	0.35	21.55
	11th month	21.55	-	21.55	0.20	0.35	21.20
	12th month	21.20	-	21.20	0.19	0.35	20.85
					2.27	2.10	
2nd	Opening Balance						
	1st month	20.85	-	20.85	0.19	0.35	20.50
	2nd month	20.50	-	20.50	0.19	0.35	20.15
	3rd month	20.15	-	20.15	0.18	0.35	19.80
	4th month	19.80	-	19.80	0.18	0.35	19.45
	5th month	19.45	-	19.45	0.18	0.35	19.10
	6th month	19.10	-	19.10	0.18	0.35	18.75
	7th month	18.75	-	18.75	0.17	0.35	18.40
	8th month	18.40	-	18.40	0.17	0.35	18.05
	9th month	18.05	-	18.05	0.17	0.35	17.70
	10th month	17.70	-	17.70	0.16	0.35	17.35
	11th month	17.35	-	17.35	0.16	0.35	17.00
	12th month	17.00	-	17.00	0.16	0.35	16.65

					2.08	4.20	
3rd	Opening Balance						
	1st month	16.65	-	16.65	0.15	0.35	16.30
	2nd month	16.30	-	16.30	0.15	0.35	15.95
	3rd month	15.95	-	15.95	0.15	0.35	15.60
	4th month	15.60	-	15.60	0.14	0.35	15.25
	5th month	15.25	-	15.25	0.14	0.35	14.90
	6th month	14.90	-	14.90	0.14	0.35	14.55
	7th month	14.55	-	14.55	0.13	0.35	14.20
	8th month	14.20	-	14.20	0.13	0.35	13.85
	9th month	13.85	-	13.85	0.13	0.35	13.50
	10th month	13.50	-	13.50	0.12	0.35	13.15
	11th month	13.15	-	13.15	0.12	0.35	12.80
	12th month	12.80	-	12.80	0.12	0.35	12.45
						1.62	4.20
4th	Opening Balance						
	1st month	12.45	-	12.45	0.11	0.35	12.10
	2nd month	12.10	-	12.10	0.11	0.35	11.75
	3rd month	11.75	-	11.75	0.11	0.35	11.40
	4th month	11.40	-	11.40	0.10	0.35	11.05
	5th month	11.05	-	11.05	0.10	0.35	10.70
	6th month	10.70	-	10.70	0.10	0.35	10.35
	7th month	10.35	-	10.35	0.09	0.35	10.00
	8th month	10.00	-	10.00	0.09	0.35	9.65
	9th month	9.65	-	9.65	0.09	0.35	9.30
	10th month	9.30	-	9.30	0.09	0.35	8.95
	11th month	8.95	-	8.95	0.08	0.35	8.60
	12th month	8.60	-	8.60	0.08	0.35	8.25
						1.16	4.20
5th	Opening Balance						
	1st month		-		0.08	0.35	7.90

	8.25		8.25			
2nd month	7.90	-	7.90	0.07	0.35	7.55
3rd month	7.55	-	7.55	0.07	0.35	7.20
4th month	7.20	-	7.20	0.07	0.35	6.85
5th month	6.85	-	6.85	0.06	0.35	6.50
6th month	6.50	-	6.50	0.06	0.35	6.15
7th month	6.15	-	6.15	0.06	0.35	5.80
8th month	5.80	-	5.80	0.05	0.35	5.45
9th month	5.45	-	5.45	0.05	0.35	5.10
10th month	5.10	-	5.10	0.05	0.35	4.75
11th month	4.75	-	4.75	0.04	0.35	4.40
12th month	4.40	-	4.40	0.04	0.35	4.05
				0.70	4.20	-
6TH	Opening Balance					
1st month	4.05	-	4.05	0.04	0.35	3.70
2nd month	3.70	-	3.70	0.03	0.35	3.35
3rd month	3.35	-	3.35	0.03	0.35	3.00
4th month	3.00	-	3.00	0.03	0.35	2.65
5th month	2.65	-	2.65	0.02	0.35	2.30
6th month	2.30	-	2.30	0.02	0.35	1.95
7th month	1.95	-	1.95	0.02	0.35	1.60
8th month	1.60	-	1.60	0.01	0.35	1.25
9th month	1.25	-	1.25	0.01	0.35	0.90
10th month	0.90	-	0.90	0.01	0.35	0.55
11th month	0.55	-	0.55	0.01	0.35	0.20
12th month	0.20	-	0.20	0.00	0.20	-
				0.23	4.05	
DOOR TO DOOR						
MORATORIUM PERIOD	72	MONTHS				
REPAYMENT PERIOD	6	MONTHS				
	66	MONTHS				