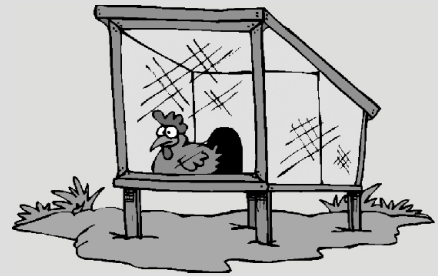


POULTRY PROCESSING



1.0 INTRODUCTION

Poultry farms are increasing steadily. Many government agencies are encouraging poultry farming and even short term training courses are organised regularly. Such farms have generated considerable employment opportunities in semi urban and rural areas. Marketing of poultry birds is expensive and death of birds during transit is the main bottleneck. This compels most of the poultry farms to concentrate on nearby markets even if it means less prices. Instead, if these birds are processed after dressing and packed in tins then transportation is easier, shelf life of the product goes up and the product is more hygienic.

2.0 PRODUCT

2.1 Applications

Good quality poultry birds are slaughtered and after dressing, they are cooked and packed in cans. This ensures longer shelf life and also takes care of problems associated with transportation of live birds, higher costs and loss of birds during transit. Proposed processing plant must be located in the vicinity of poultry farms. This project has good potential in several states of the country and this note considers UP as the preferred location.

2.2 Availability of know-how and Compliances

DFRL, Mysore, has successfully developed the technical know-how. Compliance with PFA Act is mandatory.

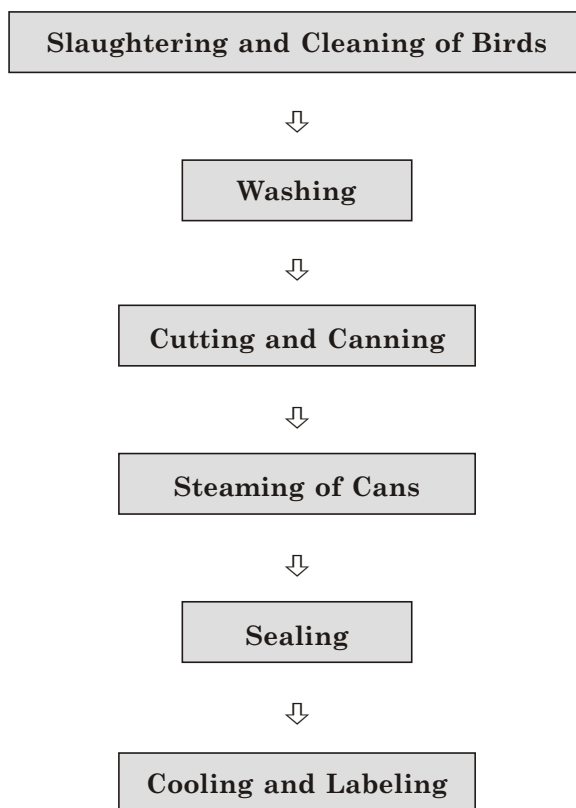
3.0 MARKET POTENTIAL

Number of non-vegetarians is steadily increasing year after year and because of changing social structure, eating non vegetarian food is no more a taboo. Even amongst the non vegetarians, various food and snack preparations made from chicken are very popular.

Increase in the disposable incomes of people, changing lifestyles and preference for instant or convenience food has seen many new products becoming very popular during last few years. Likewise, number of star hotels, exclusive restaurants and other eateries are also going up year after year. Clubs, canteens, caterers and flight kitchens is yet another growing market. Longer shelf life and hygienically packed poultry products would be preferred by many. Proper marketing network supported by publicity would be very important.

4.0 MANUFACTURING PROCESS

The process starts with slaughtering of birds and subsequently their feathers, lungs, kidneys, head and other unwanted parts are removed and balance portion is thoroughly washed in water. Then this cleaned portion is cut into required sizes and packed into sterilised tins. They are canned either with 3 to 5% brine or with curried vegetables. Then these tins are subjected to live steam in an exhaust box for around 15 minutes at a temperature of about 60-65 °C. Then the cans are sealed air tight and are further processed in retort at a pressure of 10 to 15 lbs. for about 40-45 minutes. Then the cans are immediately cooled to room temperature and labelling and further packing is undertaken. The process flow chart is as under:



5.0 CAPITAL INPUTS

5.1 Land and Building

A plot of land of about 300 sq.mtrs. with built-up area of 125 sq.mtrs. would be needed. Slaughtering and dressing operations can be undertaken in a shed adjacent to main factory with asbestos sheet roofing along with water storage tanks and processing and packing can

be undertaken in the main shed. Cost of land is assumed to be Rs. 90,000/- whereas total construction cost is taken as Rs.4.00 lacs.

5.2 Machinery

Annual rated processing capacity (after dressing) of 120 tonnes with 300 working days and 12 hours working every day would need following equipments:

Item	Qty.	Price (Rs.)
Oil-fired Steam Boiler	1	1,00,000
Straight Line Exhaust Box complete with reduction gear boxes, electric motor and accessories	1	75,000
Canning Retort with pressure gauge, safety valve and other accessories	1	60,000
Can Reformer & Flanger	1 each	1,00,000
Can Seamer	1	85,000
Can Tester	1	50,000
Laboratory equipments, SS utensils, weighing scales, knives/cutters, plastic crates etc.	--	80,000
	Total	5,50,000

5.3 Miscellaneous Assets

Other assets like furniture & fixtures, packing tables, exhaust fans, plastic buckets/tubs etc. would cost Rs. 80,000.

5.4 Utilities

Power requirement shall be 40 HP whereas furnace oil shall be required for boiler. Daily water requirement will be around 5000 ltrs.

5.5 Raw and Packing Materials

The most critical raw material would be good quality poultry birds. Prior arrangements for regular supply are advisable. Other materials like spices and salt, citric acid, garlic, onion, tomatoes and coriander shall also be required in small quantities. Cans, cartons, labels, box strapping would be the packing materials.

6.0 MANPOWER REQUIREMENTS

Particulars	Nos.	Monthly Salary (Rs.)	Total Monthly Salary (Rs.)
Machine Operators	2	3,000	6,000
Skilled Workers	2	2,500	5,000
Semi-skilled Workers	2	1,750	3,500
Helpers	12	1,250	15,000
Salesman	1	2,500	2,500
		Total	32,000

7.0 TENTATIVE IMPLEMENTATION SCHEDULE

Activity	Period (in months)
Application and sanction of loan	2
Site selection and commencement of civil work	2
Completion of civil work and placement of orders for machinery	6
Erection, installation and trial runs	2

8.0 DETAILS OF THE PROPOSED PROJECT

8.1 Land and Building

Particulars	Area (Sq.Mtrs)	Cost (Rs.)
Land	300	90,000
Building	125	4,00,000
	Total	4,90,000

8.2 Machinery

The total cost is estimated to be Rs. 5.50 lacs as explained earlier.

8.3 Miscellaneous Assets

Total expenditure on other assets is likely to be Rs. 80,000/- as stated before.

8.4 Preliminary & Pre-operative Expenses

An amount of Rs. 1.25 lacs would take care of pre-production expenses like establishment, registration, administrative and travelling charges, interest during implementation, trial runs etc.

8.5 Working Capital Requirements

At 60% utilisation in the first year, the working capital needs shall be as under:

(Rs. in lacs)

Particulars	Period	Margin	Total	Bank	Promoters
Stock of Packing Materials	1 Month	30%	0.80	0.55	0.25
Stock of Finished Goods	½ Month	25%	2.80	2.10	0.70
Receivables	½ Month	25%	3.90	2.90	1.00
Other Expenses	1 Month	100%	0.40	--	0.40
		Total	7.90	5.55	2.35

8.6 Cost of the Project & Means of Financing

(Rs. in lacs)

Item	Amount
Land and Building	4.90
Machinery	5.50
Miscellaneous Assets	0.80
P&P Expenses	1.25
Contingencies @ 10% on Land and Building & Plant & Machinery	1.05
Working Capital Margin	2.35
Total	15.85
Means of Finance	
Promoters' Contribution	4.75
Term Loan from Bank/FI	11.10
Total	15.85
Debt Equity Ratio	2.33 : 1
Promoters' Contribution	30%

Financial assistance in the form of grant is available from the Ministry of Food Processing Industries, Govt. of India, towards expenditure on technical civil works and plant and machinery for eligible projects subject to certain terms and conditions.

9.0 PROFITABILITY CALCULATIONS

9.1 Production Capacity & Build-up

As against the rated processing capacity of 120 tonnes, actual utilisation in the first year is taken at 60% and thereafter at 75%.

9.2 Sales Revenue at 100%

With selling price of Rs. 130/kg. or Rs.1.30 lac per ton annual income of 120 tonnes would be Rs. 156 lacs.

9.3 Raw and Packing Materials Required at 100%

(Rs. in lacs)

Product	Qty. (Tonnes)	Price/Ton (Rs.)	Value
Poultry Birds, Spices, Salt, Vegetables	185	45,000	83.25
Citric Acid etc.	--	--	1.80
Packing Material @ Rs.13000/Ton	--	--	15.60
		Total	100.65

9.4 Utilities

The annual cost of utilities at 100% would be Rs. 4.00 lacs.

9.5 Selling Expenses

A provision of 20% of sales income is made towards selling commission, transportation, hoardings, publicity materials at major sales outlets etc.

9.6 Interest

It is calculated @ 12% per annum on term loan of Rs. 11.10 lacs considering complete repayment in 5 years inclusive of a moratorium period of 1 year and on working capital from bank it is taken @ 14% per annum.

9.7 Depreciation

It is calculated on WDV basis @ 10% on building and 15% on machinery and miscellaneous assets.

10.0 PROJECTED PROFITABILITY

(Rs. in lacs)

No.	Particulars	1st Year	2nd Year
A	Installed Capacity	--- 120 Tonnes ---	
	Capacity Utilisation	60%	75%
	Sales Realisation	93.60	117.00
B	Cost of Production		
	Raw and Packing Materials	60.39	75.49
	Utilities	2.40	3.00
	Salaries	3.84	4.75
	Stores and Spares	0.36	0.54
	Repairs & Maintenance	0.60	0.90
	Selling Expenses @ 20%	18.72	23.40
	Administrative Expenses	0.72	1.00
	Total	87.03	109.08
C	Profit before Interest & Depreciation	6.57	7.92
	Interest on Term Loan	1.21	0.99
	Interest on Working Capital	0.78	1.00
	Depreciation	1.34	1.16
	Profit before Tax	3.24	4.77
	Income-tax @ 20%	0.65	0.95
	Profit after Tax	2.59	3.82
	Cash Accruals	3.93	4.98
	Repayment of Term Loan	--	2.50

11.0 BREAK-EVEN ANALYSIS

(Rs. in lacs)

No	Particulars	Amount	
[A]	Sales		117.00
[B]	Variable Costs		
	Raw and Packing Materials	75.49	
	Utilities (70%)	2.10	
	Salaries (70%)	3.33	
	Stores & Spares	0.54	
	Selling Expenses (70%)	16.33	
	Admn Expenses (50%)	0.50	
	Interest on WC	1.00	98.93
[C]	Contribution [A] - [B]		18.07
[D]	Fixed Cost		8.43
[E]	Break-Even Point [D] ÷ [C]		47%

12.0 [A] LEVERAGES

Financial Leverage

$$\begin{aligned} &= \text{EBIT/EBT} \\ &= 5.23 \div 3.24 \\ &= 1.61 \end{aligned}$$

Operating Leverage

$$\begin{aligned} &= \text{Contribution/EBT} \\ &= 14.24 \div 3.24 \\ &= 4.39 \end{aligned}$$

Degree of Total Leverage

$$\begin{aligned} &= \text{FL/OL} \\ &= 1.61 \div 4.39 \\ &= 0.37 \end{aligned}$$

[B] Debt Service Coverage Ratio (DSCR)

(Rs. in lacs)

Particulars	1st Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
Cash Accruals	3.93	4.98	5.30	5.63	5.91
Interest on TL	1.21	0.99	0.68	0.39	0.18
Total [A]	5.14	5.97	5.98	6.02	6.09
Interest on TL	1.21	0.99	0.68	0.39	0.18
Repayment of TL	--	2.75	2.75	2.75	2.85
Total [B]	1.21	3.74	3.43	3.14	3.03
DSCR [A] ÷ [B]	4.25	1.71	1.88	2.08	2.19
Average DSCR	----- 2.42 -----				

[C] Internal Rate of Return (IRR)

Cost of the project is Rs. 15.85 lacs.

(Rs. in lacs)

Year	Cash Accruals	16%	18%	20%
1	3.93	3.39	3.33	3.27
2	4.98	3.70	3.58	3.46
3	5.30	3.40	3.23	3.07
4	5.63	3.11	2.91	2.71
5	5.91	2.81	2.58	2.38
	25.75	16.41	15.63	14.89

The IRR is around 17%.

Some of the equipment and packing machinery suppliers are

1. B. Sen Berry & Co, Karol Baugh, New Delhi 110 005
2. Narang Corporation, Connaught Place, New Delhi 110 001
3. Cowel Can Ltd, Barotiwala, Solan (HP)
4. DK Barry and Compnay Pvt. Ltd., 11/35, West Punjabi Baug, New Delhi-110026.
Tel No. 25160363
4. Dr. Froeb (India) Pvt. Ltd., B-136, 2ND Floor, Kalkaji, New Delhi-110019.
Tel No. 26463037/18528