

1 MACRONI (GOLD FINGER)

1.1 Introduction

Macaroni or gold finger is a simple product made from Maida and Tapioca flour. This is a mass consumption item especially amongst children and youngsters. The product comes under "Ready-to-Eat" category and has become very popular throughout the country. Macaroni means a product made from a blend of flours. It is manufactured in different sizes, hollow or solid and for different cooking methods. Some are made for cooking whereas others for frying. This note is for macaroni or gold finger meant for frying.

1.2 Objective

The primary objective of the model report is to facilitate the entrepreneurs in understanding the importance of setting up unit of Macaroni (Gold Fingers). This model report will serve as guidance to the entrepreneurs on starting up such a new project and basic technical knowledge for setting up such a facility.

1.3 Raw Material Availability

Maida and tapioca flour are the important materials which will be available from local markets. Quantity required of soda bicarbonate, salt and edible colours will not be much.

1.4 Market Opportunities

Gold fingers are very popular throughout the country especially amongst children and youngsters. It is one of the cheap eatables available in the market as compared to potato wafers, cheese balls or other such items in the same category. Its popularity in urban markets is limited but semi-urban and rural markets have witnessed substantial increase in demand. Since they enjoy considerable shelf-life, they are stored in households in large quantities. It has become a very popular snack food or lunch-box item. Since it is not a very costly item, people from all walks of life can afford it.

1.5 Project description

1.5.1 Applications

Macaroni is a simple product made from maida and tapioca flour with shape like a hollow tube or pipe in different sizes ranging from 1" to 4" long. Its shelf life is more than a month under normal conditions. It is available in different colours. This product is very popular across the country and can be made at a location which is closer to the market.

1.5.2 Capacity of the Project

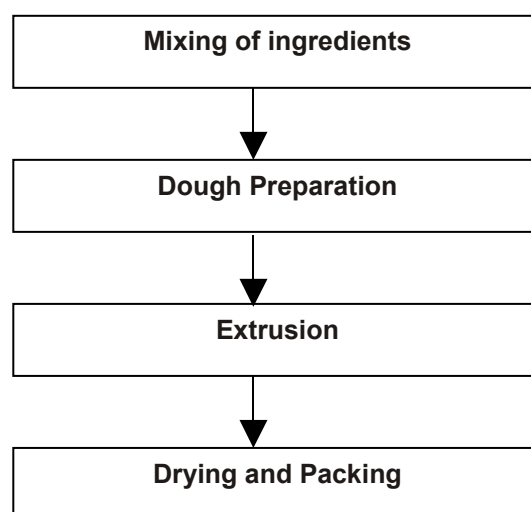
The capacity of the project is 120 tonnes per annum.

1.5.3 Critical success factors

Market for gold fingers is scattered and they can be sold at many places. Hence, proper distribution arrangements must be made. They are generally salty but depending upon local tastes and liking some other suitable flavours can be made.

1.5.4 Manufacturing process

The process starts with dry mixing of maida, tapioca starch and soda bicarbonate in the vertical mixer. Then boiled water is added to this mix to prepare dough in the dough mixer. The time required is about 15 minutes. Kneaded dough is then taken to macaroni-making machine where extruded material of desired shape and length is obtained by using an appropriate die. At this stage, the moisture content is around 30%. The product is collected in wooden trays where surface drying takes place and it becomes hard enough to be handled without sticking or being crushed. Then the product is semi-dried by exposing to indirect sunrays or keeping in shade. This quality of macaroni does not have satisfactory cooking quality as it gives heavy loss on cooking. Heat treatment can improve this quality but then it imparts brown colour which may not be liked by the consumers. The product can be exposed to steam for about 15 minutes and then dried. It increases the shelf life as the moisture content comes down to around 10%. Process loss is 8 to 10%. The process flow chart is as follows:



1.6 Project component and cost

Major components of the projects and their costs are described in the table hereunder:

PARTICULARS	Unit	Qty	Cost/unit	Total
LAND & BUILDING				13.30
Land	SqM	380	250.00	0.95
Land Development				
Land Area		380	500.00	1.90
Building				
Production Block				
Main Production Area	SqM	100	5,000.00	5.00
Store cum packing room & Sales Counter	SqM	50	5,000.00	2.50
Misc Handling Area	SqM	100	2,000.00	2.00
Contingencies		10%		0.95
PLANT & MACHINERY				3.04
Powder Mixer		1	50,000	0.50
Dough Mixer		1	70,000	0.70
Macroni machine		1	80,000	0.80
Boiler		1	20,000	0.20
Water Storage Tanks		4	2,000	0.08
Wooden Trays		100	200	0.20
Misc.	LS	1	5,000	0.05
Contingencies		20%		0.51
MISCELLANEOUS FIXED ASSETS				0.72
Misc Assests	LS	1	60,000	0.60
Contingencies		20%		0.12
PRE-OPERATIVE EXPENSES				8.50
Establishment		1	700,000	7.00
Professional Charges		1	50,000	0.50
Security Deposits		1	100,000	1.00
TOTAL				25.56

The cost of the various components will depend on the location of the project. Item wise assumptions are as under:

1.7 Plant and Machinery

The main machineries required to prepare the macroni or gold fingers are Powder Mixer, Dough Mixer, Macroni machine, Boiler, Water Storage Tanks, Wooden Trays etc. The total cost of plant and machinery is Rs. 3.04 lakhs.

1.8 Building

The main production block will cost Rs. 10.45 lakhs. The entire building will be divided into three zones – main production area, storage cum packing room and sales counter and miscellaneous handling area. .

1.9 Miscellaneous Assets

Other assets like furniture and fixtures, packing tables, plastic tubs, SS utensils, storage racks, weighing scales, polythene bag sealing machine etc. shall be required for which a provision of Rs. 72000/- is made.

1.10 Preliminary & Pre-operative Expenses

A provision of Rs. 8.50 lakhs would take care of pre-production expenses like establishment, professional charges, security deposits etc.

1.11 Working Capital Requirement

ITEMS	Year 1	Year 3	Year 5
STOCK OF RAW MATERIAL & PACKING MATERIAL	4.54	6.16	6.16
SUNDRY DEBTORS	15.12	20.52	20.52
TOTAL	19.66	26.68	26.68
MARGIN	4.91	6.67	6.67
MPBF	14.74	20.01	20.01
INTEREST ON WC	1.62	2.20	2.20

1.12 Means of Finance

EQUITY CAPITAL			35.00%
MOFPI SUBSIDY	25%	50.00	25.00%
TERM LOAN			
FINANANCIAL INSTITUTIONS		10.00%	40.00%
-Payable half yearly Installments	10	1.20	
TOTAL			100%

1.13 Cash flow statement

PARTICULARS	Year 1	Year 3	Year 5	Year 7
SOURCES OF FUNDS				
EQUITY CAPITAL	-	-	-	-
SUBSIDY				
NET PROFIT	2.24	7.53	6.18	4.74
(INTEREST ADDED BACK)				
DEPRECIATION	0.76	0.76	0.76	0.76
PRELIMINARY EXP.W/O	1.21	1.21	1.21	1.21
INCREASE IN TERM LOAN	-	-	-	-
INCREASE IN BANK BORROWINGS-WC	14.74	3.16	-	-
TOTAL	18.95	12.66	8.15	6.71

1.14 Projected balance sheet

PARTICULARS	Year 1	Year 3	Year 5	Year 7
LIABILITIES				
EQUITY CAPITAL	10.66	10.66	10.66	10.66
RESERVES & SURPLUS	7.01	12.57	20.37	26.17
TERM LOAN	10.99	6.19	1.39	-
BANK BORROWINGS-WC	14.74	20.01	20.01	20.01
TOTAL	43.41	49.43	52.43	56.84

1.15 Projected profit and loss account

PARTICULARS	Year 1	Year 3	Year 5	Year 7
NET REVENUE REALISATION	50.40	68.40	68.40	68.40
TOTAL EXPENSES	46.19	58.90	60.25	61.69
GROSS PROFIT	4.21	9.50	8.15	6.71
DEPRECIATION	0.76	0.76	0.76	0.76
INTEREST	2.84	3.00	2.52	2.20
PRELIMINARY EXP.W/O	1.21	1.21	1.21	1.21
PROFIT BEFORE TAX	(0.60)	4.53	3.66	2.54
TAXES	-	-	-	-
PROFIT AFTER TAX	(0.60)	4.53	3.66	2.54
DIVIDEND	-	-	-	-
DIVIDEND TAX	-	-	-	-
RETAINED PROFIT	(0.60)	4.53	3.66	2.54

1.16 Key Indicators

NET PRESENT VALUE at current Inflation (Rs. in lakhs)	35.49
INTERNAL RATE OF RETURN %	26.83
AVERAGE DSCR	1.65
BREAK EVEN POINT %	92.62
PAY BACK PERIOD (YEARS)	4.89

1.17 Manpower Requirement

PARTICULARS	NOs.
SUPERVISORY STAFF	
Production Supervisors	2
WORKERS	
Skilled Workers	3
Semi-Skilled Labour	8
Salesman	2

1.18 Assumptions

Project & Financing			
Contingencies on Building			10%
Contingencies on Equipment			20%
Term Loan			40%
Rate of Interest on Term Loan			10%
Subsidy Considered	Subject to ceiling		25%
Expected time of Installation		Months	10
Moratorium		Months	6
CAPACITY			
Rated Capacity Per Annum	80% of Installed capacity	TPA	120
Number of Operational Days	DAYS		300
Working Hours Per day	Hrs		8
CAPACITY UTILIZATION			
Year I			70%
Year II			80%
Year III			95%
SALES PRICE			
W S Price			60,000
OTHER EXPENSE			

Commission		10.0%
Marketing Expenses		2.5%
POWER		
Connected Load	HP	25
DEPRICIATION AS PER COMPANY'S ACT		
BUILDING		3.34%
PLANT & MACHINERY		10.34%
MISC. FIXED ASSETS		7.07%
LAND & SITE DEVELOPMENT		1.63%
MAINTENANCE		
BUILDING		1.00%
PLANT & MACHINERY		3.00%
MISC. FIXED ASSETS		2.00%
LAND & SITE DEVELOPMENT		1.00%

1.18.1 Sources of technology

- Nagpal Brothers, C-127, Phase II, Mayapuri Industrial Area, New Delhi- 110064.
Tel No. 25400407 / 02631
- SP Engg. Works, Fazalgunj, Kanpur
- Lylapur Engg Co, PB No. 8, Gaziabad , UP
- Master Mechanical Works Pvt Ltd, 75, Link Rd., Lajpat Nagar III, New Delhi.

The actual cost of projects may deviate on change of any of the assumptions.