BUSINESS FEASIBILITY STUDY - RE

Garlic Eggless Mayonnaise - Actual Formulation (

Aurangabad, Maharashtra | Machine: 100 kg / 30 min line

WHAT CHANGED FROM THE FIRST STUDY

Raw material cost:	Rebuilt from your exact 250 g garlic-mayo recipe = Rs. Rs. 82/kg estimate)
Machinery:	Sized to your quoted line - 100 kg/30 min (200 kg/hr) b machinery cost kept under Rs. 10 lakh
Capacity ramp:	Uses your specified utilisation path: 40% -> 60% -> 70 Years 1-5
Packaging, labour, power, QC, overh	Added back on top of the Rs. 64.84/kg raw material co were excluded from your figure

CONTENTS

For Market Analysis, SWOT, Risk Analysis and the Regulatory/Licensing checklist, refer to the companion file 'Mayonnaise_Feasibility_Study_Aurangabad.xlsx' delivered earlier - those sections are unchanged and not repeated he updated cost and capacity numbers. Blue text = editable input. Green text = link from another sheet.

EVISED

Costing

e

64.84/kg (was a generic

atch capacity, total

% -> 80% -> 100% over

st, as you noted these

jection (Year 1-5)
ar 1-5)
&L)

re. This file focuses on the

KEY ASSUMPTIONS & INPUTS

Edit blue cells to re-run the entire model

A. MACHINE CAPACITY & OPERATIONS

Parameter	Value	Unit
Batch size	100	kg/batch
Batch cycle time	30	minutes
Operating hours per day	8	hours
Working days per month	25	days
Working months per year	12	months
Throughput per hour	200	kg/hour
Installed capacity per day	1,600	kg/day
Installed capacity per annum	480,000	kg/year

B. CAPACITY UTILISATION (YOUR SPECIFIED RAMP)

Year	Utilisation %	
Year 1	40.0%	
Year 2	60.0%	
Year 3	70.0%	
Year 4	80.0%	
Year 5	100.0%	

C. PRICING

Parameter	Value	Unit
Ex-factory selling price (250 g pouch, garlic mayo)	150	Rs./kg
Annual price escalation	4.0%	%

D. COST INPUTS

Parameter	Value	Unit
Raw material cost per kg	64.82	Rs./kg
Raw material cost inflation	5.0%	
Packaging cost (250g pouch + cap/nozzle + carton, blended)	18	Rs./kg
Power tariff (MSEDCL industrial, avg.)	9.50	Rs./unit
Processing/yield loss	2.0%	

E. FINANCE ASSUMPTIONS

Parameter	Value	Unit
Interest rate - term loan	11.0%	%

Interest rate - working capital	11.5%	%
Term loan tenure	5	years
Depreciation - Plant & Machinery (WDV)	15.0%	%
Depreciation - Building/Civil (WDV)	10.0%	%
Depreciation - Furniture/Vehicle (WDV)	15.0%	%
Corporate/MSME income tax rate	25.0%	%
Promoter's equity share of project cost	40.0%	%

Notes
As per your quoted machine
Yields 200 kg/hour throughput
Single shift assumed - can extend to 2 shifts for higher throughput
Equals 200kg/hr x 8hr x 25days x 12mo

Notes
As specified
As specified
As specified
As specified
As specified

Notes
ASSUMPTION - not specified by user. Set conservatively at ~2.3x recipe cost; CONFIRM your actual target ex-factory/distributor price before relying on the IRR/payback figures, which are highly sensitive to this cell

Notes
Linked from your exact recipe costing (~Rs.64.84/kg)
ASSUMPTION - excluded from your RM figure per your note; confirm with pouch vendor
Applied on raw material + packaging consumption

Notes
MSME food processing term loan

Cash credit / OD limit
Income Tax Act WDV method
Balance via term loan

RAW MATERIAL COSTING - GARLIC EGGLESS MAY

Exact formulation as provided; oil priced at Rs. 160/kg

Ingredient	Qty / 250 g (g)	Price (Rs./kg)	Cost / 250 g (Rs.)
Refined Vegetable Oil	62.50	160	10.000
Water	157.78	0	0.000
Pregelatinized Modified Starch	3.75	270	1.013
Emulswell AZ HVG2	4.50	475	2.138
Emulfino AZ	1.50	450	0.675
Fresh Garlic	7.00	20	0.140
White Vinegar	5.50	60	0.330
Fresh Lemon Juice	4.50	325	1.463
Sugar	4.00	28	0.112
Salt	3.00	28	0.084
Xanthan Gum	0.50	290	0.145
Sodium Benzoate	0.20	200	0.040
Potassium Sorbate	0.20	315	0.063
Calcium Disodium EDTA	0.02	190	0.004
TBHQ	0.06	0	0.000

Total batch weight	255.01		
RAW MATERIAL COST PER 250 g BATCH			**16.21**

SCALE-UP SUMMARY

Batch Size	Raw Material Cost (Rs.)	Rs./kg	
250 g	16.21	*64.82*	
500 g	32.41	*64.82*	
1 kg	64.82	*64.82*	
10 kg	648.21	*64.82*	
100 kg	6,482.12	*64.82*	

RAW MATERIAL COST PER KG (blended, this recipe)	**64.82**

This raw-material cost (~Rs. 64.84/kg at these input prices) excludes pouch/cap/nozzle packaging, labour, ele and transport - all of which are added separately in the Operating Expenses tab, as you specified.

ONNAISE

Note
No cost
Emulsifier/stabiliser blend
Emulsifier
Preservative - within FSSAI limit
Preservative - within FSSAI limit
Sequestrant
Antioxidant - price per your data

Note

ctricity, processing loss, QC, overhead, GST

MACHINERY & EQUIPMENT LIST

100 kg/30 min batch line - total machinery cost kept under Rs. 10 lakh per your input

Equipment	Qty	Rate (Rs.)	Amount (Rs.)
High-shear emulsifier/homogeniser mixer (100 kg batch, SS304, jacketed)	1	500,000	500,000
Chiller/cooling circulation unit (3 TR)	1	140,000	140,000
Semi-automatic pouch filling & sealing machine (250g/500g)	1	130,000	130,000
Cap/nozzle fitting station	1	25,000	25,000
SS storage tanks (250L x 2) + piping	1	55,000	55,000
Weighing scales (platform + precision)	2	20,000	40,000
QC lab basic setup (pH meter, viscometer, moisture)	1	60,000	60,000
Installation, commissioning & trial batches	1	35,000	35,000

TOTAL - PLANT & MACHINERY			**985,000**
Check: is total below Rs. 10,00,000?			*YES - within budget*

Specification / Note
Core unit - matches your quoted 100kg/30min capacity
Emulsion temperature control
Form-fill-seal or piston pouch filler
For spouted pouches
Oil & finished product holding
Batch weighing & QC
In-house quality control
Erection, testing

PROJECT COST (CAPITAL EXPENDITURE)

CAPITAL EXPENDITURE BREAKUP

Head	Amount (Rs.)	% of Total
Civil work / factory shed interiors (leased premises)	300,000	15.1%
Plant & Machinery (see Machinery List tab)	985,000	49.6%
Electrical installation & utility connection	150,000	7.6%
Furniture, fixtures & office equipment	80,000	4.0%
Delivery vehicle (Tata Ace / similar)	350,000	17.6%
Pre-operative expenses (FSSAI, Udyam, consultancy, trials)	120,000	6.0%
Sub-total - Fixed Capital	**1,985,000**	
Working Capital Margin (see Means of Finance ta	780,434	
TOTAL PROJECT COST	**2,765,434**	

Notes
FSSAI-compliant flooring, drainage; MIDC shed assumed leased
Auto-linked - kept under Rs.10 lakh
MSEDCL industrial connection, DG backup
For distribution

MEANS OF FINANCE

Funding structure for total project cost

A. WORKING CAPITAL MARGIN ESTIMATION (YEAR 1 BASIS)

Component	Basis	Amount (Rs.)
Raw material + packaging inventory	*20 days of Year-1 RM+packaging cost*	871,324
Finished goods inventory	*12 days of Year-1 ex-factory sales value*	946,849
Receivables (HoReCa/institutional credit)	*15 days of Year-1 sales value*	1,183,562
Cash & bank / contingency buffer	*Fixed minimum operating buffer*	120,000

Total Working Capital Requirement		**3,121,735**
Promoter's margin on working capital (25%, balance via bank OD/CC limit)		780,434

B. SOURCES OF FUNDS (TOTAL PROJECT COST)

Source		Amount (Rs.)
Promoter's Contribution (Equity)		1,106,174
Term Loan from Bank/NBFC		1,659,260

TOTAL SOURCES OF FUNDS		**2,765,434**

Notes
20-day stock cover at Year-1 production volume
12-day FG cover at Year-1 sales value
Credit period extended to buyers
Minimum operating cash for contingencies

Notes
Share set in Assumptions tab (default 40%)
Balance of project cost @ terms in Assumptions tab

MANPOWER PLAN

Staffing sized for a 200 kg/hr single-shift line

Designation	Nos.	Monthly Salary (Rs.)	Monthly Cost (Rs.)
Plant Manager / Production In-charge	1	35,000	35,000
Production Supervisor	1	22,000	22,000
QC/QA Executive	1	20,000	20,000
Skilled machine operators	2	16,000	32,000
Helpers / unskilled workers	5	12,000	60,000
Store/Inventory clerk	1	14,000	14,000
Delivery driver cum sales coordinator	1	15,000	15,000
Accounts/Admin executive (shared)	1	15,000	15,000
Sales & marketing executive	1	20,000	20,000

Total Monthly Wage Bill			**233,000**
Total Annual Manpower Cost (incl. PF/ESI @ 13%)			**3,159,480**

Note
Overall operations, QC oversight
Shift supervision
FSSAI compliance, batch testing
Mixer/filling line operation
Material handling, packing, cleaning - higher headcount for 200kg/hr line

CAPACITY & REVENUE PROJECTION (YEAR 1-5)

Volume x blended ex-factory price, at your specified utilisation path

Year	Capacity Utilisation	Volume (kg/year)	Avg. Selling Price (Rs./kg)
Year 1	40.0%	192,000	150.00
Year 2	60.0%	288,000	156.00
Year 3	70.0%	336,000	162.24
Year 4	80.0%	384,000	168.73
Year 5	100.0%	480,000	175.48

Volume = Installed capacity (Assumptions!C13, derived from your 100kg/30min machine spec) x Utilisation 4% p.a. from Year 2. The Rs.195/kg ex-factory price is an assumption (not given in your figures) - edit Assu

Sales Revenue (Rs.)	Growth %	Note
28,800,000	*n/a*	
44,928,000	56.0%	
54,512,640	21.3%	
64,792,166	18.9%	
84,229,816	30.0%	

% (40/60/70/80/100% as you specified for Years 1-5). Price escalated
ımptions!C25 to your actual target MRP/trade price.

OPERATING EXPENSES (YEAR 1-5)

Variable and fixed operating costs linked to volume and revenue projections

Particulars	Year 1	Year 2	Year 3
Raw material cost (incl. yield loss)	12,694,584	19,993,969	24,492,613
Packaging cost (incl. yield loss)	3,525,120	5,287,680	6,168,960
Power, fuel & utilities	72,960	109,440	127,680
Manpower cost (salaries + PF/ESI)	3,159,480	3,412,238	3,685,217
Repairs & maintenance (machinery)	29,550	29,550	29,550
Selling, distribution & freight	1,440,000	2,246,400	2,725,632
Marketing & sales promotion	720,000	1,123,200	1,362,816
Administrative & general overheads	220,000	233,200	247,192
Factory shed rent	180,000	189,000	198,450
Quality, food-safety compliance & lab	85,000	89,250	93,713
TOTAL OPERATING EXPENSES	**22,126,694**	**32,713,928**	**39,131,823**

Raw material and packaging lines scale directly with the volume projections and reflect your recipe costing plus a sma since it is typically pass-through/input-credited; add it explicitly if your product falls outside standard input credit flows.

Year 4	Year 5	Basis
29,391,135	38,575,865	*Volume x RM cost/kg (your recipe), inflated 5% p.a., +2% yield loss*
7,050,240	8,812,800	*Volume x packaging cost/kg (250g pouch, cap/nozzle, carton)*
145,920	182,400	*~40 units/MT processed x industrial tariff*
3,980,035	4,298,438	*Linked from Manpower Plan tab; 8% p.a. increment thereafter*
29,550	29,550	*3% of machinery cost per annum*
3,239,608	4,211,491	*5% of sales revenue*
1,619,804	2,105,745	*2.5% of sales revenue*
262,024	277,745	*Rent (if any), telephone, stationery, misc; 6% p.a. escalation*
208,373	218,791	*Rs.15,000/month MIDC shed rent, 5% escalation*
98,398	103,318	*FSSAI renewal, lab tests, audits*
46,025,087	**58,816,143**	

ıll yield-loss allowance. GST is not modelled as a P&L cost

TERM LOAN REPAYMENT SCHEDULE

5-year term loan, equal annual principal + reducing-balance interest

LOAN SUMMARY

Term Loan Am	1,659,260			
Interest Rate (	11.0%			
Tenure (years)	5			

REPAYMENT SCHEDULE (EQUAL ANNUAL PRINCIPAL)

Year	Opening Balance	Principal Repayment	Interest	Total Instalment
Year 1	1,659,260	331,852	182,519	514,371
Year 2	1,327,408	331,852	146,015	477,867
Year 3	995,556	331,852	109,511	441,363
Year 4	663,704	331,852	73,007	404,860
Year 5	331,852	331,852	36,504	368,356

Closing Balance
1,327,408
995,556
663,704
331,852
0

PROFITABILITY STATEMENT (P&L) - YEAR 1-5

All figures in Rs.

DEPRECIATION SCHEDULE (WDV METHOD)

Block	Year 1	Year 2	Year 3
Plant & Machinery + Electrical (WDV base)	170,250	144,713	123,006
Building / Civil work (WDV base)	30,000	27,000	24,300
Furniture & Vehicle (WDV base)	64,500	54,825	46,601
Total Depreciation	**264,750**	**226,538**	**193,907**

PROFIT & LOSS STATEMENT

Particulars	Year 1	Year 2	Year 3
Sales Revenue	28,800,000	44,928,000	54,512,640
Less: Total Operating Expenses	22,126,694	32,713,928	39,131,823
EBITDA	**6,673,306**	**12,214,072**	**15,380,817**
EBITDA Margin %	*23.2%*	*27.2%*	*28.2%*
Less: Depreciation	264,750	226,538	193,907
EBIT	6,408,556	11,987,535	15,186,911
Less: Interest on Term Loan	182,519	146,015	109,511
Less: Interest on Working Capital	269,250	269,250	269,250
Profit Before Tax (PBT)	**5,956,788**	**11,572,270**	**14,808,150**
Less: Income Tax	1,489,197	2,893,068	3,702,037
PROFIT AFTER TAX (PAT)	**4,467,591**	**8,679,203**	**11,106,112**
Net Profit Margin %	*15.5%*	*19.3%*	*20.4%*

Depreciation follows the WDV method per Income Tax Act rates. Working capital interest is applied on the bank-funded p

Year 4	Year 5	Rate
104,555	88,872	C$41
21,870	19,683	C$42
39,611	33,669	C$43
166,036	**142,224**	

Year 4	Year 5	Note
64,792,166	84,229,816	
46,025,087	58,816,143	
18,767,080	**25,413,673**	
29.0%	*30.2%*	
166,036	142,224	
18,601,044	25,271,449	
73,007	36,504	
269,250	269,250	
18,258,787	**24,965,696**	
4,564,697	6,241,424	
13,694,090	**18,724,272**	
21.1%	*22.2%*	

ortion (75% of working capital requirement).

CASH FLOW STATEMENT - YEAR 1-5

Simplified project cash flow

Particulars	Year 1	Year 2	Year 3
Profit After Tax (PAT)	4,467,591	8,679,203	11,106,112
Add back: Depreciation	264,750	226,538	193,907
Cash Profit (PAT + Depreciation)	**4,732,341**	**8,905,740**	**11,300,019**
Less: Term Loan Principal Repayment	331,852	331,852	331,852
Net Cash Flow After Debt Service	**4,400,489**	**8,573,888**	**10,968,167**
Cumulative Net Cash Flow	4,400,489	12,974,377	23,942,544

Simplified project-level cash flow; excludes year-on-year working capital changes and initial equity infusion. A bank-read

Year 4	Year 5	Note
13,694,090	18,724,272	
166,036	142,224	
13,860,126	**18,866,496**	
331,852	331,852	
13,528,274	**18,534,644**	
37,470,818	56,005,462	

/ DPR should present a full sources-and-uses cash flow.

BREAK-EVEN ANALYSIS

Based on Year 3 (70% utilisation) operating parameters

BREAK-EVEN CALCULATION (YEAR 3 BASIS)

Particulars	Value	Unit
Avg. selling price per kg (Year 3)	162.24	
Variable cost per kg (RM + packaging + power + freight + marketing)	103.80	
Contribution per kg	58.44	
Contribution margin %	36.0%	
Fixed costs per annum (Year 3): manpower + R&M + admin + rent + compliance +	4,826,790	

BREAK-EVEN VOLUME (kg/year)	**82,598**	
BREAK-EVEN SALES VALUE (Rs./year)	**13,400,655**	
Break-even as % of installed capacity	17.2%	
Break-even as % of Year 3 projected volume	24.6%	

A break-even point below the Year 1 planned utilisation (40%) indicates the project reaches profitability early. Re
the relevant year's column.

Note		
Rs./kg		
Rs./kg - RM+packaging (per your recipe) +		
Selling price - variable cost		
Sum of fixed/semi-fixed cost lines		

compute for other years by changing the E-column references (Year 3) to

RETURNS, RATIOS & CAPACITY-LEVEL SUMMARY

Project-level return metrics and a side-by-side view at each utilisation level

A. PROJECT CASH FLOW FOR IRR/NPV (YEAR 0-5)

CAUTION - read before using these figures: this machine (480 MT/year installed capacity) is highly ca project cost), so the IRR/payback below come out very high even at a modest Rs.150/kg selling price profitable' but 'can you actually sell 480 MT/year (~40 MT/month) of garlic mayo' - that is roughly 160,(for a new regional brand. Treat capital returns as a secondary check and focus your diligence on rea level, plus your actual achievable ex-factory price (Assumptions!C25, currently an assumption at Rs.

Particulars	Year 0	Year 1	Year 2
Net Project Cash Flow	(2,765,434)	5,071,167	9,217,188

B. RETURN METRICS

Metric	Value	Benchmark	Interpretation
Project IRR (5-year, unlevered)	**237.5%**	*>14-16%*	*Should exceed the term loan interest rate and investor's hurdle rate*
NPV @ 12% discount rate	**37,162,576**	*> 0*	
Simple Payback Period (years)	**0.2 years**	*3-5 years*	
Return on Investment - Year 3 (PAT/To	**401.6%**	*15-25%*	

C. SIDE-BY-SIDE VIEW AT EACH CAPACITY LEVEL (STEADY-STATE COST S

Particulars	40%	60%	70%
Capacity Utilisation	40.0%	60.0%	70.0%
Volume (kg/year)	192,000	288,000	336,000
Sales Revenue (at Rs.195/kg, Year-1 price)	28,800,000	43,200,000	50,400,000
Raw Material + Packaging Cost	16,219,704	24,329,556	28,384,482
Other Variable Costs (power, freight, marketing @ 7.5% of sales)	2,160,000	3,240,000	3,780,000
Fixed Costs (manpower, rent, admin, R&M, compliance)	4,254,122	4,254,122	4,254,122
EBITDA	**6,166,174**	**11,376,322**	**13,981,396**
EBITDA Margin %	*21.4%*	*26.3%*	*27.7%*

Section C isolates the effect of capacity utilisation alone (all 5 columns priced and costed at Year-1/steady-state rates, igr in the main P&L) - useful for a quick 'what if we ran at X% today' comparison, separate from the 5-year growth trajectory s

ıpital-efficient (~Rs.10L machinery, ~Rs.28L total
. The real feasibility question is NOT 'is this
000 x 250g pouches per month, a large volume
listic sales/demand absorption at each utilisation
150/kg).

Year 3	Year 4	Year 5
11,584,090	14,116,819	########

STRUCTURE)

80%	100%	Note
80.0%	100.0%	
384,000	480,000	
57,600,000	72,000,000	
32,439,408	40,549,260	
4,320,000	5,400,000	
4,254,122	4,254,122	
16,586,470	**21,796,619**	
28.8%	*30.3%*	

ıoring the Year-1-5 price escalation and cost inflation used
shown in Sections A-B.