

AAMCHUR (DRIED MANGO POWDER)

1. Introduction

Aamchur is dried raw mango powder. It is used as a tastemaker in many foods and as a substitute to tamarind or lime to give the sour taste. “Chaat Masala” “Curry Masala” and other spice mixtures have Aamchur as an ingredient.

2. Market

The major market outlets are the “A” class outlets. The product also finds placement in self-service counters and departmental stores. Food processing industries purchase the product in bulk quantities. The dehydrated powder also has a good export potential.

3. Packaging

Aamchur powder is packed in tins for bulk packaging. In retail packaging, 50 grams and 100 grams are the unit weights.

4. Production capacity

- The plant will be in continuous operation. It will operate to two shifts per day, each of twelve hours duration.
- The plant will process 1000 kgs of raw mango per day.
- The yield of aamchur powder will be 25% of the weight of raw material used. The total quantity of finished product available per annum would be 75 metric tonnes.
- The time period required for achieving full capacity utilization is one year.

5. Sales revenue

- With an ex-factory selling price at Rs. 200 per kilogram for dehydrated aamchur powder the total sales revenue will be Rs. 150.00 lakhs per annum.

6. Production process outline.

Raw mango is taken and the skin peeled. The fruit is slit to remove the seed. The resulting pulp is grated. The gratings are blanched for a few seconds in bisulphite solution and then dried in a fluidized bed drier. The dried mass is ground in a pin mill and the powder to the desired mesh size is obtained,

7. Quality specifications

- The product should be free from mold and fungal growth.
- It should be free from any fermented odour, coliforms, salmonella and streptococci bacteria.
- The moisture content in the product should not normally exceed 8 to 10%
- It shall not contain any added flavours or colours.

8. Pollution control measures

Not necessary as there are no pollutants or effluents.

9. Energy conservation measures

Common measures will do.

10. Land and construction cost for the proposed unit

The unit is proposed to be set up in a leased area. The area required is 4000 square feet as detailed below.

SI	Description	Sq. feet
1	Processing area	500
2	Raw material store	400
3	Washing area	200
4	Dehydration area	500
5	Grinding area	500
6	Packing area	400
7	Quality control laboratory	200
8	Packaging material store room	200
9	Finished goods store	400
10	Machinery spares store room	100
11	Administration office	200
12	Boiler area	200
13	Toilet space	200

14	Total	4000
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- Lease rent – Rs. 8.00 per square foot
- Total rent per month – Rs. 32000
- Lease advance – Rs. 1,50,000

11. Costing of machinery and equipment

Sl	Description	Rs. lakhs
1	Precooling facility at + 10 degrees centigrade for raw fruit	5.000
2	Stacking trays for raw mango - 500 trays @ Rs. 200 each with each tray holding 10 kgs of raw material	1.000
3	Preparatory section consisting of washing tank, slicers and graters	5.500
4	Blanching tank with thermostat control, solenoid valves, and circulation pump to keep blanching solution in circulation	3.500
5	Vibratory shaker in stainless steel to remove excess water after blanching	1.000
6	Fluidized bed dryers for dehydrating gratings at a capacity of 1000 kilograms in a span of 8 to 10 hours complete with heat exchanger, blower fans and accessories	6.840
7	Pin mill with accessories at a grinding capacity of 50 kilograms per hour	6.500
8	Hot water boiler and accessories	2.850
9	Form fill and seal packing machine with augur weighers and fillers	7.750
10	Total	39.940
11	Laboratory equipment	2.000
12	Grand total machinery and equipment	41.940

12. Project cost

SI	Description	Rs. lakhs
1	Land	On lease
2	Civil works	On lease
3	Plant machinery	39.940
4	Laboratory equipment	2.000
5	Transport vehicle	0.000
6	Pollution control equipment	0.000
7	Energy conservation equipment	0.000
8	Cost of power connection	1.000
9	Cost of electrification	1.000
10	Erection and commissioning	2.500
11	Cost of machinery spares	0.500
12	Cost of office equipment	0.500
13	Deposits if any	1.050
14	Company formation expenses	0.100
15	Gestation period expenses	1.500
16	Sales tax registration expenses	0.100
17	Initial advertisement and publicity	2.000
18	Contingencies	0.150
19	Working capital margin money	4.000
20	Total	56.340

13. Working capital requirements per month

a. Salaries and wages

SI	Description	No of persons	Total salary / month (Rs. lakhs)
1	Production Manager	1	0.300
2	Production supervisor cum chemist	2	0.300
3	Skilled workers	4	0.320
4	Unskilled workers	8	0.480
5	Packing workers	4	0.120
6	Administrative staff	2	0.300
7	Total	21	1.820

b. Raw material requirement per month

SI	Description	Qty (kgs)	Rate / kg (Rs)	Value (Rs. lakhs)
1	Raw mango	25000	20.00	5.000
2	Total raw material	25000		5.000

c. Packaging material requirement per month

SI	Description	Qty	Rate / unit (Rs)	Value (Rs. lakhs)
1	Primary packaging material – metallized polyester – poly film	25 kgs	250	0.0625
2	Cartons and straps	1000 nos	40	0.4000
3	Total			0.4625

Total raw + packaging material = Rs. 5.4625 lakhs

d. Utilities per month

SI	Description	Rs. lakhs
1	Power 6000 kwh @ Rs. 6.00 per unit	0.360
2	Water	0.050
3	Boiler fuel	0.250
4	Total utilities	0.660

e. Contingent expenses per month

SI	Description	Rs. lakhs
1	Rent for processing shed	0.320
2	Postage and stationery	0.010
3	Telephones, fax etc.	0.025
4	Consumable stores	0.010
5	Repairs and maintenance	0.281
6	Local transports, loading and unloading	0.010
7	Advertisement and publicity @ 5% of sales	0.625
8	Insurance	0.068
9	Sales expenses @ 1% of sales	0.125
10	Miscellaneous expenses @ 1% of sales	0.125
11	Trade incentives @ 2% of sales	0.250
12	Taxes @ 4%	0.500

13	Total contingent expenses	2.349
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f. Total working capital requirement per month

SI	Description	Rs. lakhs
1	Salaries and wages	1.820
2	Raw material and packaging material	5.463
3	Utilities	0.660
4	Contingent expenses	2.349
5	Total	10.292

14. Means of finance

SI	Description	Rs. lakhs
1	Total Project Cost	56.340
2	Equity @ 25%	14.085
3	Debt @ 75%	42.255
4	Working capital margin money	4.000

15. Financial analysis

SI	Description	Rs. lakhs
1	Total recurring cost per year	123.504
2	Depreciation on land and building	0.000
3	Depreciation on machinery	4.194
4	Depreciation on furnaces	0.000
5	Depreciation on moulds and fixtures	0.010
6	Depreciation on office equipment	0.050
7	Interest on long term loan @ 13.5%	5.071
8	Interest on short term borrowings@ 13.5%	0.849
9	Total cost of production	133.678

16. Turnover per year

SI	Item	Qty	Rate/unit (Rs)	Total Rs. lakhs
1	Aamchur	75000 kgs	200	150.00

17. *Viability analysis*

SI	Description	Value
1	Net profit before income tax (Rs. lakhs)	16.322
2	Net profit ratio	10.8%
3	Internal rate of return	19.7%
4	Break even percentage	54%
5	Debt service coverage ratio	2.101

List of machinery suppliers for Aamchur

1. Sri Valsa Engineering Works, 36, Nanda Nagar, Singanallur, Coimbatore 641005. Tamil Nadu.; Tel: 0422 - 2574268; Fax: 0422 – 2574268
2. Geeta Food Engineering, Plot No. C - 7 / 1, TTC Industrial Area, Pawana MIDC, Thane - Belapur Road, Behind Savita Chemicals, Navi Mumbai 400705. Maharashtra.; Tel: 022 - 56101973; Fax: 022 – 55906450
3. Vivega Engineering Works, 116 – 118, Sathy Road, R.K.Puram, Ganapathy, Coimbatore. 641006; Tel: 0422-2531523; 09443721341
4. Navinchandra and Co., 308, Thambu Chetty Street, Chennai. 600001; Tel: 044-25228675