

PROJECT PROFILE

ON

DEHYDRATED DRUMSTICK POWDER

Month & Year

Aug 2010

**PREPARED BY
TANSTIA-FNF SERVICE CENTRE
B-22, INDUSTRIAL ESTATE
CHENNAI-600032**

Supported by

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DEHYDRATED DRUMSTICK POWDER

1. Introduction

Drumstick is grown in large quantities in the State and especially in the southern districts. Drumstick forms an important ingredient in sambhar prepared traditionally at home or in restaurants and eating-houses. The flavour is most preferred. Being messy to use, the powder is finding a lot of acceptability both in India and abroad. There is a considerable surplus of this vegetable that can be processed (dehydrated) for consumption throughout the year.

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

Dehydrated drumstick powder can be packed in metallised or foil pouches for retail packaging. Bulk packaging can be in tins.

4. Production capacity

- The plant will be in operation for three shifts a day.
- The plant will process 1500 kgs of drumstick per day.
- The edible portion of drumstick is 83% and it has a moisture content of 86%.
- The yield of dehydrated drumstick powder will be 15% of the weight of raw material used. The total quantity of finished product per annum would be 67.5 metric tones.
- The time period required for achieving full capacity utilization is five years.

5. Sales revenue

- With an ex-factory selling price at Rs. 200 per kilogram for dehydrated drumstick powder the total sales revenue will be Rs. 135 lakhs per annum.

6. Production process outline.

Washing

Fresh mature drumsticks are selected for processing. They are washed to remove adhering dirt.

Grading

The vegetable is graded to remove damaged and immature sticks.

Steaming and blanching

The sticks are steamed and blanched in huge tanks to facilitate pulp extraction.

Pressing

The soft sticks are pressed between rollers to extract the pulp.

Slurry preparation

Thick slurry is prepared with the pulp obtained.

Drying

The slurry is dried in a vacuum drier with the core drying temperature ranging between 50 to 55 degrees centigrade.

Grinding

It is ground to a fine powder along with some edible starches and anti-caking agents.

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 6 to 8%
- 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. Fruit Products Order License

A FPO license is necessary for processing this vegetable

11. Land and construction cost for the proposed unit

The unit is proposed to be set up in a leased area. The area required is 3600 square feet as described below

<i>Sl</i>	Description	<i>Sq. feet</i>
1	Processing area	1000
2	Raw material store	200
3	Washing area	200
4	Dehydration area	500
5	Grinding area	200
6	Packing area	200
7	Quality control laboratory	200
8	Packaging material store room	200
9	Finished goods store	200
10	Machinery spares store room	100
11	Administration office	200
12	Boiler area	200
13	Toilet space	200
14	Total	3600

Lease rent – Rs. 6.00 per square foot

Total rent per month – Rs. 21600

Lease advance – Rs. 100000

11. Costing of machinery and equipment

<i>Sl</i>	Description	<i>Rs. lakhs</i>
1	Precooling facility at + 10 degrees centigrade for drumsticks	1.500
2	Stacking trays for drumsticks - 500 trays @ Rs. 150 each with each tray holding 10 kgs of raw material	0.750
3	Preparatory section consisting of washing tank	0.500
4	Steaming and blanching tank	1.850
5	Pulp extractor	0.600
6	Vacuum drier for dehydrating drumstick at a capacity of 500 kilograms in a span of 8 to 10 hours, complete with vacuum pump, heat exchangers and accessories	4.840
7	Form fill and seal machine with augur weigher and filler	2.750
8	Pin mill with accessories at a grinding capacity of 50 kilograms per hour	5.500
9	Boiler and accessories	3.850
10	Total	22.140
11	Laboratory equipment	1.000
12	Grand total machinery and equipment	23.140

12. Project cost

<i>Sl</i>	Description	<i>Rs. lakhs</i>
1	Land	On lease
2	Civil works	On lease
3	Plant machinery	22.140
4	Laboratory equipment	1.000
5	Transport vehicle (Tata Ace)	3.760
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	1.000
12	Cost of office equipment	1.000
13	Deposits if any	0.700
14	Company formation expenses	0.100
15	Gestation period expenses	1.500
16	Sales tax registration expenses	0.100
17	Initial advertisement and publicity	10.000
18	Contingencies	1.000
19	Working capital margin money	4.023
20	Total	50.823

14. Working capital requirements per month

a. Salaries and wages

Sl	Description	No of persons	Total salary / month (Rs. lakhs)
1	Production Manager	1	0.250
2	Production supervisor cum chemist	3	0.450
3	Skilled workers	3	0.240
4	Unskilled workers	9	0.360
5	Packing workers	9	0.360
6	Administrative staff	2	0.300
7	Van driver	1	0.070
8	Total	28	2.030

b. Raw material requirement per month

SI	Description	Qty (kgs)	Rate / kg (Rs)	Value (Rs. lakhs)
1	Drumsticks	40000	10.00	4.000
2	Total raw material	40000		4.000

c. Packaging material requirement per month

SI	Description	Qty	Rate / unit (Rs)	Value (Rs. lakhs)
1	Primary packaging material – metallized polyester – poly film	400 kgs	250	1.000
2	Cartons and straps	2000	40	0.800
3	Total			1.800

Total raw + packaging material = Rs. 5.800 lakhs

d. Utilities per month

SI	Description	Rs. lakhs
1	Power 6000 kwh @ Rs. 5.50 per unit	0.330
2	Water	0.050
3	Boiler fuel	0.250
4	Total utilities	0.630

e. Contingent expenses per month

SI	Description	Rs. lakhs
1	Rent for processing shed	0.216
2	Postage and stationery	0.010
3	Telephones, fax etc.	0.050
4	Consumable stores	0.020
5	Repairs and maintenance	0.281
6	Local transports, loading and unloading	0.100
7	Advertisement and publicity @ 4% of sales	0.452
8	Insurance	0.018
9	Sales expenses @ 1% of sales	0.113
10	Miscellaneous expenses @ 1% of sales	0.113
11	Trade incentives @ 2% of sales	0.226

12	Taxes	0.000
13	Total contingent expenses	1.599

f. Total working capital requirement per month

<i>Sl</i>	Description	<i>Rs. lakhs</i>
1	Salaries and wages	2.030
2	Raw material and packaging material	5.800
3	Utilities	0.630
4	Contingent expenses	1.599
5	Total	10.059

14. Means of finance

<i>Sl</i>	Description	<i>Rs. lakhs</i>
1	Total Project Cost	50.823
2	Equity	16.771
3	Debt	34.052
4	Working capital margin money	4.023

15. Financial analysis

<i>Sl</i>	Description	<i>Rs. lakhs</i>
1	Total recurring cost per year	120.708
2	Depreciation on land and building	0.000
3	Depreciation on machinery and vehicle	2.814
4	Depreciation on furnaces	0.000
5	Depreciation on moulds and fixtures	0.020
6	Depreciation on office equipment	0.100
7	Interest on long term loan @ 13.5%	4.597
8	Interest on short term borrowings@ 13.5%	0.815
9	Total cost of production	129.054

16. Turnover per year

Sl	Item	Qty	Rate/unit (Rs)	Total Rs. lakhs
1	Dehydrated Drumstick powder	67500	200	135.00

17. Viability analysis

Sl	Description	Value
1	Net profit before income tax (Rs. lakhs)	5.946
2	Net profit ratio	4.5%
3	Internal rate of return	22.2%
4	Break even percentage	49%
5	Debt service coverage ratio	1.967

List of machinery suppliers

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