

PROJECT PROFILE

ON

BANANA CHIPS

Month & Year

Aug 2010

**PREPARED BY
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BANANA CHIPS

1. Introduction

Banana chips are gaining wide acceptance in numerous households as a tasty snack food. Banana chips are prepared from two specific varieties viz. “Mondan” and “Nendram”. The chips are predominantly consumed by people in South India. The Nendram variety is fried in coconut oil while the Mondan variety is fried in refined groundnut or sunflower oil. It is being consumed as an alternative to potato chips.

2. Market

The major market outlets are the “A” and “B” class outlets, departmental stores, super markets and self service counters. The product also has a good export potential. Although the product is conceptually new, its properties as a ready to eat snack food are known among housewives.

3. Packaging

The processed product is packed in laminated polyester-poly pouches. The product is packed in measures of 50 grams and 100 grams.

4. Production capacity

- The plant will be in operation for two shifts a day with each shift of 8 hours duration.
- The plant will operate to a capacity of a raw material (Banana) input of 300 kilograms per shift or 600 kilograms per day. The end product yield will be 200 kilograms of chips per day.
- The estimated production per day is therefore 200 kilograms.
- The total production per month will be 5 M.T while the annual production is estimated at 60 M.T
- The time period required for achieving full capacity utilization is one year.

5. Sales revenue

- The ex-factory selling price will be Rs. 160 per kilogram thereby yielding a sales revenue of Rs. 96.00 lakhs on full capacity utilization.

6. Production process outline.

The raw banana is first washed thoroughly to remove any adhering dirt or sand. The skin is peeled manually and the fruit is sliced with slice thickness ranging from 1.8 mm to 2.5 mm. The slices are dipped into a blanching tank to remove surface starches and prevent browning at the time of frying. The slices are subjected to centrifugal spinning in the spinner whereby excess moisture is removed. The slices are fried in medium hot oil to give golden brown chips. The excess oil from the chips is drained and the chips dusted with salt and spices in the coating pan before being packed. The product is flushed with nitrogen gas in the pouch so as to prevent development of rancidity.

7. Quality specifications

- The product shall conform to standards laid down under the Bureau of Indian Standards and the Prevention of Food Adulteration Act.
- Outer residual skin - not exceeding 10%
- Dirt and other suspended extraneous matter - should be absent.
- Moisture - 2% maximum
- Total ash - 0.4% maximum
- Acid insoluble ash - 0.1% maximum
- Free fatty acid of oil used - 0.1%
- Peroxide value of oil used - nil

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 proposed unit is to be set up in a leased area. The total leased area is 2500 square feet vide details given below.

SI	Description	Sq. feet
1	Processing area	1000
2	Washing area	400
3	Raw material store	100
4	Other ingredients store room	100
5	Finished goods store room	100
6	Packaging material store room	100
7	Quality control laboratory	200
8	Office space	200
9	Machinery spares store room	100
10	Miscellaneous space	100
11	Toilet space	100
12	Total	2500

Lease rent – Rs. 8.00 per square foot

Total lease rent per month = 20000

11. Costing of machinery and equipment

SI	Description	Rs. lakhs
1	Washing tank	0.200
2	Peeling knives	0.010
3	Slicing machine	0.540
4	Rinsing and spinning machine	0.360
5	Batch frier – 2 nos	0.850
6	Spice coating pan	1.820
7	Sealing machine with inert gas flushing arrangement	0.510
8	Total	4.290
9	Laboratory equipment	0.600
10	Grand total machinery and equipment	4.890

12. Project cost

SI	Description	Rs. lakhs
1	Land	On lease
2	Civil works	On lease
3	Plant machinery	4.290
4	Laboratory equipment	0.600
5	Transport vehicle – 1 Tata Ace	3.600
6	Pollution control equipment	0.000
7	Energy conservation equipment	0.000
8	Cost of power connection	0.100
9	Cost of electrification	0.100
10	Erection and commissioning	0.300
11	Cost of machinery spares	0.100
12	Cost of office equipment	1.000
13	Deposits if any	0.500
14	Company formation expenses	0.100
15	Gestation period expenses	0.300
16	Sales tax registration expenses	0.100
17	Initial advertisement and publicity	5.000
18	Contingencies	0.500
19	Working capital margin money	2.944
20	Total	19.534

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 supervisors	2	0.400
3	Skilled workers	2	0.200
4	Unskilled workers	4	0.200
5	Sales staff	1	0.150
6	Administrative staff	1	0.150
7	Van driver	1	0.080
8	Total	12	1.480

b. Raw material requirement per month

SI	Description	Qty (kgs)	Rate / kg (Rs)	Value (Rs. lakhs)
1	Raw banana	15000	16.00	2.400
2	Edible oil	1200	80.00	0.960
3	Salt	80	10.00	0.008
4	Spices	20	100.00	0.020
5	Total raw material	16300		3.388

c. Packaging material requirement per month

SI	Description	Qty	Rate / unit (Rs)	Value (Rs. lakhs)
1	Primary packaging material – pouches for chips	20000 nos	2.00	0.400
2	Cartons and straps	1350	40	0.540
3	Total			0.940

Total raw + packaging material = Rs. 4.328 lakhs

d. Utilities per month

SI	Description	Rs. lakhs
1	Power 1600 kwh @ Rs. 6.00 per unit	0.096
2	Water	0.010
3	Boiler fuel	0.000
4	Total utilities	0.106

e. Contingent expenses per month

SI	Description	Rs. lakhs
1	Rent for processing shed	0.200
2	Postage and stationery	0.020
3	Telephones, fax etc.	0.050
4	Consumable stores	0.020
5	Repairs and maintenance	0.050
6	Local transports, loading and unloading	0.060
7	Advertisement and publicity @ 5% of sales	0.400
8	Insurance	0.007
9	Sales expenses @ 1% of sales	0.080
10	Miscellaneous expenses @ 1% of sales	0.080
11	Trade incentives @ 2% of sales	0.160
12	Taxes @ 4%	0.320
13	Total contingent expenses	1.447

f. Total working capital requirement per month

SI	Description	Rs. lakhs
1	Salaries and wages	1.480
2	Raw material and packaging material	4.328
3	Utilities	0.106
4	Contingent expenses	1.447
5	Total	7.361

14. Means of finance

SI	Description	Rs. lakhs
1	Total Project Cost	19.534
2	Equity	6.446
3	Debt	13.088
4	Working capital margin money	2.944

15. Financial analysis

SI	Description	Rs. lakhs
1	Total recurring cost per year	88.332
2	Depreciation on land and building	0.000
3	Depreciation on machinery and vehicle	0.850
4	Depreciation on furnaces	0.000
5	Depreciation on moulds and fixtures	0.010
6	Depreciation on office equipment	0.100
7	Interest on long term loan @ 13.5%	1.767
8	Interest on short term borrowings@ 13.5%	0.596
9	Total cost of production	91.655

16. Turnover per year

SI	Item	Qty	Rate/unit (Rs)	Total Rs. lakhs
1	Banana chips	60000 kgs	160	96.00

17. Viability analysis

SI	Description	Value
1	Net profit before income tax (Rs. lakhs)	4.345
2	Net profit ratio	4.5%
3	Internal rate of return	22.2%
4	Break even percentage	43%
5	Debt service coverage ratio	1.986

List of machinery suppliers for banana chips

1. Hari Om Industries; Dhebar Road South, Atika Industrial Area, Street No. 3, Near Jaydev Foundry, Rajkot 360002, Gujarat.; Tel: 0281 - 2363620; Fax: 0281 - 2371745.
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. Agaram Industries, 126, Nelson Road, Aminjikarai, Chennai, 600029, ; Tel: 044-23741413; Fax: 044-23741529
4. Royal Scientific Industries, T.S.74A, SIDCO Industrial Estate, Ekkatuthangal, Chennai. 600097., Tel: 044-22254749