

Project Profile On Nutritious Biscuits

PRODUCT CODE	205801010
QUALITY AND STANDARDS	PFA Act, 1954 (Mandatory) and BIS
	Specification(Optional) Nutritious Biscuits
	IS 7487:1986 (1st Revision)
PRODUCTION CAPACITY	Quantity : 108000 kg (per annum)
	Value : Rs. 1,72,80,000
MONTH AND YEAR OF PREPARATION	March, 2021
PREPARED BY	MSME – Development Institute
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INTRODUCTION

The bakery industry occupies an important position among the Indian food processing industries. The Indian bakery market stood at a value of nearly USD 7.60 billion in 2020. The market is further estimated to grow at a CAGR of 8.5% between 2021 and 2026 to reach a value of USD 12.39 billion by 2026. The reason for the spurt in the production of bakery products could be attributed to their advantages over other processed foods. Bakery products are ready to eat, convenient to use and possess satisfactory nutritional quality. India is the second largest producer of biscuits after USA. The biscuit industry in India comprises of organized and un-organised sectors. Bread and Biscuits form the major baked foods accounting for over 80% of total bakery products produced in the country. The quantities of bread and biscuits produced are more or less same, however, value of the biscuits is more than bread. The industry has traditionally been and largely continues to be in the unorganized sector contributing to over 70% of the total production. Bakery products once considered as sick man's diet, have now become an essential food items of vast majority of population. Though bakery industry in India has been in existence since long, real fillip came only in the later part of the 20th century. The contributing factors were urbanization, resulting in increased demand for ready to eat profiles at reasonable costs etc. The main constituent of bakery products, the refined wheat flour is deficient in, lysine and soybean is deficient in sulphur containing amino acids. Thus a combination of these two as ingredients in nutritious biscuits/bakery products is a desirable step for not only increasing the protein content, but also for supply of balanced amino acid pattern. The Indian bakery industry can, therefore, explore this

aspect for better food value and product quality. The use of soya flours and soya products in bakery products would not only improve nutritional quality of bakery products, but also increase profit margins of an entrepreneur due to improved product quality.

MARKET POTENTIAL

The per capita consumption of bakery products in India stands at 1-2 kg per annum, which is still much lower than the developed countries where it is between 15 and 50 kg per annum. The size of the bakery ingredients market is approximately ₹3,000 crore in India and growing at 12-15 per cent. in other developed countries, indicating greater potential for the industry as compared to the present situation. The bakery units are unevenly spread among States. It is mainly concentrated in the States of Maharashtra, West Bengal, Andhra Pradesh, Karnataka and Uttar Pradesh. Industrially advanced States like Maharashtra and West Bengal have very large number of bakery units. East and North India are the regions with the highest consumption rate of biscuits and cookies in the country. Maharashtra and West Bengal, being the most industrially developed states, hold the highest rate of biscuit consumption. The top four players in the biscuits and cookies market are Parle Products, Britannia, ITC, and Surya Food and Agros, where Britannia and Parle together account for 61% of the total market share.

The Biscuits are becoming quite popular in rural areas as well. Nearly 55% of biscuits are consumed by rural sector. The higher consumption of biscuits in rural area could be attributed to its position as a snack, longer shelf life and better taste which is liked by different cross sections of population. There is no marketing problem as every shop is a market for biscuits.

The biscuits and cookies industry in India accounts for nearly 72% of the sales in the Indian bakery market. In comparison to other baked FMCG products, the penetration of cookies and biscuits is quite high in both the urban and rural areas owing to their affordable price and cholesterol-free nature. Currently, India is the world's largest biscuit consuming nation, which will be worth nearly USD 4.65 billion by FY 2020. The region enjoys a comparative advantage in manufacturing, with an abundant supply of primary ingredients, which supports the growth of the industry in the region.

Bakery products still remain the cheapest of the processed ready to eat products in the country. The production of Bakery products has increased from 5.19 lakh tonnes in 1975 to 18.95 lakh tonnes in 1990 recording four-fold increase in 15 years' time. Among the bakery products, biscuits occupy an important place as they contribute over 33% of total products processed. Over 79% of the biscuits are produced by small scale sector consisting of both factory and non-factory units. The growth rate for bakery products is estimated at an average 9.8% per annum. The demand for bakery products will continue to increase in future. The estimated growth rate of 9.8% is on the lower side considering the present potentiality of bakery products, particularly in rural areas, where about 75% of the population lives. Hence use of soya is beneficial to consumers for nutritional improvement and to entrepreneur for earning more profit. The protein content of biscuits varies from 7-8 percent and supplementation with 30 percent soyaflour adds to the protein content by 50

percent. Encouraging trends in consumption of bakery products by population of lower and middle income groups indicate vast scope for consideration of nutritional enrichment of bakery products. Protein Rich Biscuits can serve as means of providing additional nutrition at affordable cost.

BASIS AND PRESUMPTIONS

1. The Project Profile has been prepared on the basis of single shift of 8 hours a day and 25 working days in a month at 75% efficiency.
2. It is presumed that during the first year, the capacity utilization will be 70% followed by 85% in the next year and 100% in the subsequent years.
3. The rates indicated for salaries and wages for skilled workers and others are on the basis of the minimum rates in the State of U.P.
4. Interest rate for the fixed and working capital has been taken @ 11% on an average whether financed by the Bankers or Financial Institutions.
5. The margin money required is the minimum (25% of the total capital investment).
6. The rental value for office, workshop and other covered area has been taken @ Rs. 10/- per sq.ft.
7. The rates for machinery, equipment and raw materials are those prevailing at the time of preparation of the Project Profile and are likely to vary from place to place and supplier to supplier. When a tailor made project profile is prepared, necessary changes are to be made.
8. The payback period may be 5 years after the initial gestation period.
9. The gestation period in implementation of the project may be 6 to 9 months which includes making all arrangements, completion of all formalities, market surveys and tie-ups etc.

IMPLEMENTATION SCHEDULE

The implementation of the project includes various jobs/exercises such as procurement of technical know-how, transfer of technology, market surveys and tie-ups, preparation of project report, selection of site, registration, financing of project, procurement of machinery and raw materials etc., recruitment of staff, erection/ commissioning of machines, trial production and commercial production etc. In order to efficiently and successfully implement the project in the shortest period simultaneous exercises are carried out. Project implementation will take a period of 8 months from the date of approval of the scheme, Break up of activities with relative time for each activity is shown below:

	<i>Activity</i>	<i>Period (Month)</i>
1	Scheme preparation and approval	0-1
2	Sanction of loan	2-5

3	Clearance from State Pollution Control Board	3-4
4	Placement of order for machinery and delivery	4-5
5	Installation of machines	6-7
6	Power Connection	6-7
7	Trial Run	7-8
7	Commencement of Production and MSME Udyam Registration	9 Onwards

TECHNICAL ASPECTS

Process of Manufacture:

The protein rich nutritious biscuits can be manufactured after obtaining Raw Materials like maida, starch, soda, salt, colour, soya flour, preservatives, vanaspati, sugar, flavours etc. which are easily available in local markets. The calculated amount of maida, soya flour, starch, Vanaspati, water etc. are mixed and properly kneaded to the desired consistency. The dough is then rolled, cut, baked, cooled and packed in pouches.

Quality Control and Standards:

The PFA Act, 1954 is mandatory and BIS Specifications are optional for Biscuits.

The relevant Bureau of Indian Standards Specification for Protein Enriched nutritious biscuits is IS:7487:1986 (first revision). The specification for Biscuits (third revision) (with the first Amendment) is 1011:1992. The details of specification can be obtained from the Bureau of Indian Standards, Manak Bhawan, 9, Bahadur Shah Zafar Marg, New Delhi-110002.

Production Capacity (per year):

1. Production of Creamed nutritious Biscuits Wafer : 108000 Kg.
2. Value of Creamed nutritious Biscuits Wafer : Rs. 1,72,80,000

Motive Power: 50 K.W.

Pollution Control:

1. This industry may involve pollution to some extent for which State Pollution Control Board has to be approached.
2. Minimum height of shed will be maintained with exhaust fans installed for removing decongestion, proper ventilation, removal of cokes, fumes etc.

Energy Conservation:

The following steps may be taken for the conservation of energy:

1. Machinery and equipments' parts, which are revolving and reciprocating should be properly, lubricated from time to time with suitable lubricant oil.
2. Lay out of the unit should be designed in such a way that no back tracking of material is there.
3. All electric switches may be turned off, when not required.
4. The entire transmission belt will be tightened before starting the work wherever applicable.
5. As far as possible, Solar Energy and day light will be used keeping all the other lightsoff.
6. As far as possible inductive load of motor will be reduced and high power factor will be used with the aid of capacitors of appropriate sizes.
7. It is desirable for an oven to have a higher production capacity, a short come-up-time, a higher reliability and energy efficiency (with least thermal radiation) and less maintenancerequirement.

FINANCIAL ASPECTS:

(A) Fixed Capital:

i) Land and Building (rented)

Amount (In Rs.)

Monthly Rent @ Rs 5 per Sq. meter Covered Area 5000 Sq. ft 25000

ii) Machinery and Equipments:

Sl.	Description	Qty.No.	Amount (In Rs.)
1.	Automatic continuous Roller - size 48" fitted with two heavy duty reduction wastage returning system with Electrical Motors with starters complete machinery	1	2500000
2.	Flour Shifter automatic screw type vibrator system with motor and starters	1	150000
3.	Suger Grinding Machine (30-50 Kg./Hrs., 2KW)	1	90000
4.	Roll Sheeter size 24" fitted with reduction gear box variable speed, with motor and starters	1	575000
5.	Double action horizontal mixing machine cap. 300 Kg. per batch, automatic tilting with electrical motor and starters	1	400000
6.	Cooling conveyor size 24" working length 100' total length 35' with motor and starters	1	650000

7. Oil spraying machine for salted biscuit belt size 24" with electrical Motor and starters	1	175000
8. Turn table working between oven and conveyor fitted with motor and starters	1	300000
9. Extra Brass roller for rotary cutting machine and Roller cutting machine	1	25000
10. Syrup Machine with one motor and starters SS	1	200000
11. Biscuit Grinder with motor 5 HP and starters	1	60000
12. Working table with S.S./ Aluminum top	2	12500
13. Weighing Balance platform type	1	10000
14. Aluminium vessels, Mats, cups, mugs, ladle, spoons, gloves, etc.	LS	25000
<i>Electrification and Installation Charges @ 10% of Cost of Plant and Machinery (Rounded)</i>	--	500000
<i>Cost of Furniture and Office Equipment</i>	--	100000
Total		5772500

iii) Pre-operative Expenses

Rs. 200000/-

Total Fixed Capital = Rs. 5972500/-; i.e Rs. 6000000/- (Say)

(B) Working Capital (per month)

i) Staff and Labour:

Sl. No.	Designation	No.	Total (In Rs.)	
<i>(a) Administrative and Supervisory Salary</i>				
i)	Production Manager	1	15000	15000
ii)	Supervisor/Store-keeper	1	12000	12000
iii)	Accountant	1	10000	10000
iv)	Salesman	3	10000	10000
v)	Peon/Watchman	1	6000	5500
vi)	Sweeper	1	5000	5000
<i>(b) Technical: Skilled and Unskilled</i>				
i)	Skilled Workers	3	10000	10000
ii)	Semi-skilled Workers	2	7500	7500
ii)	Helper	4	5000	5000
		Total		80000
			<i>Perquisites @ 15%</i>	12000
			Total	92,000

ii) **Raw Material:**

Sl. No.	Description	Qty.	Rate (In Rs.)	Amount (In Rs.)
1.	Wheat Flour (Maida)	6000 Kg.	25 per Kg.	1,50,000
2.	Maida starch, vegetable fat, salt, soya flour, soda, colours, preservatives etc.	3000 Kg.		4,50,000
3.	Packaging material	L.S.		2,50,000
		Total		8,50,000

iii) **Utilities:**

Description	Amount (In Rs.)
Electricity	25,000
Water	5,000
Total	30,000

(iv) **Other Contingent Expenses:**

	<u>Amount (In Rs.)</u>
1 Rent	25000
2 Postage and Stationery	1000
3 Advertisement	2000
5 Repair and Maintenance	3500
6 Transportation	2500
7 Consumable	2000
8 Sales Expenses	25000
9 Insurance	2000
10 Misc. Expenses	1000
Total	64000
(v) <u>Total Recurring Expenditure</u>	Amount (In Rs.)
1) Salary and Wages	92000
2) Raw Material	850000
3) Utilities	30000
4) Other Contingent Expenses	64000
Total	1036000
(vi) Working Capital for 3 months Rs.31,08,000	

C. Total Capital Investment:

	<u>Amount (In Rs.)</u>
I. Fixed capital	60,00,000/-
II. Working Capital	31,08,000/-
Total	91,08,000/-

MACHINERY UTILIZATION:

It is expected that during first year machine utilization will be 70% and during second year 85% and 100% in subsequent years.

FINANCIAL ANALYSIS:

Amount (In Rs.)

1. Cost of Production (per annum)

i) Total Recurring Cost	12432000
ii) Depreciation on Machinery and Equipment @ 10%	567250
iii) Depreciation on Office Equipments and Furniture @ 20%	20000
iv) Interest on Total Capital Investment @ 11%	1001880
Total	1,40,21,130

2. Turnover (Per Annum):

Sl. No.	Description	Qty.(Kg.)	Rate (per Kg.)	Total (In Rs.)
1)	Turn-over of Nutritious Biscuits (Salty and Sweet)	9000	155	13,95,000
		(per month)		
	Turnover (per Annum)			1,67,40,000

3. Net Profit (per annum) (before Income Tax)

Rs. 27,18,870

(Annual Sales Turnover – Cost of Production)

4. Net Profit Ratio

$$= \frac{\text{Net profit} \times 100}{\text{Sales Turnover}} = \frac{27,18,870 \times 100}{1,67,40,000} = 16.24 \%$$

5. Rate of Return

$$= \frac{\text{Net Profit}}{\text{Total investment}} \times 100$$
$$= \frac{27,18,870 \times 100}{91,08,000} = 29.85 \%$$

6. Break-even Point (BEP)

<u>Fixed Cost (per annum)</u>	<u>Amount (In Rs.)</u>
(a) Total Depreciation (on m/c. and equipment, dies, tools, furniture)	587250
(b) Rent	300000
(c) Interest on borrowing (Total Investment)	1001880
(d) Insurance	24000
(e) 40% of salary	276000
(f) 40% of utilities	144000
(g) 40% of other contingent expenses	307200
Total	2640330

$$\text{BEP (\%)} = \frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Profit}}$$

Fixed Cost + Profit

$$= \frac{2640330 \times 100}{5359200} = 49.26\%$$

5359200

Addresses of Machinery and Equipment Suppliers:

- 1 M/s Authentic Designer C-112,
Sector-10, Noida-201 301 (U.P)
- 2 M/s Reliance Engineering Works K.No. 4065,
Sec.-46-D, Chandigarh-160 047
- 3 M/s Sembhi Engineers 4-5, New Colony,
Opp. KMV College, Jalandhar-144 004
- 4 M/s Ghaziabad Printing and Packing Industry Pvt. Ltd.
Opp. Ganesh Tent House,
Near DPS, Meerut Road,

Ghaziabad (U.P.)

- 5 M/s Aroras Box and Cartons Pvt Ltd.
39th K. M., Delhi-Jaipur Road, (N.H.No. 8),
Gurgaon-122 001 (Haryana)
- 6 M/s Jain Packaging Products 33, Sarai Pipal Thala,
Behind Mangat Ram Dal Mill, Subzi Mandi,
Azadpur, Delhi-110033
- 7 M/s United Packaging
19/21, Shakti Nagar,
Delhi-110 007
- 8 M/s RajatElectronics
1309, A-5, FirstFloor, Pan Mandi,
Sadar Bazar, Delhi-110006
- 9 M/s R.D. Singal and Co.
A-81/2, Wazirpur Industrial Area,
Delhi-110 052
- 10 M/s Ambica Packers and Printers
2687, Kinari Bazar,
Dariba Kalan, Delhi-110 006
- 11 M/s Control Print (India) Ltd.
A-27, Swasthya Vihar,
Vikas Marg,
Delhi-110 092

Raw Materials:

The Raw Materials would be sourced from the local Suppliers and dealers