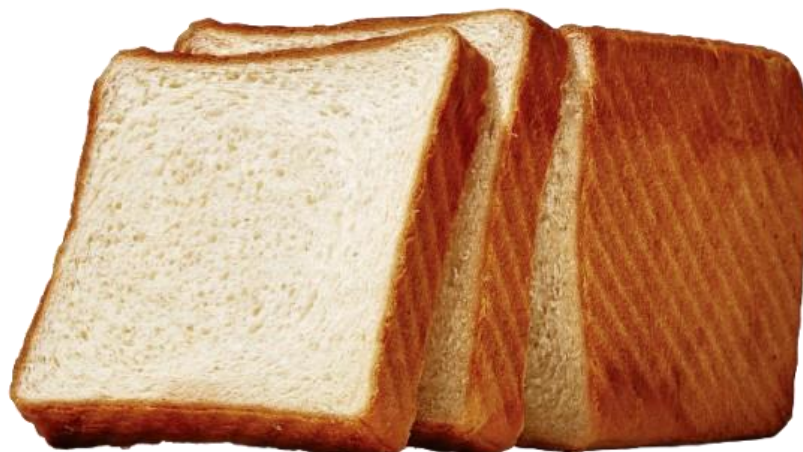




PM Formalisation of Micro Food Processing Enterprises Scheme

DETAILED PROJECT REPORT FOR PROCESSING OF BREAD MAKING



AATMANIRBHAR BHARAT

**National Institute of Food Technology, Entrepreneurship and
Management (NIFTEM) - Thanjavur**

(an Institute of National Importance under Ministry of Food Processing Industries, Government of India)

Pudukkottai Road, Thanajvur – 613005

<https://niftem-t.ac.in/>

Ph : 04362-228155, Fax:04632-227971

Contents

S.no

| | | |
|-----|--|----|
| 1. | Project At a Glance | 1 |
| 2. | Introduction | 2 |
| 3. | The Proposal | 2 |
| 4. | Business Model | 3 |
| 5. | Project Details | 4 |
| | Assumptions | 4 |
| | Implementation Schedule | 4 |
| | Statutory& Government Approvals | 5 |
| 6. | Manufacturing Process | 5 |
| 7. | Proposed Floor Plan | 6 |
| 8. | Process Flow Diagram | 7 |
| 9. | Financial Statements | 8 |
| | Project Financing | |
| | 9.1.1. Project Cost | 9 |
| | Working Capital Requirement | |
| | 9.2.1. Raw Material | 9 |
| | 9.2.2. Human Resources | 9 |
| 10. | Business Projections | 10 |
| 11. | Cash Flow | 11 |
| 12. | Feasibility Assessment | 12 |
| | Technical | 12 |
| | Socio – Economic | 12 |
| | Market | 12 |
| | Financial | 12 |
| 13. | SWOT Analysis | 13 |
| 14. | Risk Assessment & Management | 13 |
| 15. | Monitoring& Control | 14 |
| 16. | Conclusion | 15 |
| 17. | Annexure | 16 |

1. Project At a Glance

| | | |
|---|---|--|
| 1. Name of the proposed project | : | Bakery - Milk Bread Preparation Unit |
| 2. Name of the entrepreneur/FPO/SHG/Cooperative | : | |
| 3. Nature of proposed project | : | Proprietorship/Company/Partnership |
| 4. Registered office | : | |
| 5. Project site/location | : | |
| 6. Names of Partner (if partnership) | : | |
| 7. No of shareholders (if company/FPC) | : | |
| 8. Technical advisor | : | IIFPT |
| 9. Marketing advisor/partners | : | |
| 10. Proposed project capacity | : | 60 MT/annum (70, 75, 80, 85 & 90% capacity utilization in the 2 nd , 3 rd , 4 th , 5 th and 6 th years' onwards respectively) |
| 11. Raw materials | : | Bread Flour, Milk Powder, Sugar, Salt & other fermenting/ preservatives. |
| 12. Major product outputs | : | Milk Bread (Loaves) |
| 13. Total project cost | : | Rs.31.28 Lakhs |
| • Land development, building & civil construction | : | N/A (Making use of existing land/ building) |
| • Machinery and equipments | : | Rs. 25.28 Lakhs |
| • Other Capital Investments | : | Rs. 3 Lakh |
| • Contingencies | : | Rs. 3 Lakh |
| 14. Means of Finance | | |
| • Subsidy grant by MoFPI (max 10 lakhs) | : | Rs.10 Lakhs |
| • Promoter's contribution (min 20%) | : | Rs. 11.28Lakhs |
| • Term loan (45%) | : | Rs. 10 Lakhs |
| 15. Profit after Depreciation, Interest & Tax | | |
| • 2 nd year | : | Rs. 7.49 Lakhs |
| • 3 rd year | : | Rs. 8.98 Lakhs |
| • 4 th year | : | Rs. 10.48Lakhs |
| • 5 th year | : | Rs. 11.98 Lakhs |
| 16. Average DSCR | : | 3.339 |
| 17. Term loan repayment | : | 7 Years |
| 18. Payback period for investment | : | 6 Years |

2. Introduction

The Indian bakery industry is one of the biggest sections in the country's processed food industry. Bakery products, which include bread and biscuits, form the major baked foods accounting for over 82 per cent of the total bakery products produced in the country. It enjoys a comparative advantage in manufacturing, with an abundant supply of primary ingredients required by the industry. The bakery segment in India can be classified into the three broad segments of bread, biscuits and cakes.

Bakery products are high nutrient value and affordable, due to the rapid population rise, the rising foreign influence, the emergence of a female working population and the fluctuating eating habits of people, they have gained popularity among people, contributing significantly to the growth trajectory of the bakery industry. A number of healthy products have been launched in the bakery segment and are gaining popularity at a high rate.

In that Milk bread is the most affordable and ready to eat snack/ food available in the Indian market. It has been consumed across all income groups. After globalization there is a massive change over in food habits of Indian people, due to which the Bread is becoming a secondary staple food to chapati/ rice which is the main staple food in India. Milk Bread promotes growth in small children/ prevents deficiency when their diet is restricted to low protein diet. The milk solid's in milk bread supply essential amino acids absent in whole wheat.

It is very evident that the consumption of Milk Bread has increased against other bread varieties over the years since it has additional nutritional value in it. Baked goods are expected to grow by constant value at a compound annual growth rate (CAGR) of two per cent over the forecast period. The bakery industry in India has witnessed an annual growth rate of more than 15 per cent during the past years. As the business and the industry thrives, the challenges accruing out of it are also growing expediently.

3. The Proposal

By considering the high demand, it is proposed here to manufacture Milk Bread by using various machines suggested & supplied by IIFPT at an installed capacity of total 200 kg/8 hour.

4. Business Model

Business Model Canvas

Key Partners

- PM-FME.
- IIFPT
- Machinery, repairs and ingredient suppliers.

Key Activities

- Production
- Inventory Management
- Sales and Marketing

Key Resources

- Fund provided by PM-PME
- Training to personnel provided by IIFPT

Value Propositions

- Provide Customers healthy & tasty Milk Breads.
- Nutritional ingredient
- Availability of product on demand

Customer Relationship

- Long term relationship to sustain in the market
- Maintain hygienic production

Channels

- Shopping malls, Chain of stores etc.,
- Retailer Shops
- Hotels and Resorts

Customer Segments

- All income groups
- Hospitals
- Tourists
- Students

Cost Structure

- Fixed Cost for Plant and Machinery
- Attractive Packaging
- Distribution and Sales
- Cost for product replacement in case of packets are braked.

Revenue Streams

- Value added product generate revenue
- Products are produced as per market segments- High, Middle, Low level income group and occasional customers.
- Prices are little lower than competitors.

5. Project Details

5.1. Assumptions

1. The Project Profile has been prepared on the basis of Single Shift of 8 hours a day and 300 working days in a year at 80% efficiency.
2. It is presumed that in the first year, the capacity utilization (CU) will be 70% followed by 75%, 80%, 85% and 90% onwards in the subsequent years.
3. Raw material consumption is 80% for first year then 90% and after that 100% in subsequent years.
4. For Calculation purpose CU is adjusted in hike of raw material cost too.
5. The selling price of the products is kept fixed for calculation purpose.
6. The rate of salaries and wages for skilled workers and others are on the basis of the minimum rates in the State of Tamil Nadu.
7. The proposer have land and building; and have sufficient amount of primary raw material i.e. Bread flour.
8. The payback period may be 5-years after the initial gestation period.
9. The gestation period in implementation of the project may be to the tune of 6 to 9 months which includes making all arrangements, completion of all formalities, market surveys and tie-ups etc.

5.2. Implementation Schedule

The implementation of the project includes various jobs/exercises such as procurement of technical know-how, 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.

Breakup of activities with relative time for each activity is shown below:-

| Action | Period (In Months) |
|---|-------------------------------|
| Scheme Preparation and approval | 0 - 1 |
| SSI Provisional Registration | 1 - 2 |
| Sanction of loan | 2 - 5 |
| Clearance from State Pollution Control Board | 3 - 4 |
| Placement of order for machinery and delivery | 4 - 5 |
| Installation of machines | 6 - 7 |
| Power connection | 6 - 7 |
| Trial run | 7 - 8 |
| Commencement of Production | 9 Onwards |

5.3. Statutory & Government Approvals

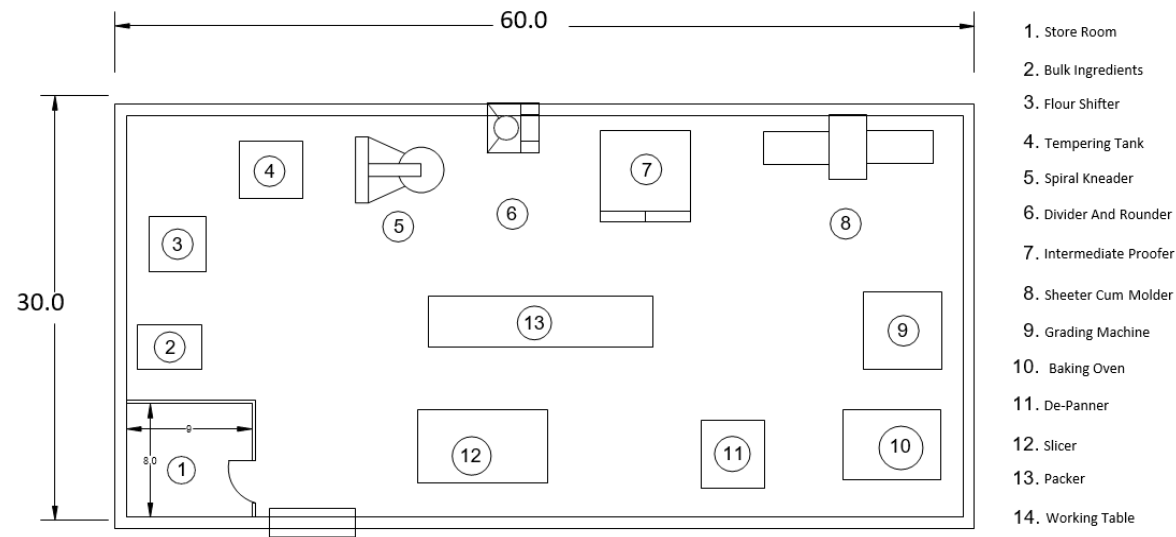
It is mandatory for the bakeries to acquire licenses from FSSAI, GST, Local Municipality, Fire Department and State Pollution Control Board. Out of these, the FSSAI, GST and local Municipal Health permits are of priority before starting the unit.

6. Manufacturing Process

The bread flour is sifted and poured into an industrial mixer, temperature controlled water is piped into the that mixer. A pre-measured amount of Yeast, Sugar, Salt and Water is added into the mixer and mixed for 5 minutes. Shortening, improver, additives and preservatives added into it. The mechanical arm knead the dough to the desired

consistency quickly, an experienced personal will determine the consistency of the dough by the sound of the dough as it rolls around the mixture. Now the dough is allowed to ferment in a temperature of 30 degrees for 30 minutes(Bulk-Proofing) followed by a knock- back for 2 to 3 minutes and the divider cuts the dough into 400g weights. The rounded dough will be allowed at 27 degree for 15 minutes in the immediate proofer. Now the dough will reshaped into loaves and dropped into pans. The pan travels into an another proofer for final proofing at 35 degree for 45 minutes. The dough is baked at 220 degree for 30 minutes. The loaves are dumped from the pans onto shelves and after cooling put into the slicing machine for consistency sliced pieces. The sliced loaves are slipped into the preprinted retail covers.

7. Proposed Floor Plan



*All Measurements are in feet

8. Process Flow Diagram



9. Financial Statements

9.1. Project Financing

9.1.1. Project Cost

| S. No. | Heads | Estimate Amount |
|--------------|--------------------------|--------------------|
| 1 | Land | Own |
| 2 | Building | Own |
| 3 | Plant & Machinery* | ₹ 2,528,000 |
| 4 | Contingency | ₹ 300,000 |
| 5 | Other capital Investment | ₹ 300,000 |
| Total | | ₹ 3,128,000 |

* Machinery Cost & Split-Up

| S. No. | Machine Name | Capacity | Cost |
|--------------|--------------------------|---|--------------------|
| 1 | Bulk ingredients handler | Semi Automation, Material : SS Model : PSPM132 Capacity : 50 to 200KG (hour) | ₹ 66,000 |
| 2 | Flour shifter | Material : MS.SS Capacity : 100 kg Motor power : 1.5HP Size : 2feet to 6feet | ₹ 75,000 |
| 3 | Tempering tank | Capacity : 500 to 1000L Material : SS Material Grade : SS304 Voltage : 440V Frequency : 50HZ to 60HZ | ₹ 165,000 |
| 4 | Spiral kneader | Type : Full Automatic Capacity : 100KG Power : 440V Frequency : 50HZ Phase : 3Phase | ₹ 300,000 |
| 5 | Divider and rounder | Dough Dividing Range : 30PCS Dimension : 640*540*2100MM Capacity : NFK30 Design Type : Standard Automation Grade : Semi – Automatic Voltage : 380V Power : 0.75KW Dough weight : 30 to 100gm | ₹ 363,000 |
| 6 | Intermediate proofer | Operation : Semi-Automatic Power : Electric Voltage : 220V | ₹ 600,000 |
| 7 | Sheeter cum Moulder | Dough : 30-100PCS Capacity : 30PCS Design Type : Standard Voltage : 380V Power ; 0.75KW | ₹ 315,000 |
| 8 | Baking oven | Voltage : 380V Power : 27KW Material : SS | ₹ 103,000 |
| 9 | De-Panner | Voltage : 3HP,380,50HZ Material : SS | ₹ 76,000 |
| 10 | Slicer | Machine : Mild steel Motor : 1HP-2HP Frequency : 50HP Phase Type : 1Phase Voltage : 220V | ₹ 55,000 |
| 11 | Packer | Power : 3KW Phase : Single And Three Voltage : 220V Machine Material : SS | ₹ 410,000 |
| Total | | | ₹ 2,528,000 |

9.2. Working Capital Requirement

9.2.1. Raw Material

| Ingredients | MT/ Year | Rate/ MT | Cost |
|--------------------|----------|-----------|------------------|
| Bread Flour | 60 | ₹ 25,000 | ₹ 1,500,000 |
| Milk Powder | 3 | ₹ 250,000 | ₹ 750,000 |
| Sugar | 3 | ₹ 30,000 | ₹ 90,000 |
| Salt | 2 | ₹ 3,000 | ₹ 6,000 |
| Other Ingredient | 1 | ₹ 10,000 | ₹ 10,000 |
| Packaging Material | 5 | ₹ 10,000 | ₹ 50,000 |
| Total | | | ₹ 906,000 |

9.2.2. Human Resources

| Particular | Number of Employees | Salary/ Month | Cost/ Month | Cost/ Year |
|---------------------------|---------------------|---------------|------------------|--------------------|
| Master Baker | 2 | ₹ 18,000 | ₹ 36,000 | ₹ 432,000 |
| Admin Staff | 1 | ₹ 15,000 | ₹ 15,000 | ₹ 180,000 |
| Marketing& Delivery Staff | 3 | ₹ 12,000 | ₹ 36,000 | ₹ 432,000 |
| Labour/ Housekeeping | 4 | ₹ 8,000 | ₹ 32,000 | ₹ 384,000 |
| Total | | | ₹ 119,000 | ₹ 1,428,000 |

10. Business Projections

Installed plant capacity = 200 Kg/day

Efficiency @ 80% = 160 Kg/day

Production for 300 Working Days = 48,000 kg

Sales

Milk Bread ₹100/ Kg = ₹48,00,000/-

Since capacity utilization (CU) is taken different for different years therefore, projected sales will be:

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| CU @ | Under Const. | 70% | 75% | 80% | 85% | 90% | 90% |
| Sales | Under Const. | ₹ 3,360,000 | ₹ 3,600,000 | ₹ 3,840,000 | ₹ 4,080,000 | ₹ 4,320,000 | ₹ 4,320,000 |

11. Cash Flow

| | | | | | | | | |
|---|----------|---------|---------|---------|---------|---------|---------|-------|
| Project Cost | | | | | | ₹ | 3128000 | lakhs |
| Promoter's Capital | | | | | | ₹ | 1128000 | lakhs |
| Loan @11.10% | | | | | | ₹ | 1000000 | lakhs |
| PM-FME Subsidy @ 35% (Max upto 10 Lac) | | | | | | ₹ | 1000000 | lakhs |
| Total Assistance | | | | | | ₹ | 2000000 | lakhs |
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | |
| CU | 0% | 70% | 75% | 80% | 85% | 90% | 90% | |
| Sales | 0 | 3360000 | 3600000 | 3840000 | 4080000 | 4320000 | 4320000 | |
| Raw material | 0 | 634200 | 679500 | 724800 | 770100 | 815400 | 815400 | |
| Salary | 714000 | 1428000 | 1428000 | 1428000 | 1428000 | 1428000 | 1428000 | |
| Other expenses @ 10% of sales (electricity, insurance and others) | 0 | 336000 | 360000 | 384000 | 408000 | 432000 | 432000 | |
| Depreciation @ 10% | 252800 | 227520 | 204768 | 184291 | 165862 | 149276 | 134348 | |
| Loan due | 1000000 | 1000000 | 833333 | 666666 | 499999 | 333332 | 166665 | |
| Interest on Term loan | 111000 | 111000 | 92500 | 74000 | 55500 | 37000 | 18500 | |
| Loan instalments | 0 | 166667 | 166667 | 166667 | 166667 | 166667 | 166667 | |
| Total Expenses | 1077800 | 2903387 | 2931435 | 2961758 | 2994129 | 3028343 | 2994915 | |
| Gross Profit | -1077800 | 456613 | 668565 | 878242 | 1085871 | 1291657 | 1325085 | |
| Tax @ 10% | 0 | 45661 | 66857 | 87824 | 108587 | 129166 | 132509 | |
| Net Profit | -1077800 | 410952 | 601708 | 790418 | 977284 | 1162491 | 1192576 | |

12. Feasibility Assessment

12.1. Technical

- Raw Material for this business is bread flour, which is readily available in the market/ Proposer.
- The required machineries are available at IIFPT with an affordable cost.
- Machineries built by IIFPT are Semi& Full automatic in nature, so operation will be smoother and easier, which will reduce the intense labour required in bread making.
- The Proposer has ample storage space to store raw materials and finished product.

12.2. Socio – Economic

- Bakery unit will fetch revenue for the Proposer and Human Resources work in the proposed Bakery, which will upgrade their socio-economic status.
- People from nearby villages can be employed here and it will create the employment opportunity to young persons.
- People can be trained as a salesman, machine operator or manager.
- The entrepreneurial and managerial skills of the people working here will get developed.
- Idle resources can be turned into profitable one.

12.3. Market

- There is always a demand for Milk Bread and it has a good market potential always.
- Milk Bread can be sold in Residential Areas, Hospitals, Schools/ Colleges, Business establishments.
- In cities Milk Breads can be displayed and sold in Malls, Chain of Stores and organized retail shops.
- Large retail stores can be approached to sell these products.
- Nowadays people are health conscious and they are buying quality Milk Breads to consume it as a snack or even as a meal.

12.4. Financial

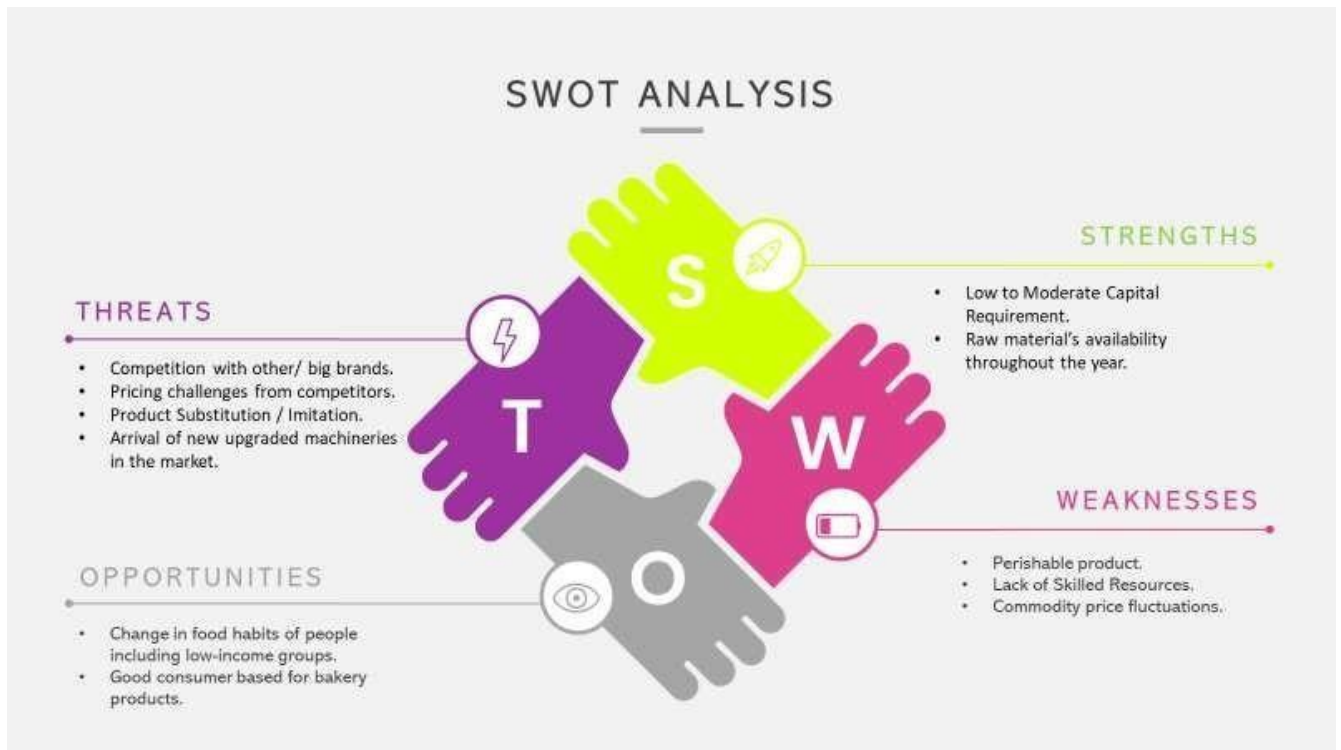
Milk Bread is a value added product, which has higher value (selling price) than that of raw materials.

The financial aspects are elaborated in Section 16. Annexures.

This business have Average **DSCR = 3.34** and **IRR as 10.33%**

So, this project is financially viable.

13. SWOT Analysis



14. Risk Assessment & Management

- Based upon the fact that Bakery products are perishable in nature; Material Management is required for avoidance of the wastage.
- Proper study of consumer behavior should be conducted and accordingly the product can be produced.
- The shelf value of milk bread is about 72 hours therefore demand for these products can be generated through proper advertisement and promotion.

- The financing of these types of industries depends on the market factors, though demand for these products are high but financial institution does not easily finance these products. The financing agency must be ensured through a proper business plan.
- The packaging of product should be attractive, which creates an additional demand for our product.
- Proper certification of plant is required from the authorities, so Food safety standards should be followed.
- Proposer may approach for ISO certification for ensuring the quality standards of products.
- Internal Checklist should be in plant / unit and it must be supervised periodically.
- Waste disposal - The main waste in the bakery unit is of unused dough and burnt product. These need to be removed in a timely manner. Dough may lead to fungal growth in the manufacturing premises, whereas burnt product will contaminate the finished product. Waste should be disposed immediately in covered bins to avoid contamination.

15. Monitoring & Control

- Making Milk Bread requires an experienced skilled worker or qualified baker to check raw material quality, dough consistency, proofing, baking, etc.
- It is necessary to develop right taste, texture and consistency of the products.
- It is necessary to avoid waste during flour sifting, dough making, rolling/sheeting, slicing/cutting etc., ,since wastage and its disposal also increase the cost.
- Proper consultation from IIFPT is essential in selection of bakery equipment.
- Water used in Milk Bread must be of good quality, prefer RO water if total dissolved solids are high in source water.
- Disposal of solid and liquid waste are to work out properly as per pollution laws.
- Good level of competence is needed to understand quality of raw materials, formulation of products, functions of additives used in formulation, control of process and machinery to produce end product of desired quality, taste and texture, type of packing material to be used, market trends and penetration, etc.,
- Technical knowledge and skills are needed for problem solving, and to ensure good hygiene and safety in the workplace.
- Proper pest control is required for preventing insects and rodents.
- The guidelines listed in FSSAI manual should be followed strictly.

16. Conclusion

Milk Bread still remain the cheapest of the processed ready to eat products in the country, which is liked by different cross sections of population. The demand for bread is constantly increasing. Also there is no marketing problem as every shop is a market for bakery products.

Bakery business is like venturing into spreading your labour of love. A love that is devoured by millions for its freshness & taste and the warmth that it leaves behind.

17. Annexure

| | | | | | | | | | |
|--|----------|----------|----------|-----------|---------|-----------|---------|-------|-------|
| Project Cost | | | | | | | ₹ | 31.28 | lakhs |
| Promoter's Capital | | | | | | | ₹ | 11.28 | lakhs |
| Loan @11.10% | | | | | | | ₹ | 10 | lakhs |
| PM-FME Subsidy @ 35% (Max upto 10 Lac) | | | | | | | ₹ | 10 | lakhs |
| Total Assistance | | | | | | | ₹ | 20 | lakhs |
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | | |
| CU | 0% | 70% | 75% | 80% | 85% | 90% | 90% | | |
| Sales | 0 | 3360000 | 3600000 | 3840000 | 4080000 | 4320000 | 4320000 | | |
| Raw material | 0 | 634200 | 679500 | 724800 | 770100 | 815400 | 815400 | | |
| Salary | 714000 | 1428000 | 1428000 | 1428000 | 1428000 | 1428000 | 1428000 | | |
| Other expenses @ 10% of sales (electricity, insurance and others) | 0 | 336000 | 360000 | 384000 | 408000 | 432000 | 432000 | | |
| Depreciation @ 10% | 252800 | 227520 | 204768 | 184291 | 165862 | 149276 | 134348 | | |
| Loan due | 1000000 | 1000000 | 833333 | 666666 | 499999 | 333332 | 166665 | | |
| Interest on Term loan | 111000 | 111000 | 92500 | 74000 | 55500 | 37000 | 18500 | | |
| Loan instalments | 0 | 166667 | 166667 | 166667 | 166667 | 166667 | 166667 | | |
| Total Expenses | 1077800 | 2903387 | 2931435 | 2961758 | 2994129 | 3028343 | 2994915 | | |
| Gross Profit | -1077800 | 456613 | 668565 | 878242 | 1085871 | 1291657 | 1325085 | | |
| Tax @ 10% | 0 | 45661 | 66857 | 87824 | 108587 | 129166 | 132509 | | |
| Net Profit | -1077800 | 410952 | 601708 | 790418 | 977284 | 1162491 | 1192576 | | |
| ICR = Profit before depreciation interest and tax/interest | 0 | 6.1634 | 9.4414 | 14.3586 | 22.5538 | 38.9443 | 78.8891 | | |
| Profit After Tax+ Depreciation + Interest | -714000 | 749472 | 898976 | 1048709 | 1198646 | 1348767 | 1345424 | | |
| Interest +installment of term loan | 111000 | 277667 | 259167 | 240667 | 222167 | 203667 | 185167 | | |
| DSCR= (Profit After Tax+ Depreciation +interest)/(Interest + Installment of term loan) | -6.43243 | 2.699176 | 3.468714 | 4.3575119 | 5.39525 | 6.6224179 | 7.26601 | | |



Contact Us

National Institute of Food Technology, Entrepreneurship and Management (NIFTEM) - Thanjavur

(an Institute of National Importance under Ministry of Food Processing Industries, Government of India)

Pudukkottai Road, Thanjavur – 613005, Tamil Nadu, India

Ph: 04362-228155, Fax:04362-227971

Email: director@iifpt.edu.in Web: <https://niftem-t.ac.in/>

