

# PROJECT REPORT

## ON

### KURKURE & POTATO CHIPS



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**LIST OF ANNEXURES**

**CHAPTER-1**  
**THE PROJECT AT A GLANCE**

Sl. No.	Particulars	Description				
A. Project Description						
1.	Proposed Project	Potato and Banana Chips Making Unit				
2.	Capacity of the Plant/Unit (At 100% Capacity)	▪ Kurkure: <b>800 Ton</b> ▪ <u>Potato Chips: 300 Ton</u> <b>Total : 1100 Ton</b>				
3.	Year-wise Capacity Utilisation	Yr 01 <b>40%</b>	Yr 02 <b>50%</b>	Yr03 <b>60%</b>	Yr 04 <b>70%</b>	Yr 05 <b>70%</b>
B. Project Cost						
1.	Land	Rented				
2.	Civil Works & Buildings	Rented				
3.	Plant & Machinery	Rs. 1,70,00,000.00				
4.	Pre-operative Expenses	Rs, 2,00,000.00				
5.	Margin for Working Capital	Rs. 46,99,600.00				
6.						
7.						
Total		Rs. 2,50,00,000.00				
C. Means of Finance						
1.	Equity @ 25%	Rs. 50,00,000.00				
2.	Loan from Bank @ 75%	Rs. 2,00,00,000.00				
Total		Rs. 2,50,00,000.00				
D. Financial Benchmarks						
1.	Break Even Point(at Operating Capacity on Third Year)	31.36%				
2.	Average DSCR	2.52				
3.	Internal Rate of Return	18.00%				
E. Basic Assumptions						
1.	Power Rate Per Unit	Rs. 13.00/- Per Unit				
2.	Interest Rate	Term Loan: 10.5%; WC Loan: 12.5%				
3.	Repayment Period	6 Years including moratorium period of 1 Year.				

## CHAPTER-2

### INTRODUCTION

- 2.1. kurkure and Potato chips are popular processed food items resulting in substantial value-addition. Chips are crispy, salty or spicy and consumers prefer fresh quality. Chips are the most popular variety of snacks and they are consumed round the year by people of all age groups and all income segments. Kurkure has become the perfect Namkeen snack of the nation. Embodying the spirit of our lovable country, this tedha shaped snack has found a home in the hearts and minds of all. Inimitable taste coupled with superior quality has made it the choice of millions and an inevitable part of their families. Little wonder that it is one of India's most loved snack food brands. The food market can enjoy with this generation those really do not know about the product. But, Kurkure come different approach to consumers of this generation from the older generation. From that we can prove for every product, understanding the consumer behavior and develop the product are major reasons for its success. It maintains the balance between children and parents. Because of no of flavors it can with stand as leading food product than the other competitors .
- 2.2. Potato is an important crop among the horticultural crops in the North Eastern region of India. The state of Assam has the maximum area and production under Potato crop within the North East. The highest productivity of this crop in the NEH region is in Tripura. It is estimated that 25% of the Potatoes, which are spoiled due to various reasons such as transportation, type of packing, non-availability of cold storage capacities during harvesting season, glut in the market etc., could be saved by making various preserved Potato products. Potato Chips is one of such value added products which has a great potential as this is considered as one of the traditional foods of India.
- 2.3. POTATO is a very popular fruit due to its low price and high nutritive value. POTATO contains about 20% sugar and reasonable amount of Vitamins A, B and C. This is considered to be a rich source of energy producing food. It is consumed in several forms and amongst many value added preparations, POTATO Chips is considered to be the most important item.
- 2.4. Considering the potential market opportunity of such units, the present detail project report has been developed. The main objective of such initiative is to productively utilize the abundantly available resources of the local area and to enable uninterrupted supply of the products to market throughout the year.
- 2.6.1. A detailed analysis has been carried out considering mainly the aspects below:
- 2.6.2. Market and demand of the products.
- 2.6.3. Requirements of miscellaneous assets for the project.
- 2.6.4. Estimation of installed capacity and operation pattern.
- 2.6.5. Consumables, power & utilities and manpower requirements etc.
- 2.6.6. Estimation of the cost of the project and working capital requirements.
- 2.6.7. Means of Finance
- 2.6.8. Estimation of cost of operation, profitability and fund flow statements etc.

2.6.9. Implementation Schedule.

2.6.10. The total Project cost is estimated at **Rs. 200.00 Lakhs** which includes margin money for working capital @ 25%.

2.6.11. The various profitability estimates and other financial indicators worked out as given in the following pages are up to the satisfaction level.

### **PROJECT DESCRIPTION**

- 3.1. The proposed project is that of setting up of a Kurkure and Potato Chips making unit at suitable location.
- 3.2. The key products of the proposed project are as follows;
  - Kurkure
  - POTATO Chips
- 3.3. Chips are very popular amongst all age groups and they are made from various materials. This industry is very large and is dominated mainly by local manufacturers. Easy availability, freshness and competitive price are the main features. These products can be made anywhere, where there are availability of raw material without much difficulty.
- 3.4. The proposed project would procure the raw materials from the farm level available locally. After processing, the products would be supplied to the market through distributors/ wholesalers/retailers.

## **CHAPTER-4**

### **MARKET PROSPECT**

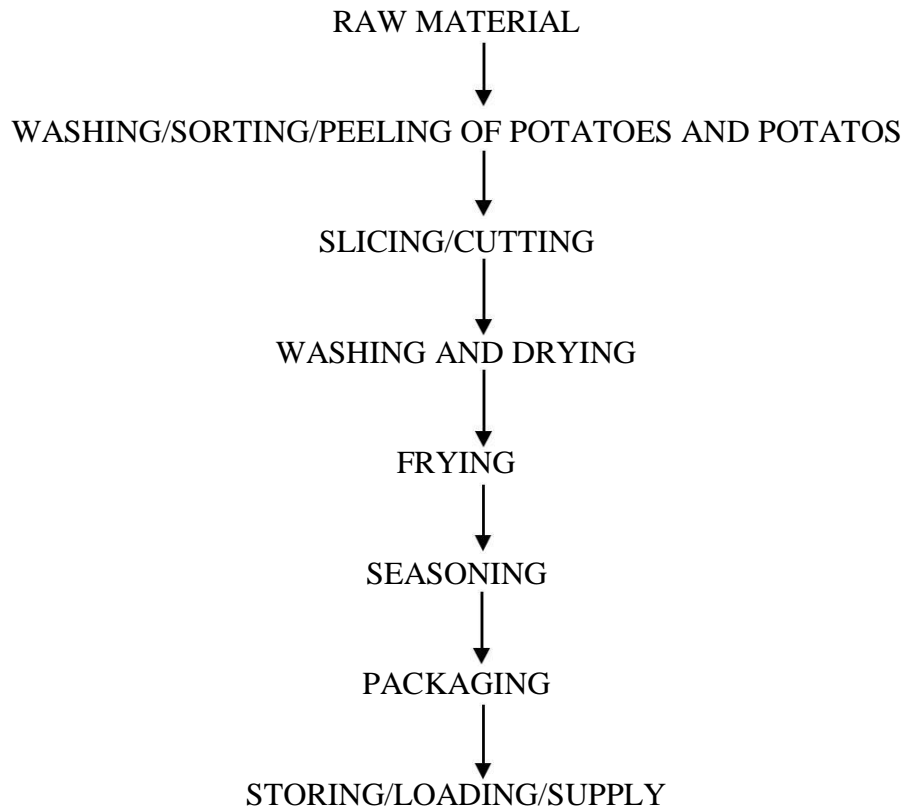
- 4.1. The popularity of snack foods is growing high day by day and KURKURE & POTATO CHIPS have emerged as a potential snack food. There exists a very large market for chips and they can be sold at various retail outlets, Paan shops, bus-stands, railway stations, roadside eateries etc. The major market outlets are the “A” and “B” class outlets, departmental stores, super markets and self service counters. There also exists institutional market consisting of clubs and other institutions, school & college canteens, army establishments, bars & pubs, railway and airlines caterers etc. Competition from organised sector may be there but local and small units have distinct advantages in terms of less overheads, lower transportation costs, longer shelf life, quick access to market and economy in terms of cost.
- 4.2. Market Promotion plays a vital role for the generation of the potential customers therefore, application of marketing strategies are recommended. Marketing plan of the proposed project may include good quality maintenance, promotional campaign like offering special discounts, referrals, advertisement and tying up with buying houses.



## CHAPTER-5

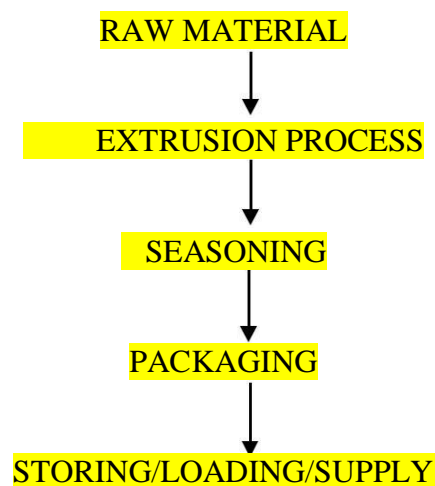
### TECHNOLOGICAL PROCESS

5.1. The process flow diagram for Potato Chips is as follows:



5.2. **POTATO Chips** :The raw POTATO 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 POTATOs thus prepared are then dipped in brine water to avoid oxidation. Sometimes turmeric powder is also used for colouring the POTATO chips or to improve colour. The POTATO chips are fried in vegetable oil and cooled down to the room temperature. These chips are then packed in polythene bags of suitable gauze and sizes to prevent spoilage.

5.3. The process flow diagram for Kurkure is as follows:



The extrusion process is the base for Kurkure production process. The fully automatic production process begins with the procurement of raw material; Cornmeal, Grammeal, and spice mix masala seasonings. The procurement of raw material depends on the quality parameters set by PepsiCo Global Standard for Safety and Quality. In addition to this, the sample goes through the quality control lab and then the process starts. Production begins by blending meal i.e. rice, corn, and gram at a certain ratio with an addition of water.

Extrusion of the blended meal begins by passing through an apparatus called **Extruder**. In the extruder, the raw materials are pressed through a die using high-pressure build-up by the screw and high temperature created by shear between sleeve and screw. The pressure drop at the die causes the snack to expand and the face cutters set the desired snack length and mass.

After extrusion, the frying process begins in fryer using edible oil for extra crispness and for shelf-life. Further Spice mix seasonings sprinkled throughout the batch through seasoning tumbler. Now the product is ready for packaging. In addition to this, metal detector scans the final product to look for foreign particles.

## CHAPTER-6

### QUALITY CONTROL AND STANDARDS

- 6.1. Following specifications under Bureau of Indian Standard related to processing of such products may be referred:

IS: 4626-1978

IS: 2860-1964

IS: 7254-1974

- 6.2. **FSSAI LICENSE:** FSSAI License is issued by the Food Safety and Standards Authority of India (FSSAI), Ministry of Family Health & Welfare, Government of India. Application to commence a food business must be made to the FSSAI in the prescribed format. Based on the application and supporting documents, FSSAI will accord approval. The Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations 2011 introduced to improve the hygiene and quality of food has brought about tremendous changes in the food industry. As per the Act, no person shall commence or carry on any food business except under a FSSAI license or FSSAI registration. Therefore, any food manufacturing or processing or packaging or distributing entity is now required to obtain a FSSAI License or Registration.
- 6.3. **POLLUTION CONTROL:** There is no major pollution problem associated with this project in terms of air and sound pollution except for disposal of waste water which would be managed appropriately through recycling facility. However, entrepreneur should obtain NOC from concerned State Pollution Control Board.
- 6.4. **EFFLUENT DISPOSAL:** Disposal of any effluent out of the project unit should be treated with recycling facility or dumped in such a way that these does not cause hazard in the vicinity of the site.
- 6.5. **ENERGY CONSERVATION:** Proper care should be taken in order to use appropriate amount of fuel and electricity.

## CHAPTER-7

### **CONSUMABLES, POWER AND UTILITY**

7.1. The major consumables required are as follows;

1. Potato , Corn Rice
2. Edible Oil, Salt, Spices and Flavours
3. Packaging Materials.

7.2. POWER:

The total requirement of power for the project is 30.00 KW. The total power supply would be distributed in the following way;

Plant & Machinery	-	<b>30.00 KW</b>
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The details requirement is shown in **ANNEXURE-V**.

7.3. UTILITY:

**WATER:** Constant flow of water would be necessary in the operation of the plant. Water would be obtained from bore well and can be stored in an overhead tank, from where it will be supplied to the required areas. Process water should be free of mud and suspended particles. It should be available at a pressure of 3 Kg/sq.cm.

**OTHER UTILITIES:** Other utilities includes fuel etc. those should be locally available. Detail expenditure against the head is shown in **Appendix- C2**.

## CHAPTER-8

### INSTALLED CAPACITY

8.1. In assessing the proposed plant capacity, due consideration has been given to technological and financial factors, marketing considerations, availability of consumables, infrastructure facilities and economic viability. The detailed requirement of the plant and machineries to achieve the plant capacity is assessed by the unit technician. While arriving at the requirement of various type of equipment and machinery required for the unit, due considerations has been given to the following points.

- a) Minimum Wastage
- b) High Productivity
- c) Maximum flexibility in operation
- d) Adequate stock by provision wherever necessary

The installed production capacity of the unit per hour is as follows;

Kurkure	-	800 Kgs/hour
Potato Chips	-	300 kgs/hour

For the purpose of carrying out this economic viability of the proposed project, it is assumed that the plant will operate at following efficiencies during the first 5(Five) years.

Year	01	02	03	04	05
Capacity Utilization	40%	50%	60%	70%	70%

## CHAPTER-9

### **BASIS AND PRESUMPTIONS**

While deriving figures and projections in this Project report, following Basis and Presumptions have been made.

- 9.1. The project is based on a single shift basis and 300 days of working schedule in a year, working for 8 hours a day, 25 days a month.
- 9.2. The project cost and other projections etc. have been made on present market conditions and the sources available within our sources only and therefore it may vary on account of market fluctuations and with different suppliers and qualities.
- 9.3. The cost of machinery and equipment/materials indicated refer to a particular make and the prices are approximate to these prevailing at the time of preparation of this report.
- 9.4. Power rate is assumed at Rs.13.00 per unit and monthly fixed rental charges.
- 9.5. Water would be made available through bore well facility at the project site.
- 9.6. Manpower requirement for the project has been planned considering the size of the unit.
- 9.7. Interest rates considered is 10.5% on term loan and 12.50% on Working capital loan for financial assistance.
- 9.8. For repayment, a period of 6 years is planned with moratorium period of one year.
- 9.9. Insurance charges have been considered Lump Sum.
- 9.10. Repair and maintenance have been calculated at reasonably.
- 9.11. Depreciation shown has been calculated on Straight Line Method.
- 9.12. Non-refundable deposits, Preparation of detailed project report fees, Architecture fees, traveling & Convenience amount, Know-how & Engineering fees, Application processing fees, trial production, fees etc are considered under pre-operative expenses.
- 9.13. Break Even Point & Rate of Return is calculated on optimum production condition findings.
- 9.14. At the plant site, availability of unskilled labour is not a problem. Skilled and unskilled labour can be recruited for operating the plant. Initial training will be required for smooth and efficient running of the plant. It is felt that the skilled manpower available locally having some experience in operation can be recruited to satisfy the manpower need.
- 9.15. Project would be set up at a site that is well connected by road and there is adequate supply of power and water.

## CHAPTER-10

### **PROJECT COST ESTIMATES AND MEANS OF FINANCE**

#### 10.1. TOTAL PROJECT COST:

The Capital cost of the project has been estimated on the basis of installed capacity assuming 200 working days per annum. The total cost of the Project including margin for working capital has been estimated at **Rs. 200.00 Lakhs** as detailed in **ANNEXURE-X**.

#### 10.2. LAND, BUILDING AND CIVIL WORKS:

Land & Building is on Rent @ **1.80. Laks** per month.

#### 10.3. PLANT & MACHINERY:

The total cost of Plant & Machinery has been estimated at **Rs.202.00 laks** as detailed in ANNEXURE-III.

#### 10.4. PLANT EXPENDITURE:

The total cost on Plant expenditure includes admissible taxes, transportation, insurance of the machineries and installation etc. has been included as detailed in ANNEXURE-III.

#### 10.5. FIXED ASSET:

#### 10.6. PRELIMINARY & PRE-OPERATIVE EXPENDITURE:

An expenditure of **Rs. 2.00** Laks has been earmarked on this account, as detailed in Appendix- A4.

#### 10.7. CONTINGENCY AND ESCALATION:

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#### 10.8. WORKING CAPITAL ESTIMATES:

The details of the Working Capital requirements of the proposed unit have been shown in **ANNEXURE-X**. In arriving at the working capital estimates, various components vis Administrative Expenses/Consumables and Working Expenses have been taken on the basis of usual norms. The Working Capital requirement is proposed to be met from project margin money and cash credit loan borrowings from the financial institution.

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#### 10.9. MEANS OF FINANCE:

The Proposed Project Cost of **Rs. 250.00 Lakhs** would be financed under MSME development schemes of financial institutions/commercial banks, in the following manner as shown below.

1. LOAN FROM BANK/FI @ 80%	=	200.00 LAKHS
2. PROMOTERS CONTRIBUTION @ 20%	=	50.00 LAKHS
<b>TOTAL</b>	=	<b>250.00 LAKHS</b>

### 10.10. DEBT-EQUITY RATIO:

Based on the above financing pattern, the Debt-Equity ratio of the Project is **5:1**.



## CHAPTER-11

### ECONOMIC VIABILITY AND FINANCIAL ANALYSIS

#### 11.1. COST OF PRODUCTION:

The cost of production has been estimated annually for the first five years of operation. The various cost components taken into account are cost of administrative expenses, consumable stores, utilities, wages and salaries, repairs and maintenance, insurance, interest rates, taxes etc. depreciation. The detailed cost of production has been shown in **ANNEXURE-I**.

#### 11.2. REPAIR & MAINTENANCE:

Cost under Repair and Maintenance expenses have been assessed by charging 5% on Machineries as detailed in **ANNEXURE-VIII**.

#### 11.3. ADMINISTRATIVE EXPENSES:

This has been considered in the cost and profitability statement under other expenses etc.

#### 11.4. SELLING EXPENSES:

This has been considered in the cost and profitability statement under other expenses etc.

#### 11.5. DEPRECIATION:

In calculating the cost of operation, depreciation has been calculated under straight line method after absorbing the pre-operative and contingencies expenses as shown in **ANNEXURE-XII**.

#### 11.6. FINANCIAL CHARGES:

The interest on proposed term loan amount of **Rs. 16.56 Lakhs** has been calculated @ 10.5% being the rate of interest. The interest calculation for various years after considering the repayments due in respective years has been shown in **ANNEXURE-XI**.

#### 11.7. SALES REALISATION:

The total annual income of the Project is shown in **ANNEXURE-IX**. Based on **40%** capacity utilisation, total turnover is estimated at **Rs. 1710.07 Lakhs on First year**, the sale for other years are estimated at different capacity utilisation as shown in **ANNEXURE-IX**.

11.8. NET PROFIT:

The proposed project is expected to generate profit from the first year of operation itself and will gradually increase with increase in capacity utilisation.

11.9. INTERNAL ACCRUALS:

The net profit after tax with depreciation added back would make up sufficient internal accruals to meet the term loan, working capital loan repayment obligations without any liquidity problems.

11.10. FINANCIAL ANALYSIS:

The break-even point of the proposed project is **31.36%** at 40% operating capacity on third year as shown in **Annexure-XVI**.

The DSCR of the project has been worked out in **Annexure-XVIX** with an average of **2.34**, which is considered quite satisfactory to meet the repayment and interest obligations in respect of the term loan.

The **internal rate of return** of the project works out to **18.00 %**, which is satisfactory.