POPCORN MANUFACTURING UNIT

1. INTRODUCTION:

Popcorn or Popping Corn is a type of corn which explodes from the kernel and puffs up after heating. However, there are special varieties of corn that give improved popping yield. And these varieties are most suitable for the production.The industrial popcorn production demands a comparatively small space and infrastructure for commencing.

2. PRODUCT & ITS APPLICATION:

Popcorn is becoming very popular snack among Indians. Popcorn is widely consumed in cinema halls, theatres and other stage shows by audience because of its easy to eat consumption feature.Popcorn fits into the better-for-you snack trend as a low-calorie food with a myriad of flavouring possibilities

3. DESIRED QUALIFICATIONS FOR PROMOTER:

Successful running this project does not require any specific qualification.

4. INDUSTRY LOOKOUT AND TRENDS

Global popcorn market growth is steadily at a CAGR of approximately 7% during the forecast period. The growing opportunity in the snacks industry is the primary growth driver of this market. Globally, customers are spending more on convenient snacks, with some of these snacks acting as meal replacements. Customers consider both taste and health at the point of purchases forcing the snack manufacturers to understand the consumption drivers and

build a product accordingly. For instance, during 2015, online retailer Ocado started selling Joe &Seph's popular popcorn flavours on their online supermarket.

The rising number of varieties and flavours of popcorn has also been contributing to the market growth. Numerous vendors have started including flavours like bacon, blue cheese, spicy or salted caramel, cheesecake and stout beer to cater to a large consumer based. For instance, Snacks101 offers baked and gluten free popcorn varieties such as white cheddar, sea salt, sweet & spicy sriracha and smoky chipotle.

5. MARKET POTENTIAL AND MARKETING ISSUES, IF ANY:

This is a very delicious and tasty snacks item from the user point of view. Additionally, the product is also safe and healthy for consumption. This product is becoming equally popular among the consumers and the manufacturers. Some of the important factors attributing to the growth of its market in India are increasing consumption from tier I cities. In addition, the growth of multiplexes in the country and entry of a number of manufacturers with innovative flavors are also the major reasons. Therefore, the snack, that eternal movie-time munchy, has become a sizzling business in India these days. The popcorn market in India is increasing very fast – especially in multiplexes. And the gross profit margin is very lucrative.

6. RAW MATERIAL REQUIREMENTS:

Generally, corn or maize is the primary required raw material. Additionally, there will be a need to procure salt, butter, flavors, spices etc. For packaging, it requires food grade HDPE bottles/bags and cardboard boxes.

7. MANUFACTURING PROCESS:

The product is produced by heating kernels until the internal moisture expands and pops through the outer shell of the kernel, allowing the starch within to expand and cool. The machine will do everything to produce crispy popcorns. For flavouring, prepared popcorn is stored in storage and then fed into seasoning/flavouring machine. Finally, the product will be

packed with the moisture proof packaging materials. Generally, corrugated outer cartons are used for the transportation and bulk handling of the items.

8. MANPOWER REQUIREMENT:

The enterprise requires 14employees as detailed below**:**

Sr. No.	**Designation of Employees**	**Salary Per Person**	**Monthly Salary ₹**	**Number of employees required**				
				Year-1	**Year-2**	**Year-3**	**Year-4**	**Year-5**
	Variable Labour: Workers							
1	Operator	₹ 10,000.00	₹ 10,000.00	2	2	2	3	3
2	Un Skilled Workers	₹ 8,000.00	₹ 24,000.00	5	5	5	8	8
	sub-total		₹ 34,000.00	7	7	7	11	11
	Fixed Staff:							
1	Accountant	₹ 12,000.00	₹ 12,000.00	1	1	1	1	1
2	Store Keeper	₹ 8,000.00	₹ 8,000.00	2	2	2	4	4
3	Sales Staff	₹ 12,000.00	₹ 24,000.00	4	4	4	5	5
	sub-total		₹ 44,000.00	7	7	7	10	10
	Total		₹ 78,000.00	14	14	14	21	21

9. IMPLEMENTATION SCHEDULE:

The project can be implemented in 6 – 8months' time as detailed below:

Sr. No.	**Activity**	**Time Required *(in months)***
1	Acquisition of premises	1.00
2	Construction (if applicable)	2.50

3	Procurement & installation of Plant & Machinery	2.50
4	Arrangement of Finance	1.00
5	Recruitment of required manpower	1.00
	Total time required *(some activities shall run concurrently)*	6.0 - 8.00

10. COST OF PROJECT:

The project shall cost ₹ 72.13lacs as detailed below:

Sr. No.	Particulars	₹ in Lacs
1	Land	18.00
2	Building	15.80
3	Plant & Machinery	20.30
4	Furniture, other Misc.Equipments	0.85
5	Other Assets including Preliminary / Pre-operative expenses	2.03
6	Margin for Working Capital	15.15
	Total	**72.13**

11. MEANS OF FINANCE:

Bank term loans are assumed @ 60% of fixed assets. The proposed funding pattern is as under:

Sr. No.	Particulars	₹ in Lacs
1	Promoter's contribution	18.03
2	Bank Finance	54.10
	Total	**72.13**

12. WORKING CAPITAL CALCULATION:

The project requires working capital of ₹15.15lacs as detailed below:

Sr. No.	Particulars	Gross Amt	Margin %	Margin Amt	Bank Finance
1	Inventories	7.58	0.25	1.89	5.68
2	Receivables	3.79	0.25	0.95	2.84
3	Overheads	3.79	100%	3.79	0.00
4	Creditors	-		0.00	0.00
	Total	15.15		6.63	8.52

13. LIST OF MACHINERY REQUIRED:

A detail of important machinery is given below:

Sr. No.	Particulars	UOM	Qtty	Rate (₹ in Lacs)	Value (₹ in Lacs)
	Plant & Machinery / equipments				
a)	***Main Machinery***				
1	Automatic Popcorn making machine	Nos	1	₹ 12.50	₹ 12.50
2	Flavoring Machine	Nos	1	₹ 2.85	₹ 2.85
3	SS Storage tanks	Nos	5	₹ 0.55	₹ 2.75
4	Weighing Scale	Nos	1	₹ 0.25	₹ 0.25
Sr. No.	**Particulars**	**UOM**	**Qtty**	**Rate (₹ in Lacs)**	**Value (₹in Lacs)**
5	Material Handling Equipment	Nos	LS	₹ 1.35	₹ 0.52
6	Misc. Tools	Nos	LS	₹ 0.60	₹ 0.37
	sub-total Plant & Machinery				**₹ 20.30**
	Furniture / Electrical installations				
1	Office furniture and Electrification	LS	1	₹ 0.50	₹ 0.50
	sub total				**₹ 0.50**
	Other Assets				
1	preliminary and preoperative	LS		3.19	₹ 3.19

	sub-total Other Assets				**₹ 3.19**
	Total				**₹ 35.62**

All the machines and equipments are available from local manufacturers. The entrepreneur needs to ensure proper selection of product mix and proper type of machines and tooling to have modern and flexible designs. It may be worthwhile to look at reconditioned imported machines, dies and tooling. Some of the machinery and dies and tooling suppliers are listed here below:

1. Fry-Tech Food Equipments Private Limited
S. No. 4, Raviraj Industrial Estate,
BhikhubhaiMukhi Ka KuwaBharwadvash,
Ramol, Ahmedabad - 380024,
Gujarat, India

2. Hindustan Vibrotech Pvt. Ltd.
Office No. 2, Ground Floor,
Vrindavan Building, Vile Parle East,
Mumbai – 400057,
Maharashtra, India

3. Electrons cooling systems Pvt. Ltd.
S-27, SIDCO Industrial Estate
Kakkalur Industrial Estate
Tiruvallur – 602003,
Tamil Nadu, India

4. Springboard Enterprises India Ltd.
1st, 2nd & 3rd Floor,
Plot No. 7, 8 & 9,
Garg Shopping Mall,

Service Centre, Rohini Sector 2
New Delhi – 110085,
Delhi, India

5. Flour Tech Engineers Private Limited
Plot No. 182, Sector 24,
Faridabad - 121005,
Haryana, India

6. P Square Technologies
3, Swami Mahal,
Gurunanak Nagar,
Off. Shankarsheth Road Bhavani Peth,
Pune - 411002,
Maharashtra, India

7. Ricon Engineers
10 To 13, Bhagwati Estate,
Near Amraiwadi Torrent Power,
Behind Uttam Dairy,
Rakhial, Ahmedabad - 380023,
Gujarat, India

8. Kamdhenu Agro Machinery
Plot No. 6, Near Power House,
Wathoda Road Wathoda,
Nagpur - 440035,
Maharashtra, India

14. PROFITABILITY CALCULATIONS:

Sr. No.	Particulars	UOM	Year-1	Year-2	Year-3	Year-4	Year-5
1	Capacity Utilization	%	60%	70%	80%	90%	100%
2	Sales	₹. In Lacs	162.00	189.00	216.00	243.00	270.00
3	Raw Materials & Other direct inputs	₹. In Lacs	42.99	50.16	57.32	64.49	71.65
4	Gross Margin	₹. In Lacs	119.01	138.85	158.68	178.52	198.35
5	Overheads except interest	₹. In Lacs	17.34	18.42	20.59	21.24	21.67
6	Interest @ 10 %	₹. In Lacs	5.41	5.41	3.61	2.70	2.16
7	Depreciation @ 30 %	₹. In Lacs	6.09	4.26	3.05	2.44	1.83
8	**Net Profit before tax**	₹. In Lacs	**90.17**	**110.75**	**131.44**	**152.14**	**172.69**

The basis of profitability calculation:
This unit will have 250-300 MT/Annum capacity. The growth of selling capacity will be increased 10% per year. (This is assumed by various analysis and study; it can be increased according to the selling strategy.)

Energy Costs are considered at Rs 7 per Kwh and fuel cost is considered at Rs. 65 per liter. The depreciation of plant is taken at 10-12 % and Interest costs are taken at 14 -15 % depending on type of industry.

15. BREAKEVEN ANALYSIS:

The project shall reach cash break-even at 12.02% of projected capacity as detailed below:

Sr. No.	Particulars	UOM	Value
1	Sales at full capacity	₹. In Lacs	270.00
2	Variable costs	₹. In Lacs	71.65
3	Fixed costs incl. interest	₹. In Lacs	23.83
4	BEP = FC/(SR-VC) x 100 =	% of capacity	12.02%

16. STATUTORY / GOVERNMENT APPROVALS

The Ministry of Food Processing Industries has been operating several plan schemes for the development of processed food sector in the country during the 10th Plan. One of the schemes relates to the Technology Up-gradation/ Establishment/ Modernization of food processing industries.

The Indian food processing industry is regulated by several laws which govern the aspects of sanitation, licensing and other necessary permits that are required to start up and run a food business. The legislation that dealt with food safety in India was the Prevention of Food Adulteration Act, 1954 (hereinafter referred to as "**PFA**"). The PFA had been in place for over five decades and there was a need for change due to varied reasons which include the changing requirements of our food industry. The act brought into force in place of the PFA is the Food Safety and Standards Act, 2006 (hereinafter referred to as "**FSSA**") that overrides all other food related laws.

FSSA initiates harmonization of India's food regulations as per international standards. It establishes a new national regulatory body, the Food Safety and Standards Authority of India (hereinafter referred to as "**FSSAI**"), to develop science based standards for food and to regulate and monitor the manufacture, processing, storage, distribution, sale and import of food so as to ensure the availability of safe and wholesome food for human consumption.Entrepreneur may contact State Pollution Control Board where ever it is applicable.

All food imports will therefore be subject to the provisions of the FSSA and rules and regulations which as notified by the Government on 5th of August 2011 will be applicable.

Key Regulations of FSSA

A. Packaging and Labeling
B. Signage and Customer Notices
C. Licensing Registration and Health and Sanitary Permits

17. BACKWARD AND FORWARD INTEGRATIONS

The objective of the scheme is to provide effective and seamless backward and forward integration for processed food industry by plugging the gaps in supply chain in terms of availability of raw material and linkages with the market. Under the scheme, financial assistance is provided for setting up of primary processing centers/ collection centers at farm gate and modern retail outlets at the front end along with connectivity through insulated/ refrigerated transport.

The Scheme is applicable to perishable horticulture and non-horticulture produce such as, fruits, vegetables, dairy products, meat, poultry, fish, Ready to Cook Food Products, Honey, Coconut, Spices, Mushroom, Retails Shops for Perishable Food Products etc. The Scheme would enable linking of farmers to processors and the market for ensuring remunerative prices for agri produce.

The scheme is implemented by agencies/ organizations such as Govt. / PSUs/ Joint Ventures/ NGOs/ Cooperatives/ SHGs / FPOs / Private Sector / individuals etc.

Backward Linkage:

- Integrated Pack-house(s) (with mechanized sorting & grading line/ packing line/ waxing line/ staging cold rooms/cold storage, etc.)
- Pre Cooling Unit(s)/ Chillers
- Reefer boats
- Machinery & equipment for minimal processing and/or value addition such as cutting, dicing, slicing, pickling, drying, pulping, canning, waxing, etc.
- Machinery & equipment for packing/ packaging.

Forward Linkage:

- Retail chain of outlets including facilities such as frozen storage/ deep freezers/ refrigerated display cabinets/cold room/ chillers/ packing/ packaging, etc.
- Distribution center associated with the retail chain of outlets with facilities like cold room/ cold storage/ ripening chamber.

18. TRAINING CENTERS AND COURSES

There are few specialized Institutes provide degree certification in Food Technology, few most famous and authenticate Institutions are as follows:

1. Indian Institute of Food Science & Technology,
   Plot No.1, Near Maa-BaapkiDargah,Opp to Nath Seeds,
   Paithan Road Aurangabad
   Aurangabad - 431005
   Maharashtra, India

2. MIT College of Food Technology, Pune
   Gate.No.140, Raj Baugh Educational Complex,
   Pune Solapur Highway,
   LoniKalbhor, Pune – 412201
   Maharashtra, India

3. CSIR - Central Food Technological Research Institute (CFTRI)
   Cheluvamba Mansion, Opp. Railway Museum,
   Devaraja Mohalla, CFTRI Campus, Kajjihundi, Mysuru
   Karnataka – 570020

Udyamimitraportal (link : www.udyamimitra.in) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

Disclaimer:

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.