



MODEL PROJECT REPORT



PROJECT REPORT ON BAKED BEANS

SWAVALAMBI BHARAT ABHIYAN

PROJECT AT GLANCE

1 Name of Proprietor/Director	XXXXXXXXXX
2 Firm Name	XXXXXXXXXX
3 Registered Address	XXXXXXXXXX
4 Nature of Activity	XXXXXXXXXX
5 Category of Applicant	XXXXXXXXXX
6 Location of Unit	XXXXXXXXXX
7 Cost of Project	22.75 Rs. In Lakhs
8 Means of Finance	
i) Own Contribution	2.28 Rs. In Lakhs
ii) Term Loan	15.98 Rs. In Lakhs
iii) Working Capital	4.50 Rs. In Lakhs
9 Debt Service Coverage Ratio	1.65
10 Break Even Point	0.54
11 Power Requirement	15 KW
12 Employment	9 Persons
13 Major Raw Materials	Beans or Haricot beans, Tomato Puree, Starch, Salt, Flavourings, additives & preservatives

14 Details of Cost of Project & Means of Finance

Cost of Project

Particulars	Amount in Lacs
Land	Owned/Leased
Building & Civil Work	Owned/Leased
Plant & Machinery	16.50
Other Misc Assets	1.25
Working Capital Requirement	5.00
Total	22.75

Means of Finance

Particulars	Amount in Lacs
Own Contribution	2.28
Term Loan	15.98
Working capital Loan	4.50
Total	22.75

1. INTRODUCTION



Beans are members of the legume family, plants that produce pods with seeds inside. They're a staple food in some cultures and an important source of plant-based protein and other essential nutrients, such as iron and folate. Canning is a method of preserving foods for long periods by packing them in airtight containers. Beans are partially cooked and canned under high heat and pressure. Canned beans are a versatile processed food and offer a nutritional profile similar to that of dried beans. They are an excellent source of fiber, plant-based protein, and other essential nutrients, such as folate and potassium. They're reliable, cheap, and nonperishable, and they also play nicely with a multitude of other ingredients, including vegetables, rice, fish, and meat. Despite the potential for contamination, canned beans are generally safe to consume and prove to be a convenient and nutritious alternative to dried beans. Dried beans can take a long time to soak and cook (sometimes, you have to plan a day or two ahead). Unsurprisingly, many end up taking the familiar and low-cost shortcut of using canned beans instead.

2. PRODUCT DESCRIPTION

2.1 PRODUCT USES

Baked beans are used as a convenience food. They may be eaten hot or cold, and straight from the can, as they are fully cooked. Baked beans are served alongside barbecue foods and at picnics. Baked beans are used in salads or culinary dishes. Consumption of baked beans was found to lower cholesterol levels a good source of vegetable protein. Nutritional value includes vegetable protein, low fat and fiber.

2.2 PRODUCT RAW MATERIAL

- **Beans:** The unit's primary raw material is beans. High-quality beans can be procured. Most vendors use haricot beans for baked beans production.



- **Other:** Tomato puree, Starch, Salt, sugar, Spices, artificial flavourings, additives, and preservatives. Packing materials. Steel tins or cans are used as a packing material.



2.3 MANUFACTURING PROCESS

This process can be broken down into the following steps-

- **Raw material procurement**
- **Baked beans production process**
- **Testing**

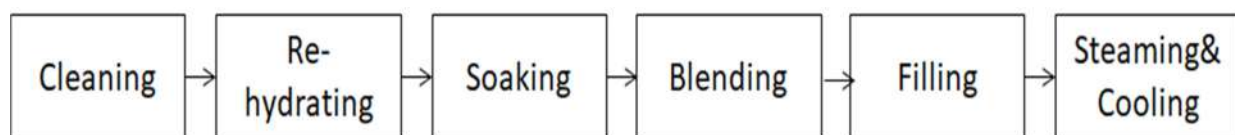
Raw Material Procurement

The raw materials are checked strictly as per established quality standards and requirements. Individual supplier assessment and supplier rating are done depending upon the rejection levels at the incoming quality control stage. Sorting of raw material will be done as per material type or specifications. The material will be stored in; a dust-free, moisture-free, cool, neat, and clean environment.

Powder Making Process

1. **Bean Conditioning:** The conditioning process is there to remove broken beans, off-colored beans, stones, and other foreign material. Uniformity in the beans helps in further processing and allows them to soak up water before being steamed. Conditioning is done using different methods that include sieves, sifters, color sorters,

- destoners, and gravity separators. This process can be optional if high quality beans are procured.
2. **Re-hydration:** The dried beans are first rehydrated with hot water. The process starts with beans loaded into a blancher goes through conveyor then rehydrated with water. They are then introduced to 85-degree chamber then soaking for 10 minutes. The steam blancher softens the dry beans then rehydration in warm water to remove excess skin. This process simultaneously kills any microorganisms on the surface of the beans.
 3. **Ingredient Mixing:** Discolored beans are removed through a laser air jet system before addition of ingredients. Ingredients added are tomato puree, starch to thicken, vinegar spices. They are then treated with any food additives, including salt, and canned under high pressure and heat.
 4. **Blending:** The mixture is blended for 15 minutes before steaming and canning.
 5. **Filling & Steaming:** It will be kept in steamer about 2 hours for baking beans. The blended mixture is then filled by fillers in cans or tan and sealed and a long bout in the super-steam pressure cookers, between 90 minutes and five hours, depending on the flavor. That last step prevents bacteria from getting into the can.
 6. **Cooling:** Later, cans are given time to cool. They're labeled and organized on a conveyor belt and sent down to the warehouse.



Testing

Quality control

3. PROJECT COMPONENTS

3.1 Land & Building

The land required for this manufacturing unit will be approx. around 3000-4000 square feet. Land Purchase and Building Civil Work Cost have not been considered as part of the cost of project. It is expected that the premises will be on rental and approximate rentals assumed of the same will be Rs.30,000 to Rs. 40,000 per month.

3.2 Plant & Machinery

This is a semi-automatic type of plant and the production capacity is set to be 120 Kg Baked Beans per day.

Machines-

- **Bean Cleaning Machine (Optional)**

This machine is used to clean raw bean seeds. Various machines or fully automatic bean cleaner can be used for bean cleaning process.



- **Fully Automatic Baked Bean Production Line**

This line consists of various machines used for baked bean production. This line has, Hydration tanks, Vacuum extractor tank, Hosting pool, Blancher, Cooling and inspection hopper, Steamer, Filler machine etc.

1. Hydration tanks- Used for rehydration of beans.
2. Vacuum extractor tank: For bringing the pulses from the hydration tanks.
3. Hosting pool: For collecting the product from the extractor and feeding it into the Blancher. Inferior tank with perforated sheeting on the floor to allow passage of water. Polypropylene band conveyor with buckets to get the product. Recirculating pump to return water to hydration tanks. Tank with adjustable overflow, stopcock, etc. equipment's comes in hosting pool.
4. Blancher: It consisting of rotary drum with removable Ø 3 mm perforated sheeting for ease of cleaning. This is fitted with a worm to force the product through the machine and deflector fins for floating products. It has several features such as, movement via 2 hp mechanical gear motor with electronic variable drive. Tube heat exchanger on the outside of the blancher is to heat the water indirectly and recycle the condensates. 3 hp pump used to recirculate the water from the tank through the heat exchanger and create a counterflow for uniform temperatures. It has incorporating spray in the center of the worm. It also has Digital temperature control with modulated pneumatic valve and filter.
5. Vibrating conveyor – vibratory tray: For collecting the product from the blancher and feeding it evenly into the cooling hopper.
6. Cooling and inspection hopper: Hopper with upper overflow and gate to take skins to one end. Centrifugal pump to generate water flow. Bar of network sprays at the end of the ascent for rinsing the product and renewing the water in the hopper to keep it from heating up.
7. Filler machine: Filler machine is for filling the product into glass jars and metal cans.
8. Sealing machine: This machine is used for sealing filled cans.
9. Liquid dosing machine: This machine is for adding tomato puree or other required ingredients.
10. Semi-automatic loader: For placing cans into baskets.
11. Steamer: It is for steaming operation of beans.



4 LICENSE & APPROVALS

Basic registration required in this project:

- Company registration
- GST registration
- MSME Udyam registration
- BIS certification
- Trademark registration
- Food and Safety Administration approval

PROJECTED BALANCE SHEET					(in Lacs)
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
<u>Liabilities</u>					
Capital					
Opening balance		3.59	5.81	8.04	11.24
Add:- Own Capital	2.28				
Add:- Retained Profit	3.81	5.72	7.24	9.69	11.46
Less:- Drawings	2.50	3.50	5.00	6.50	7.50
Closing Balance	3.59	5.81	8.04	11.24	15.20
Term Loan	14.20	10.65	7.10	3.55	-
Working Capital Limit	4.50	4.50	4.50	4.50	4.50
Sundry Creditors	1.32	1.49	1.67	1.86	2.07
Provisions & Other Liability	0.40	0.48	0.58	0.80	0.96
TOTAL :	24.01	22.93	21.89	21.95	22.73
<u>Assets</u>					
Fixed Assets (Gross)	17.75	17.75	17.75	17.75	17.75
Gross Dep.	2.66	4.93	6.85	8.48	9.87
Net Fixed Assets	15.09	12.82	10.90	9.27	7.88
Current Assets					
Sundry Debtors	2.85	3.28	3.67	4.10	4.57
Stock in Hand	3.59	4.02	4.50	4.97	5.50
Cash and Bank	1.48	1.30	1.07	1.61	1.78
Loans & Advances	1.00	1.50	1.75	2.00	3.00
TOTAL :	24.01	22.93	21.89	21.95	22.73

PROJECTED PROFITABILITY STATEMENT					
(in Lacs)					
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
Capacity Utilisation %	70%	75%	80%	85%	90%
<u>SALES</u>					
Gross Sale					
BAKED BEANS PRODUCTION UNIT	85.46	98.47	110.24	123.08	137.07
Total	85.46	98.47	110.24	123.08	137.07
<u>COST OF SALES</u>					
Raw Material Consumed	56.70	63.75	71.60	79.90	88.65
Electricity Expenses	2.02	2.48	2.65	2.82	2.98
Depreciation	2.66	2.26	1.92	1.64	1.39
Wages & labour	7.20	7.92	8.71	9.58	10.54
Repair & maintenance	2.56	2.95	3.31	2.46	2.74
Packaging	1.71	1.97	2.20	2.46	2.74
Cost of Production	72.85	81.34	90.40	98.86	109.05
Add: Opening Stock	-	1.70	1.90	2.11	2.31
Less: Closing Stock	1.70	1.90	2.11	2.31	2.54
Cost of Sales	71.15	81.14	90.19	98.66	108.81
GROSS PROFIT	14.31	17.33	20.05	24.42	28.26
GROSS PROFIT RATIO	16.74%	17.60%	18.19%	19.84%	20.62%
Salary to Staff	3.12	3.43	3.78	4.15	4.57
Interest on Term Loan	1.57	1.38	0.99	0.60	0.21
Interest on working Capital	0.50	0.50	0.50	0.50	0.50
Rent	3.60	4.14	4.76	5.48	6.30
Selling & Administrative Exp.	1.71	1.97	2.20	3.69	4.11
TOTAL	10.49	11.42	12.23	14.42	15.68
NET PROFIT	3.81	5.91	7.82	10.00	12.58
Taxation	-	0.19	0.59	0.31	1.12
PROFIT (After Tax)	3.81	5.72	7.24	9.69	11.46
NET PROFIT RATIO	4.46%	5.81%	6.56%	7.87%	8.36%

PROJECTED CASH FLOW STATEMENT					(in Lacs)
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
<u>SOURCES OF FUND</u>					
Own Margin	2.28				
Net Profit	3.81	5.91	7.82	10.00	12.58
Depreciation & Exp. W/off	2.66	2.26	1.92	1.64	1.39
Increase in Cash Credit	4.50	-	-	-	-
Increase In Term Loan	15.98	-	-	-	-
Increase in Creditors	1.32	0.16	0.18	0.19	0.20
Increase in Provisions & Oth labilities	0.40	0.08	0.10	0.22	0.16
	-				
TOTAL :	30.95	8.42	10.03	12.06	14.34
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	17.75				
Increase in Stock	3.59	0.43	0.47	0.47	0.53
Increase in Debtors	2.85	0.43	0.39	0.43	0.47
Repayment of Term Loan	1.78	3.55	3.55	3.55	3.55
Increase in Loans & Advances	1.00	0.50	0.25	0.25	1.00
Drawings	2.50	3.50	5.00	6.50	7.50
Taxation	-	0.19	0.59	0.31	1.12
TOTAL :	29.46	8.61	10.25	11.52	14.16
Opening Cash & Bank Balance	-	1.48	1.30	1.07	1.61
Add : Surplus	1.48	-0.19	-0.23	0.54	0.17
Closing Cash & Bank Balance	1.48	1.30	1.07	1.61	1.78

<u>CALCULATION OF D.S.C.R</u>					
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
CASH ACCRUALS	6.47	7.98	9.16	11.33	12.85
Interest on Term Loan	1.57	1.38	0.99	0.60	0.21
Total	8.05	9.37	10.15	11.93	13.07
<u>REPAYMENT</u>					
Instalment of Term Loan	1.78	3.55	3.55	3.55	3.55
Interest on Term Loan	1.57	1.38	0.99	0.60	0.21
Total	3.35	4.93	4.54	4.15	3.76
DEBT SERVICE COVERAGE RATIO	2.41	1.90	2.24	2.87	3.47
AVERAGE D.S.C.R.	2.53				

REPAYMENT SCHEDULE OF TERM LOAN

Interest 11.00%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	Closing Balance
1st	Opening Balance						
	1st month	-	15.98	15.98	-	-	15.98
	2nd month	15.98	-	15.98	0.15	-	15.98
	3rd month	15.98	-	15.98	0.15	-	15.98
	4th month	15.98	-	15.98	0.15		15.98
	5th month	15.98	-	15.98	0.15		15.98
	6th month	15.98	-	15.98	0.15		15.98
	7th month	15.98	-	15.98	0.15	0.30	15.68
	8th month	15.68	-	15.68	0.14	0.30	15.38
	9th month	15.38	-	15.38	0.14	0.30	15.09
	10th month	15.09	-	15.09	0.14	0.30	14.79
	11th month	14.79	-	14.79	0.14	0.30	14.50
	12th month	14.50	-	14.50	0.13	0.30	14.20
					1.57	1.78	
2nd	Opening Balance						
	1st month	14.20	-	14.20	0.13	0.30	13.90
	2nd month	13.90	-	13.90	0.13	0.30	13.61
	3rd month	13.61	-	13.61	0.12	0.30	13.31
	4th month	13.31	-	13.31	0.12	0.30	13.02
	5th month	13.02	-	13.02	0.12	0.30	12.72
	6th month	12.72	-	12.72	0.12	0.30	12.43
	7th month	12.43	-	12.43	0.11	0.30	12.13
	8th month	12.13	-	12.13	0.11	0.30	11.83
	9th month	11.83	-	11.83	0.11	0.30	11.54
	10th month	11.54	-	11.54	0.11	0.30	11.24
	11th month	11.24	-	11.24	0.10	0.30	10.95
	12th month	10.95	-	10.95	0.10	0.30	10.65
					1.38	3.55	
3rd	Opening Balance						
	1st month	10.65	-	10.65	0.10	0.30	10.35
	2nd month	10.35	-	10.35	0.09	0.30	10.06
	3rd month	10.06	-	10.06	0.09	0.30	9.76
	4th month	9.76	-	9.76	0.09	0.30	9.47
	5th month	9.47	-	9.47	0.09	0.30	9.17
	6th month	9.17	-	9.17	0.08	0.30	8.88
	7th month	8.88	-	8.88	0.08	0.30	8.58
	8th month	8.58	-	8.58	0.08	0.30	8.28
	9th month	8.28	-	8.28	0.08	0.30	7.99
	10th month	7.99	-	7.99	0.07	0.30	7.69
	11th month	7.69	-	7.69	0.07	0.30	7.40
	12th month	7.40	-	7.40	0.07	0.30	7.10
					0.99	3.55	

4th	Opening Balance						
	1st month	7.10	-	7.10	0.07	0.30	6.80
	2nd month	6.80	-	6.80	0.06	0.30	6.51
	3rd month	6.51	-	6.51	0.06	0.30	6.21
	4th month	6.21	-	6.21	0.06	0.30	5.92
	5th month	5.92	-	5.92	0.05	0.30	5.62
	6th month	5.62	-	5.62	0.05	0.30	5.33
	7th month	5.33	-	5.33	0.05	0.30	5.03
	8th month	5.03	-	5.03	0.05	0.30	4.73
	9th month	4.73	-	4.73	0.04	0.30	4.44
	10th month	4.44	-	4.44	0.04	0.30	4.14
	11th month	4.14	-	4.14	0.04	0.30	3.85
	12th month	3.85	-	3.85	0.04	0.30	3.55
					0.60	3.55	
5th	Opening Balance						
	1st month	3.55	-	3.55	0.03	0.30	3.25
	2nd month	3.25	-	3.25	0.03	0.30	2.96
	3rd month	2.96	-	2.96	0.03	0.30	2.66
	4th month	2.66	-	2.66	0.02	0.30	2.37
	5th month	2.37	-	2.37	0.02	0.30	2.07
	6th month	2.07	-	2.07	0.02	0.30	1.78
	7th month	1.78	-	1.78	0.02	0.30	1.48
	8th month	1.48	-	1.48	0.01	0.30	1.18
	9th month	1.18	-	1.18	0.01	0.30	0.89
	10th month	0.89	-	0.89	0.01	0.30	0.59
	11th month	0.59	-	0.59	0.01	0.30	0.30
	12th month	0.30	-	0.30	0.00	0.30	-
					0.21	3.55	
DOOR TO DOOR		60	MONTHS				
MORATORIUM PERIOD		6	MONTHS				
REPAYMENT PERIOD		54	MONTHS				