

SQUASHES AND SYRUPS

PRODUCT CODE	:	202302008						
QUALITY AND STANDARDS	:	The products should conform to the standards laid down in Fruit Product Order, 1955.						
PRODUCTION CAPACITY (PER ANNUM)	:	<table> <thead> <tr> <th>Quantity</th> <th>Value (Rs.)</th> </tr> </thead> <tbody> <tr> <td>(I) 9200 Cases of Squashes</td> <td>27,60,000</td> </tr> <tr> <td>(II) 4800 Cases of Syrups</td> <td>15,55,200</td> </tr> </tbody> </table>	Quantity	Value (Rs.)	(I) 9200 Cases of Squashes	27,60,000	(II) 4800 Cases of Syrups	15,55,200
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MONTH AND YEAR OF PREPARATION	:	May, 2003						
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INTRODUCTION

In a hot country like India, the use of refreshing and thirst quenching beverages, mostly falling under the category of aerated waters, has become stagnant. For a long time, the use of flavoured thick sugar syrups has been very common. During the last few decades, the products like fruit juices, squashes, cordials, crushes, syrup and ready-to-serve beverages have been introduced in the country on commercial scale to a large extent. The rapid increase in the production of these items in different parts of our country is a proof of their rising popularity. The use of fruits by industry for the preparation of such products will not only reduce wastage of fruits during handling but also add nutrition and palatability to the drink.

MARKET POTENTIAL

With the changing pace of human activity and changing life style, the demand for easy-to-prepare drink is also increasing. Besides consumption in the households, it is served in hotels, restaurants, clubs, airlines, railways etc. There has been an appreciable increase in the export of processed foods which includes squashes and syrups. With the fast growth of the urban areas and the living standards of the Indian people growing higher, there is a good potential to develop this industry in the small scale sector.

BASIS AND PRESUMPTIONS

1. The unit is envisaged to work for one shift of eight hours per day.
2. Full capacity utilisation is envisaged to be achieved within three years.

3. The labour wages have been kept at the prevailing rates.
4. Interest rate for fixed capital and working capital has been taken at 15% on an average.
5. Costs of machinery and equipments are based on the prevalent prices in the market at time of preparation of the project profile.

IMPLEMENTATION SCHEDULE

<i>Activity</i>	<i>Duration</i>
a. Preparation of project details	1 month
b. Registration with DIC and approaching financial institutions for loan etc.	15 days
c. Processing of application in the financial institution, appraisal of the project and sanctioning of the loan etc.	2 months
d. Construction of building and installation of machines etc.	3 months
e. Trial production	15 days

TECHNICAL ASPECTS

Process of Manufacture

Squashes

The juices of citrus and other fruits which are to be used for the manufacture of squashes are extracted and preserved during their respective seasons. As per the pre-determined recipe, sugar, citric acid and water are weighed, mixed together, boiled and filtered through a cloth. The syrup thus

obtained is cooled and mixed with the required quantity of fruit juice. To improve the appearance and taste of the product, adequate quantities of edible food colour dissolved previously in a small quantity of water and essence, is added to it. After mixing all the ingredients, chemical preservatives like potassium meta bisulphite (KMS) dissolved previously in a small quantity of water is added. Immediately after this, the squash is filled in bottles, capped, labelled and packed in cartons.

Syrups

As per the pre-determined formulation, sugar, citric acid and water are weighed, mixed together, boiled and filtered through a cloth. Cleaned syrup thus obtained is cooled adjusted to 70 brix. It is then flavoured and coloured with artificial essence, colours of desired fruit or herb as permissible under F.P.O. After mixing all the ingredients, chemical preservative like sodium benzoate is added at the rate of 700 ppm by dissolving it previously in small quantity of water. The syrup thus obtained is filled into washed and sterilised bottles. Bottles are capped, labelled and packed in cartons.

Quality Control and Standards

The product should conform to the specifications laid down in F.P.O. 1955.

Production Capacity (per annum)

Product	Quantity	Rate (In Rs.)	Amount (In Rs.)
Squash	9200 cases	300	27,60,000
Syrup	4800 cases	324	15,55,200

Motive Power

5 H.P.

FINANCIAL ASPECTS

A. Fixed Capital

(i) Land and Building

Factory building has been presumed to be Rs. 4000 per month taken on rent 200 sq. mtrs @ Rs. 20 per sq. mtr.

(ii) Machinery and Equipment

Sl. No.	Description	Indig/Imported	Qty.	Amount (In Rs.)
1.	Rosing Machine (1/2 HP Motor)	Ind.	2	14,000
2.	Screw type juice extractor (Aluminium 1/2 HP Motor)	Ind.	2	12,000
3.	Bottle washing machine (two tanks 8 rinsers) (1/2 HP Motor)	Ind.	1	10,000
4.	Pulping Machine 1/2 tonne caps. (1 HP 3 phase motor)	Ind.	1	20,000
5.	Fruit washing machine with water spraying arrangement	Ind.	1	25,000
6.	Stainless Steel mixing tank with stirrer cap. 200 Litre	Ind.	2	23,000
7.	Vacuum bottle filling machine	Ind.	1	16,000
8.	P.P. Cap Sealer	Ind.	1	16,000
9.	Stainless steel cutting and peeling knives	Ind.	L.S.	5,000
10.	Fruit halving machine	Ind.	1	8,000
11.	Baby boiler	Ind.	1	10,000
12.	Platform type weighing scale and balance of 100 kg., 5 kg. and 2 kg.	Ind.	L.S.	10,000

Sl. No.	Description	Indig/Imported	Qty.	Amount (In Rs.)
13.	Steam jacketted kettle 40 Gallons	Ind.	2	70,000
			Total	2,39,000
	Quality Control Equipment	L.S.		20,000
	Electrification and Installation charges @ 10%	-		24,000
	Office Furniture and Fixtures	L.S.		20,000
			Total	3,03,000
	(ii) Pre-operative Expenses			25,000
	Total Fixed Cost (ii + iii)			3,28,000

B. Working Capital (per month)

(i) Personnel

(a) Administrative and Supervisory Staff

Sl. No.	Designation	No.	Rate (In Rs.)	Total (In Rs.)
1.	Manager (Food Technologist)	1	8,000	8,000
2.	Clerk-cum-Typist	1	4,000	4,000
3.	Accountant-cum-Cashier	1	5,000	5,000
4.	Sales Supervisor	1	5,000	5,000
	(b) Technical Staff			
5.	Mechanic-cum-Boilerman	1	3,000	3,000
6.	Skilled Workers	2	2,000	4,000
7.	Unskilled Workers	8	1,600	12,800
			Total	41,800
			Perquisites @ 15%	6,270
			Total	48,070

(ii) Raw Material

Sl. No.	Particulars	Ind/Imported	Qty.	Rate (In Rs.)	Total (In Rs.)
1.	Assorted fruits	Ind.	4000 kg.	6	24,000

Sl. No.	Particulars	Ind/ Imported	Qty.	Rate (In Rs.)	Total (In Rs.)
2.	Sugar	Ind.	5000 kg.	16	80,000
3.	Bottles 700 ml. including 2% wastage	Ind.	1189 doz.	50	59,450
4.	PP Caps	Ind.	1189 doz.	12	14,268
5.	Labels	Ind.	1189 doz.	12	14,268
6.	Chemicals viz. (colour, essence, citric acid and preservative)	Ind.	LS	-	15,000
7.	Card board boxes		1189 doz.	14	16,646
			Total		2,23,632

(iii) Utilities	Amount (In Rs.)
a) Power	3,000
b) Fuel	5,000
c) Water	500
Total	8,500

(iv) Other Contingent Expenses	Amount (In Rs.)
a) Rent	4,000
b) Postage and Stationery	500
c) Consumable Stores	2,000
d) Repairs and Maintenance	500
e) Transport Charges	10,000
f) Insurance and Taxes	5,000
g) Miscellaneous	3,000
Total	25,000

(v) Total Recurring Expenditure (per month)	Amount (In Rs.)
1. Personnel	48,070
2. Raw Materials	2,23,632
3. Utilities	8,500
4. Other Contingent Expenses	25,000
Total	3,05,202

(vi) Total Working Capital (for 2 months)
 $3,05,202 \times 2 = \text{Rs. } 6,10,404$

C. Total Capital Investment

	Amount (In Rs.)
i) Fixed Capital	3,28,000
ii) Total Working Capital (For 2 months)	6,10,404
Total	9,38,404

FINANCIAL ANALYSIS

1. Cost of Production (per year)	Amount (In Rs.)
a) Total recurring cost	36,62,424
b) Depreciation on machinery and equipment @ 20%	56,600
c) Depreciation on furniture @ 20%	4,000
d) Interest on total investment @ 15%	1,40,760
Total	38,63,784

2. Turn-over (per year)

Item	Qty.	Rate (In Rs.)	Amount (In Rs.)
Fruit Squashes	9200 cases	300	27,60,000
Synthetic Syrup	4800 cases	324	15,55,200
Total			43,15,200

3. Net Profit Rs. 4,51,416

4. Net Profit Ratio

$$= \frac{\text{Net Profit per year} \times 100}{\text{Turnover per year}}$$

$$= \frac{451416}{4315200}$$

$$= 10.46\%$$

5. Rate of Return

$$= \frac{\text{Net Profit per year} \times 100}{\text{Total Investment}}$$

$$= \frac{451416 \times 100}{938404}$$

$$= 48\%$$

6. Break-even Point

1. Fixed Cost

Particulars	Amount (In Rs.)
a. Depreciation of machinery and equipments @ 20%	56,600

Particulars	Amount (In Rs.)
b) Interest on total investment	140,760
c) 40% of salary and wages	2,30,736
d) 40% of other expenditure	1,00,800
e) Rent	48,000
Total	5,76,896

B.E.P.

$$= \frac{FC \times 100}{FC + AP}$$

$$= \frac{576896 \times 100}{576896 + 451416}$$

$$= 56\%$$

Addresses of Machinery and Equipment Suppliers

1. M/s. Raylons Metal Works
Kondivita Lane,
Andheri Kurla Road, Mumbai.
2. M/s. Gardners Corporation
158, Golf Links,
New Delhi-110003.
3. M/s. Techno-equipments
31, Parekh Street, Mumbai.
4. M/s. B. Sen Barry and Co.
65/11, New Rohtak Road,
New Delhi-110 005.