GRAPE RAISIN

QUALITY AND STANDARDS : FPO specifications

PRODUCTION CAPACITY : 15 tpa

1.0 PRODUCT AND ITS APPLICATIONS

The raisin are dry grapes and used as confection in sweetmeats and many culinary preparations.

The grapes are dried in the sun or in temperature controlled dehydrators with or without any preliminary treatment.

2.0 MARKET POTENTIAL

The grape production has registered a phenomenal growth in India during past few years. The main grape producing regions are Maharashtra, Andhra Pradesh, Karnataka, Tamilnadu, Gujarat, Punjab, M.P. There was a glut in grape production during the year 2003. Drying of grapes in the form of raisins can provide remunerative returns to the growers. This commodity has a vast export potential in addition to the domestic market.

3.0 BASIS AND PRESUMPTION

a) The unit proposes to work atleast 100 days per annum
b) The wages for skilled workers is taken as per prevailing rates in this type of industry.
c) Interest rate for total capital investment is calculated @ 12% per annum.
d) The entrepreneur is expected to raise 20-25% of the capital as margin money.
e) The unit proposes to construct own building while the cost of construction is based on local enquiry.
f) Costs of machinery and equipment are based on average prices from machinery manufacturers.

4.0 IMPLEMENTATION SCHEDULE

Project implementation will take a period of 8 months. Break-up of the activities and relative time for each activity is shown below:

- Scheme preparation and approval : 01 month
- SSI provisional registration : 1-2 months
- Sanction of financial supports etc. : 2-5 months
- Installation of machinery and power connection : 6-8 months
- Trial run and production : 01 month

5.0 TECHNICAL ASPECTS

5.1 Process of Manufacture

Selection of grapes : The grapes should preferably be seedless with total soluble solids above 20%. The grapes should be fully ripe and free from diseased berries. Thick skinned varieties as well as larger sized berry varieties can also be used for preparation of raisins.

Checking of grapes : The fruits are treated with alkali to check the skin by which the skin gets punctured thereby hastening the rate of drying. The grapes after treating in alkali are washed thoroughly in water.

Bleach Treatment :- The grapes are often bleached with sulphur fumes to produce 'Golden-bleached'. The residual sulphur dioxide also helps in prevention of spoilage during the dehydration process as well as enhances the storage life of the finished product.

Drying of Bunches:- Drying is done either in the sun or in a mechanical dehydrator or a combination of both or solar dehydrators.

Drying ratio : A drying ratio of 5:1 can be expected for grapes of 20% total soluble solids, which could be brought down to 4.5:1 with 22-23% total soluble solids and 4:1 with 24-25% total soluble solids of green grapes.

5.2 Quality Control and Standards : As per FPO specifications.

6.0 POLLUTION CONTROL

There is no major pollution problem associated with this industry except for disposal of waste which should be managed appropriately. The entrepreneurs are advised to take "No Objection Certificate" from the State Pollution Control Board.

7.0 ENERGY CONSERVATION

No coal or LDO is used in this unit.

8.0 PRODUCTION CAPACITY

Quantity	:	15,000 kg raisin
Value	:	Rs. 17.25 lakh
Installed capacity	:	750 kg grapes /day
Working days	:	100/annum
Manpower	:	10

Utilities

Motive Power	:	15 kWH
Water	:	5 kL/day

9.0 FINANCIAL ASPECTS

9.1 Fixed Capital

9.1.1 Land & Building

		Amount (Rs. lakh)
Land 800 sq.m.	:	0.80
Building 100 sq. m. @ 2500	:	2.50
Drying yard 300 sq.m.	:	0.30

Total cost of Land and Building	:	3.60

9.1.2 Machinery and Equipment

Description		Amount (Rs. lakh)	
Dehydrator	:	2.00	2.00
Lye peeling unit		0.01	0.01
Sulphuring chamber		0.01	2.02
Erection & electrification @10%			
cost of machinery & equipment	:		0.01
			0.20
			0.46
Office furniture & fixtures	:		
Total	:		------
			4.70

9.1.3 Pre-operative Expenses

Consultancy fee, project report, deposits with electricity department etc.	:	0.50

9.1.4 Total Fixed Capital : **8.80**

9.1.1+9.1.2+9.1.3)

9.2 Recurring expenses per annum

9.2.1 Personnel

Designation	No.	Salary Per month	Amount (Rs.lakh)
Plant Manager	1	6000	0.72
Administrative & supervisory Staff	2	4000	0.96
Skilled workers	1	2500	0.30
Unskilled workers(4 months)	6	1500	0.36
			2.34
Perquisites @10%			0.24

Total :	10		2.58

9.2.2 Raw Material including packaging materials

Particulars	Qty.(MT)	Rate	Amount (Rs. lakh)
Grapes	75	10000	7.50
Sulphur, alkali	LS	LS	0.10
Total:			7.60

9.2.3 Utilities	Amount (Rs. lakh)
Power	0.27
Water	0.01
Total:	0.28

9.2.4 Other Contingent Expenses	Amount (Rs. lakh)
Repairs and maintenance@10%	0.50
Consumables & spares	0.45
Insurance	0.05
Total:	1.00

9.2.5 Total Recurring Expenditure	Amount (Rs. lakh)
(9.2.1+9.2.2+9.2.3+9.2.4)	11.46

9.3 Working Capital **2.86**

Recurring Expenditure for 3 months

9.4 Total Capital Investment	Amount (Rs. lakh)
Fixed capital (Refer 9.1.4)	8.80
Working capital (Refer 9.3)	2.86
Total:	11.67

10.0 FINANCIAL ANALYSIS

10.1 Cost of Production (per annum)	Amount (Rs. lakh)
Recurring expenses (Refer 9.2.5)	11.46
Depreciation on building @5%	00.28
Depreciation on machinery @10%	00.22
Depreciation on furniture @20%	00.10
Interest on Capital Investment @12%	01.16
Total:	13.22

10.2 Sale Proceeds (Turnover) per year

Item	Qty. (MT)	Rate per MT	Amount (Rs.lakh)
Grape raisins Packed in 1kg PET jars	15	115/kg	17.25

10.3 Net Profit per year

= Sales - Cost of production

= 17.25- 13.22

= Rs. 4.03 lakh

10.4 Net Profit Ratio

$$= \frac{\text{Net profit X 100}}{\text{Sales}}$$

$$= \frac{4.03 \text{ X } 100}{17.25}$$

= 23.36%

10.5 Rate of Return on Investment

$$= \frac{\text{Net profit X 100}}{\text{Capital Investment}}$$

$$= \frac{4.03 \text{ X } 100}{11.67}$$

= 34.53%

10.6 Annual Fixed Cost	**Amount (Rs. Lakh)**
All depreciation	0.60
Interest	1.16
40% of salary, wages, utility, contingency	1.55
Insurance	0.05
Total:	3.36

10.7 Break even Point

$$= \frac{\text{Annual Fixed Cost X 100}}{\text{Annual Fixed Cost + Profit}}$$

$$= \frac{3.36 \text{ X } 100}{3.36 + 4.03}$$

$$= \frac{336}{7.39}$$

= 45.5%

11.0 ADDRESSES OF MACHINERY AND EQUIPMENTSUPPLIERS

Batliboi Engineers (Bangalore) Pvt. Ltd.
99/2&3, N.R.Road, Bangalore – 560 002

B.Sen Barry & Co.
65/11, New Rohtak Road
New Delhi – 110 005

Gardners Corporation
158 Golf Links, New Delhi – 110 003

Narene Tulaman Manufacturers Pvt. Ltd.
Balanagar, Hyderabad – 500 037

Raylon Metal Works
Kondivitta Lane
J.B.Nagar, Andheri, Mumbai – 400 059

Bajaj Maschinen Pvt. Ltd.
7/20-7/27 Jai Laxmi Industrial
Estate, Site IV
Sahibabad Industrial Area - 201010
Dist.Ghaziabad, UP

SSP (Pvt) Ltd.
13th Milestone, Mathura Road
Faridabad – 121003, Haryana

Narangs Corporation
P-25/90 Connaught Place
New Delhi – 110001

Nirmal Services
2254/23 Rajguru Road, Chuna Mandi
Paharganj
New Delhi – 110055

Ganson Ltd.
645 Anna Salai
Chennai – 600006

Grovers Pvt. Ltd.
223, Kaliandas Udyog Bhavan
Prabhadevi, Mumbai – 400 025

Macneill and Magor Ltd.
4, Mangoe Lane
Kolkata – 700 001