

## FROZEN VEGETABLES & COLD STORAGE

### 1. INTRODUCTION

India is a large country producing variety of fruits and vegetables. The range includes fruits like mangoes, banana, papaya, orange, mosambi, grapes, pineapple, watermelon etc. and vegetables like potatoes, onions and number of green vegetables including lady finger brinjal, cabbage, peas, chillies and so on. Till recently, the fruit and vegetable industry is mostly concentrated in rural areas catering to the requirement fo immediate urban areas situated in a radius of around 50 to 60 Ksm. A revolution in this industry started with theprocessing of fruits and marketing of fruit pulps in the indegenous as well and international markets. Fruits & vegetables, being perishable in nature require certain techniques of preservation for retaining the freshness in tact and making them an acceptable item even after few days of ripening. It also facilitates the farmer to realise a better price instead of selling theproduct at a throw away price due to the perishability. This necessity as evolved a new concept of storing these items at below or just above sub-zero temperatures known as cold storage.

### 2. MARKET

Normally the capacity of a cold storage unit is expressed in terms of its storage volume. This capacity is related to the product to be stored and the plant capacity is measured in terms of its tonnage. The normal products considered for this purpose are potatoes and tamarind. Depending on the bulk density of the roduct this capacity varies for storing other items. Besides huge potential exists for storing fresh vegetables even for shorter periods. Thus, the present gap in demand and existing facility offers scope for encouraging units.

### 3. MANUFACTURING PROCESS

The cold storage polant process is simple and well established. Ammonia refrigeration is cheap and is of high latent heat of evaporation. Rooms of different temperature must be separated by insulation and should be protected from moisture. It will run for 365 days on 24 hours a day basis. Normally, the temperature to be maintained at the cold storage will by 4.50 celcius.

The storing mateiral, viz. tamarind, chillies and potatoes etc. are to be packed in jute bags/barrels. The temprature and relative humidity is to be maintained depending upon the storing material.

### 4. PRODUCTION CAPACITY PER ANNUM

Capacity	1200 Tones
Selling Price	Rs. 1100 Kgs

## 5. PROJECT COST/CAPITAL INVESTMENT

S.No	Description	Amount Rs.
1	Land & Building	0
2	Preliminary & Preoperative Expns	10000
3	Fixed Capital	1575000
4	Working Capital for 1 month(s)	296000
	Total Project Cost	1881000

## 6. MEANS OF FINANCE

S.No	Description	%age	Amount Rs.
1	Promoter Contribution	15%	282150
2	Subsidy	20%	376200
3	Term Loan	65%	1222650
	Total		1881000

## 7. FINANCIAL ASPECTS

## A. FIXED CAPITAL

i. Land and Buildings - Rent

2000 per month

ii. Machinery and Equipment

S.No	Description	Qty.	Rate	Amount Rs.
1	Double Cylinder -Ammonia compressors	1	700000	700000
2	Thermocole Insulation for walls,floor etc	1	550000	550000
3	Diesel Generator Set - 62.5 KVA	1	200000	200000
4	Electrification	1	50000	50000
5	Erection, Insulation etc.	1	75000	75000
	Total			1575000

## B. WORKING CAPITAL

i. Salaries &amp; Wages (per month)

S.No	Description	Nos.	Sal/mon.	Amount Rs.
1	Supervisor/Entrepreneur	1	3500	3500
2	Skilled Workers	4	2500	10000
3	Unskilled Workers	1	2000	2000
4		0		0
5		0	0	0
	Total			15500

ii. Raw Material (per month)

S.No	Description	Unit	Qty.	Rate	Amount Rs.
1	Raw Material - clientele on		LS		0
	hire basis and as such no raw				
	materials are required				
			0	0	0
			0	0	0
			0	0	0
	Total				0

iii. Utilities (per month)

S.No	Description	Unit	Amount Rs.
1	Power	LS	5000
2	Water	LS	200
	Total		5200

## iv. Other Expenses (per month)

S.No	Description	Amount Rs.
1	Postage & Stationery Expenses	15000
2	Transportation Expenses	1000
3	Advertisement Expenses	4000
4	Consumable Stores	2000
5	Miscellaneous Expenses	1000
	Total	23000

## v. Total Working Capital (per month)

S.No	Description	Amount Rs.
1	Rent	2000
2	Salaries and Wages	15500
3	Raw Material	0
4	Utilities	5200
5	Other Expenses	23000
	Total	45700

## 8. COST OF PRODUCTION (PER ANNUM)

S.No	Description	Amount Rs.
1	Total Working Capital	548400
2	Depreciation @ 15%	236250
3	Interest @ 12%	146718
	Total	931368

## 9. TURNOVER (PER YEAR)

S.No	Description	Unit	Qty.	Rate Rs.	Amount Rs.
1	Hiring of Frozen Vegetables	Tones	1200	1100	1320000
	Total				1320000

## 10. FIXED COST (PER YEAR)

S.No	Description	Amount Rs.
1	Depreciation	236250
2	Interest	146718
3	Rent	24000
4	Salaries & Wages @ 40%	74400
5	Other Expenses incl. Utilities @ 40%	135360
	Total	616728

## 11. PROFIT ANALYSIS &amp; RATIOS

1	Net Profit	Rs.	388632
2	Percentage of Profit on Sales		29%
3	Return on Investment		21%
4	Break Even Point		61%