1 READY TO EAT VEGETABLES

1.1 Introduction

In most of the big cities, lifestyles are changing very rapidly. With working couples, life has become very fast and disposable income gas increased. This has resulted in many ready to eat items becoming popular during last few years. Ready to eat vegetables is one such item, which is gaining popularity in urban areas. With many Indians settling abroad, students go out for further studies and foreigners developing a liking for the Indian curried vegetables and other food items. There are fairly good chances of exports as well. The promoters must observe strict hygiene norms irrespective of the targeted market.

1.2 Objective

The primary objective of the model report is to facilitate the entrepreneurs in understanding the importance of setting up unit of Ready to Eat vegetables, technology and financial parameters of various components for preparation and submission of project proposal to bank for sanction of long term loan. This model report will serve as guidance to the entrepreneurs on starting up such a new project and basic technical knowledge for setting up such a facility.

1.3 Raw Material Availability

The raw material and there area and production in the state is given in the table below:

Name of crops	Area	Production	Yield
Potato	47602	7.140	15.00
Onion	35704	5.713	16.00
Tomato	18254	2.738	15.00
Brinjal	13208	1.981	15.00
Cabbage	3349	0.670	20.00
Cauliflower	7665	1.226	16.00
Pea	17278	1.901	11.00

1.4 Market Opportunities

With change in lifestyle (nuclear families, working couples, more disposable income and less time to cook), more and more people, are opting for ready-to-eat food in a big way and , is estimated to be around Rs 50 crore and growing at 30 per cent a year.

The sheer variety that's available on supermarket shelves and local kirana stores is mindboggling. MTR, ITC, Tasty Bite, Currie Classic and Kohinoor offer customers several ready-to-eat options in regional category to choose from: so the choice is from kharabath, palak paneer, bharwan baigan, Kashmiri rajma, avial and even the evergreen dal makhni.

Costing as little as Rs 25 and going up to to Rs 150 (dal Bukhara), the ready-to-eat market has good potential to tap upon.

Socio-economic changes like an increase in the number of professional women, greater exposure and other overall societal changes are some of the factors have reduced the time available for cooking. Hence women today seek alternatives, which are provided by the packaged meals segment. The packing of these products comprises layers of polyester and aluminium foil held together by special glue. In a country like India, where the population prefers fresh, cooked food, introduction of ready-to-eat meals was not an easy task. But with increase in awareness that ready-to-eat foods are natural and free from preservatives it is expected that the demand for ready to eat foods will increase in due course of time.

With many Indian traveling within and outside the country, cans of such assorted vegetables are convenient as well as economical. Yet another growing market segment is the non - resident Indians and many foreigners with whom Indian cuisine has become very popular. But thrust of this note is growing domestic market, as export market would need large production capacity. Exports can be thought of after settling down in the domestic market. But this product is still confined to big Indian cities and location has to be selected accordingly. Marketing will be very critical in view of presence of couple of competitors. Hence proper network of retailers, adequate publicity and appropriate placement are important.

1.5 Project description

1.5.1 Applications

There is a possibility of many curried food items like chhole, rajma, mutter, paneer, palak panner, dum allo, malai kofta, navrattan korma, kashmiri dum aloo and so on and there could be some new varieties as well. These vegetables can be eaten with rice and chapattis.

1.5.2 Availability of know how and compliances

CFTRI, Mysore has successfully developed the technical know-how. Compliance under the PFA Act is mandatory.

1.5.3 Capacity of the Project

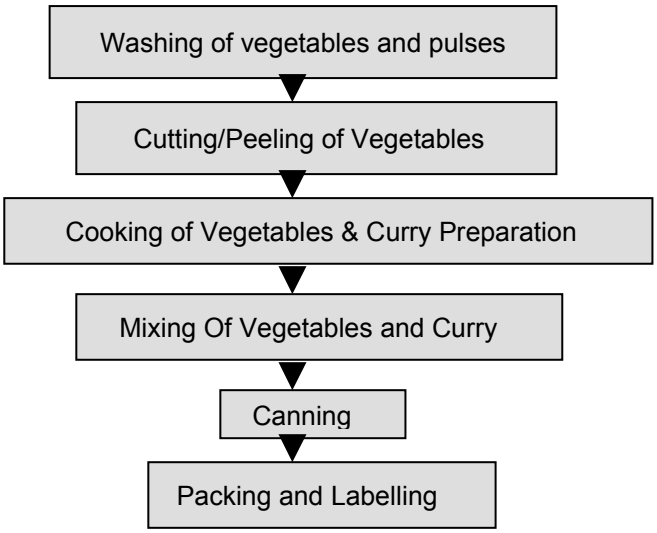
The proposed capacity of the unit is 1152 tonnes per year, but it can be increased in the coming years depending upon the success of the project.

1.5.4 Critical success factors

- As market share is dominated by few big companies it is proposed to attract investment from private sector for creating market awareness and brand building of the produce.
- Formulation of curried vegetables and dals play key role in success as the taste of the product has prime importance
- The products are mainly for export, strict hygienic conditions at each stage of plant operation is essential
- One HACCP professional to be employed at the beginning of the project itself

1.5.5 Manufacturing process

It is simple and standardized. Vegetables and pulses are thoroughly washed in water and then they are cut in the required size or vegetables like potatoes and carrots are peeled and then cut. Then they are cooked in the steamed jacketed kettle. Simultaneously curry is prepared with ingredients like **chopped tomatoes, onions, garlic, butter, chill, spices** etc. and both are mixed homogenously. On cooling they are packed in the sterilized cans and cans are then exhausted sealed and labeled. The yield is 120% due to addition of many other ingredients and water. The process flow chart is as follows –



1.6 Project component and cost

Major components of the projects and their costs are described in the table hereunder:

1.7 Land and Building

PARTICULARS	Unit	Qty	Cost/unit	Total
LAND & BUILDING				**48.75**
Land	SqM	1,000	625.00	6.25
Land Development				
Land Area		1,000	1,500.00	15.00
Building				
Production Block				
Building operations and other operations	SqM	500	5,000.00	25.00
Contingencies		10%		2.50
PLANT & MACHINERY				**575.00**
PLANT & MACHINERY	LS	1	50,000,000	500.00
Contingencies		15%		75.00
MISCELLANEOUS FIXED ASSETS				**23.00**
Total Miscellaneous Asset	LS	1	2,000,000	20.00
Contingencies		15%		3.00
PRE-OPERATIVE EXPENSES				**21.50**
Establishment		1	1,410,000	14.10
Professional Charges		1	500,000	5.00
Security Deposits		1	240,000	2.40
TOTAL				**668.25**

1.8 Plant and Machinery

The total cost of the plant and machinery is Rs. 575 Lakhs. The main plant and machinery required for this project will be vegetable washer, abrasive peeler, rotary slicer, chopper, preparation table, aluminum trays, plastic crates, steam jacketed pans, straight line exhauster, can reformer, can seaming machine, two- crate vertical retorts, cooling tank etc.

The other equipments required are (steam boiler (1.5 MT/ha), Steam pipelines and fittings, electrical installations and fittings, laboratory equipments, workshop equipments, material hadling equipments, fire fighting equipments, weighing scales etc.

1.9 Building

The main production block will cost around Rs. 27.50 lakhs.

1.10 Miscellaneous Assets

A provision of Rs. 23 lakhs would take care of all the requirements.

1.11 Preliminary & Pre-operative Expenses

A provision of Rs. 21.50 lakhs would take care of pre-production expenses like establishment, professional charges, security deposits etc.

1.12 Working capital assessment

ITEMS	Year 1	Year 3	Year 5
RAW MATERIAL & PACKAGEING COST	9.51	17.00	18.89
SUNDRY DEBTORS	48.94	87.48	97.20
TOTAL	**58.45**	**104.48**	**116.09**
MARGIN	14.61	26.12	29.02
MPBF	43.83	78.36	87.07
INTEREST ON WC	4.82	8.62	9.58

1.13 Means of finance

EQUITY CAPITAL			42.68%	**291.43**
MOFPI SUBSIDY	25%	50.00	7.32%	**50.00**
TERM LOAN				
FINANANCIAL INSTITUTIONS		10.00%	50.00%	**341.43**
-Payable half yearly Installments	14	24.40		
TOTAL			100%	**682.86**

1.14 Cash flow statement

PARTICULARS	Year 1	Year 3	Year 5	Year 7
SOURCES OF FUNDS				
EQUITY CAPITAL	-	-	-	-
SUBSIDY				
NET PROFIT	31.97	133.45	155.28	152.82
(INTEREST ADDED BACK)				
DEPRECIATION	62.35	62.35	62.35	62.35
PRELIMINARY EXP.W/O	3.07	3.07	3.07	3.07
INCREASE IN TERM LOAN	-	-	-	-
INCREASE IN BANK BORROWINGS-WC	43.83	17.41	-	-
TOTAL	**141.22**	**216.28**	**220.70**	**218.23**

1.15 Projected balance sheet

PARTICULARS	Year 1	Year 3	Year 5	Year 7
LIABILITIES				
EQUITY CAPITAL	291.43	291.43	291.43	291.43
RESERVES & SURPLUS	43.00	187.95	444.18	715.12
TERM LOAN	317.03	219.43	121.83	24.23
BANK BORROWINGS-WC	**43.83**	**78.36**	**87.07**	87.07
TOTAL	**695.30**	**777.17**	**944.51**	**1,117.85**

1.16 Projected profit and loss account

PARTICULARS	Year 1	Year 3	Year 5	Year 7
NET REVENUE REALISATION	261.00	466.56	518.40	518.40
TOTAL EXPENSES	**163.62**	**267.69**	**297.70**	**300.17**
GROSS PROFIT	**97.38**	**198.87**	**220.70**	**218.23**
DEPRECIATION	62.35	62.35	62.35	62.35
INTEREST	38.97	34.22	25.42	15.66
PRELIMINARY EXP.W/O	3.07	3.07	3.07	3.07
PROFIT BEFORE TAX	(7.00)	99.23	129.86	137.16
TAXES	-	-	-	-
PROFIT AFTER TAX	(7.00)	99.23	129.86	137.16
DIVIDEND	-	-	-	-
DIVIDEND TAX	-	-	-	-
RETAINED PROFIT	(7.00)	99.23	129.86	137.16

1.17 Key indicators

NET PRESENT VALUE at current Inflation (Rs. in lakhs)	**815.73**
INTERNAL RATE OF RETURN %	**22.54**
AVERAGE DSCR	**2.53**
BREAK EVEN POINT %	**58.13**
PAY BACK PERIOD (YEARS)	**4.58**

1.18 Manpower Requirement

PARTICULARS		**NO.**
SUPERVISORY STAFF		
	MANAGER	1
	SUPERVISORS	2
	SALES MANAGER	2
WORKERS		
	SKILLED WORKERS	6
	SEMI SKILLED LABOURS	9
	HELPERS	10

1.19 Assumptions

Project & Financing			
Contingencies on Building			10%
Contingencies on Equipment			15%
Term Loan			50%
Rate of Interest on Term Loan			10%
Subsidy Considered	Subject to ceiling		25%
Expected time of Installation		Months	10
Moratorium		Months	6
CAPACITY			
Capacity Per Annum	TPA		1152
Number of Operational Days	DAYS		240
Working Hours Per day	Hrs		20
Yield			95%
CAPACITY UTILIZATION			
Year I			50%
Year II			70%
Year III			90%
Year IV			100%
SALES PRICE			
W S Price	Rs/MT		45000
OTHER EXPENSE			
Commission			7.5%
Marketing Expenses			2.5%
POWER			
Connected Load	HP		60
DEPRICIATION AS PER COMPANY'S ACT			
BUILDING			3.34%
PLANT & MACHINERY			10.34%
MISC. FIXED ASSETS			7.07%
LAND & SITE DEVELOPMENT			1.63%
MAINTENANCE			
BUILDING			2.00%
PLANT & MACHINERY			3.00%
MISC. FIXED ASSETS			2.00%
LAND & SITE DEVELOPMENT			1.50%

1.20 Sources of technology

Technology of the project related material handling equipment is available with indigenous companies and could be set up at competitive prices. Major suppliers are understated –

- Techno Equipments, 31, Parekh Street, Girgaon, Mumbai 400 004
- Raylons Metal Works, P B No 17426, J B Nagar, Andheri (E), Mumbai 400059
- Auric Techno Services Pvt Ltd, C 101, Sgreenath Hermitage, Baner Rd, Pune 411008, Tel No – 25898072/99113, Fax No – 25899113
- Container Industries, C-299, Ghatkopar Industries Estate, 72, LBS Marg, Mumbai 400080

The actual cost of projects may deviate on change of any of the assumptions.