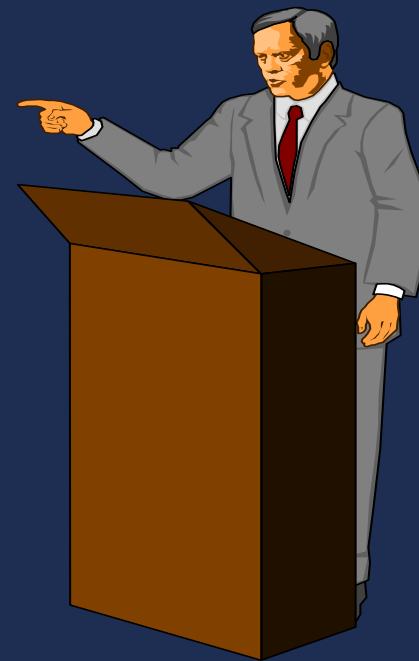

**WELCOME
TO**

THE PRESENTATION





A Presentation *on Opportunities*

in

**Production and Export Potentials of
Potato Flakes**

by

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KOLKATA

***at “International Exhibition & Conference on Processed
Food”, Jaipur,***

From 29th August – 2nd September, 2007





A few words

on

MANAGEMENT

&

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MANAGEMENT & SYSTEMS RESEARCH


is a Technical, Management & Financial Consultancy organisation empanelled with the CDC, Ministry of Science & Technology, Govt. of India & The World Bank, (DACON Regn.No.1422) operating in many parts of the country and in Nepal, Bhutan and Bangladesh





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Agro based and Food processing industries are our major areas of operations where for about 10 years we have been handling quite a large number of projects which include Multipurpose Cold Storage, Dairy and Milk processing, White Button Mushroom, Fruits and Vegetable Processing, Fish Processing, Poultry etc. In potato processing we are involved with all the export-oriented projects which have either come up or are being set up in West Bengal.

In association with APEDA's eastern zonal office we prepared the pre-feasibility report on export potential of potato in West Bengal, on the basis of which the Potato AEZ was set in the state.



**Potato Flake is one of
the most important
processed
Potato products**



Potato flakes find applications
in the following industries

- **Bakery Industry**
- **Fish Industry**
- **Snack food application**
- **Flake based chip**

- **Baked Lay (Frito Lay, USA) no oil used, rendering the chip a healthy contender in these health-conscious times**
- **RAS Chips, RAS Potato Mash (Rixona B.V., Holland)**
- **Pringles (Procter & Gamble)**
- **Instant mashed potatoes, manufactured chips and breads and flavour**



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- **Raw material for soup manufactures, snack-industries, catering and ready meal companies, bakery, bread and confectionery ingredient suppliers, etc.**
 - **Potato Mash. This potato product is designed for the hotel an catering industry, snack bars and institutions.**
 - **Snack Chips are potato flakes mixed with water, yielding a dough which has to be pressed through a machine shaping potato chips which are then deep fried in fat or oil or as the majority trend in the developed world is, baked in order to avoid fat or oil.**



Market Potential :

- ◆ **Indian potato flakes (recognised for its internationally accepted quality) would be able to make its place in the scheme of things, specially because**
 - **Indian potato prices are extremely competitive when compared to others**
 - **India ranking among the five largest countries in the world has a very large, extremely well-organised farm sector where the growth of potatoes is very substantial.**
 - **India is very conveniently located geographically, being half-way between the present major world supplier to the world market and the major consumer growth areas for potato flakes.**
 - **The production of potato flakes has huge potentials in the fast growing Indian market. Potato Flake is being increasingly consumed by manufacturers of snack food, soup powder, bread, biscuit and other bakery products.**



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- **The average price of Potato flakes in India is about Rs.60.00 per kg., 40% lower than that of the imported products**
 - **Potato Flakes production has been the dynamic segment of the dehydrated potato industry for the past 30 years.**
 - **French fry production all over the world is increasing very fast. It is well known that more and more French fries and potato snack foods are prepared by extruding potato mash.**
 - **The demand for potato Flakes has been continuously growing for the last decade , more so due to the application of the potato flake in a large way in the snack food industry . Potato snack food is the most popular snack food the world over from U S A to Japan. Also, with the acreage for potato not increasing in the developed countries due to various reasons, supplies must now be harnessed from countries like India.**
 - **The U.S. exported 10000 MT of potato flakes during the 1st two months of 2005 i.e up 247% from previous year. Exports for the period represent about 32% of full production capacity for the period. Belgium imported 68% of the flakes exported during the period, with other European countries taking another 3% of U. S. flakes export.**



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- Procter & Gambles's marketing effort are for continuing international growth in demand for PRINGLES (which would mean further growing demand for Potato Flakes which is the major ingredients in Pringles).
 - Several other markets are showing promise for potato flakes.
 - Flakes export to other European countries are about 3 times as strong as they were in 2001.
 - The total overall market for potato flakes world wide (actually traded) has been estimated as 3,60,000 tonnes in 2005, of which USA exported 60,000 tonnes, mostly to the Far East, Japan etc. With the very fast growth of various branded flake-based snacks like Pringles , Frito Lay etc., there has already been a sudden spurt of demand , almost the double of 2002.



Name of major customers :

(1) Indian market :

The leading domestic consumers are **Hindusthan Lever Ltd., Nestle, Food Specialties Ltd., Pepsi Foods Ltd., Vesta Foods (McDonald), Haldiram Bhujwala etc.** The consumption in the organised sector is about 15000 MT per year.

The product is also selling in the domestic market in consumer packs.

(2) International market :

In International market Potato flakes is used as an ingredient in industries like Bakery, Fish, Meat, Snack food, dried instant soup, baby food, etc. and by all chips and french fries producing industries like Baked Lay (Frito Lay, USA), RAS Potato Mash (Rixona B.V., Holland), Pringles (Procter & Gamble) etc.



PROCESS FLOW CHART

RAW POTATOES



WASHER TANK (CONTAINING WATER)



WASHING



PEELING



SLICING



BLANCHING



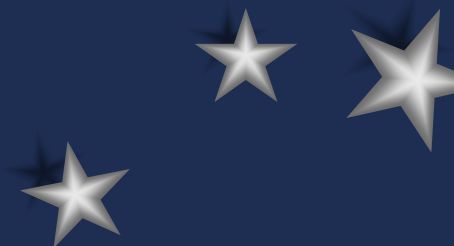
COOKING & RICING



MASHED PRODUCT



POTATO FLAKES



THE WHOLE FLAKE LINE



A BRIEF PROJECT PROFILE ON POTATO PROCESSING (POTATO FLAKES)

- 1) **NATURE OF INDUSTRY** : 100% Export Oriented Potato Flakes Project (300 kgs.per hour installed capacity) to produce about 2160 MT per annum.

- 2) **LOCATION OF THE PROJECT** : Any potato growing region of India (under Potato AEZ or otherwise)

- 3) **REQUIRED AREA** :
 - a) Land : 1.5 acres approx.
 - b) Factory and Office Building : 16,000 sq.ft. approx.

- 4) **RAW MATERIALS** : At 100% capacity utilisation requirement of raw potato will be about 12960 MT. The potato should have 18% - 20% of dry matter and some ideal varieties are Kufri Jyoti, Kufri Sindhuri, Kufri Asoka, Kufri Bahar, Kufri Pukhraj,



5) UTILITIES :

Power :	-	100 HP approx.
i) Transformer (1no.)	-	100 KVA
ii) Generator Set (1 no.)	-	100 KVA
Boiler :	-	steam - 2000 kg. Per hour - 12 bar
Fuel :	-	Diesel Oil for Generator and Boiler
Water :	-	Normal Tap water 2500 LPH @ +10-20 degree C Chilled water 2000 LPh @ +2 degree C Soft Water 2000 LPH
Manpower :	-	30 Persons



Project Cost will be about Rs. 11 Crores.

Funding Mechanism:

A. Equity

- | | |
|--|------------------|
| i) Main Promoter & Associates ----- | Rs. 302.00 Lacs. |
| ii) Grant from APEDA ----- | Rs. 15.00 Lacs. |
| iii) Grant from DFPI, Govt. of India ----- | Rs. 50.00 Lacs. |

Rs. 367.00 Lacs.



Debt :
**Term Loan from any Bank
or Financial Institution ----- Rs.733.00 Lacs.**
Total (A+B) Rs.1100.00 Lacs.

Product price :

The prevailing rates of Potato flakes for the export market will be at least Rs.60-70/- per kg FOB any Indian Port.

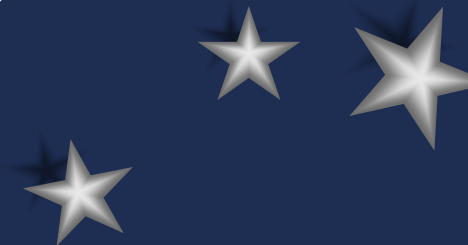
A Few Important Parameters :

At optimum (95%) capacity utilisation

Estimated Turnover ----- Rs. 14Crores (Approx.)

Net Cash Accruals ----- Rs. 4 Crores (Approx.)

B.E.P. at installed capacity ----- 40% (Approx.)



Incentives for Potato processing unit :

1. **Grant** to the tune of 25% of the total capital expenditure towards Plant & M/C and Technical Civil Works of the Project from the **Department of Food Processing Industries, Govt. of India**, upto a maximum limit of **Rs. 50.00 Lakhs**.
2. **Subsidy** to the tune of **Rs.15 Lacs** under various heads may be obtained from **APEDA Ministry of Commerce & Industries, Govt. of India**.





Thank you

