

SOYA BEAN PROCESSING COMPLEX

Soyabean processing complex

Soya bean is emerging as an important crop in Adilabad, Karimnagar and Nizamabad districts. Production is estimated at 1 lakh tons per year. Apart from being a source of edible oil, Soya is popular as a rich source of protein. Defatted or whole Soya is used to make innumerable products like, Soya milk, Soya flour, and Soya nuggets. These products have gained consumer acceptance and steady growth of market is expected.

Proposal:

There is good scope to set up an integrated soya processing unit in the soya growing districts or around Hyderabad.

Product mix	
Whole Soya flour	10 tons per day
Soya milk	50,000 liters per day
Soya paneer	2 tons per day
Paneer based on milk and Soya milk mix	2 tons per day
Soya nuggets	10 tons per day

Market:

Whole Soya flour: The potential markets for Soya flour are in school feeding programme, social welfare feeding programme, confectionery industries, baking industries, for nuggets and chunks manufacturing, as a supplement for wheat flour.

Soya milk: Soy milk is nutritionally close to cow's [milk](#). Soy milk is promoted as a healthy alternative to cow's milk for reasons including:

1. Diabetes management through its ability to control [blood sugar](#). 2. Source of [lecithin](#) and [vitamin E](#). 3. Cholesterol free and safe for people with [lactose intolerance](#) or [milk allergy](#). 4. Polyunsaturated and [monounsaturated](#) fats are good for the heart. 5. Contains [isoflavones](#)
2. At present Soya milk is being marketed as a speciality in tetra packs at exorbitant price. When marketed in poly pouches under refrigeration soya milk can be sold at prices lower than milk and can capture huge market.

Soya paneer: This is a substitute for milk paneer. Contains same amount of protein and costs less

Paneer based on milk and Soya milk mix :

This is made by mixing milk and Soya milk in 75: 25 ratio. This costs less than milk paneer with little difference in taste or nutrition.

Soya nuggets: Soya nuggets are already well accepted by consumers

Process:

Processing of Soya into food products for human consumption is built around four processes.

1. Whole Soya flour is made by cooking pre soaked beans, drying, dehulling and powdering. Soya nuggets Soya meal etc are made from Soya flour by extrusion process. Protein enriched flours are made by mixing Soya flour with other flours
2. Soaking Soya beans in water and then grinding the soaked beans in water make soya milk. The pulp is separated from the milk by filtration. Soya paneer (commonly known as TOFU) and many other products are made from Soya milk in a way similar to milk products.
3. Isolating proteins from Soya, which can be added to processed foods to enhance their protein content.
4. Production of fermented foods like Soya sauce.

Units based on processes 3, 4 are not yet set up in our country.

Technology:

Technology is available from National research institutions and turnkey plant suppliers are also available

Plant and Machinery:

Plant and machinery consists of, cleaning equipment SS tanks, grinders, Filters, SS mixers, boiler, refrigeration plant and packing machinery. Turn key plant supply is possible.

Raw material availability:

For the proposed product mix 40 Tons per day (12000 Tons per year) Soya beans are required. Considering present production level of 1 lakh tons per year within the state Soya bean availability for the proposal is assured.

Utilities and Infrastructure needs:

Requirement of power are moderate (about 250 KVA). One critical requirement is availability of good quality potable water for the process needs.

Project cost:

The project can be set up as one integrated unit or a cluster of small units. The capital investment for the proposed product mix will be about Rs. 6 crores

Turnover and profitability:

Gross turnover will be about Rs. 40 crores per year. Value addition will be in the range of 40 to 50 %

Suggested location:

Soya growing districts / Hyderabad

Entrepreneur profile:

This is a marketing intensive activity. Enterprenuers already in the food product manufacture / distribution line can consider this project with long term out look to build an integrated soya product complex.

Apitco's consultancy:

1. Detailed market study to finalise product mix
2. Establish raw-material availability
3. Tie – up with Machinery suppliers and offers for plant and machinery.