

MALT FROM BARLEY AND OTHER CEREALS

If barley is wetted in a container or on a special floor and stirred to keep oxygen levels high it will germinate. This produces high levels of alpha amylase, which converts the starch to sugar. This natural process in which the starch is converted to sugars is called malting.

As applied in industry malting is the controlled germination of cereals, followed by termination of this natural process by the application of heat. Further heat is then applied to 'kiln' the grain and produce the required flavour and colour. The products are called malts.

Malts and malt extracts are extensively used in the brewing, distilling, confectionary, pharmaceutical, malted food and beverage industries.

Proposal:

All the end user industries like breweries, distilleries and confectionery units are in high growth phase. There are no malt producing units in South India. Investment in a malt producing unit based on imported barley is a profitable proposition.

Product mix

Barley malt	30000 Tons / yr
Wheat malt	5000 Tons / yr
Jowar / Ragi malt	10000 Tons / yr
Malt extracts	3000 Tons / yr

Market

Indian beer market is expected to grow to 200 million cases (1500 million liters) per year by the year 2010 from present 125 million cases per year. Barley malt demand will go up to 2 lakh tons from 1.25 lakh tons.

Distilled spirits (mainly whisky) market in India is expected to grow to 80 million cases (720 million liters) per year by 2010 from present 55 million cases per year. At present the whisky is made from molasses derived alcohol. This is going to change now. If we assume 20 % of additional demand will be met with grain based alcohol, market for malt will go up by 40000 tons.

The increase in demand after 2010 is expected to continue at 10 %. This represents additional demand of 25000 tons per year.

Manufacturing process

Five stages of the malting process: (1) initial storage, cleaning and grading (2) steeping (3) germinating (4) kilning, and (5) crushing, aging and blending.

Technology:

The technology is simple. Main features are controlling temperature, humidity and qualities of air and water.

Plant and Machinery:

Malting plants are called malt houses. This is because the main investment is in the cement concrete structures. Steeping operation alone is carried out in stainless steel tanks. germination and kilning are carried out in concrete housings provided with stirring and controls. The plant construction is mostly on site work. Necessary expertise in this line is available within the country.

Raw materials:

Barley is the main raw material. It is grown in Punjab, Haryana and Rajasthan areas. For this plant barley is proposed to be imported.

Utilities:

Power, steam and water are the utilities required

Project cost:

Capital out lay for 50000 tons per year malt producing facility is estimated at Rs 20 crores.

Turnover and profitability:

Turn over will be Rs. 60 crores with net profit margin of 6 to 8 %.

Suggested location:

Coastal districts. Near a port, where barley can be imported.

Entrepreneur profile:

The main task is getting into agreements with large breweries and distilleries. A number of foreign companies are in the process of setting up units in India. The entrepreneur should have access to these companies.

Apitco's consultancy:

Project planning