

AGRO BASED INDUSTRIES IN INDIA

SUGAR INDUSTRY

India is the second largest producer of both sugarcane and cane sugar and contributes about 8 per cent of the total sugar production in the world. About 45 million farmers, their dependents and a large agricultural labour force, constituting 7.5 per cent of the rural population, are involved in sugarcane cultivation, harvesting and ancillary activities. Besides, about 0.5 million skilled and unskilled workers are engaged in the sugar industry.

Products and by products

Sugarcane is an important cash crop which is crushed in the factories to produce sugar. A fairly large amount is also used to make gur and khandsari.

By products: Besides providing sugar, gur and khandsari, it also supplies molasses, bagasse and press mud. Molasses is obtained in the process of sugar manufacture involving repeated crystallisation and centrifugation. It is used in the alcohol industry for the distillation of liquor (rum), power alcohol, etc. It is also used in the production of certain chemicals and synthetic rubber.

Bagasses, the left over cane after crushing, is used for producing steam which is used as a source of power for sugar industry. It is used as a source of power for sugar industry. It is also used for making cardboard, paper and insulation board.

Press mud is utilised for making wax, carbon paper and shoe polish.

Ethyl alcohol or ethanol can either be produced by direct fermentation of cane juice or from molasses, which is a by-product of the sugar manufacturing process. In India, ethanol can be produced from molasses. To boost sugar mills' ethanol-production capacity and help them pay off mounting arrears to cane farmers, the Union government has approved ₹3,355 crore in incentives. Increased ethanol blending in petrol has many benefits including reduction in import dependency, support to agricultural sector, more environmental friendly fuel, lesser pollution and additional income to farmers. Ethanol Blended Petrol (EBP) programme was launched in January, 2003. The programme sought to promote the use of alternative and environment friendly fuels and to reduce import dependency for energy requirements.

DISTRIBUTION OF SUGAR INDUSTRY

Maharashtra

Maharashtra is the second leading producer of sugar in India, accounting for more than one-third of the total production of sugar in the country. Due to marine impact, the climate is ideal for the cultivation of sugarcane as a result of which the recovery rate of sucrose is higher and the crushing season is longer.

The main sugar producing area in Maharashtra is located in a narrow belt extending from Manmad in the north to Kolhapur in the south. It has 119 sugar mills, of which 87 are in the cooperative sector. Most of the mills are large in size in which the crushing period lasts for more than 140 days.

Northern India

Uttar Pradesh is largest producer of sugar in India. Here the sugar factories are located in two belts-Ganga-Yamuna doab area. The main sugar producing centres are Saharanpur, Meerut, Muzaffarnagar, Bagat, Bulandshahar and Ghaziabad. In the Terai belt, the main sugar producing centres are located in Basti, Bahraich, Gonda, Gorakhpur and Lakhimpur Kheri. Uttar Pradesh, Formerly the largest producer, has been

relegated to second place because of old mills, management and labour problems and shorter crushing period.

The other states which produce sugar are Bihar, Punjab and Haryana, Madhya Pradesh and Gujarat.

Peninsular India

Peninsular India has emerged as the leading producer of sugar in the country. Tamil Nadu has higher per hectare yield of sugarcane, higher sucrose content and longer crushing season, These characteristics along with new machinery has led to higher output of sugar in Tamil Nadu . In Tamil Nadu, the sugar factories are located in Coimbatore, Villupuram, vellore, Tiruvanmalai and Tiruchchirappalli districts .In Karnataka, the major producers are Belgaum, Belary, MAndya, Bijapur, Shimoa and Chitradurg.

In recent decades there has been a tendency of the sugar industry's growth towards the south. This is because of the reasons discussed below.

Tendency of the Industry to Migrate to the South

1. In south India the favourable maritime climate free from the effects of summer 100 and winter frost is best suited for growing superior varieties of cane. So there is a longer production period.
2. The black soil here is more fertile than the alluvial soil of the northern India. Besides this, the black soil is well drained.
3. The cane is of superior quality with higher yield.
4. The excellent transport facilities, especially in the states of Maharashtra and Tamil Nadu, in relation to export markets have placed these states in very advantageous position for the further expansion of the sugarcane industry.
5. The sugarcane farms in South India have bigger area and are managed by the co-operative societies. These cooperative societies have access to better facilities like better seeds, fertilisers, irrigation, etc.
6. Sugar is a weight losing crop. i.e. its sucrose content goes on decreasing with time. Since the factories in southern India are located near the fields, loss of sugar content due to transportation is minimum.
7. New machinery and crushing devices ensure more yield.

Difference between the Sugar Industry of North and Peninsular India

1. Peninsular India has tropical climate which gives higher yield per unit area as compared to north India.
2. The sucrose content is also higher in tropical variety of sugarcane in the south.
3. The crushing season is also much longer in the south than in the north.
4. The co-operative sugar mills are better managed in the south than in the north.
5. Most of the mills in the south are new which are equipped with modern machinery.

Problems faced by sugar industry:

1. The crisis that the sugar industry is facing is the result of excess production of sugar. This has lowered prices resulting in a liquidity crunch for sugar mills
2. At the heart of the crisis is the fall in global crude oil prices along with a decline in the Brazilian currency (real). Lower crude prices means Brazil's mills that have just started crushing would divert less sugarcane for producing ethanol. The extra sugar resulting from this, combined with a weak real, has brought down international prices, making it also further difficult for India to export.
3. Brazil and Australia initiated a legal investigation into whether India's support for its sugar sector has violated WTO restrictions.
4. High cost of sugarcane, inefficient technology, uneconomic process of production and heavy excise duties result in cost of manufacturing. PC can be reduced by proper utilization of by products in industry Ex: Bagasse can be used in manufacturing pulp, insulating boards, plastics, carbon cortex etc. Molasses can be used gainfully for manufacturing of power alcohol. Press mud can be used for extracting wax.
5. India has short crushing season varying between 4 to 7 months . Mills and workers remain idle for rest of the time creating financial problems for the industry..
6. Per capita consumption of sugar in India is much lower than world average. This result in low market demand
7. Sugar industry is grappling with high stock building which they are not able to clear causing non-recovery of input cost
8. The 5% blending of ethanol in diesel and petrol is not achieved yet. Producing ethanol is profitable to sugar mills rather than producing sugar.
9. The working capital from banks is becoming difficult because of the issue of debt non-repayment.
10. Due to stock pile up, these mills are not able to clear the arrears of farmers because FRP is higher than the selling price, leading to discontent among them.