A Study on Gur (Jaggery) Industry in India
(Research - Outline)

By

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Overview:

Sugar cultivation is done on around 4 million hectares of land in India and its production has fluctuated between 230-300 million tones in past several years. The Rs. 250 billion sugar industry has about 450 sugar mills in India with an average installed capacity of 18 million tones. India is the largest consumer of sugar and second largest producer in the world. 90 Percent of total sugarcane and sugar production in the country with Maharashtra and Uttar Pradesh alone accounting for 60 percent of Indian's total sugar production. As against an average annual rise of 2.5% in world sugar production during the past ten years, global sugar consumption has grown by about 2% per annum, while in India the consumption has been higher at about 3.5% per Annum. (LKP Research).

Gur (Jaggery) is a traditional product of sugarcane. It can defined as a honey brown colored raw lump of sugar. It is the natural mixture of sugar and molasses's. It contains all the minerals and vitamins present in sugarcane juice and that is why it is known as healthiest sugar in the world. In some of the South America countries it is known as Panela.

At time of production of sugar it requires a mix up of chemicals like sulphure dioxide, lime, phosphoric...
acid, formic acid and bleaching agents that is why all the contents of sugarcane cannot be found in sugar where as Gur has all the contents and even the scientists have proved that all the essential vitamins and minerals are missing from sugar as compared to Gur. It is also used as medicine. In Ayurvedic system of medicine it is used as blood purifier and it prevents disorders of bile.

Gur making plants are generally tiny in size, and the machineries of the plants are fabricated by local artisans or engineering workshops. The plants are located in rural areas of Sugarcane leading zones of Uttar Pradesh and Tamilnadu mainly ("Cooperative Sugar" Jan. 2009, Vol. 40). It is an unorganized industry and has no Research and Development support. This is a second major rural industry in north U.P. region and has good employment opportunities also. Gur making process is simple and cheep as compared to sugar. The Capital investment in Gur plant (tiny) is around Rs. 80,000 to 1,00,000 for establish a plant which has production of 45 quintals in every month. In north U.P. we found that the entrepreneurs have three types of producing units based on their production size.

i) Tiny Unit has a capacity of 15 quintal crushing per day and production of Gur is around 1.5 to 1.75 quintal per day and capital investment in establishment of plant is around Rs. 80,000 to 1,00,000 where cost of land & building is not included.

ii) Medium Unit has a capacity of 50 quintal crushing per day and production of Gur is around 5 to 5.5 quintal per day and capital investment in establishment of plant is around Rs. 1,40,000 to 1,75,000 where cost of land & building is included. And;

iii) Large Unit has a capacity of 70 quintal crushing per day and production of Gur will be around 7-8 quintal per day and capital investment in establishment of plant is around Rs. 2,15,000 to 2,50,000 where cost of land & building is not included.

In the Gur manufacturing plants generally using vertical roller type crusher for juice extraction and it operated by either diesel engines (8-14 Hors Power depend on size), or electric motor. For boiling of juice manufacturers using round furnace made from ordinary bricks. They used dried bagasse for charging the furnace. Indian Institute of Petroleum, Dehradun has done realistic work on its furnace formation and fuel consumption. A NGO "Janahit Sewa Sansthan, Madhopur, Kushinagar (U.P.)" is working for the development of this industry since last ten years and has organized so many workshops and panel discussions for the Gur manufacturers in Eastern U.P. region. The manufacturers are now aware about new products of Gur these workshops and discussions, but they are lacking the technical aspects of manufacturing process. Shree V. K. Mishra (President, Janhit Sewa Sansthan) is very much aware about the problems facing by manufacturers and that is why his NGO is working with full dedication. The number of gur plants is denser in Kushinagar & Gorakhpur district of Uttar Pradesh than other districts. Gur industry is largest cottage Industry of U.P. and few parts of Tamil Nadu, so there is need of a research for further development.

**Conceptual Framework:**

Madan et al (2004) stated that "Gur and Khndsari are among the major agro processing industries found in rural sector of our country. Nearly 50% of total sugarcane produced in the country is used for manufacture of about 8 million tones Gur which is known as the most nutritious agent among all sweeteners."

Still Gur is not producing on a good commercial scale globally. The market surveys said that Gur has good demand in metros as well as urban areas but suppliers are not able to supply as per demand. This year Rate of one kg Gur is just double than sugar in the market. In view of this scenario, it was felt necessary to carry out a research, which can reveal the present status of Gur industry in terms of its marketing, cost-return analysis, pricing-regulatory and R&D in operations. This research will urged the policymakers to streamline strategies that promote stabilization of sugarcane economy and make the nation credible supplier of Gur in the International market, benefiting Gur makers, sugarcane growers and other stakeholders.

**Objective of Study:**

What are the strategies to promote the consumption of Gur among people? What are the major problems in Gur making? Why there is no value added product of Gur, while it has a medicinal aspect? Price Realization Problem linked with quality of the Gur? What is the storage support of Gur? Cost and Returns of Gur Making and its opportunity cost? How far the individual entrepreneur is efficient compared to cooperatives?

*Is there any need for a Research & Development Institute of Gur?*
Gur Industry is not only a traditional industry but it also has medicinal values. This industry covering a wide range of population which depends on it, but no any good research organized for further development. There is need to conduct a research on above mentioned objectives for this Industry.

**Major Players (U.P. & Tamil Nadu)**

After consulting the report (Annexure-I) of *National Federation of Cooperative Sugar Factories Ltd.* I found that the Uttar Pradesh and Tamil Nadu are producing huge quantity of gur, so that I thought to conduct research in these stats only. The study will cover the major clusters of Gur Industry in Uttar Pradesh and Tamilnadu.

For conveniently survey Uttar Pradesh can divide in three areas North, Central and West. The districts will cover under these areas are as follows:

**North Uttar Pradesh:** Deoria, Mahrajgunj, Gorakhpur, Kushinagar, Salempur & Mau.

**Central Uttar Pradesh:** Lucknow, Lakhimpur-Kheri, Sitapur, Gonda and Baharaich.

**Western Uttar Pradesh:** Saharanpur, Shahjahapur, Badaut, Rampur, Hapur & Mujaffarnagar and few districts of Tamil Nadu.

**Conclusion:**

This research will help to develop the Gur Industry of India, its value added production, market potentiality as well as increase the demand in international markets. This will help and guide the manufacturers for diversifying the Gur products range, and also helpful in planning of its marketing strategy. Cost-Benefit analysis of this Industry will focus its financial and revenue aspects which will give a direction to the manufacturers. Still there is no research Institute for the development of this Industry, so this research will find the actual need of any R&D for this Industry and training support for the entrepreneurs.

**Annexure-I**

**State-Wise Estimate of Production of Gur (Including Khandsari )**

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Source: "Cooperative Sugar", January 2009; Vol. 40, No.5, Published by NFCSE.

(P) Provisional (A) Includes Jharkhand (B) Includes Chhatisgarh (C) Includes Uttaranchal, @ Included in Uttar Pradesh.

* Relates to Gujarat, Orissa, Rajasthan, West Bengal, Kerala, Delhi, Tripura, Himachal Pradesh, Jammu & Kashmir, and Maharashtra..

** Quality of sugarcane has been reduced due to reported diversion of sugarcane for manufacture of white sugar.

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_Source: E-mail July 23, 2009_