

Problem and Prospects of Gur Production in India

Project Report
Submitted by

Dr. Ashfaq Ali
Assistant Professor
Shri Ram College
Muzaffarnagar

Funded by

Tikaula Sugar Mills Ltd.
Muzaffarnagar



**Shri Ram College
Muzaffarnagar**

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IQAC, Shri Ram College,
Muzaffarnagar


Principal
Shri Ram College
Muzaffarnagar



Tikaula Sugar Mills Ltd

2D, 1, Vakil Rd, New Mandi, Muzaffarnagar,
Uttar Pradesh 251001

20/1

Dated 12/7/2019

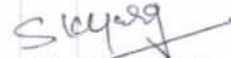
To,

Dr S C Kulshreshtha
Chairman,
Shri Ram Charitable Trust,
Muzaffarnagar

Dear Sir,

I am pleased to inform you that on your request, we are herewith donating/ granting Rs: 50,000/- for conducting a project on Problems & Prospects of Jaggery in India on Gur Mahotsav. We are herewith transferring of Rs: 50,000/- via Net Banking. Please note that a deduction of Rs: 1,000/- is being made towards TDS.

Hope for the great success of the event.


Yours faithfully

For Tikaula Sugar Mill Ltd

Executive Superintendent

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SHRI RAM COLLEGE

(Affiliated To CCS University, Meerut & Approved By NCTE)

CIRCULAR ROAD, MUZAFFARNAGAR

'A' Grade Accredited by NAAC

Date: 13.07.2019

Dr. Ashfaq Ali
Deptt. of Commerce
Shri Ram College, Muzaffarnagar

We are pleased to inform you that the Project Proposal entitled "**Problem and Prospects of Gur Production in India**" submitted by you to the Management Committee, which is related to Tikaula Sugar Mill Ltd, Muzaffarnagar has been approved and an amount of Rs. 50,000 has been sanctioned for the Project in your department.

Please start working on the above said project and take necessary action for timely completion of the project.


Principal


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Utilization Certificate

S.N.	Detail of sanction of Fund with Project name and Duration	Amount
1.	30-Day project on Problem and Prospects of Gur Production in India, Date of Sanction of Fund- 12-07-2019 as per Sanction Letter	50000.00
	TOTAL	50000.00

It is Certified that out of Rs. 50000.00 (Rs. Fifty Thousand Only) of grants sanctioned by M/s **Tikaula Sugar Mill Ltd** during the year 2019-20 in favor of **Shri Ram College, Muzaffarnagar**, a sum of Rs. 50000.00 has been utilized for the purpose of the project for which it was sanctioned and that the balance of Rs. Nil remaining unutilized at the end of the year has been surrendered. The Extra amount (If any) is met out by Shri Ram College.

2. Certified that we have satisfied our self that the conditions on which the grant was sanctioned have been duly fulfilled/are being fulfilled and that we have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercise-

- 1 Checking of cash book
- 2 Checking of payment vouchers.
- 3 Checking of expenses bills.

For Shri Ram College

Secretary

Place: Muzaffarnagar

Date- 30-08-2019

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[Signature]
**Principal
Shri Ram College
Muzaffarnagar**

For Goel Rakesh & Co.
Chartered Accountants



Rakesh Kumar Goel
Proprietor

M. No. 071858

FRN : 003374C

[Signature]
**Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar**

Problem and Prospects of Gur Production in India

Sugar and jaggery (popularly known as gur) are well known as the most valued, traditional sweetener primarily obtained from sugarcane. The rising demand for sweeteners has brought focus on jaggery, an important cottage industry in economies of the nation for their implications on employment and income. As a traditional sweetener, jaggery is produced in small units using local machinery in rural areas. Jaggery is produced nearly in 25 countries with a total production of about 13 million tonnes per year. India is the largest producer of jaggery under an unorganised agro-processing sector, sharing 55% of the total world production, followed by Colombia (11%). In 2016, about 14.2% of the total sugarcane produced in India is being utilised for making jaggery and khandsari (a mixture of crystalline sugar and molasses). In India, Uttar Pradesh is the major producer of jaggery, followed by Tamil Nadu. The importance of jaggery has been recognised at the international level. Of the total world production, more than 60% of the jaggery is being produced in our country. As the major producer of jaggery, the country is recognised as one of the leading traders and exporters in the world.

Jaggery making is one of the most important agro-processing industries and the sub-tropical climate is conducive to cultivate sugarcane, which is also used in jaggery making. Given changing market scenarios, consumers' preferences, and global competitions, new income-generating opportunities need to be created through crop and product diversification in sugarcane 'Produce to Product Chain' (Lal and Singh, 2004). Sustainable sugarcane farming is intended to meet society's sweeteners, food, energy, and bio-fuel needs in the present without compromising the ability of future generations to meet their own needs. Practitioners of sustainable sugarcane farming seek to integrate three main objectives into their work: a healthy environment, economic profitability, and social and economic equity. Jaggery is a bank of vitamins and minerals. It is rich in calcium, phosphorus, and iron. The jaggery made by using natural clarificant is delicious golden in colour and a prominent source of energy. Because having high vitamin C, vitamin A, and other minerals, it can act as a vehicle to fight iron and vitamin deficiency. The presence of micro-nutrients in jaggery possesses anti-toxic and anti-carcinogenic properties. Potassium maintains the acid balance in cells and magnesium in jaggery strengthens the nervous system.

Value addition of organically processed jaggery:

To fetch the high prices and considering the health issues, the following products additions in the jaggery may be abetted:

Giloy (*Tinispora cordifolia*), Ajwain (*Trachyspermum ammi*), Fennel (*Foeniculum vulgare*), Linseed (*Linum usitatissimum*), Fenugreek (*Trigonella foenum-graecum*), Ginger (*Zingiber officinale*), Tulsi


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(Ocimum tenuiflorum), Moringa (Moringa oleifera), Cashew nut (Anacardium Occidentale), etc. in powder form can be used in jaggery cubes.

Million Rupees Model


By all means of sugarcane production and supply to the sugar mills, a farmer is earning only Rs 164154/ ha of income. The roadmap to achieve the higher income by sugarcane farmers is paved by efficient post-production management viz. processing and marketing. This also makes a farmer self-reliant. Preliminary objectives to enhance the income of farmers along with maintaining the sustainability of the production system the concept of crop diversification was introduced. This concept led to the inclusion of several intercrops with sugarcane depending on the consumers' preferences, market demand, and resource availability/use. The concept proved a foolproof avenue for enhancing the income more than double.

Along with the crop diversification, experiments on product diversification by the processing of Sugarcane for the production of jaggery was conducted at Sugarcane Research Institute, Dr. Rajendra Prasad Central Agricultural University, Pusa, Samastipur, Bihar, with the objective to enhance the net return per unit area by production and processing of sugarcane and making a farmer self-reliant. Jaggery plays an important role in meeting the sweetener demand of the nation. This has many nutritive advantages over white sugar. After Pandemic Covid-19, consumers focussed on the use of jaggery as a component of many of the food and beverages like Chyawanprash and decoctions (Kadha), predominantly used as immunity-boosting sequels. Now the concept of product diversification as jaggery making may prove another avenue for further increase in farmer's income besides long term engagement of the migrant labourers.

This concept also helps to make the farmer self-reliant. Jaggery is produced conventionally through the process of heating purified cane juice by employing about 10 semi-skilled workers. The traditional jaggery fetches very low prices in the market due to improper use of clarificants and accumulation of high impurities results in poor quality. Subsequently, fallacious shaping and packaging, inadvertent to food safety norms, and unorganized marketing further adds to its disparagement. Hence, by using this model a farmer can earn more than 10 lakh rupees from one hectare of land in a particular season.

Conclusion:

Employment generation for the migrants is the priority of the Government. The quality jaggery produced can be sold out at a higher price in the wholesale market. Hence, by adopting the technology, the farmer can enhance their income by selling the value jaggery at Rs.100-120/kg instead of Rs.60/kg (the price of traditionally made jaggery). The socio-economic impact of jaggery


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cottage may be ruled out because of its contribution to rural development. It will improve the product quality, hygiene, and market access to reap the economic benefits of premium jaggery products in the market. Hence, adopting modern technology for jaggery processing will certainly a fruitful step towards the goal of doubling the farmer's income in our country.

In the survey, it was observed Gur plant owners are facing common problems, but the impacts of these Problems are different for each. The major problems which were identified are low profit, transportation, high raw material cost, and lack of Research & Development. But out of this low profit is the major problem of Gur plant units. If they have their own transportation they get more profit. The reason identified that due to lack of unity and of inter-competition, the plant owners are not ready to form any association, cooperative or society for development of transportation and R&D. Now a days Labour Problem is also big issue because of this number of Running Plant in Kolhapur decreases to 250 from 1000 in last 4 years. Also demand of High pay from labors reduces profit of Plant and this effect Gur market very badly. Predominantly, the Indian population is rural, with more than 65% of the population living in the villages. Majority of Indian population suffers either under-nutrition and/ or malnutrition. We are forever looking for ways and means to enhance health of the population. Herein, jaggery, being the wholesome medicinal sugar, comes to the rescue. Jaggery is not only nutritious but also easily available to rural India.

Typically to make jaggery, i.e. gur, the filtered cane juice is pumped into open pans, kept on a triple pan furnace, fired with the bagasse. The juice is clarified with traditional herbal clarificants, thereby eliminating impurities in suspension, and colloidal/ colouring compounds by accumulation. The juice is then boiled and concentrated to make jaggery in desired shape and sizes.

Still considered a labour-intensive industry, and confined mostly confined to rural areas, jaggery has concentrated production and scattered consumption patterns. Traditionally enough, to satiate the consumer misconception that light is cleaner and healthier, gur manufacturers often resort to chemical aids to clarify and decolorise the juice. Processed in unhygienic conditions, delivered in none or insignificant packing, this potpourri of chemicals enters the human digestive system and converts the 'healthy jaggery' into unhealthy. Unhygienic and chemical-catalyzed manufacturing practices and loose packing has diverted many a customer away from gur.

We, at Muzaffarnagar, wanted to build on Indian traditional knowledge and save the jaggery cottage industry from passing away prematurely. Within this effort, we aimed to make the present and future generations in close connect with traditional sweeteners like wholesome gur. Hence, we invested in extensive R&D to set up the most modern and hygienic facility to manufacture jaggery.


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After research and employing various techniques and combinations, we have presented the market with India's first and most sanitized, healthy, and wholesome packaged jaggery.

It is rather unfortunate that gur, being one of the most ancient cottage industries, is completely overlooked and royally ignored by the government. Gur manufacturers are burdened by the forever escalating a miscellany of taxes-- Mandi Samiti Tax, Sugar Cane Tax, excise duty and more. It is surprising to note that khandsari sugar is exempted from excise duty even though jaggery, which is an intermediate product, has excise duty levied on it.

As it is, the gur manufacturer has enough challenges to face. Gur, being a seasonal product, needs a cold chain for supply in off season. However, there is a complete absence of 'inexpensive' cold storage and cold chain in India. While gur production is only from November to March, consumers expect it year round. To crown it all, the gur manufacturer collapses when the consumer compares price of hygienically processed and packed jaggery against the loose 'fly-tasted' gur.

Jaggery's health benefits go beyond the kitchen. It has long been observed that people who work in highly toxic surroundings and regularly consume jaggery, such as industrial workers in dusty or smoky environments, have little or no bronchial or lung discomfort. Jaggery is one of the most important and ancient rural cottage industries. It provides jobs to the unemployed rural people in their vicinity with minimum capital investment. Not only is it cheaper than white sugar, but also more nutritious. It is important to safeguard the interest of jaggery manufacturing units and improve manufacturing technologies.

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