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## SUGARCANE AND SUGAR PLAY IMPORTANT ROLE IN INDIAN ECONOMY

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### ABSTRACT

*Sugarcane and sugar play an important role in India's economy, trade and lifestyle. Sugar is the second largest food industry in the country, after cotton. The sugarcane and sugar industry affects the lives of more than 5 million farmers and their dependents who are engaged in sugarcane cultivation in an area of nearly 50 lakh hectares. India is the largest trading and second largest producer of sugar in the world. The average annual production of sugarcane is about 35.5 crore, which is used to produce about 3 crore tonnes. Sugarcane mills are required to buy the crop from farmers within a defined radius known as the cane buffer in FRP. In this way, government programs and policies provide adequate coverage to sugarcane growers and protect them from any risk. The remunerative and guaranteed income, coupled with positive growth in recovery, continues to attract farmers to grow sugarcane despite tight supply and low sugar prices in market. It would not be an exaggeration to say that India has become a country with a high sugar content. The Indian government has done a lot to help sugarcane growers and the sugar industry; However, the problem remains.*



**KEYWORDS:** *Sugar cane, Sugar, Important work, Indian economy.*

### INTRODUCTION

The main factors of sugar export competition are the difference between the price of sugarcane for milling and the cost of production of sugar in India compared to other sugar producing countries in the world. Another reason is the type of sugar exported from India compared to the type of sugar available in the international market. Sugarcane is known to be a water intensive crop. On average, one kilogram of sugar requires about 1,500 to 2,000 kilograms of water. Most of the irrigated areas in the country are paddy and sugarcane which reduces water for other crops. Pressure on water from sugarcane cultivation in states like Maharashtra has become a major concern, calling for more efficient and sustainable use of water through alternative cropping schemes. This is particularly important in areas where groundwater use has reached critical and over-exploited levels or where more than 50% of surface water is used solely for irrigation. water.

Several committees have been formed in the past to address the problems faced by sugarcane growers and producers. The general recommendations of the committees covered areas such as: (a)

sugar prices and distribution systems; (b) creating new factories; (c) amendments to various laws affecting the sugar industry; (d) increased productivity in the sugar industry; (e) matters relating to the reservation of sugarcane areas; (f) sugar control; (g) pollution reduction; (h) improve the efficiency of the company in terms of energy consumption; (i) alternative use of sugarcane for ethanol; j) increasing exports; (k) support required to make sugar mills profitable, etc. What is important in this report is the recommendation of the committee under the chairmanship of Dr C. Rangarajan, then president of the EAC-PM, in 2012. Developments since 2012 show that the state is often slow to make changes in the abolition of sugarcane reservations, minimum standards, etc. In 2003, the government launched a major Ethanol Blended Petrol (EBP) program to promote environmentally friendly fuel (by increasing the use of ethanol) and reduce energy imports. The EBP program invests in the sugarcane sector by promoting sustainable ethanol. This helps reduce the amount of debt collected for sugarcane growers and allows them to be paid on time. The National Biofuels Policy 2018 expands access to feedstock for ethanol production. The policy aims to increase the percentage to 20% by 2029-2030.

Currently, the Ministry of Petroleum and Natural Gas is implementing an EBP program to achieve a 10% ethanol blend in gasoline by 2021-2022. By ramping up ethanol production capacity, it is expected to produce another 200 crore liters in 2 years, which can take ethanol production to 450-500 crore liters by 2020-2021. As India currently has more than 70 tonnes of sugar surplus, there is ample scope to convert sugarcane surplus into ethanol production without affecting the sugar supply needed to meet domestic demand. According to the information in the Sugar Cane (Control) Act 1966, one ton of sugar cane produces 70 liters of ethanol, while the production of one ton of sugar is the production of 600 liters of ethanol.

Based on a detailed analysis of the sugarcane and sugar sector, the discussions held in the working group, the advice of the company representatives and other stakeholders, the main recommendations of the group's work are as follows:

**1. Price of Sugarcane:** The decline / fall in the price of sugar in recent years in the context of continuous increase in the price of sugarcane is the main difficulty faced by the sugar industry during the year. recent ones. Officials believe that to avoid the problems of sugarcane growers and to make the sugar industry financially viable, the price of sugarcane should be linked to the price of sugar. A revenue sharing mechanism (RSF), along with a price stabilization fund should be introduced to prevent farmers from receiving prices below the FRP. Although the scientific method proposed by the Rangarajan Committee can be considered, the price of sugarcane may need to be adjusted slightly higher due to the good recovery rate in recent years, that is to say n 'between the reference period of the recommendations of the Rangarajan Committee and the present period. . Therefore, instead of 70% of the price of sugar and products and 75% of the price of sugar alone, the price structure can be 75% of sugar and products and 80% of the price of sugar. This system can be applied prospectively, for example from the sugar season 2020-21 or 2021-22. Future increases in the PRF should be moderate. States that have declared fixed state prices should be encouraged to refrain from doing so unless they are willing to bear additional costs of SAP themselves and not force companies to charge sugarcane prices above the FRP.

**2. Sugarcane payments to farmers:** Sugarcane is a fairly remunerative crop. Compared to A2+FL price of Rs 155 per quintal in 2018-19, the FRP set by the central government is Rs 275 per quintal, giving a return of 77% (at A2+FL price), which is higher than most others. competitors. harvest. If the farmers receive 60% of sugarcane FRP in advance, this will cover their entire A2+FL cost and give a small share in the same amount. It is proposed to allow millers to pay for cane in the following manner: 60% payment within 14 days of delivery of cane to the mill; another 20% in two weeks and the balance of 20% in one month (or on the sale of sugar, whichever comes first), so that all sugarcane royalties to farmers are paid within 2 months.

**3. Conversion to water-sensitive crops:** In view of the urgent need for water conservation, officials suggest converting some sugarcane to water-sensitive crops, providing incentives suitable for farmers. It is expected that the government will transfer about three lakh hectares of sugarcane area, which

produces about 20 lakh tonnes of sugarcane, to other plantations through this system. The cooperative plans to pay Rs 6,000 each as an additional incentive to farmers for alternative crops that are less water intensive than sugarcane. Officials suggest that DAC&FW start a new program for such compensation in coordination with the ministry of Jal Shakti and it can be implemented for three years initially.

Also, another way to reduce consumption may include limiting sales to 85% of sugarcane producers to encourage them to expand their production to the remaining 15% in other crops. However, this 85% limit may not be maintained; rather, it should be flexible depending on sugar supply and demand conditions and future export opportunities. Such a system can be designed from the 2020-21 sugar season, because there is already a reduction in the area planted in sugar cane in 2019-2020.

**4. Sugar and Development Fund:** Due to the suspension and / or reduction in the price of sugar, the liquidity situation of the sugar industry remains a major concern, making the government provide a financial support system. different from time to time. Project managers suggest a long-term solution that requires sufficient funds to support the mill if such situations arise. It is proposed to levy sugar tax at Rs 50 per quintal for 3 years, which will add about Rs 4,500 crore to the fund, which will help to provide bed linen or comfort bank provide loans and contract agreements. mills to improve technology and pay their farmers. The company should be encouraged to release some part of the sales/profit in the years of high sugar prices which can be used during the low sugar prices when the water supply becomes a constraint for the mills. Once the balance of supply and demand is restored, sugar tax should be reduced or removed and sugar producers can be asked to pay SDF a percentage of sugar sales, which will be decided by the Indian government. The officials believe that the levy reduces export competition whenever the international price of sugar is lower than the domestic price, as it is now. Therefore, it is recommended that this tax (or compensation) be waived for sugar intended for export, to ensure that it will not be a competition for mills that export their maximum capacity. Since the focus of the fund is from the sugar industry to the sugarcane growers, it can be renamed as the "Sugar and Sugarcane Development Fund".

**5. Ethanol Blending Program:** The staff recommendation is to support and improve the technology and adoption of ethanol blending in line with the goal of reaching 10% by 2021-2022 and 20% by 2029-30 and recommending mid-term blending goals time. . by 15% by 2024-2025. Support needs to be extended to help promote and integrate technology and learn from Brazil's experience of switching from raw sugarcane to ethanol blends. In order to increase ethanol production, other measures can be considered in accordance with the recommendations set out in the National Biofuels Policy 2018. These include a clear definition of the regulation on the use of feedstock and the extension of financial incentives and appropriate funds for each type. , the creature. of the State Biofuel Development Council, comes up with updated BIS standards and national biomass benchmarks. A proper delivery system should be developed, where resources are collected and a fair pricing system for the community involved in the organization of local, state and other stakeholders. In addition, like Karnataka, other state governments should also consider removing unnecessary restrictions on the movement of ethanol used for blending programs.

**6. Trade policy:** Although it is important to continue encouraging the export of sugar now, the workers recommend a comprehensive review of the export incentives for sugar, to align them with India's commitments in the agreement WTO, especially as India wants. Eliminate subsidies on trade, ocean freight, etc., by December 2023. The Ministry of Food and Public Distribution should coordinate with the Ministry of Commerce and create a suitable incentive system for sugar exports while reducing its impact on the national economy.

**7. Increase sugar MSP to Rs. 33 per kg:** Officials suggest a one-time increase in the minimum price of sugar to Rs 33 per kg; as it will help the sugar factory to cover the cost of production including interest, maintenance charges, etc. Given the emerging developments, the MSP for sugar should be reviewed six months after the announcement.

**8. Implementation of recommendations from previous committees:** The task force found that despite the major reforms recommended by the C. Rangarajan committee in 2012, almost every state has implemented them. The officials suggest that the Ministry of Food and Utilities take up the matter

with the state government and suggest some measures that may be necessary for the independence of the sugar sector. However, the sugar tax/quota system does not need to be stopped at this time because past experience has shown that sudden import shocks cause prices to fall further after the system is stopped. limit.

**9. Widespread irrigation in sugarcane:** According to the ACCP survey, there is a huge difference in water consumption for sugarcane cultivation between Uttar Pradesh and Maharashtra in South India. The working group recommends that every effort should be made for the adoption of trickle water instead of irrigation in Maharashtra and the southern states of India. This will save almost 40% to 50% water, which in turn can be used for other purposes. To promote irrigation, in addition to continuous advertising, some incentive measures in the form of access to equipment for farmers can also be considered. Various agriculture sector programs promoting irrigation should be implemented for this purpose. Drip irrigation will be more popular if the electricity is paid for irrigation to prevent flooding.

**10. Eliminate sugar preservatives:** Functional preservatives improve the status of millets that are not useful in terms of food security for people, as in the case of wheat and rice. If the measures suggested in this article are adopted, the need for safety products will disappear.

**11. Bag recycling:** The working group recommends that sugarcane millers be given incentives to recycle bags. In addition to its use as fuel, bagasse has many other uses. If the bag is not fired at high temperature, it will lead to uncontrolled fire and pollution of the surrounding air. Funding is expected to come from loans from the SDF. In addition, to cope with falling prices, a full adjustment of cogeneration prices must be done to encourage this industry to use bagasse and other biomass.

**12. Promotion of Jaggery:** Officials suggest that the Department of Food and Public Distribution, in consultation with the National Sugar Institute, Kanpur and other stakeholders including BIS, develop a suitable system for adopting advanced technology for those who produce jaggery and set good standards.

**13. Financial Assistance to Struggling Sugar Mills:** Due to various administrative problems, many struggling sugar mills are unable to receive loans under the Government of India's soft loan scheme. While the authorities recognize the need for independence for banks to make financial decisions under RBI regulations, there is a need for some changes in providing loans to distressed companies for various reasons. . The finance department can gather the meeting of the necessary people and find a good solution to the problem of the sugar producers by getting money from the bank.

**14. Long-Term Ethanol Pricing Formula:** The industry has requested a long-term ethanol pricing formula to support the establishment or expansion of ethanol production capacity. The Task Force recommends that the Department of Oil and Gas thoroughly consider the proposal taking into account the need to provide guidance on the ethanol pricing system to reduce uncertainty about returns and investment made for ethanol production. .

**15. Comprehensive restructuring of the company:** The working party has come up with various suggestions that should be done in the long run to improve the economic potential of the company. However, given the understanding of the subject and the importance of dependence on sugarcane as the main crop of nearly five million people and farmers and dependents, a system was taken fair and just. However, the high level of politics in the sugar sector continues to cause sugar production to exceed domestic demand and make domestic prices less competitive for the market. The capital expenditure and natural resources involved in the sugarcane and sugar industry are large and growing. Therefore, it is necessary for the complete restructuring of the sugar industry in a step-by-step manner.

India is the largest consumer of sugar in the world. The sugar industry in India is one of the most important agro-industrial industries, which affects the lives of about 5 million farmers and their families, and 5 million workers are directly employed. There are more than 700 sugar mills installed in the countries with a milling capacity of about 340 lakh MT of sugar and an annual production of around Rs 80,000 crore. However, with declining sugar prices and rising sugarcane prices in recent years, the company has faced various problems, including financial constraints. Although the federal government has announced various measures to reduce these problems, the demand for additional assistance has not decreased. Therefore, NITI Aayog felt the need to find a long-term solution for the sugarcane

industry and the sugar industry, to reduce their dependence on state subsidies and to support agricultural diversification to reduce the negative impact of sugarcane cultivation. and water. department. Hence, NITI Aayog formed a working group. background and research Sugarcane and sugar: major crops and industries The sugar industry plays an important role in India's agricultural economy - sugarcane and sugar are and continue to be important commodities for trade and livelihood. Today, the industry is an important factor in India's rural development as the country's second largest agricultural industry, after cotton. It directly or indirectly affects the lives of more than 5 million farmers and their dependents, engaged in sugarcane cultivation in an area of nearly 50 lakh hectares . In addition, 5,000,000 workers in the sugar industry and 10,000 other workers, indirectly, earn their living from the sugar industry. India is the largest trading and second largest producer of sugar in the world. Brazil used to be the world leader in sugar production. However, of late Brazil has been converting most of its sugarcane to ethanol production, and India will soon take over as the world's largest sugar producer. Average annual sugarcane production in India is 35.5 tonnes, and sugar production is about 3 crore tonnes. Being the largest consumer of sugar, India's domestic consumption is estimated at around 2.6 crore tonnes for the current fiscal year.

The complex system of pricing, marketing, supply and processing has undermined sugarcane cultivation and production. The complexity is further compounded by state-level involvement in sugarcane prices through the state approved pricing system (SAP). Due to the relatively high price of sugarcane - Fair and Remunerative Price (FRP) - set by the federal government, farmers prefer sugarcane despite the low competition and limited crop. In addition, sugarcane procurement mills are required to purchase produce from farmers within a specified radius known as sugarcane buffer zones and FRPs. In this way, government programs and policies provide sugarcane growers with insurance and protect them well.

Sugarcane and sugar are essential commodities and are therefore regulated by various provisions of the Essential Commodities Act 1955. This means that the company is well organized in terms of land allocation for cultivation, price of sugarcane, supply of sugarcane, sugar production and sale of milled sugar in the market. Nationally and internationally. However, there is a debate about whether food products should still be considered important, due to the firm's stability and uncertainty. The current state of the sugar industry

Sugarcane and sugar production in India has followed a steady upward trend. In a sugar cycle of about 5 years, the company usually has production for more than 3-4 years followed by low production for one or two years. Until a few years ago, the culture reflected the strong behavior of the cobweb. The company achieves such high production because farmers choose to grow this crop. This interest stems from the high rate of return (RoR) that sugarcane growers receive and the unique feature of finding an assured buyer for their produce. Yields from sugarcane are 60-70% higher than most other crops. Sugarcane growers also get the promised price from the government, which is not the case for many other crops, as there is no middleman between the sugarcane grower and the sugarcane farmer. - sugarcane, sugarcane growers continued to be very interested. growing sugar cane. , even if their payment from the old company is delayed. Despite the delay in payment, in most cases, sugarcane growers receive at least two-thirds of their production money on time. It is also important to know that sugarcane seeds are hardy and can withstand climate change. Compared to many other crops, sugarcane growers have to put in less effort in terms of input and labor time to grow the crop so it is often called the "lazy crop". Sugar as an export product

India, in the conventional sugar system, produces a lot of sugarcane/sugar every 3-4 years. Exporting can be a good option for removing this excess production. However, it is difficult for the Indian sugar industry to compete in the international market as other sugar producing countries already capture most of the foreign market. For Indian sugar to be fully competitive, a thorough analysis and understanding of the international market is required. The main factors of sugar export competition are the difference between the price of cane and the cost of production of sugar in India compared to other sugar producing countries in the world. Another reason is the type of sugar exported from India compared to the type of sugar available in the international market. Ethanol mixture

With the production of sugarcane and the amount of sugar growing every year, a plan is needed to reverse the excessive production of sugarcane. One of the plans being implemented is to use sugarcane to produce ethanol and to remove it from sugar production. Ethanol, which is an important food and renewable fuel product, is obtained from the fermentation of sugar cane molasses (a by-product of sugar production). Since ethanol is an environmentally friendly fuel source, it can be mixed with gasoline to create different fuel blends, and when the blend is used in the engine, it results in less environmental pollution. Allocating more sugarcane for ethanol production will not only help turn around the stockpile, but will also benefit the sugar industry and the economy in many other ways.

In 2003, the government launched a major Ethanol Blended Petrol (EBP) program to promote environmentally friendly fuel (by increasing the use of ethanol) and reduce energy imports. This program, in general, was designed with several objectives in mind. By increasing the use of biofuels, it aims to control carbon emissions while saving foreign exchange and reducing dependence on imports. Specifically, the EBP program invests in the sugarcane sector by promoting sustainable ethanol. Therefore, it helps in reducing the amount of debt and allows for quick payment of sugarcane producers. Started in 2003 as a pilot project, the EBP program has now been expanded to the entire country (except the Union Territories of Lakshadweep and Andaman and Nicobar Islands). It is done through a network of 186 Petroleum Marketing Company (OMC) factories, drawing ethanol from 179 distilleries with an installed ethanol production capacity of 305 crore litres.

The National Biofuels Policy (2009) allowed the purchase of non-digestible feedstocks such as molasses, celluloses and lignocellulose. Until 2017-2018, ethanol for the EBP program comes from molasses, allowing the use of products from the sugar industry. The current molasses yield allows for the production of about 300 crore liters of alcohol/ethanol, which requires a 10% blend. However, the real profit is only 5-6%. Of this, EBP currently uses between 120 and 50 crore liters and requires a purity level of 99.6%. The National Biofuels Policy 2018 expands access to feedstock for ethanol production. The policy aims to increase the percentage to 20% by 2029-2030. Conserve water by encouraging farmers to switch to other crops

Considering that the sugarcane industry needs radical changes and radical solutions, the researchers propose a solution that involves getting farmers in different regions to switch the production of sugarcane to sugarcane. others require less water and are suitable for the desired area. This will have a positive effect on the economy by reducing the amount of cane and the weight in the sugar mill, and saving water. This will require the central or state government to encourage and assist in the development of sugarcane varieties.

The working group estimates that this process may continue for the next 4 to 5 years until the sugar economy stabilizes and achieves a greater proportion of the EBP objectives. However, if the price of sugar increases during the interregnum (due to a decrease in sugarcane production due to drought or a change in the sugar system), the program can be stopped.

Reduces financial constraints for farmers and industrial companies One of the major challenges facing the sugar and cane industry today is that at the current sugar and cane prices, FRP/SAP sugar prices, sugar mills cannot generate enough revenue to sustain ability to pay farmers in advance for sugarcane and recover its value from the sale of sugar. According to industry sources, sugar prices are not dependent on FRP/SAP to generate enough profit for the sugar industry to pay FRP/SAP in full. Under the directive, the mills will pay the farmers within 15 days, as they sell their annual sugar sales. Therefore, a new solution is needed to allow the mills to earn money and support, at the same time, farmers will be paid so that 60% can be paid in advance, and the balance of 40 % to be paid in installments based on sugar sales. Meanwhile, to ensure that the farmers do not suffer from the payment of the remaining 40%, appropriate arrangements will be made by the bank with the support of the government through the Sugar Development Fund (no accommodation). The SDF was established in 1982, by an Act of Parliament. It is currently being used to provide loans to sugar producers to support their restructuring and improvement; the project of cogeneration based on bagasse; production of anhydrous alcohol or ethanol from alcohol; conversion of existing ethanol plants to ZLD plants; and the development of sugar cane. Loans are offered at a deposit rate of 2% below the prevailing bank rate.

### Use sugar cane bags

A high portion of bagasse obtained as a by-product of sugar production is used as a captive power by increasing the temperature in the sugar mill. This reduces the dependence on external power of these sweets. The working group found that many of the bags from the sugar factory were being processed properly. Efforts should be made to make them work effectively. For 10 tons of crushed sugarcane, 3 tons of liquid bags are collected. The bag is called wet because it contains between 48% and 52% water. Once dried, dry bags have high value for industry and economy in terms of net calorific value.

### CONCLUSION

The sugar industry is the second largest food industry in India. Sugar mills, especially sugar mills in Maharashtra and other states, have helped in building trust among villagers and strengthening the industrial base in rural India. In the era of globalization, the sugar industry needs a greater competitive edge which can be provided by improving productivity and producing quality sugar at competitive prices. It requires quality control at all levels of operations to improve its performance. The need of the hour is to liberate the industry from the unemployed. Many units of sugar do not have recovery plants from products. Work should be started based on bagasse and molasses. Ethanol, alcohol and paper products have huge development opportunities in India. In the future, 10-15% ethanol can be mixed with gasoline. A bagasse-based power plant installed next to each sugar mill will meet the electricity requirement.

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