



How The Excess Supply of Sugar Can Be Harnessed To Promote Use of Biofuels. Discuss.(150 Words / 10 M) (GS-3 Agriculture)

Approach:

1. Introduction
2. Mention advantages of using sugarcane in producing biofuels.
3. Measures to be taken.
4. Conclusion

Sugarcane is grown as a Kharif Crop. It needs a hot and humid climate with an average temperature of 21 °C to 27 °C and about 75-150 cm rainfall. Sugarcane is a water-intensive crop. Sugarcane can grow in any soil which can retain moisture, however deep rich loamy soil is considered ideal for sugarcane. India is the **second-largest producer** of sugarcane after Brazil.

Advantages of using sugarcane for producing biofuels in India:

Biofuels made from crops can be used in the **transportation sector as an alternative** to fossil fuels. With climate change mitigations underway, India can **lower its greenhouse gas emissions** by limiting fossil fuels in the transport sector. Brazil already has a biofuel industry based on Sugarcane. The Government of India has also set a target that India's transport sector should **at least 20%** be comprised of biofuels.

In India, **molasses**, a by-product of sugar manufacturing, is used to make biofuel. But if India can use sugarcane juice in biofuels, the whole commodity would be used far more productively and sustainably. To reach that **E-20 mandate** with molasses alone means a very large expansion of sugarcane cultivation is needed. This would also lead to a huge amount of extra sugar on the market. If sugarcane juice was used, then the E-20 mandate could be met **without any massive production expansion** and increasing sugar's **water** and **climate challenges**.

What needs to be done?:

- **Make sugarcane cultivation sustainable:** Improvements in sugarcane farming can reduce water intensity significantly. For instance, In Mexico, by using water recycling, sugar's water consumption fell by 94%. So, India can adopt such practices.
- **Implement a series of post-harvest investments:** Sugarcane Farmers are not cultivating fruit and vegetables because of their perishable nature. According to NITI Aayog, about 30% of cane area could be diverted to other crops by providing incentives to farmers at a cost of about ₹9,200 crores.
- So, governments could implement a series of post-harvest investments like drying and refrigeration facilities so that farmers can save their perishables till they go to market. This would be a big incentive for more sustainable agriculture.



-
- **Shift to traditional diets:** While the US consumes the most sugar per capita, FAO estimates China and India will drive the world's future sugar rush. With the growing desire for a more Western diet, India has to rediscover more traditional and healthier, diverse diets.
 - **Increase Taxes on sweetened beverages:** In Mexico, which had an even more worrying situation than India, showed encouraging results by taxing beverages. With the poorest classes proportionately benefitting, India can also implement similar policies.

Research highlights that there is a crucial intersection between food security, energy and water in India. Initially, the sugarcane juice can be diverted to produce biofuels to utilise excess sugar. But the long term solution would be making sugar cultivation sustainable, efficient and also making people move away from consuming excessive sugar. Thus, the trajectory of sugar can be turned towards suiting both Earth and humanity.

Legacy IAS Academy