



Challenges and Opportunity in Sugarcane Sector for Doubling Farmer's Income in India

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Indian agriculture is producing enough food for 17.00 per cent in the world population with only 2.30 per cent available land resources and 4.00 per cent fresh water in the world. India's population is likely to reach about 1.40 billion by 2025 AD with its current growth rate of about 1.90 per cent per annum. The per capita availability of arable land area 0.34 hectare in 1950 – 51, is likely to shrink to 0.08 hectare in 2025. (Srivastava *et al.* 2011)

Sugarcane is the main source of sugar production in the world. Out of total sugar production in the world (60.00%) obtained only in sugarcane sector. India is the fifth largest economy in the world next to US, China, Japan and Germany contribution of these countries in the world (Shukla *et al.* 2017). Out of 101 sugarcane growing countries in the world, India is the second largest producer of sugarcane (18.18 %) next to Brazil (15.81%) (DF&PDMCA 2020). Further, India is largest consumer of sugar (15.93%) in the world and 7th largest exporter of sugar (2.80%) in the world. Presently 60 million farmers are involved in sugarcane production and about 7.50 per cent rural population is being dependent directly or indirectly on sugarcane sector (Sah *et al.* 2019). The sugarcane is known as to be a water-guzzling crop average 1 kg sugar production required about 1500 – 2000 liter of water (NITI Aayog 2020). Now sugarcane is being cultivated annually over an area of 4.86 million hectare and production is 377.76 million tonnes during 2019 – 20. The average sugarcane productivity remained 81.83 tonnes per hectare in tropics and 56.49 tonnes per hectare in sub tropics with the national average of 77.61 tonnes per hectare and sugar recovery 10.86 per cent (Cooperative Sugar, Sugar Statistics 2020). India will need 27.29 million tonnes of sugar to meet the demand of the increasing population.

Table 01: Sugarcane Area, Production and Yield in India

Year	Area Under Sugarcane (000 hectare)	Production of Sugarcane (000 tonnes)	Yield of Sugarcane hectare (tonnes)
2015 – 16	4927	348448	70.70
2016 – 17	4436	306070	69.00
2017 – 18	4732	376905	79.60
2018 – 19	5114	400157	78.25
2019 - 20 (P)	4867	377766	77.61

Source: Cooperative Sugar, Sugar Statistics, November 2020; Vol. 52, No.3

The Potential of sugarcane sector towards doubling farmer's income, Uttar Pradesh is the largest sugarcane producing state in the country, which contributes about (50.00%) total area under sugarcane cultivation and total sugarcane production about (45.00%) in the country followed by Maharashtra which covers area about (12.00%) and production (15.00%) in the country (Shahi H.N 2001).

The contribution of sugarcane to the agricultural GDP has steadily increased from about 5.00 per cent in 1990-91 to 10 per cent in 2010-11. Sugarcane farming and sugar mill is the pivot of the state economy and development, as it is the highest producer of sugarcane in India. The state average cane yield is about 80.50 tonnes per hectare and average sugar recovery is 11.45 per cent in the year 2018-19. During the 2019-20 total area under cane cultivation was about 2.67 million hectares that producing a total 217.25 million tonnes and average yield of the 81.10 tonnes per hectare of the Uttar Pradesh. The total 188 sugar mills crushed 1104.06 lakh tonnes of cane and about 120 lakh tonnes sugar was produced with revenue of Rs. 33588.40 crore against the total amount of Rs. 35463.68 crore payable to farmers has been made for the crushing season 2017-18 up to January 2019.

The Uttar Pradesh is adjoining by Bihar in the east, Madhya Pradesh in the south, Rajasthan, Delhi, Himanchal Pradesh and Haryana in the east, Uttarakhand in the north and Nepal touch the northern borders of the Uttar Pradesh. It assumes strategic importance for Indian defence. Its area of (236286 Km²) lies between latitude of 77 to 84° E Area wise it is the fourth largest state in India. The economy of Uttar Pradesh is the second largest state economy in India with Rs. (14.46) lakh crore in gross domestic product and per capita GDP of Rs. (48520) (According to Census 2011.) agriculture and service sectors are the largest parts of the state's economy. The adequate water and land are the most important resources to achieve the desired production of food, fibers, feed and fuel to sustain the demand of growing population.

Table 02: Sugarcane Area, Production and Yield in Uttar Pradesh

Year	Area (Lakh hectare)	Production (Lakh tonnes)	Average Yield (tonnes/ha.)
2015 – 16	20.52	1364.12	66.47
2016 – 17	20.54	1486.57	72.38
2017 – 18	22.99	1820.75	79.19
2018 – 19	27.94	2249.2	80.50
2019 – 20	26.79	2172.53	81.10

Source: Uttar Pradesh Sugar Industry and Sugarcane Development Statistical Summary

Challenges of the Sugarcane production

The sugarcane producers in Uttar Pradesh face various types of challenges during the sugarcane production these are follows:

- Inadequate availability of quality seed of new sugarcane varieties and poor seed replacement rate adversely affect the realization of potential cane yield.
- Fluctuating production trends, low rate of recovery, high cost of production, small and uneconomic size of mills etc.
- The topography, climate, soil fertility and production of seedlings creates problem in sugarcane germination.





- The political ownership or their large share in cooperative sugar mills because delayed in the payment to farmers.
- The corruption due to political ownership further cause higher price and poor productivity in sugar mills.
- An irregularity availability of water is other major issue in cultivation of sugarcane crop. As many states have sufficient irrigation facilities with regular raining season i.e. South India while others have poor irrigation facility with even raining season i.e. U. P.

Opportunities of the Sugarcane Sector

The Sugarcane producers of the Uttar Pradesh various Opportunities during the sugarcane production these are follow:



- India is considered as sugar bowl about (15.00%) of the total sugar production in the world. Sugarcane multiple uses in the life of common man both for direct or indirect consumption.
- India is the second largest producer of sugarcane next to Brazil and also largest consumer in the world. (DF&PDMCA 2020)
- As the nature of sugarcane is nonperishable goods, government can store sugar in ware house before delivered it to other countries and regulate the optimum price for the consumer.

- The sugarcane industry is a high socio-economic development focus in rural areas by organizing resources, creating job opportunities, providing a source of income and developing transport and communication system.
- Sugarcane industry is an important agro-based industry that rural livelihood of about 60.00 million sugarcane farmers and around 5 lakh workers directly or indirectly employed in sugar mills.
- The sugar industry is fully capable of meeting demand of potable alcohol, fuel, ethanol, raw sugar and structural changes in global market.
- Indian Sugar industry annual output is worth approximately Rs. 80000 crores. (ISMA 2020).



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