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Report Highlights:

India's centrifugal sugar production in marketing year (MY) 2024/2025 (October-September) is forecast to reach 34.5 million metric tons (MMT), equivalent to 33 MMT of crystal white sugar. The current year's sugar production estimate is lowered to 34 MMT, equivalent to 32 MMT of crystal white sugar, due to the late onset of rain in Maharashtra and Karnataka as well as red rot infestation in central Uttar Pradesh. India's sugar exports in MY 2024/2025 are estimated to be 3.7 MMT as the Indian government is likely to maintain the export cap to meet domestic food consumption and sugar to ethanol diversion for the Ethanol Blending Program. Sugar consumption in the forecast year is expected to reach 32 MMT to meet sugar requirement during festivals, rise in pre-packed food market, sugar and confectioneries, and organized and unorganized catering services.

PRODUCTION, SUPPLY AND DISTRIBUTION

Table 1. India: Centrifugal Sugar (Raw Value Basis) (Thousand Metric Tons [TMT])

Sugar, Centrifugal	2022/2023 Oct 2022		2023	/2024	2024/2025		
Market Year Begins			Oct 2023		Oct 2024		
India	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post	
Beginning Stocks (1000 MT)	9506	9506	5306	9596	0	10500	
Beet Sugar Production (1000 MT)	0	0	0	0	0	0	
Cane Sugar Production (1000 MT)	32000	37000	36000	34000	0	34500	
Total Sugar Production (1000 MT)	32000	37000	36000	34000	0	34500	
Raw Imports (1000 MT)	800	1391	1000	2500	0	3050	
Refined Imp.(Raw Val) (1000 MT)	0	2	0	4	0	4	
Total Imports (1000 MT)	800	1393	1000	2504	0	3054	
Total Supply (1000 MT)	42306	47899	42306	46100	0	48054	
Raw Exports (1000 MT)	3349	2446	3200	1600	0	700	
Refined Exp.(Raw Val) (1000 MT)	4084	5857	3300	3000	0	3000	
Total Exports (1000 MT)	7433	8303	6500	4600	0	3700	
Human Dom. Consumption (1000 MT)	29567	30000	30506	31000	0	32000	
Other Disappearance (1000 MT)	0	0	0	0	0	0	

Total Use (1000 MT)	29567	30000	30506	31000	0	32000
Ending Stocks (1000 MT)	5306	9596	5300	10500	0	12354
Total Distribution (1000 MT)	42306	47899	42306	46100	0	48054

Source: FAS New Delhi historical data series. Forecast for 2024/2025; market years 2023/2024 and 2022/2023 are estimates. Note: Stocks include only milled sugar, as all *khandsari* sugar produced is consumed within the marketing year. Virtually no centrifugal sugar is utilized for alcohol, feed, or other non-human consumption. All figures in raw value. To convert raw value to refined/crystal white sugar, divide by a factor of 1.07.

Table 2. India: Sugarcane, Centrifugal, Area in Thousand Hectares and Others, TMT

Sugar Cane for Centrifugal	2022/2023 Oct 2022		2023/	/2024	2024/2025 Oct 2024		
Market Year Begins			Oct	2023			
India	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post	
Area Planted (1000 HA)	5500	5500	5600	5450	0	5420	
Area Harvested (1000 HA)	5500	5500	5600	5450	0	5420	
Production (1000 MT)	413000	416000	417500	415500	0	416000	
Total Supply (1000 MT)	413000	416000	417500	415500	0	416000	
Utilization for Sugar (1000 MT)	328000	328000	335000	335000	0	340000	
Utilization for Alcohol (1000 MT)	85000	88000	82500	80500	0	76000	
Total Utilization (1000 MT)	413000	416000	417500	415500	0	416000	

Source: FAS New Delhi historical data series. Forecast for 2024/2025; market years 2023/2024 and 2022/2023 are estimates. Note: Virtually no cane is utilized directly for alcohol production. "Utilization for alcohol" in the table includes cane used for gur, seed, feed, and waste. "Utilization for sugar" data includes cane used to produce mill sugar and *khandsari* sugar.

PRODUCTION

FAS New Delhi (Post) forecasts Marketing Year (MY) 2024/25 centrifugal sugar production at 34.5 million metric tons (MMT) (raw value basis) (**Table 1**), equivalent to 33 MMT of crystal white sugar¹. This outyear forecast is 1.5 percent higher than the revised production estimate for the current MY due to the planting of early maturing varieties and ratooning in key growing areas. It includes 600,00 MT of *khandsari*². Post lowers MY 2023/24 centrifugal sugar production to 34 MMT (raw value basis), equivalent to 32 MMT of crystal sugar, a six percent drop (raw value basis) from the previous MY (**Figure 1**) due to climatic challenges. According to the Ministry of Agriculture and Farmers Welfare, India's total sugarcane production for MY 2023/2024 is estimated to reach 446.4 MMT³, almost nine percent drop from the previous year estimate of 494.2 MMT.⁴ Even with the likely unfavorable weather conditions due to the El Niño phenomenon, sugarcane will remain the most lucrative crop for farmers in the forecast year, because of price initiatives for sugar and ethanol by the Indian government.





Source: FAS New Delhi research. MY 2023/24 E* is estimated, MY 2024/25*F indicates forecast.

¹Sugar polarization factors: to convert raw value to refined/crystal white sugar, divide by a factor of 1.07. ²*Khandsari* is a local type of low-recovery sugar prepared by open-pan evaporation.

³ Press Information Bureau, Release ID: <u>2010380.</u>

⁴ Press Information Bureau, Release ID: 1927272.

Post forecasts India's sugar planted area for the marketing year (MY) 2024/25 at 5.42 million hectares (MHa) and total sugarcane production at 416 MMT (**Table 2**). For the current MY 2023/24, Post has revised the planted area to 5.45 MHa, almost three percent lower than the previous estimate, and sugarcane production to 415.5 MMT. The drop in acreage is related to the El Nino weather pattern that included comparatively less rainfall in the onset of the season than in previous years (**Figure 2**). The late onset stunts the vegetative growth of the canes in Maharashtra, Uttar Pradesh, and Karnataka—three states that account for 80 percent of sugar production in India. According to industry sources, the limited rainfall in Maharashtra favored pulling up the state's production number considerably to 1 MMT. There was also a red-rot infestation in Uttar Pradesh which is detrimental to cane growth and resulted in a marginal production drop. Despite this, according to FAS sources, cane production is higher in Uttar Pradesh due to the highest state prices, State Advised Price (SAP), offered by the state for the current year.



Figure 2. India: Precipitation (September-February2023 and September-February2024)

Data Source: USAF 7x Monthly Precipitation, USDA Global Agricultural and Disaster Assessment System.

Further, it is anticipated that fewer *ratoon*⁵ crops will be available for MY 2024/25 due to the red-rot infestations in central Uttar Pradesh and water shortages in Karnataka that compelled farmers to uproot the canes for the current MY. However, ratoon crops in Maharashtra and the planting of early-maturing varieties in January 2024 during the limited rainfall should contribute to slightly increasing the sugar output for MY 2024/25.

⁵ The cane root stub left over from the first harvest that is harvested again is called a ratoon. It increases the sugar output, not the cane acreage.

Overall, the weather pattern resulted in less planting area in 2023/24, which is likely to limit sugar production for MY 2024/25. Additionally, farmers in Maharashtra, Uttar Pradesh, and Karnataka are planting different varieties of sugarcane to increase productivity. Since sugarcane is a perennial crop and takes time to mature, the above-mentioned factors will likely limit the growth in sugar output for the forecast year.

Fair and Remunerative Prices

On February 21, 2024, the Cabinet Committee on Economic Affairs updated its Fair and Remunerative Price (FRP) for sugarcane for MY 2024/2025 from \$3.79/quintal (INR 315/quintal)⁶ to \$4.09/quintal (INR 340/quintal), based on a recovery rate of 10.25 percent. Additionally, growers are awarded a premium of INR 3.32/quintal for every 0.1 percent gain in recovery above 10.25 percent, and the same amount will be deducted for a reduction of recovery by 0.1 percent.⁷

The revised FRP is 8 percent higher than the current year and will be implemented in October 2024. Currently, the growers are paid \$3.79/quintal (INR 315/quintal), where sugar recovery is less than 9.5 percent.⁸ The revised FRP is 107 percent above the cost of production and the highest so far. More than 99 percent of cane arrears are paid to the farmers for sugar seasons until MY 2022/23 due to the Indian government's policy interventions. Presently, all the states follow the FRP mechanism, except Uttar Pradesh, Karnataka, Uttarakhand, Haryana, and Punjab.

State Advised Pricing

Uttar Pradesh, Karnataka, Uttarakhand, Haryana, and Punjab follow a State Advised Price (SAP) for sugarcane, which is not dependent on a sugar recovery rate like FRP and is mostly higher than FRP. SAP for Uttar Pradesh was the same for two years at \$4.21/quintal (INR 350/quintal). But in early January 2024, the state government of Uttar Pradesh increased the SAP to \$4.39/quintal (INR 360-370/quintal) for general and early maturing varieties to support the farmers and sugar mills amidst the weather challenges.⁹

⁶ For the purpose of this report, 1 United States Dollar (USD/\$) is equal to INR 83.

⁷ "What is a citizen's 'right to be free from the adverse effects of climate change', underlined by Supreme Court?". <u>Indian Express</u>, Published April 9, 2024.

⁸ Press Information Bureau, Release ID: <u>2007875</u>.

⁹ "UP raises state cane price by Rs 20 per quintal for 2023-24 season". Indian Express, Published April 10, 2024.

Similarly, in January 2024, Uttarakhand also increased the SAP to \$4.45/quintal (INR 365-375/quintal) for general and early maturing varieties.¹⁰ Previously, in November 2023, Haryana increased the SAP by \$0.16 INR/quintal (INR 14/quintal) to \$4.65/quintal (INR 386/quintal) for MY 2023/24 and declared to further increase it to \$4.89/quintal (INR 400/quintal) for MY 2024/25.¹¹ Likewise, the state government of Punjab raised the SAP to \$4.71/quintal (INR 391/quintal) for the current crushing season.¹² However, the SAP for Karnataka has remained unchanged since 2019, in spite of erratic climatic conditions and two consecutive low production years.

 Table 3. India: Comparative Commodity Support Price Table, INR/MT, Wheat, and Rice

 Minimum Support Price against Sugarcane SAP and FRP

Marketing Year	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Wheat	16,250	17,350	18,400	19,250	19,750	20,150	21,250	22,750
Rice (Grade A)	14,700	15,900	17,700	18,350	18,880	19,600	20,600	22,030
Sugarcane	2,550	2,750	2,750	2,850	2,900	3,050	3,150	3,400
State Advised Price for Sugarcane, by State								
Uttar Pradesh	3,150- 3,250	3,150-3,250	3,150-3,250	3,150-3,250	3,400-3,500	3,400-3,500	3,600-3,700	-
Uttarakhand	2,950- 3,300	3,100-3,270	2,950-3,270	3,100-3,270	3,450-3,550	3,450-3,550	3,650-3,750	-
Punjab	2,950- 3,100	2,950-3,100	2,950-3,100	2,950-3,100	3,450-3,600	3,720-3,800	3,910	-
Haryana	3,200- 3,300	3,350-3,400	3,350-3,400	3,450-3,500	3,500-3,620	3,720	3,860	4,000
Karnataka	2,300	2,750	2,750	2,850	2,900	2,900	2,900	-

Source: Commission for Agricultural Costs and Prices (CACP), Government of India.

Note: Tamil Nadu abolished its previously utilized SAP in 2018. *Price revised since previous Sugar Semi-annual report; IN2023-0069.

¹⁰ "Uttarakhand govt raises sugarcane advised price to Rs 375, beats UP's rate". <u>Business Line</u>, Published January 24, 2024.

¹¹ 'Paltry hike' in sugarcane SAP a joke: Opposition. <u>Hindustan Times</u>, Published November 8, 2023.

¹² "Punjab sugarcane costliest in the country but Maharashtra cane has more sugar". Indian Express, Published April 10, 2024.

Cane Arrears

According to the Ministry of Food and Public Distribution, India's total cumulative arrears for sugar season 2022/23 is approximately \$136,000 (INR 1.14 crore).¹³ Nearly 100% of India's total debt for all the sugar seasons is paid to the cane farmers.¹⁴ The average sugar recovery rate, the number of operational mills, and cane arrears vary in the respective states. It is anticipated that Uttar Pradesh sugarcane payments will surpass \$4.3 billion (INR 36,000 crore) in the crushing season of 2023/24. The mills in Maharashtra have paid \$1.57 billion (INR 13,056 crores), which accounts for 96% of the total FRP that is due, leaving only four percent in arrears.

Consumption

The forecast for outyear sugar consumption is 32 MMT, equivalent to 30 MMT of crystal white sugar, which is three percent higher than the current MY estimate of 31 MMT. This accounts for the growth of the hotel and restaurant industries sugar use. There has been tremendous growth in Indian consumers use of catering services for events in recent years, giving rise to institutional demand for sugar. India has an extensive unorganized catering service industry available for hosting events and festivals in local settings, which is one of the largest consumers of sugar. Since the pandemic, there has been a significant increase in the number of domestic consumers with disposable income and consumption of processed foods and beverages, resulting in a surge in the market for sugary snacks. Urban consumers are increasingly intrigued with the purported health benefits of specialized nutritional sugars such as *gur* and *Khandsari*. Both are subject to a five percent tax from July 2022 under India's Goods and Services Tax (GST).





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¹⁴ Press Information Bureau, Release ID: <u>1990696</u>

of Statistics and Program Implementation, Government of India.

Note: Data label included for *Consumer Food Price Index*. Inflation rate data calculated as the average of rural and urban markets and are calculated by the provisional data month over the same month of the previous year (Base year 2012).

The Indian government has banned the export of raw sugar and reduced the diversion of sugar to ethanol to keep inflation low by maintaining the domestic stock of sugar, during the general election year 2024. Presently, the sugar price is stable, whereas the price for prepared meals and the consumer food price index are elevated (**Figure 3**). With a six percent drop in the current year's sugar production number compared to the previous year, the Indian government has put a cap on sugar-to-ethanol conversion, which is anticipated to be diverted towards domestic food consumption.

Market Price

India's MY 2023/24 sugar production has affected the international sugar market. There has been a considerable increase in the price of sugar globally due to the downward production of Indian raw sugar, one of the largest exporters. The Food and Agriculture Organization (FAO) Food Price Index indicates that while meat, dairy, cereals, and vegetable oil price indexes have been stable from October 2023 to March 2024, the sugar price index varied throughout the period, resulting in an elevated food price index. Further, in March 2024, the FAO Sugar Price Index was down by 7.6 percent compared to February 2024 after increasing for two consecutive months (**See:** FAO). The sugar index is still higher by 4.8 percent compared to March 2023. On a similar note, the average international price of raw sugar reached \$26.9 per pound and \$27.3 in October and November 2023 (**Figure 4**); however, the price started declining from December onwards until March 2024.¹⁵

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0 г	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
Sugar Price (U.S. Cents per Pound)	26.9	27.3	22.1	22.4	22.5	21

Figure 4. International Pricing of Raw Sugar (Cents per pound)

Source: International Sugar Organization

¹⁵ Other contributing factors to increased international sugar prices have included reduced sugar beet production in Europe, and lower sugarcane output in Thailand.

Throughout October until early December 2023, sugar production in India was estimated to be much lower, which spiked the price index. But production numbers stabilized after the unseasonal rain in late December which then lowered the sugar and food price index from December to March 2024 (**Figure 5**).

Additionally, international sugar prices were also affected by Brazil's large exports, the estimation of higher sugar production from beet in the European Union, and Thailand's rapid sugar harvest in the last part of the season.¹⁶ Major sugar-producing countries like India and Brazil are shifting from sugar-based ethanol to corn-based ethanol as a mechanism to maintain the sugar stock during a dwindling production year. However, El Nino induced dry weather conditions in Brazil, and the elevated price of crude oil in the international market can still increase the sugar price in 2024.





Source: FAO

On April 10, 2024, India's average market price of sugar across all grades totaled \$43.1/quintal (INR 3,580/quintal) and increased by \$1.08/quintal (INR 90/quintal) compared to the previous year's corresponding period. (**Figure 6**). Gur prices occasionally swing with sugar prices in response to shifts in local and international prices, sometimes at an increase and other times at a cheaper rate. The average *gur* price for April 2024 reached \$43.9/quintal (INR 3,650/quintal).

Figure 6. March 7th - April 10th, 2024, India Sugar Average Spot Price (INR per quintal)



Source: Spot Market Sugar Price.

Trade

For MY 2024/25, post forecasts India's sugar exports to be only 3.7 MMT. Total exports include 700 thousand MT of raw sugar and 3 MMT of refined white sugar. On October 18, 2023, the Indian government banned the export of raw sugar indefinitely, effective October 31, 2023, due to an initial projection of lower sugar production for the current year (see <u>IN2023-0083</u>). Depending on yield and stock, India is likely to continue the export cap for the current and forecast year to meet the domestic food consumption, ethanol requirements for a E20 ethanol-fuel blending (EBP) target by 2025, and to avoid price inflation during the year of the general election in 2024. Under raw sugar tariff rate quota (TRQ) allocation for the current year, the United States has allocated 8,606 metric tons of raw value (MTRV), and the European Union has allocated 5,841 MT of cane sugar from India.¹⁷

For the current MY, sugar exports are revised to 4.6 MMT, which includes 1.6 MMT of raw sugar and 3 MMT of refined white sugar. In November 2023, India allowed the export of 25,000 MT of sugar to Nepal. Similarly, 50,000 MT of sugar has been allowed for Bangladesh to meet the neighboring country's sugar shortage during the month of Ramadan. In a recent development, the export of 64,494 MT of sugar was allowed to the Maldives under a bilateral trade agreement signed between the two countries in 1981.

To protect Indian farmers' interests and stabilize domestic prices, the Indian government increased its raw sugar import duty from 50 percent to 100 percent on February 6, 2018.¹⁸ The Advance Authorization Scheme (AAS) accounts for the majority of India's sugar imports, with the rest being traded commercially. The AAS requires raw sugar imports through Indian port-based sugar refineries for refining before being re-exported. Post estimates approximately 2.5 MMT of sugar to be re-exported through the AAS.¹⁹

From October 2023 to January 2024, India imported more than 90 percent of raw sugar from Brazil for refining and re-exporting, mostly to the east and west African countries. From October 2023 to January

¹⁷ Source: Government of India, Ministry of Commerce, Public Notice No. 29/2023

¹⁸ Source: Department of Food and Public Distribution.

¹⁹ Imported raw sugar through the AAS is re-exported post refinement. The products cannot be sold in the domestic market.

2024, India has mostly exported to Sudan, Libya, Kenya, Djibouti, Somalia, Sri Lanka, Tunisia, Tanzania, and the United Arab Emirates. However, the current year share has decreased compared to corresponding period of previous year, except Libya and Kenya (**Figure 7**). Post is adjusting the current trade mix of raw and refined sugar to account for domestic sugar production and available stocks.

Figure 7. India, Sugar Exports (MT), October to January 2021/2022, 2022/2023, and 2023/2024



Source: Trade Data Monitor

Note: HS codes include raw sugar; 170111, 170112, 170113, 170114; and refined sugar HS codes 170191 and 170199.

Stocks

Post forecasts India's MY 2024/25 sugar ending stocks to jump to 12 MMT. This increase in the outyear forecast accounts for the marginally increased production year compared to current year and increased domestic consumption. Additionally, the current year estimate revision to 10 MMT accounts for the higher beginning stock compared to MY 2022/23 due to a smaller diversion (1.7 MMT of sugarto-ethanol diversion) and increased domestic food consumption. Ending stocks, assuming average consumption levels, usually equate to about seven months of supply. In the later part of 2023, the Indian government issued an order to all sugar stakeholders to disclose sugar stocks every week and get the stocks verified, amidst a critical sugar year and the Indian general elections ahead.

Policy

Sugar Development Fund

The Sugar Development Fund (SDF) was passed in 1982 by the Indian Parliament to financially assist the sugar mills for renovation, bagasse-based power generation, cane development, sugar to ethanol and alcohol production, a zero liquid discharge plant, and growth of sugarcane. On February 28, 2024, the Indian government revised the SDF guidelines, which have a debt-restructuring option and a one-time settlement option for the sugar factories.²⁰ In a one-time payment, the penal fee will be waived if any sugar mill clears all the pending payment within six months.

Sugar Subsidy Scheme

On February 1, 2024, the Indian government extended the existing Sugar Subsidy Scheme for the distribution of sugar through the Antyodaya Anna Yojana program (Uplifting the Poorest Food Plan) for another two years until March 2026.²¹ According to this scheme, sugar is distributed at \$22.3/quintal (INR 18.50/kg), providing 0.01 quintal or 1 kilogram²² of sugar per family per month. Additionally, states and union territories are allowed to charge the beneficiary directly for any extra costs associated with shipping and handling fees up to the retail issue price of \$16.26/quintal (INR 13.50/kg).

National Biofuel Policy and Ethanol Blended Petrol Program

In 2018, India formed the National Policy on Biofuels to determine targets for ethanol and biofuel blending and assess the required feedstocks for fuels. Under this policy, the Ethanol Blending Program (EBP) was launched to boost the production of ethanol from sugarcane feedstocks, broken rice, damaged grains, and corn. Over the period, procurement prices increased (**Table 6**). India has reached the target of E10 in 2022 and is currently at a 12 percent ethanol-to-gasoline blending rate. The national average target for blending rate is E20 by 2025.

For the current year, the Indian government allowed the diversion of only 1.7 MMT of sugar for ethanol to adjust market realities. Oil marketing companies (OMCs) procured approximately 3.6 billion liters of ethanol from sugar for the Ethanol Supply Year (ESY)²³ 2022/23. During the ethanol supply year 2022/2023, OMCs saved around 5.09 billion liters (509 crore liters) of gasoline due to ethanol blending, which also facilitated the prompt payment of approximately \$2.32 billion (INR 19,300 crore) to farmers and a net reduction of 10.8 MMT in carbon dioxide.²⁴

²⁰ "Govt offers debt restructuring and one-time settlement to sugar mills for loans taken under SDF". Economic Times, Published March 1, 2024.

²¹ "Government approves extension of subsidy scheme on sugar supplied to AAY families by 2 years till March 2026. <u>The Hindu</u>, Published February 1, 2024.

²² 1 quintal equals 100 kilograms.

²³ Ethanol Supply Year, November to October.

²⁴ "Ethanol blending program saved Rs 24,300 crore foreign exchange in 2022-23: Hardeep Puri". <u>Economic Times</u>, Published January 4, 2024.

Feedstock	ESY 2021/22	ESY 2022/23				
Sugarcane Juice/Sugar Syrup/Sugar	63.45	65.61	65.61			
B-Heavy Molasses	59.08	60.73	60.73			
C-Heavy Molasses	46.66	49.41	56.28			
Damaged Food Grains/Maize	51.55	55.54	71.86			
Surplus Rice	56.87	58.50	58.50			

 Table 6: India: Ethanol Price by Feedstock for ESY 2021/22 and ESY 2022/23 (INR/Liter)

Source: MoPNG

Attachments:

No Attachments