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Report Name: Sugar Semi-annual

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Post: New Delhi

Report Category: Sugar

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Report Highlights:

Market Year (MY) 2021/22 (October-September) centrifugal sugar production will grow by three percent to 34.7 million metric tons (MMT), equivalent to 31.8 MMT of crystal white sugar, on account of higher yields. Combined, Uttar Pradesh, Maharashtra and Karnataka will account for 85 percent of India's total production. India is expected to withdraw its sugar export subsidies for MY 2021/22. However, reduced global supplies and firming sugar prices are forecast to drive India's exports to approximately seven MMT despite the likelihood of retracted subsidies. India's consumption estimate remains unchanged at 28.5 MMT (equivalent to 26.6 MMT of crystal white sugar), leading to ending stocks of 14.3 MMT, equivalent to an approximate seven-month supply at average consumption levels.

Commodities:

Sugar, Centrifugal

Sugar Cane for Centrifugal

Production, Supply and Distribution

Table 1. India: Centrifugal Sugar (Raw Value Basis), in Thousand Tons

Sugar, Centrifugal Market Begin Year	2019/2020		2020/2021		2021/2022	
	Oct-19		Oct-20		Oct-21	
India	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	17614	17614	14614	14614	15374	14174
Beet Sugar Production	0	0	0	0	0	0
Cane Sugar Production	28900	28900	33760	33760	34700	34700
Total Sugar Production	28900	28900	33760	33760	34700	34700
Raw Imports	900	900	1000	1000	1000	1000
Refined Imports (Raw Value)	0	0	0	0	0	0
Total Imports	900	900	1000	1000	1000	1000
Total Supply	47414	47414	49374	49374	51074	49874
Raw Exports	1400	1400	1100	1000	1000	1000
Refined Exports (Raw Value)	4400	4400	4900	6200	5000	6000
Total Exports	5800	5800	6000	7200	6000	7000
Domestic Consumption	27000	27000	28000	28000	28500	28500
Other Disappearance	0	0	0	0	0	0
Total Use	27000	27000	28000	28000	28500	28500
Ending Stocks	14614	14614	15374	14174	16574	14374
Total Distribution	47414	47414	49374	49374	51074	49874

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.

Table 2. India: Sugarcane, Centrifugal, Area in Thousand Hectares and others in Thousand Tons

Sugarcane for Centrifugal Market Begin Year	2019/2020		2020/2021		2021/2022	
	Oct-19		Oct-20		Oct-21	
India	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted	4850	4850	5283	5410	0	5600
Area Harvested	4850	4850	5283	5410	0	5600
Production	342000	342000	381000	403000	0	412000
Total Supply	342000	342000	381000	403000	0	412000
Utilization for Sugar	245000	245000	289000	308000	0	312000
Utilization for Alcohol	97000	97000	92000	95000	0	100000
Total Utilization	342000	342000	381000	403000	0	412000

Note: Virtually no cane is utilized directly for alcohol production. "Utilization for alcohol" includes cane used for *gur*, seed, feed, and waste. "Utilization for sugar" data includes cane used to produce mill sugar and *khandsari* sugar

Sugar Polarization Factors: To convert raw value to refined/crystal white sugar, divide by a factor of 1.07.

Note: All sugar data in the report are raw value basis unless otherwise stated.

PRODUCTION

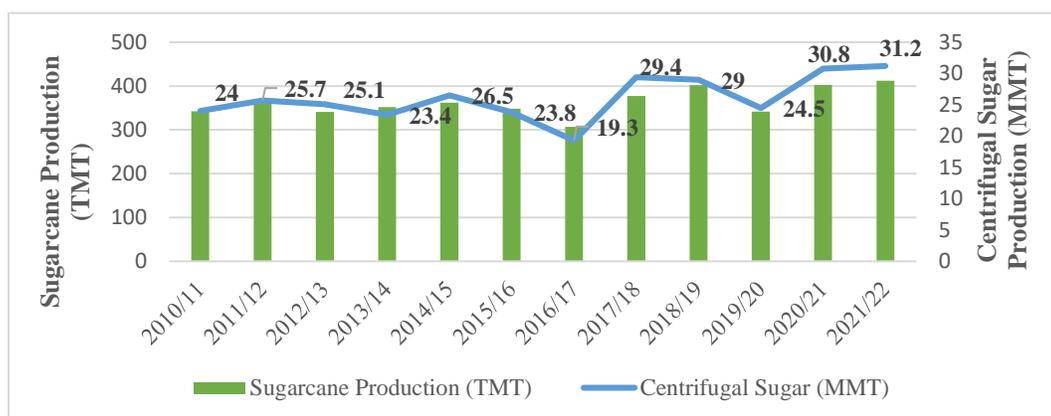
FAS New Delhi (Post) forecasts India's out-year centrifugal sugar production at 34.7 million metric tons (MMT) in marketing year (MY) 2021/2022 (October-September), increasing three percent above the previous season on account of higher yields. This forecast includes 600,000 metric tons (MT) of *khandsari*.¹ This converts to 34.1 MMT of milled sugar, equivalent to 31.8 MMT of crystal white sugar (see Table 3) (Note: Sugar Polarization Factors - to convert raw value to refined/crystal white sugar, divide by a factor of 1.07).

State	2019/20	2020/21	2021/22
	Revised	Estimate	Forecast
Andhra Pradesh	0.6	0.5	0.5
Bihar	0.6	0.7	0.7
Gujarat	0.9	1	1
Haryana	0.7	0.6	0.5
Karnataka	3.3	4.3	4.4
Maharashtra	6.3	10.6	11
Punjab	0.8	0.6	0.4
Tamil Nadu	0.8	0.8	0.9
Uttar Pradesh	12.1	11.1	11.7
Others	0.9	0.8	0.7
Total	27.0	31.0	31.8

Note: Excludes 0.6 MMT of *khandsari* sugar, as state-wise breakout is not available.

Data: 2020/21 and 2021/22 Post Estimate and forecast. Source: OAA New Delhi

Figure 1. India: Sugarcane and Centrifugal Sugar Production (MMT and Thousand Metric tons [TMT])



Data: USDA PSD, 2020/21 and 2021/22, Post Estimate and forecast. Chart Source: OAA New Delhi

¹ *Khandsari* is a local type of low-recovery sugar prepared by open-pan evaporation.

In market year 2020/21, Uttar Pradesh was India’s largest sugar producing state for the fifth consecutive year, despite an eight percent drop in production due to pest infestations (observed in eastern parts) and dry weather conditions in the latter half of the crop cycle. However, sugarcane growing areas in Uttar Pradesh are relatively well irrigated compared to other major production centers like Maharashtra and Karnataka, making them more susceptible to monsoon conditions. Despite an erratic monsoon and fewer farm workers throughout this year, India will still witness a surplus sugar season. Sugarcane producers are guaranteed returns driven by high minimum support price (MSP) for sugarcane. As a result, Post estimates a four percent increase in sugarcane acreage for MY 2021/22, as an increasing number of farmers will shift from horticultural crops to sugarcane lured by a high MSP and concerns with market yard access,² particularly for perishable crops.³

Furthermore, above-average monsoon rains and adequate water levels in reservoirs have resulted in increased yields per hectare (ha) in most of the sugarcane growing regions. This has boosted overall yields per hectare. Post estimates sugarcane yields ranging between 85-95 MT/ha for Maharashtra and Karnataka; 74-78 MT/ha for Uttar Pradesh, and 60-65 MT/ha for the rest of the country. Accordingly, Post has revised the nationwide average yields for MY 2020/21 and MY 2120/22, respectively (Table 4). Combined, the states of Uttar Pradesh, Maharashtra, and Karnataka will continue to contribute nearly 85 percent of total sugar production in the forecast year. This accounts for a near-normal diversion of cane for sugar production.

Table 4. India: Sugarcane Area, Production and Utilization

Sugarcane	Area	Yield	Product	Sugar	<i>Khandsari</i>	<i>Gur</i>	Seed
	Mha	MT/Ha	TMT	MMT	MMT	MMT	MMT
2010/11	4.89	70.09	342.38	24.0	0.7	5.4	4.1
2011/12	5.08	71.07	361.03	25.7	0.7	5.4	4.3
2012/13	5.06	67.38	341.2	25.1	0.7	4.2	4.1
2013/14	5.01	70.26	352.14	23.4	0.8	6.8	4.2
2014/15	5.14	70.44	362.33	26.5	0.8	4.5	4.4
2015/16	4.96	70.25	348.45	23.8	0.8	6	4.2
2016/17	4.38	70.02	306.7	19.3	0.8	6.8	3.7
2017/18	4.73	79.7	377	29.4	0.8	3	4.5
2018/19	5.55	72.43	402	29	0.9	5.5	4.8
2019/20	4.85	70.48	342	24.5	0.9	4.5	4.3
2020/21	5.41	74.5	403	30.8	0.8	4.4	4.3
2021/22	5.6	73.6	412	31.2	0.9	4.6	4.5

Data: OAA New Delhi historical data series. Post forecast for 2021/22, 2020/21 and 2019/20 FAS estimations.

India has approximately 756 sugar mills, of which some 64 units lie dormant due to economic, feedstock and operational inefficiencies. Sugar mills in Maharashtra are preparing to commence cane crushing for

² Also known as Agriculture Produce Marketing Committee (AMPC) *mandis*.

³ See: GAIN [IN2020-0136](#) and [IN2021-0082](#).

MY 2021/22 from October 15, 2021, onward with expectations that 193 mills in the state will be operating in the upcoming season.

On August 18, 2021, the Government of India issued an advisory to all sugar mills to increase sugar exports and diversion toward ethanol (Source: [Department of Food and Public Distribution](#)). The continuing economic benefits from the dedicated supply of cane juice/B-heavy molasses for fuel ethanol production will provide sugar mills with an incentive to divert excess sugar for this use. Uttar Pradesh, Maharashtra, and Karnataka will particularly benefit, which will improve sugar mill cash flows (see Ethanol Program section) and help with arrears settlement (overdue debt). Accordingly, India will likely accelerate its efforts to divert more sugar to produce fuel ethanol to achieve its 2022 ten percent (E10) blend target.

On the Weather Front

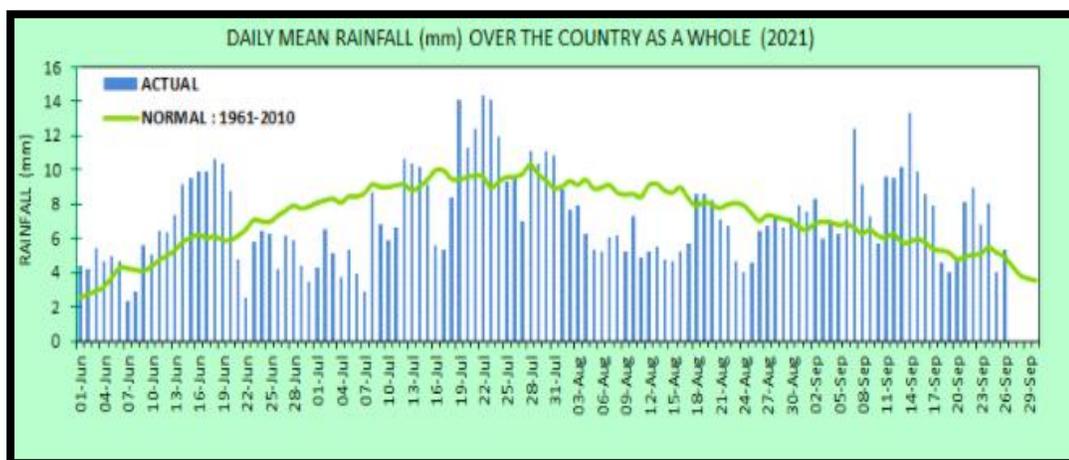
The Indian Meteorological Department (IMD) reports that nationwide cumulative precipitation from June 1 to September 23, 2021 was three percent below normal. Key sugarcane growing regions including Uttar Pradesh, Maharashtra, Karnataka witnessed below-normal rainfalls except for Tamil Nadu. However, erratic rains in August and September have offset any significant damage in sugarcane growing areas. Prevailing neutral *El-Nino* Southern Oscillation conditions will result in a delayed withdrawal of the monsoon, particularly in northwest India (Figure 2).

According to the Indian government's latest planting progress update (September 10, 2021), sugarcane production area increased six percent to 5.47 million hectares (Mha) compared to the corresponding period last year. Higher acreages are reported in Maharashtra, Karnataka, Gujarat, and Uttar Pradesh. However, in Punjab, an incidence of red rot disease⁴ in sugarcane crops impacted 50,000 hectares. Earlier this year, top borer⁵ pest infestation was observed in certain cane varieties in Haryana due to prolonged dry spells throughout June and July. This will likely result in a yield loss of 20-30 percent in the state.

⁴ [Red rot disease](#) is caused by the fungus *Glomerella tucumanensis*.

⁵ [Top borer](#) (*Scirpophaga excerptalis*) is also a major sugarcane pest in sub-tropical India.

Figure 2. India: Daily Mean Rainfall (millimeters)



Source: Adapted from the Indian Meteorological Department, Government of India.

Fair and Remunerative Price

On August 25, 2021, the Cabinet Committee on Economic Affairs approved an increase in the Fair and Remunerative Price (FRP) for sugarcane in MY 2021/22 by INR⁶ 50 to INR 290 per quintal⁷ (\$3.94/quintal). There will be a premium of INR 2.90/quintal for each 0.1 percent increase in recovery over and above ten percent (See: [Press Information Bureau, August 25, 2021](#)). The Commission for Agricultural Costs and Prices determines the FRP based on recommendations from, and after consultations⁸ with, state governments and other stakeholders. According to the government, the sugarcane production cost per quintal is computed to INR 155 (\$2.10/quintal). The Fair and Remunerative Price of INR 290/quintal (\$3.94/per quintal), at a recovery rate of ten percent, is almost 87 percent above the cost of production.

Furthermore, on September 10, 2021, the state advised price (SAP) for sugarcane in Punjab for MY 2021/22 was increased from INR 310/quintal (\$4.20) to INR 360/quintal (\$4.88/quintal). At the same time, the SAP in Haryana was increased from INR 350/quintal (\$4.74/quintal) to INR 362/quintal (\$4.9/quintal). Following suit, on September 27, 2021, the Uttar Pradesh government also announced its own revised MY 2021/22 sugarcane SAP with early maturing cane varieties now fetching INR 350/quintal (\$4.74/quintal), while common varieties will be worth INR 340/quintal (\$4.61/quintal).

⁶ For purposes of this report, USD \$1 equals INR 73.58.

⁷ One quintal equals 100 kilograms.

⁸ The recommended FRP accounts for various factors such as production costs, overall demand-supply situation, domestic and international prices, intercrop price parity, trade price terms of primary byproducts, and the likely impact of FRP on general price levels and resource use efficiency.

Cane Arrears

According to the government's MY 2019/20 estimates, approximately \$19.23 million (INR 142 crore) in cane arrears (overdue debt payments) have yet to be paid to Indian sugar mills, while for MY 2020/21, the arrears are estimated at \$639.6 million (INR 4,721 crore⁹). As of August 2021, cumulative debt for MY 2017/18 through MY 2020/21 are estimated at \$739.6 million.

CONSUMPTION

The out-year sugar consumption forecast remains unchanged at 28.5 MMT (Table 1), which is equivalent to 26.6 MMT of crystal white sugar. Current year 2020/21 consumption is estimated at 28 MMT (26.1 MMT of crystal white sugar). This reflects industry and market sentiments which indicate lower domestic offtakes in central and western India during the first five months of MY 2020/21.

According to industry sources, consumer product demand is coming back with increased sales of ice cream, bakery, confectionary, *mithai* (sweets), processed food and beverage products, all of which utilize sugar as a key ingredient. The hotel, restaurant and institutional sector is also seeing increased footfall as consumers become more comfortable dining out following the COVID-19 second wave and subsequently increased vaccinations. India's largely unorganized catering segment, which is among the heaviest sugar consumption points, is also recovering with increased weddings, caterings, and events. Expectations of a strong festive season and continuing favorable demand prospects will further propel retail and institutional sugar demand.

Across India, sugar is sold largely in loose bulk form in unorganized mom and pop *kirana* stores. This channel remained largely resilient to the shocks of the pandemic. Packaged sugar accounts for just four percent of the overall sugar sales. However, the packaged segment (branded or retail sugar category) is expected to see accelerated growth due to drivers like rising sales in modern retail and e-commerce, along with shifting consumer demographics (e.g., millennial working population, internet penetration).¹⁰

Market Prices

Average sugar prices in MY 2020/21 in the Delhi wholesale market reached INR 35,082/MT (\$475/MT). *Gur* (jaggery) prices averaged INR 32,142/MT (\$435/MT) for the same period, which moves in tandem with cane sugar prices either at a premium or discount in response to domestic and international price movements (Figure 3).

Reports of lower sugar production in Brazil will result in a contracted global inventory by 6-7 MMT. This has resulted in a sudden burst in international prices, giving Indian sugar a competitive advantage with some price parity. In September 2021, international prices ranged between \$490-\$500/MT for refined sugar and \$0.19-0.20/pound for raw sugar, signaling that India can export sugar even without an

⁹ One crore equals ten million.

¹⁰At the same time, a premature, but significant segment of the industry opines that retail sales of packaged sugar will displace loose bulk sugar sales in this decade.

export subsidy (Source: [International Sugar Organization](#)). As the domestic crushing season commences in the next three weeks, raw sugar exports are likely to remain stronger for both domestic port-based refineries as well as other markets.

Table 5. India: Commodity, Centrifugal Sugar, Monthly Price Table (INR/MT)

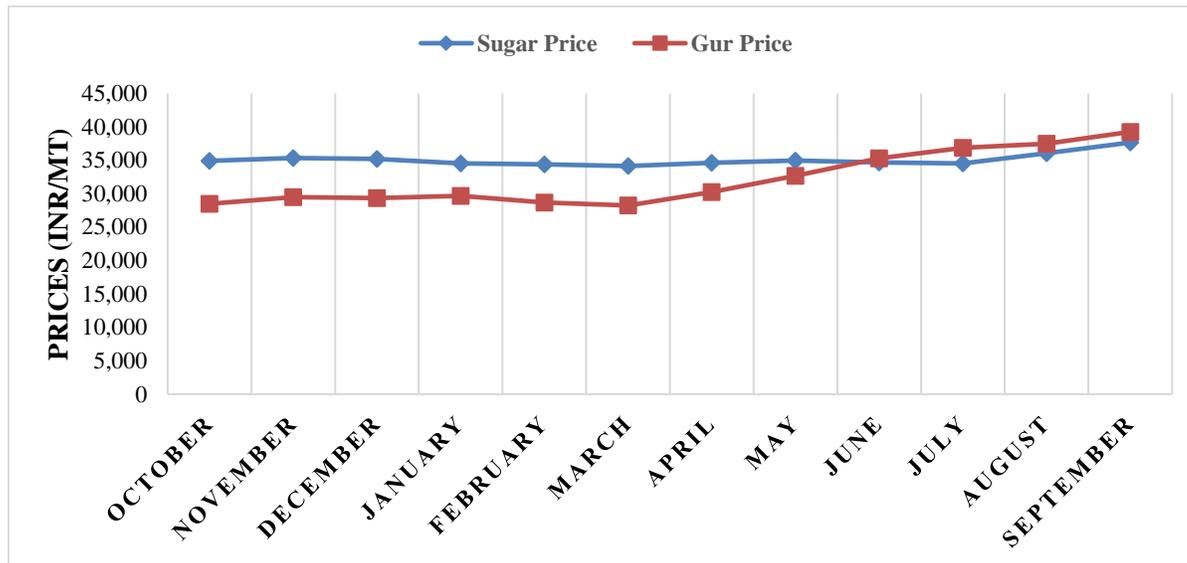
Year	2019	2020	2021	Percent Change
January	34,100	35,350	34,540	[2]
February	34,300	34,800	34,370	[1]
March	33,400	34,500	34,130	[1]
April	34,500	34,500	34,630	0
May	35,800	33,700	34,980	4
June	35,100	35,200	34,660	[2]
July	34,900	35,200	34,530	[2]
August	36,400	35,600	36,070	1
September	37,500	35,000	37,650	8
October	37,000	34,920		
November	36,000	35,320		
December	35,800	35,180		
Exchange Rates	70.16	74.13	73.58	
	Local Currency INR/\$USD			

Table 6. India: Commodity, Gur, Monthly Price Table (INR/MT)

Year	2019	2020	2021	Percent Change
January	29,000	36,500	29,650	[19]
February	30,000	31,500	28,670	[9]
March	31,500	32,000	28,230	[12]
April	33,500	32,000	30,250	[5]
May	34,500	32,500	32,660	0
June	34,500	38,000	35,300	[7]
July	35,500	39,500	36,840	[7]
August	38,000	38,500	37,500	[3]
September	37,000	38,500	39,250	2
October	31,000	28,500		
November	29,000	29,500		
December	40,000	29,350		
Exchange Rates	70.16	74.13	73.58	
	Local Currency INR/US \$			

Note for Tables 5 and 6: Exchange rates for 2019 and 2020 refer to respective marketing years (October-September). **Data source and Contract Terms:** Indian Sugar Mills Association, NFCSF, and Department of Consumer Affairs; average monthly prices based on the Delhi wholesale market.

Figure 3. India: Delhi Market Sugar and Gur Prices (INR/MT)



Data: Indian Sugar Mills Association (ISMA), National Federation of Cooperative Sugar Factories (NFCFSF), and Department of Consumer Affairs, Government of India.

TRADE

Trade Policy: In September 2021, the Indian government cleared \$244 million (INR 1,800 crore) in subsidies to sugar mills for exporting six MMT of sugar for MY 2020/21 under the Maximum Admissible Export Quota (MAEQ) program. The total budgetary outlay for sugar exports under MAEQ in MY 20/21 was \$474 million (INR 3,500 crore) (See: [GAIN IN2021-0050](#)).

India will most likely discontinue the MAEQ program in MY 2021/22. This is attributed to firm domestic and global prices, a decent exportable surplus, existing domestic alternatives for sugar feedstock diversion toward ethanol, and the likely WTO ruling¹¹ against India’s sugar export subsidy program. The current MAEQ policy subsidizes sugar exports up to six million tons. Between July-September 2021, India exported close to one MT without the export subsidy.

Exports/Imports: Assuming normal market conditions including a domestic sugar surplus and firm international prices due to relatively tight global supplies (lower production in Brazil and Thailand), Post forecasts India to export around seven MMT of surplus sugar in MY 2021/22 without any export subsidies. India will rely on regional buyers like Indonesia, Sri Lanka, and China while coping with global shipping constraints. Domestic suppliers will likely rely on Indonesia, the United Arab Emirates, Saudi Arabia, Bangladesh, and China to offset their volumes previously destined for Afghanistan and Sri Lanka because of geopolitical tensions and economic uncertainty. Total exports will include approximately 500,000 MT under the Advance Authorization Scheme (AAS); the remaining 6.5 MMT

¹¹ See [WTO DS581](#).

will be transacted through commercial sales (Note: FAS New Delhi will adjust export sales in subsequent updates to reflect actual market conditions).

For the current MY 2020/21 season, Post has revised its forecasted estimate of sugar exports to 7.2 MMT, reflecting latest market realities. India exported 6.2 MMT of sugar between January-August 2021 under the MAEQ program. Indonesia (with a 26.3 percent export share) was the largest buyer followed by Sudan (9.2 percent), UAE (8.4 percent), Sri Lanka (7.9 percent), Somalia (7.2 percent) Afghanistan (6.5 percent) and Bangladesh (five percent). According to industry sources, 700,000 MT of raw sugar has been exported to domestic port-based refineries for re-export.

Imports are likely to be negligible¹² at approximately one MMT as domestic supply will exceed requirements for both consumption and stocks.

STOCKS

Post has revised MY 2020/21 ending stocks at 14.1 MMT, which accounts for increased sugar exports. India's sugar ending stocks for MY 2021/2022 are estimated at 14.3 MMT, one percent above the previous year. This figure includes four MMT of buffer stocks applied to the current MY and out-year and is carried forward as excess supply.¹³ Ending stocks will represent approximately seven months of supply using average consumption levels, exceeding the normal two to three months of reserve stocks. However, stock levels are likely subject to decline on account of ethanol diversion.

Ethanol Program

Consistent with the National Biofuel Policy 2018, the Ethanol Blend Program (EBP) has targets of ten percent (E-10) blending of ethanol in gasoline by 2022 and E-20 by 2025. According to the Indian government, approximately 1.73 billion liters (BL) was procured for MY 2019/20 to achieve a five percent blending average. The procurement target for the current MY is 3.25 BL to achieve a blend goal of 8.5 percent. As of September 19, 2021, actual procurement has reached 2.48 BL. Of this amount, the various feedstock includes approximately 1.53 BL in B-heavy molasses, 331 million liters (ML) in sugarcane juice/syrup, 308 ML from C-heavy molasses, 291 ML from damaged food grains, and 14 ML from surplus rice. Post estimates that India's oil marketing companies (OMC) will procure approximately three BL through November 30, 2021.

¹² An exception involves the Duty-Free Import Authorization (DFIA) scheme. Under the DFIA, exporters may import sugar duty-free after meeting an export obligation. In contrast, the AAS allows local sugar millers or exporters to import raw sugar duty-free against a future export commitment.

¹³ Excess supply is referred as being above export sales, normal stocks, and consumption requirements.

Ethanol prices paid by the OMCs remain unchanged. However, according to industry sources, the prices may be increased before the ethanol supply period begins, which will run from December 1, 2021, to November 30, 2022. Current prices are given below:

- Ethanol derived from C-heavy molasses fixed at INR 45.69/liter (\$0.61/liter), up from the previous price of INR 43.75/liter.
- Ethanol produced from B-heavy molasses and partial sugarcane juice fixed at INR 57.61/liter (\$0.77/liter), increased from the previous INR 54.27/liter price. Ethanol derived from 100 percent sugarcane juice is fixed at INR 59.48/liter, or \$0.83/liter (from the previous price of INR 59.13/liter) for mills that will divert 100 percent sugarcane juice for ethanol production.
- Ethanol derived from 100 percent sugarcane juice/sugar/sugar syrup is fixed at INR 62.65/liter (\$0.84/liter), up from the previous supply period price at INR 59.48/liter. This price is provided for mills that will divert 100 percent sugarcane juice for ethanol production
- OMCs were advised to prioritize ethanol in the following order: 100 percent sugarcane juice, B-heavy molasses/partial sugarcane juice, C-heavy molasses, and damaged food grains and other sources

According to the Indian government, OMC ethanol purchases have resulted in cumulative revenues of approximately \$3 billion (INR 22,000 crore) for the sugar mills in the last three seasons (MYs 2017/18, 2018/19 and 2019/20). For MY 2020/21, estimated ethanol sales revenues are estimated at \$2.03 billion (INR 15,000 crore).

On September 10, 2021, the United States and India unveiled a U.S.-India Biofuels Taskforce to promote clean energy, encourage biofuels use, and curtail India's greenhouse gas emissions (Source: [Grainnet](#)). For the first seven months of 2021, India's industrial grade ethanol imports (denatured ethanol) from the United States were 403.2 ML (valued at \$155.5 million), down from the corresponding period last year (482 ML, valued at \$217.6 million).

Attachments:

No Attachments