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Report Highlights:

Market Year (MY) 2020/21 (out-year/October-September) centrifugal sugar (sugar) production will grow by 17 percent to 33.7 million metric tons (MMT). Uttar Pradesh remains India's largest producer of sugar followed by the states of Maharashtra and Karnataka. Assuming a return to more normal market conditions in a post-COVID-19 India, the country will export 6 MMT of sugar. A modest rise in domestic sugar consumption is foreseen, reaching 28.5 MMT, which will lead to ending stocks of 14.8 MMT, or roughly equivalent to a seven-month supply at average consumption levels.

**COMMODITIES:
SUGAR, CENTRIFUGAL
SUGAR CANE FOR CENTRIFUGAL**

Production, Supply and Demand

Table 1. India: Centrifugal Sugar (Raw Value Basis), in Thousand Tons						
Sugar, Centrifugal	2018/2019		2019/2020		2020/2021	
Market Begin Year	October, 2018		October, 2019		October, 2020	
India	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	14214	14214	17614	17614	16014	14614
Beet Sugar Production	0	0	0	0	0	0
Cane Sugar Production	33070	34300	28900	28900	33705	33760
Total Sugar Production	33070	34300	28900	28900	33705	33760
Raw Imports	1200	1300	1500	900	1200	1000
Refined Imports (Raw Value)	0	0	0	0	0	0
Total Imports	1200	1300	1500	900	1200	1000
Total Supply	48484	49814	48014	47414	50919	49374
Raw Exports	50	1100	1000	1400	1000	1500
Refined Exports (Raw Value)	3350	3600	4000	4400	4000	4500
Total Exports	3400	4700	5000	5800	5000	6000
Domestic Consumption	27500	27500	27000	27000	28500	28500
Other Disappearance	0	0	0	0	0	0
Total Use	27500	27500	27000	27000	28500	28500
Ending Stocks	17584	17614	16014	14614	17419	14874
Total Distribution	48484	49814	48014	47414	50919	49374

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	2018/2019		2019/2020		2020/2021	
Market Begin Year	Oct,18		Oct,19		Oct,20	
India	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted	5060	5550	4650	4850	5437	5283
Area Harvested	5060	5550	4650	4850	5437	5283
Production	385000	402000	355000	342000	381000	381000
Total Supply	385000	402000	355000	342000	381000	381000
Utilization for Sugar	275000	290000	253000	245000	287000	289000
Utilization for Alcohol	110000	112000	102000	97000	94000	92000
Total Utilization	385000	402000	355000	342000	381000	381000

Note: Virtually no cane is utilized directly for alcohol production. 'Utilization for alcohol' in the PS&D includes cane used for gur, seed, feed and waste. 'Utilization for sugar' data includes cane used to produce mill sugar and khandsari sugar

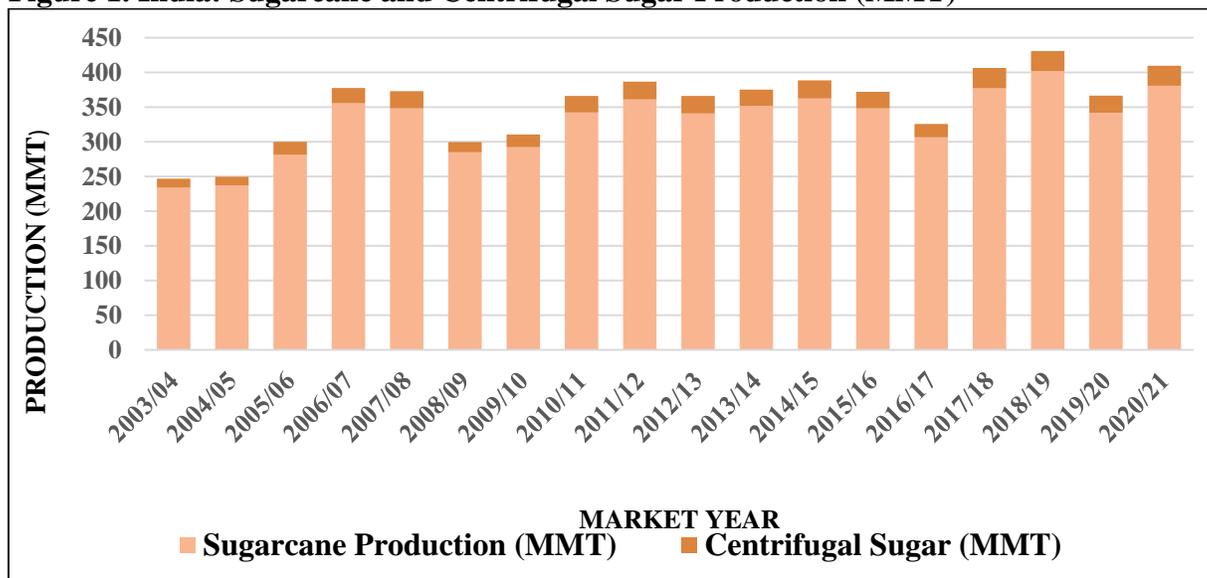
PRODUCTION:

FAS New Delhi (Post) forecasts India's out-year centrifugal sugar production at 33.7 million metric tons (MMT) in marketing year (MY) 2020/2021 (October-September), increasing 17 percent above the previous season. This forecast includes 590,000 metric tons (MT) of *khandsari*¹ and 33.1 MMT of mill sugar (equivalent to 31 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	2018/19	2019/20	2020/21
	Revised	Revised	Forecast
Andhra Pradesh	7.6	6	5
Bihar	6.6	6	7
Gujarat	11.6	9	10
Haryana	4.5	7	7
Karnataka	41	33	42
Maharashtra	107.2	62	90
Punjab	5.5	8	7
Tamil Nadu	7	8	9
Uttar Pradesh	118.2	121	123
Others	11	9.7	10
Total	320.21	270	310

Sources: MYs 2018/19 and 2019/20 – FAS New Delhi estimate. MY 2020/21- FAS New Delhi forecasts.
Note: Excludes *khandsari* sugar, as state-wise breakout is not available

Figure 1. India: Sugarcane and Centrifugal Sugar Production (MMT)



Source: FAS New Delhi office research.

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

The state of Uttar Pradesh is India's largest sugar producer for the fourth consecutive year, followed by the states of Maharashtra and Karnataka. Sugarcane acreage is increasing in Maharashtra and Karnataka in MY 2020/2021 compared to the previous season due to above-average monsoon rains and adequate water levels in reservoirs. This is set to boost overall yields per hectare (ha). Post estimates yields ranging 85-90 MT/ha for both states, bringing yields back in line with five-year production average levels. Combined the states of Uttar Pradesh, Maharashtra, and Karnataka will contribute nearly 80 percent of total sugar production in the out-year. This accounts for a near-normal diversion of cane for sugar production and an expectation of a net reduction in the national average sugar recovery rate.²

Benefits from the dedicated supply of cane juice/B-heavy molasses for fuel ethanol production continues providing sugar mills with an incentive to divert excess sugar for fuel ethanol production. It is also improving their cash flows (see, Ethanol Program section) and helping with the settlement of arrears. India will likely accelerate its efforts to divert more sugar to produce fuel ethanol to achieve its near-term E-10 blend target for calendar year (CY) 2022 (January-December) (see, [GAIN-INDIA IN2020-0122 India Biofuels Annual - 2020](#)).

Due to the novel coronavirus (COVID-19) lockdown, *gur*³ (*jaggery* or crude) production facilities closed for almost two months. While the closures resulted in increased prices, *gur* production facilities will still need to improve their purchase terms to ensure adequate supplies. Post expects cane supply to *gur* manufacturers will remain around similar levels as MY 2019/2020, while out-year *gur* production will likely exceed 4.4 million metric tons.

The impact of the COVID-19 lockdown on sugar manufacturing was swift, resulting in immediate labor shortages and a weeklong production delay due to input shortages including sulfur, lime, phosphoric acid, and packaging bags. However, sugar mills offset disruptions to sugar production by shifting to the manufacture of hand sanitizers. This year, several mills opted to harvest sugarcane mechanically in the wake of labor shortages immediately following the COVID-19 induced national lockdown.

Sugarcane Production to Increase 11 Percent: Based on the latest 2020 *khari*⁴ crop planting update from India's Ministry of Agriculture and Farmers' Welfare (MoAFW), Post is revising the sugarcane-planting estimate up by 11 percent in MY 2020/2021 to 5.28 million hectares. Out-year sugarcane production is forecast to rise due to: (1) a net increases in sugarcane planting, especially in Maharashtra and Karnataka; (2) slightly higher than anticipated cane yields (national average); and (3) increased new sugarcane plantings, due to above-normal monsoon and reservoir levels. Farmers are planting new cane that produces higher yields, in place of ratoons (less productive root stubs).⁵ Post estimates cane yields (considering ratoons, seasonality, and the age of hybrid varieties) at 72 MT/ha, slightly lower than the five-year average of 73 MT/ha but still up from the MY 2019/2020 average of 70.5 MT/ha by over two percent.

The arrival of heavy, above-normal rainfall in first half of October 2020, in the western and southern belts damaged major *khari* (fall harvested) crops. Sugarcane planted in Maharashtra and Karnataka will see a reduction in the availability of canes for crushing. The full extent of crop damage will become clearer once

² From an estimated 11.5 to 11 percent following the recent five-year average.

³ *Gur* or *jaggery* is a traditional non-centrifuged cane sugar. It is a concentrated product of cane without separation of the molasses and crystals, varying from golden brown to dark brown in color.

⁴ *Khari* season is runs typically from June to October.

⁵ Ratooning is a method of sugarcane propagation in which underground buds on the root stubble give rise to a new crop stand, called "ratoon" or "stubble crop."

water recedes from inundated fields and state governments publish their official survey results. The recently published crop season (July-June) 2020/2021 first advance estimates from the MoAFW ([DACNET](#)) indicate sugarcane production at 35.7 MMT, while setting a target of 39 million metric tons.

Table 4. India: Sugarcane Area, Production and Utilization

Sugarcane	Area	Yield	Product	Sugar	<i>Khandsari</i>	<i>Gur</i>	Seed
	Mha	MT/Ha	MMT	MMT	MMT	MMT	MMT
1990/91	3.69	65.39	241.05	122.32	13.18	76.63	28.93
1995/96	4.15	68.02	282.09	174.76	10	67.27	30.06
2000/01	4.32	69.35	299.32	176.65	11	75.75	35.92
2001/02	4.41	67.09	295.95	180.32	10.5	69.62	35.51
2002/03	4.52	63.58	287.38	194.33	9.5	49.07	34.49
2003/04	3.94	59.39	233.86	132.51	10	63.29	28.06
2004/05	3.66	64.74	237.08	124.77	9.5	74.36	28.45
2005/06	4.2	66.93	281.17	188.67	8.5	50.26	33.74
2006/07	5.15	69.03	355.52	222	10	80.86	42.66
2007/08	5.06	68.81	348.18	249.91	7	49.49	41.78
2008/09	4.44	64.19	285.02	145	6.5	99.32	34.2
2009/10	4.18	70.01	292.3	185.55	6.5	65.17	35.08
2010/11	4.89	70.09	342.38	240	7.5	53.79	41.09
2011/12	5.08	71.07	361.03	257	7	53.7	43.32
2012/13	5.06	67.38	341.2	251.5	7	41.75	40.94
2013/14	5.01	70.26	352.14	234.32	8	67.56	42.25
2014/15	5.14	70.44	362.33	265.4	8	45.45	43.48
2015/16	4.96	70.25	348.45	238	8.5	60.13	41.81
2016/17	4.38	70.02	306.7	193.3	8.5	68.09	36.8
2017/18	4.73	79.7	377	294	8	29.76	45.24
2018/19	5.55	72.43	402	290	9	54.76	48.24
2019/20	4.85	70.48	342	245	9	44.6	43.4
2020/21	5.28	72.18	381	289	8	44	40

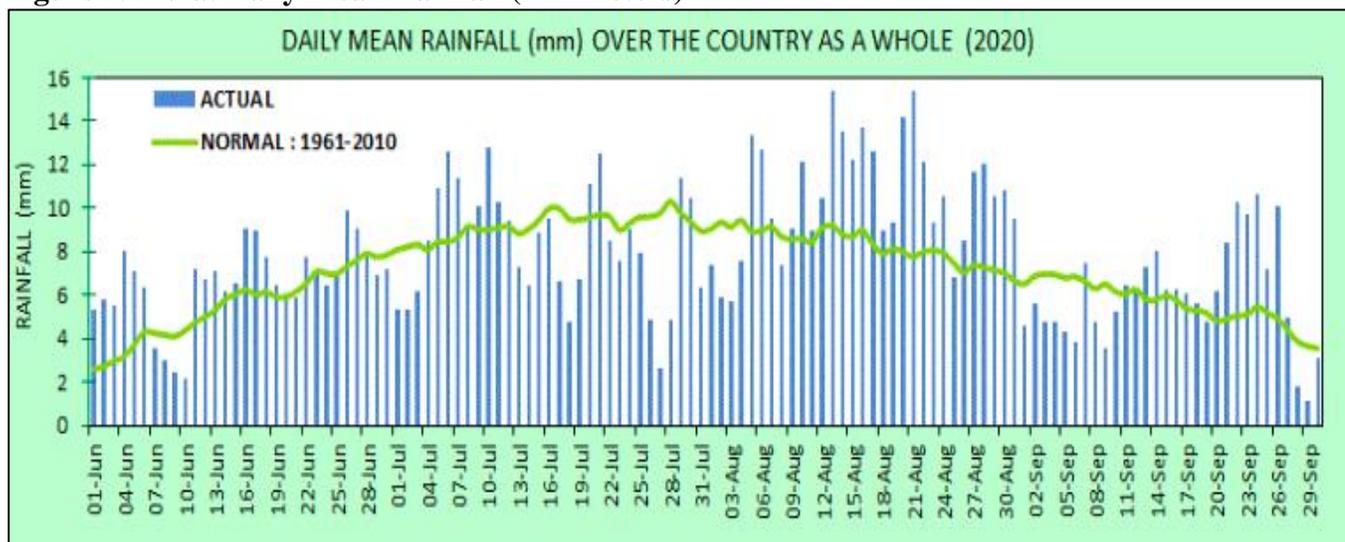
Note: Figures for 2020/2021 and 2019/2020 are FAS estimates
Sources for columns 1,2,3 & 4 for Directorate of Economics & Statistics, Ministry of Agriculture
Sources for columns 5,6 & 7 are FAS New Delhi estimates

Weather Front: The Indian Meteorological Department (IMD) reports that cumulative precipitation from June 1 to September 23, 2020 (nationwide) was eight percent above normal. Both central India and the southern peninsula had already received above normal rainfall through mid-September and will likely receive further precipitation, particularly in parts of Maharashtra, Andhra Pradesh, and Telangana under the influence of a low-pressure area.⁶ The arrival of additional rains usually indicates improved winter crop production, but a late monsoon withdrawal will extend both sugarcane harvesting and planting of winter crops such as wheat and lentils. As of early October, major reservoir water levels in Uttar Pradesh (central region); Maharashtra (western region); Andhra Pradesh, Telangana, Karnataka, and Tamil Nadu (southern region) are well above last year's volume and well above the 10-year average, indicating favorable growing conditions for MY 2020/2021.

⁶ Sugarcane is a sturdy and resilient crop and can withstand stress unless overwhelmed by drought or excessive rain.

According to the latest MoAFW's Planting Progress Report (September 25, 2020), sugarcane planting is completed in all the major states. Maharashtra, Karnataka, and Uttar Pradesh report higher planting areas, while Tamil Nadu, Telangana, and Bihar indicate lower plantings. The major sugarcane-growing areas report normal crop conditions. However, there are reports of red rot in some parts of Uttar Pradesh. Some crop damage due to excessive rainfall in Maharashtra and Karnataka occurred throughout October 2020.

Figure 2. India: Daily Mean Rainfall (millimeters)



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

Fair and Remunerative Price: The Union Cabinet increased the Fair and Remunerative Price (FRP) for sugarcane in MY 2020/2021 by Indian rupees (INR) 10 (\$0.13) to INR 285/quintal⁷ (\$0.38/quintal). There will be a premium of INR 2.85/quintal for each 0.1 percent increase in recovery over and above ten percent (see, [PIB Press release FRP](#)). The FRP is determined based on recommendations of the Commission for Agricultural Costs and Prices (CACP) and after consultation with state governments and other stakeholders.⁸ Sugar mill payment of the FRP sets cane prices paid to sugarcane producers.

Cane Arrears: As of September 11, 2020, cumulative arrears are INR 15,683 *crores* or 156.8 billion (\$2.1 billion) of which 83 percent is due for MY 2019/2020 (\$1.75 billion). The pending arrears for MY 2018/2019 are \$74 million and MY 2017/2018's stand at \$33 million; total arrears for MY 2016/2017 and prior years stand at \$256 million. At the state-level, according to the Indian government, Uttar Pradesh owes the maximum followed by Tamil Nadu, Maharashtra, and Punjab respectively (see, [PIB Press Release July 19, 2019](#)).

Banks and financial institutions lend sugar mills loans at a margin of 15 percent against sugar and 25 percent against ethanol. The sugar industry is in discussions with the government to grant a ten percent uniform rate.

⁷ One quintal = 100 kilograms (kg).

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

CONSUMPTION:

Out-year sugar consumption forecast remains unchanged at 28.5 MMT (Table 1), which is equivalent to 26.6 MMT of crystal white sugar. The COVID-19 pandemic outbreak adversely affected bulk/institutional sugar demand, which usually accounts for two thirds of overall consumption. In fact, ice cream, processed foods, and beverage manufacturers were worst hit during their peak demand period, along with hotels, restaurants, and catering establishments, especially small food businesses. Even as the country has, gradually reopened, public skepticism toward dining out remains high, despite some relaxation and changing consumer habits. However, strong household sugar demand for sugar has buttressed the Indian sugar industry. According to industry sources, dining out and food consumption trends will subsequently adapt to the new normal, largely relying on online food deliveries along with hygiene and social distancing measures for in-premise dining.

Sugar consumption growth may be reaching its upper limit as consumers are being encouraged to make healthier food choices. India's image as the diabetes capital of the world prompted the Food Safety and Standards Authority of India (FSSAI) in 2019 to notify draft Labeling and Display Regulations to reduce exposure to High Fat, Salt and Sugar (HFSS) in food. This regulation requires companies to use product labels, which include front of pack color-coding to indicate the relative fat, sugar, and sodium levels of the product⁹. A green code indicates low content; red indicates a high content (see, [FSSAI](#)). The Indian government is using such measures to promote healthier food options.

There is a growing consumer awareness for eating healthier food (i.e., lower in oil and sugar). This is evident by the dip in India's per capita sugar consumption, from 20.5 kilogram (kg) (CY 2014/2015) to 18.5 kg (CY 2018/2019).

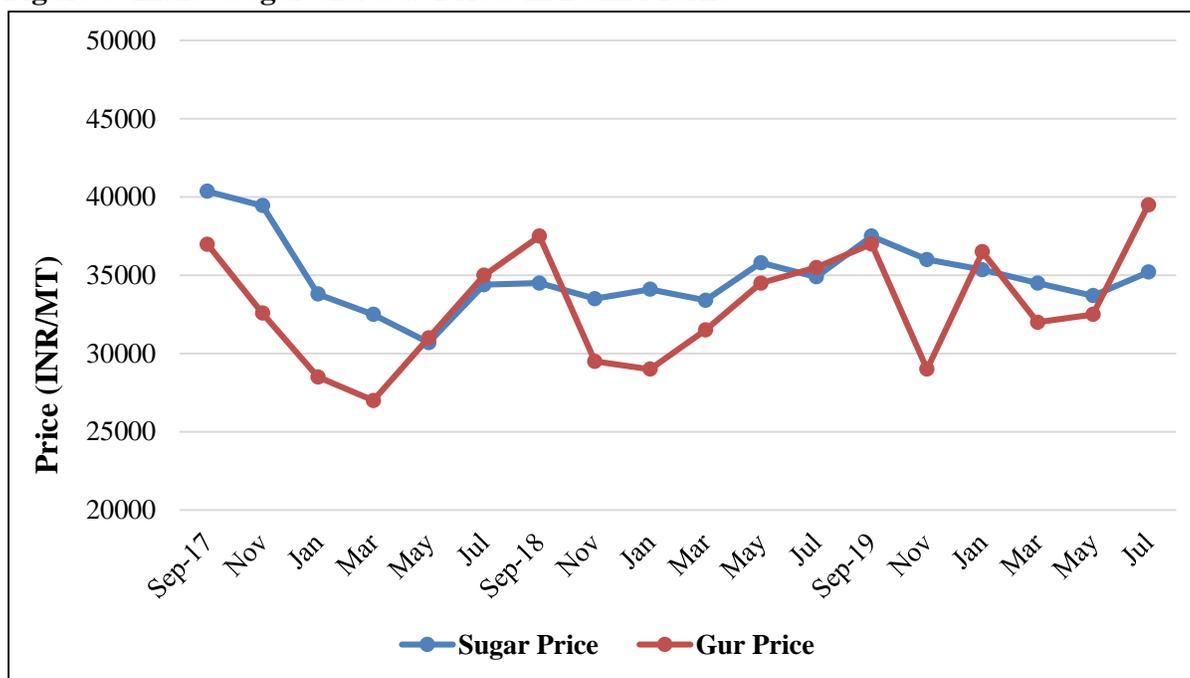
Khandsari and *gur* consumption will see a marginal decline in MY 2020/2021. *Khandsari* sugar consumption occurs at the local sweet shop level, while rural households mainly consume *gur* due to its availability and affordability (as compared to white sugar). Rural families see *gur* as a good source of energy; and will use it for both household consumption as well as an animal feed ingredient.

Market Prices: Indian domestic sugar prices dipped by almost five percent during the October 2019 (\$499/MT) and September 2020 (\$472/MT) periods, largely owing to India's surplus production. Similarly, *gur* prices have increased by 17 percent between October 2019 (\$442/MT) and September 2020 (\$519/MT), attributed to a shorter cane supply toward *gur* manufacturers. Beginning late March 2020, most of these facilities closed due to the COVID-19 nationwide lockdown. *Gur* prices move in tandem with sugar prices either at a premium or at a discount in response to domestic and international price movements (Figure 2).

With an exception for the April-June period in MY 2020/2021, raw sugar prices on the Intercontinental Exchange have lingered between \$0.13-0.16 per pound. This translates to INR 23-25/kg, and with the Indian government additional export subsidy of INR 10.5/kg (\$141/MT) it has been preferable for sugar mills to export rather than rely on domestic consumption that had slowed down during the lockdown months. Additionally, the Indian rupee's depreciation by 2.4 percent in CY 2020 have also made sugar exports more competitive.

⁹ In any 100-gram or 100 milliliters sample, if 10 percent of the total energy comes from sugar, the product requires a *red* label denoting "high" in sugar.

Figure 3. India: Sugar and Gur Prices in Delhi Market



Source: FAS New Delhi office research.

Year	2018	2019	2020	Percent Change
January	33800	34100	35350	4
February	36100	34300	34800	1
March	32500	33400	34500	3
April	29500	34500	34500	0
May	30700	35800	33700	6
June	34000	35100	35200	0
July	34400	34900	35200	1
August	33800	36400	35600	2
September	34500	37500	35000	7
October	34800	37000		
November	33500	36000		
December	33500	35800		
	67.12	70.16	74.18	
Exchange Rates	Local Currency INR/US \$			
Note: Exchange rates for 2018 and 2019 refer to respective Marketing Years (October-September) Source & Contract Terms: Indian Sugar Mills Association, NFCSF and Department of Consumer Affairs (GOI); month end prices in the Delhi wholesale market				

Table 6. India: Commodity, Gur, Price Table (INR/MT actual weight basis)				
Year	2018	2019	2020	Percent Change
January	28500	29000	36500	26
February	28000	30000	31500	5
March	27000	31500	32000	2
April	28500	33500	32000	4
May	31000	34500	32500	6
June	32000	34500	38000	10
July	35000	35500	39500	11
August	35500	38000	38500	1
September	37500	37000	38500	4
October	32000	31000		
November	29500	29000		
December	30000	40000		
	67.12	70.16	74.18	
Exchange Rates	Local Currency INR/US \$			
Note: Exchange rates for 2018 and 2019 refer to respective Marketing Years (October-September) Source & Contract Terms: Indian Sugar Mills Association, NFCSF and Department of Consumer Affairs (GOI); month end prices in the Delhi wholesale market				

TRADE:

Trade Policy: India's has delayed announcement of its export program for MY 2020/2021. The assumption is that the Maximum Admissible Export Quota (MAEQ) program that facilitates sugar exports and subsidizes any related additional production costs will continue. The scheme introduced for MY 2019/2020 for 6 MMT for all sugar grades (raw, plantation white, and refined) required sugar mills to export their MAEQ allocations by September 30, 2020.

Under the scheme, the Indian government covered marketing expenditures, such as handling, quality upgrading, debagging, and other processing costs at INR 4,400/MT (\$59.3/MT); internal transportation and freight charges, including loading, unloading, and distribution services at INR 3,428/MT (\$46.2/MT); and ocean freight (shipment from Indian ports to destination ports) at INR 2,620/MT (\$35.3/MT). This export assistance totals INR 10,448/MT, or \$140.8/MT. The Indian government's total expenditure on these subsidies comes in at \$875 million by some estimates. Sugar mills typically direct credit subsidies to farmers' accounts for cane payments owed. The balance, if any, goes to the sugar mills' accounts.¹⁰

This export assistance has long been a global concern. In 2019, it led Guatemala, Brazil, and Australia along with the United States and a host of other countries to challenge India in a World Trade Organization (WTO) dispute settlement over distortionary subsidies to sugarcane farmers (see, [DS581- Measures Concerning Sugar and Sugarcane](#)). India responded at the September 2020 WTO Agriculture Committee meeting by insisting that

¹⁰ The Indian government claims this conforms with the provisions of Article 9.1 (d) and (e) of the Agreement on Agriculture and thus WTO compatible (See: [PIB Press Release](#)).

developing nations could give such incentives until the end of CY 2023 (citing the decision of the Nairobi Ministerial meeting of December 2015).

With consecutive years of surplus production, India will likely extend its sugar export incentives, further pressuring global prices even as Brazil's arid conditions and Thailand's lower production provide a temporary respite. In the medium-term, while India may re-evaluate its export assistance, it will continue to incentivize sugar for exports.

An import duty of 100 percent on white and raw sugar has been in effect since February 6, 2018; and there is zero duty on exports since March 20, 2018.

Exports/Import: Assuming normal market conditions, and given existing export incentives and surplus production, India should be able to export 6 MMT of surplus sugar in MY 2020/2021. Total exports will include 0.5 MMT of sugar re-exported under the Advance Authorization Scheme (AAS); the remaining 5.5 MMT will be through commercial sales (Note: FAS New Delhi will adjust export sales in subsequent updates to reflect actual market conditions). In addition, Post has updated its current year assessment of sugar exports to 5.8 MMT, per data from industry sources. This increase is due to India sitting on surplus production, deficit production in Thailand (at a nine-year low) and labor shortages in Brazil resulting in delayed dispatches by up to 45 days¹¹. This helped Indian sugar secure new orders from various countries such as Vietnam, Indonesia, Bangladesh, Kenya, and Iran, which are traditionally Thailand's major export destinations. Top export markets for Indian sugar in MY 2019/2020 include Sudan, Iran, and Somalia.

Imports are likely to be negligible¹² at approximately 1 MMT since domestic supply will exceed requirements for both consumption and stocks. Post has revised its imports assessment for MY 2019/2020 to 0.9 MMT, reflecting industry sources.

STOCKS:

FAS New Delhi estimates India's sugar ending stocks in MY 2020/2021 at 14.8 MMT, almost two percent above MY 2019/2020 at 14.6 million metric tons. The stocks include 4 MMT of buffer for current and out-year, which carries forward as excess supply (i.e., above export sales, normal stocks, and consumption requirements). This change results from higher opening stocks and surplus production during MY 2020/2021. Ending stocks will meet a seven-month's supply at average consumption level, exceeding the normal two- to three-months of reserve stocks.

The Ministry of Consumer Affairs, Food and Public Distribution implemented the creation and maintenance of 4 MMT of buffer stocks for a one-year period starting August 1, 2019. Sugar mills receive reimbursement funding for the carrying cost attributed to holding the buffer stocks. Farmers also received as well payments for cane supplied in MY 2018/19 and 2019/2020 and for previous sugar seasons (see, [DFPD Notification](#)).

¹¹ Source: [Reuters](#).

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 Advance Authorization Scheme (AAS) allows local sugar millers or exporters to import raw sugar duty-free against a future export commitment.

Ethanol Program: Consistent with India’s National Biofuel Policy-2018, the Ethanol Blend Program (EBP) has a target of 10 percent (E-10) blending rate of ethanol in gasoline by 2022 and E-20 by 2030. The blending rate for MY 2019/2020 was at 5.2 percent.

On October 29, 2020, prices for ethanol procured by oil marketing companies (OMC) saw revisions under the EBP for the forthcoming sugar season 2020/2021. This will apply to the ethanol supply period, which runs from December 1, 2020 to November 30, 2021.¹³

- Ethanol derived from C-heavy molasses is fixed at INR 45.69/liter (\$0.61/liter), up from the previous price of INR 43.75/liter.
- Ethanol derived out of B-heavy molasses and partial sugarcane juice is fixed at INR 57.61/liter (\$0.77/liter), up from the previous price of INR 54.27 per liter.
- Ethanol derived from 100 percent sugarcane juice/sugar/sugar syrup is fixed at INR 62.65/liter (\$0.84/liter), up from the previous price of INR 59.48/liter for mills that will divert 100 percent sugarcane juice for ethanol production.
- The Goods, Services Tax (GST), and transportation charges is facing reassessment. There is a requirement for the oil marketing companies to fix realistic transportation charges so that long distance ethanol transport is not discouraged.
- Ethanol is prioritized in the following order: 100 percent sugarcane juice, B-heavy molasses/partial sugarcane juice, C-heavy molasses, and damaged food grains and other sources

Of the 5.1 billion liters supply requirement established by the OMCs for ethanol supply in 2020, approximately 2.07 billion liters of ethanol have been finalized (quantity as per Letter of Intent). As of October 5, 2020, the EBP program supplied some 1.45 billion liters.

Attachments:

No Attachments

¹³ Source: [PIB Press Release](#).