Sugar Industry

A closer look at impact factors 28th April 2023, Value Picker Annual Conference, Goa



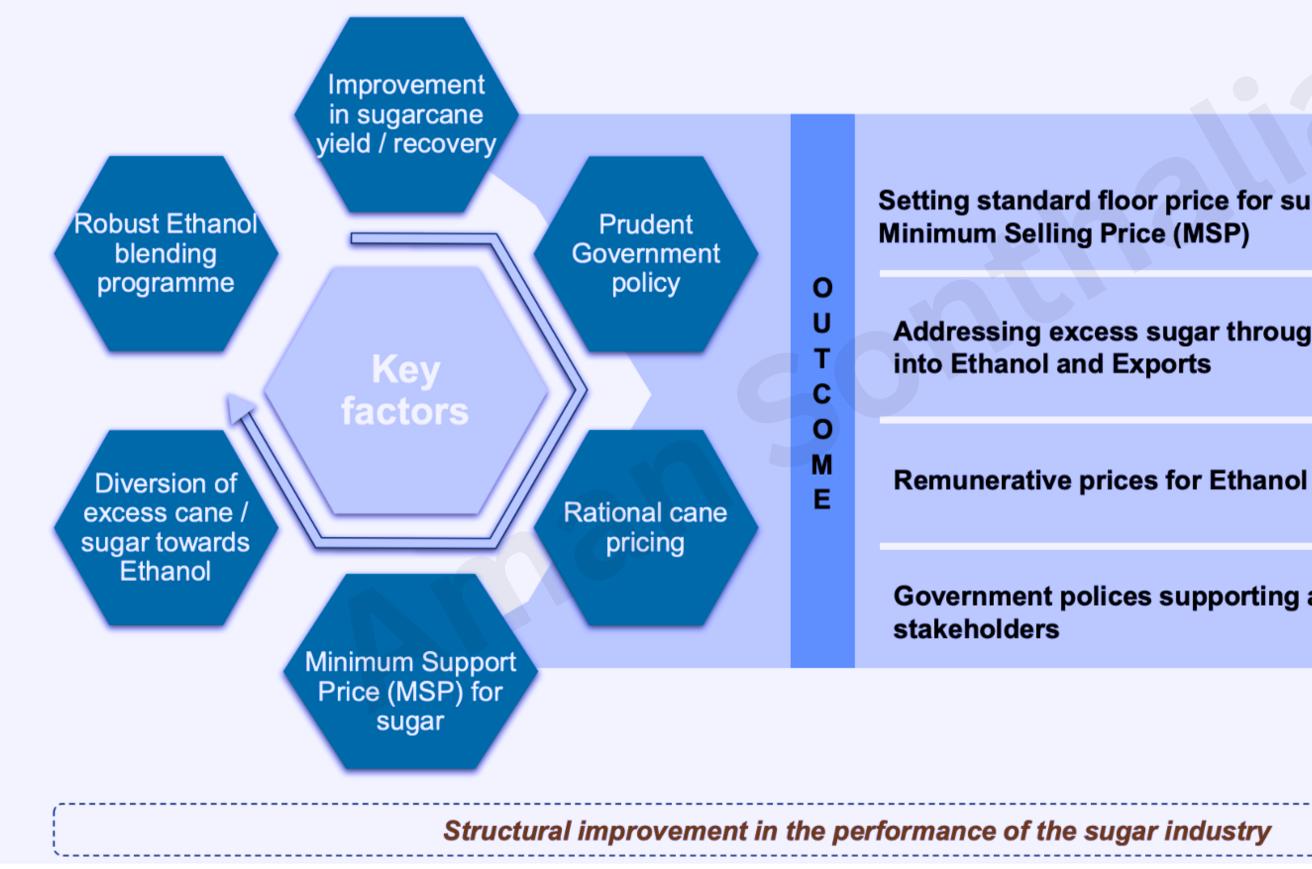
PRESENTED BY Mr. Aman Kumar Sonthalia

Disclaimer

- Forward-Looking Statements/Insights provided are based on personal research and scuttlebutt in Sugar Industry in India.
- Some industry data points and slides are sourced from Balrampur Chini, DCM, and ICICI Securities Sugar sector presentations.
- I am not a SEBI Registered Investment Advisor/Analyst.
- Viewers/Readers are requested to do their due diligence and consult professionals for investment advice.

Current Sugar Sector Scenario:

Man-Induced Sugar Cycle no Longer Prevails



Setting standard floor price for sugar i.e.

Addressing excess sugar through conversion

Government polices supporting all

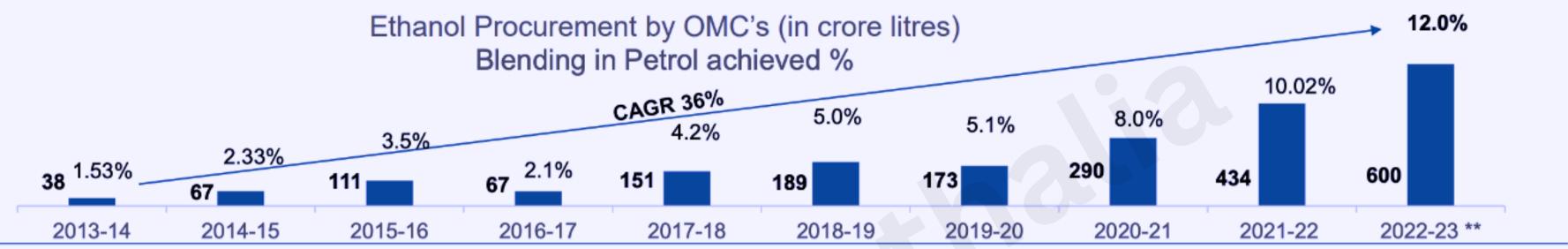
Policy Interventions From Government

- **FRP:** Fair & Remunerative Price (FRP) of sugarcane for the sugar season 2022-23 has been increased to Rs. 305 per quintal (linked to a basic recovery of 10.25%) as compared to Rs. 290 per quintal in the sugar season 2021-22 (linked to a basic recovery of 10%).
- SAP: State Advised Price (SAP) of sugarcane for the sugar season 2021-22 for the state of Uttar Pradesh increased by Rs. 25 to Rs. 350 per guintal for early variety of cane, revised after a period of 4 years. SAP for sugar season 2022-23 is yet to be announced.
- MSP: Minimum Selling Price (MSP) of sugar was first fixed at Rs. 29 per kg in June 2018 and later increased to Rs. 31 per kg in February 2019. MSP is the ex-factory price (excluding GST and transportation charges) below which no mill can sale sugar in India. Due to surplus sugar scenario, the MSP environment is expected to continue. However, the prevailing selling price of sugar is much above the MSP.
- **Stock Holding:** Along with MSP, stock holding limits on mills regulates the supply of sugar in domestic market which in return supports the local prices.
- Export: Export of sugar continues to attract zero customs duty. Export quota for sugar season 2022-23 announced for 6 million tonnes.
- **Import:** A higher customs duty continues on import of sugar.
- Soft Loans: Soft loans through banks for encouraging new distillery capacities or the augmentation of existing capacities, which facilitate higher ethanol production and reduces surplus sugar by diversion through B-heavy molasses and direct cane juice/sugar syrup to ethanol.
- Taxes: A lower GST of 5% on ethanol.

The above intervention by both the Central Govt. and the State Govt. reflects a clear shift in the mindset of the policymakers, which augurs well for the industry. However, Export Outlook for SS 23-24 and SS 24-25 looks to be set much lower at around 2 mn T due to higher diversion towards Ethanol, more insufficient opening stock, and expected El Nino impact.

Rising Fuel Ethanol Supply to meet huge demand in India

Blending in Petrol achieved %



** OMC have finalized tenders for 475.43 crore litres out of which 468.81 crore litres has been contracted and 69.63 crore litres has been delivered till 22nd January 2023 resulting in Pan India Ethanol blending of 10.81%. Targeted blending for 2022-23 is 12.0%

Price fixed by Government (Rs./BL)	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23*/
C-route Ethanol	39.00	40.85	43.46	43.75	45.69	46.66	49.41
B-route Ethanol	-	-	52.43	54.27	57.61	59.08	60.73
Juice-/Syrup route Ethanol	-	-	59.19	59.48	62.65	63.45	65.61

*/ Prices for 2022-23 are effective from December 2022 and are valid till 31st October 2023

Central Government approved the National Policy on Biofuels to achieve 20% blending of Ethanol in petrol. Key benefits highlighted by the government include:

Eliminate dependence on exports of sugar (target to sacrifice ~6 million tonnes of sugar by 2025-26)

Reduce import dependency of fuels (savings of ~\$4 billion forex i.e. more than Rs. 30,000 crs.)

Cleaner environment through E20 fuel Carbon Monoxide emissions will be 50% lower in two-wheelers and 30% lower in four-wheelers. Hydrocarbon emissions will be 20% lower in both

Additional income to farmers, Infrastructural investment in rural areas

In January 2021, the target of achieving 20% Ethanol-blending with petrol was preponed to 2025. For the same, the country will need to produce ~1016 crore litres of Ethanol

E20 fuel at 84 retail outlets has been launched to achieve 20% blending.

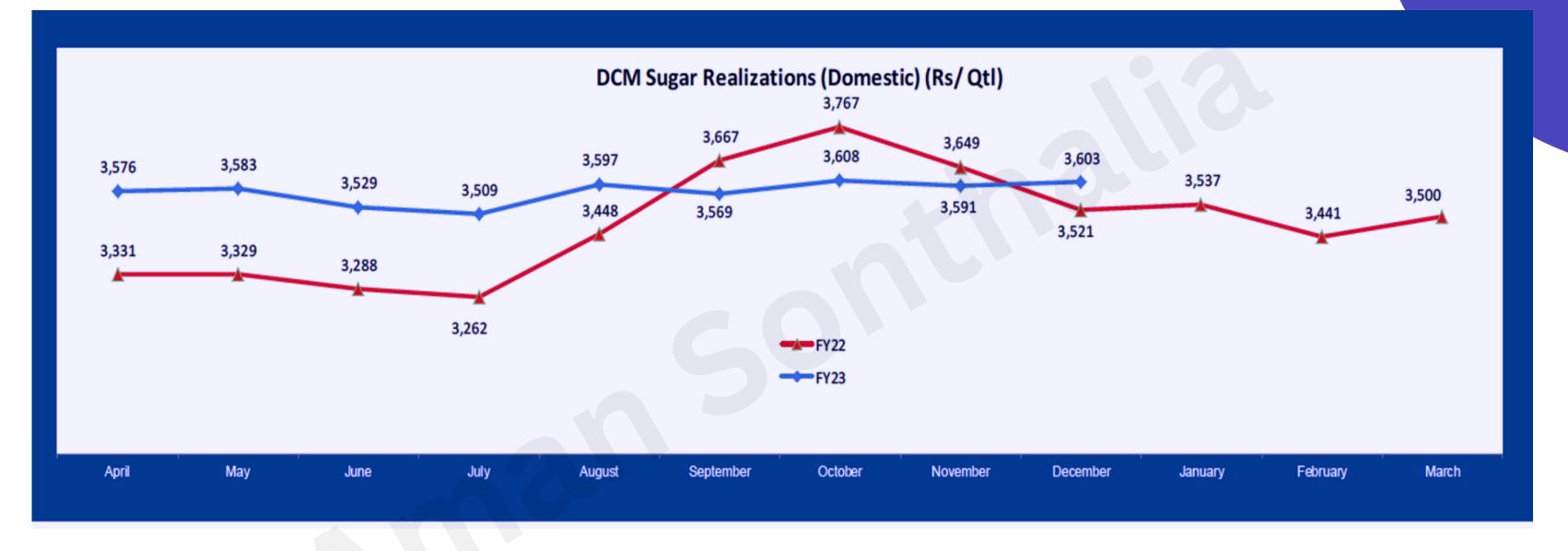
Distillery Profitability trajectory higher Balrampur Chini Rev Contribution ~19%, EBIT 56%, Management Focus likely to accelerate distillery Capacity *provided sugar prices remain below 37/-

Employment generation

Health benefits

Municipal Solid Waste Management

Sugar Realisations over the recent years

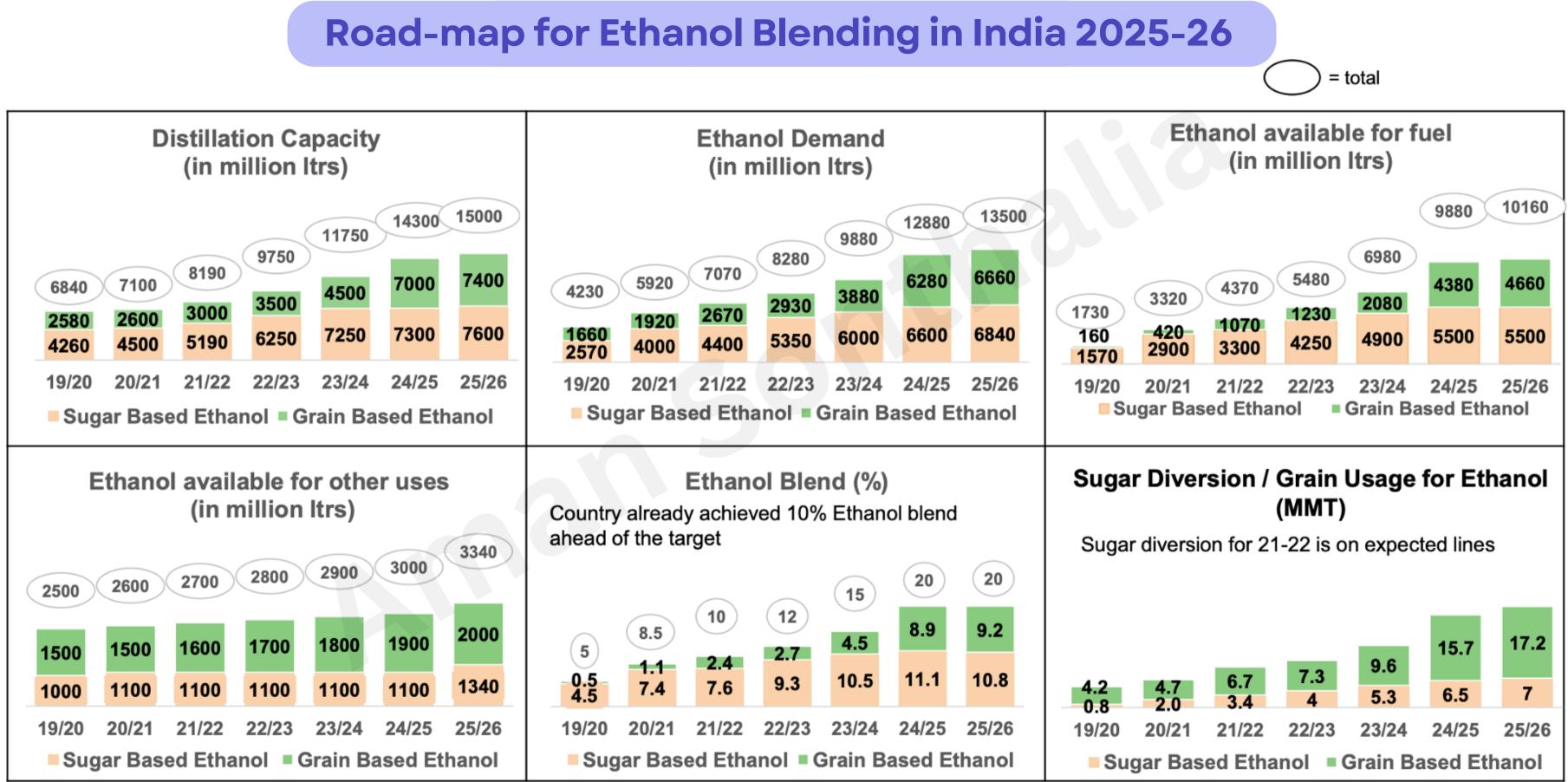


Average Sugar Realization:-

FY 21: ₹32/-FY 22: ₹34/-FY 23: ₹35/-FY 24: ₹36.50/- (expected)

- M sugar price
- Non Refined
- Refined Sugar realisation higher by ₹0.75/-Pharma Sugar realisation higher by ₹4/- per kg

• Western and Central UP price



Source: Report of the Expert Committee, NITI Aayog | Ministry of Petroleum and Natural Gas

OMC LOI/Contracts: Visibility

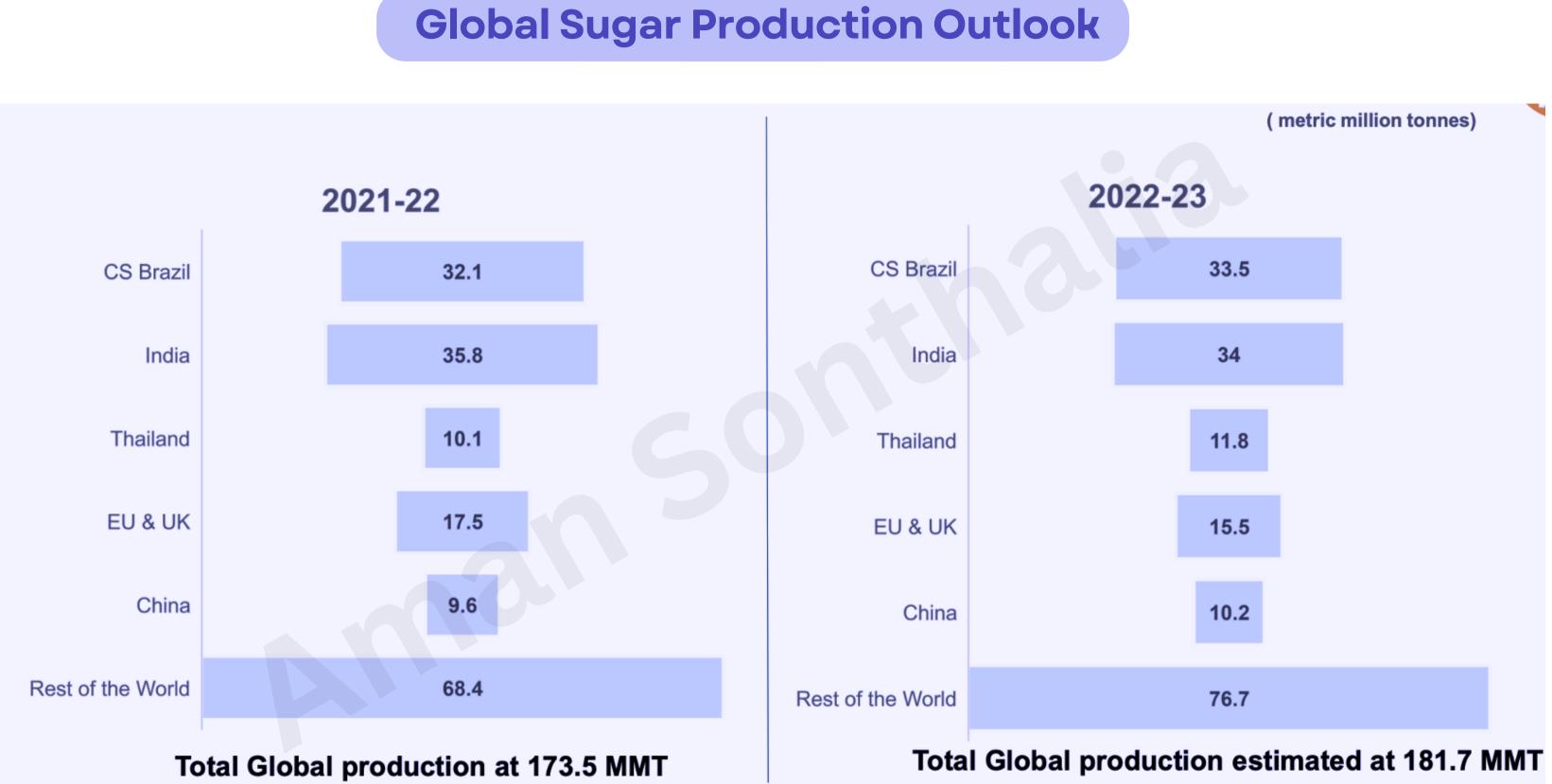
> Government has recently announced ethanol prices under the EBP Programme for ESY 2022-23, as under:

Period		C-route	B-route	Syrup	Damaged Grains	Surplus Rice
Dec 22 - Oct 23	(ESY 2022-23)	49.41	60.73	65.61	55.54	58.50
Dec 21 - Nov 22	(ESY 2021-22)	47.84	60.57	65.05	55.26	58.31
	(including incentive w.e.f. 1st June,22)	(1.18)	(1.49)	(1.60)	(2.34)	(1.44)
% change (in ESY 2022-23 w.r.t. ESY 2021-22)		5.89%	2.79%	3.40%	4.95%	2.87%

- OMC's have floated tenders for ESY 2022-23 for 600 cr BL as compared to 455.57 cr BL in ESY 2021-22
- Against the same OMC's have finalized LOI for 475.43 crore BL out of which 468.81 crore BL has been contracted

SS 2023-24 Going into Election Year – important for stakeholders in states like UP, Maharashtra & Karnataka - Likely minor upward revisions/parity maintained despite expected El Nino impact, no shortage of raw material for grain-based distilleries is expected, as FCI godowns have sufficient waste grains.





Factors Influencing Global Sugar Industry Trends other than India

1	Global oil prices						
2	Government polici ethanol	es cataly	/zing the shift betwe	een sugar to	173.5	Million tonnes, global sugar production, 2021- 22	Brazil Outlook (22
3			roduction in Brazil, I st sugar producers ir		181.7	Million tonnes (estimated), global	 Energy taxes we Brazil which bro parity down. Govt. also reduct fight inflation.
4	Global sugar consu	umption				sugar production, 2022-23	All these are for for max sugar pr
	Il sugar Balance Sheet, 2 nated) (in million tones)		Global sugar Balance 23 (Projected) (in mill		Conclusions Stable global sugar i	inventory	Global Consumpti
Open	ning	95.3	Opening	95.0	Stable Biobal saBar	, includer y	Global consump
Production 173.5		Production	181.7			expected to go u	
Cons	umption	173.8	Consumption	176.5			tightness in suga
Closing 95.0 Closin			Closing	100.2	Attractive export po	will be felt by the flows till end of (

Global Price Outlook:

- The global Raw Sugar price traded in the range of 17.58-20.98 c/lb during Q3FY23 quarter Downside on NY11 raw sugar price seems to be limited while on the upside it is expected to remain strong with upward bias, at least till Q1 of calendar 2023.
- Brazilian currency value to play an important role on the prices.

International Prices are now IRRELEVANT for India Market (despite Lucrative Prices) - Lower closing inventory - SS2022-23 5Mn T; SS 2023-24 India production likely to fall further due to expected El Nino /Draught impact; Exports are unlikely to go above ~2Mn Tonnes next sugar season

- Even if the Govt doesn't allow any exports, the impact of that will be minimal; imports are out of the question due to the huge difference between Domestic and International prices

22-23): were reduced in rought the Ethanol uced gas oil price to

proing millers to go production.

tion Outlook:

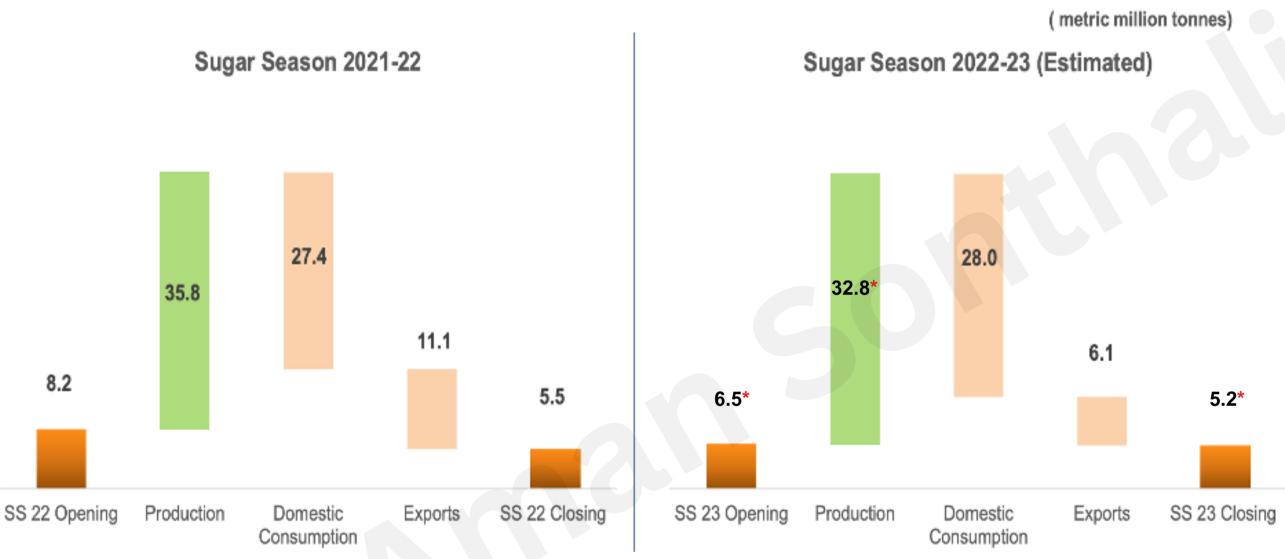
nption is o up and Igar availability he global trade f Q1 of calendar

Expected in SS 2023-24

Brazil's production was expected to have around ~370 LT, but unlikely to happen because:-

- 1. Excess rainfall in sugar-producing regions impacts yield.
- 2. The imposition of an 18% ethanol import duty (from the US) will balance out higher sugar prices.
- 3. More diversion due to increasing Ethanol Prices in Brazil.
- EU ban on pesticides in Beet cultivation (honey bees dying)
- EU sugar production will be lower
- Export from India will be subdued by ~2Mn
- International Prices have shot up and are unlikely to come down in the near future.

Domestic Sugar Balance Sheet



Managed demand/supply, robust ethanol blending policies, robust exports.

Moderating the sugar inventory and also supporting the domestic sugar prices.



Sugar Season 2023-24 (Estimated)

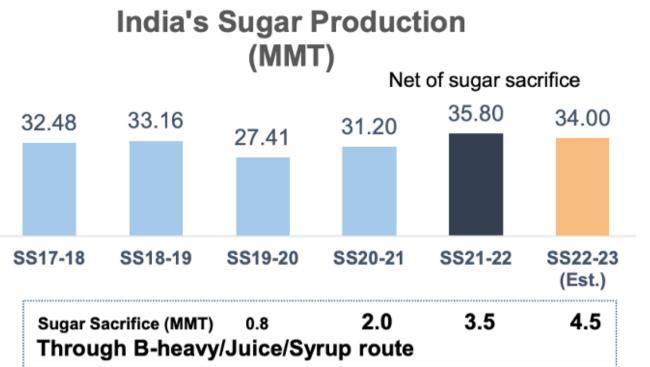
- Opening:
- Production**:
- Consumption:
- Exports:
- Closing:

- ~52 Lakh Tons
- ~300 Lakh Tons
- ~280 Lakh Tons
- ~20 Lakh Tons
- ~52 Lakh Tons

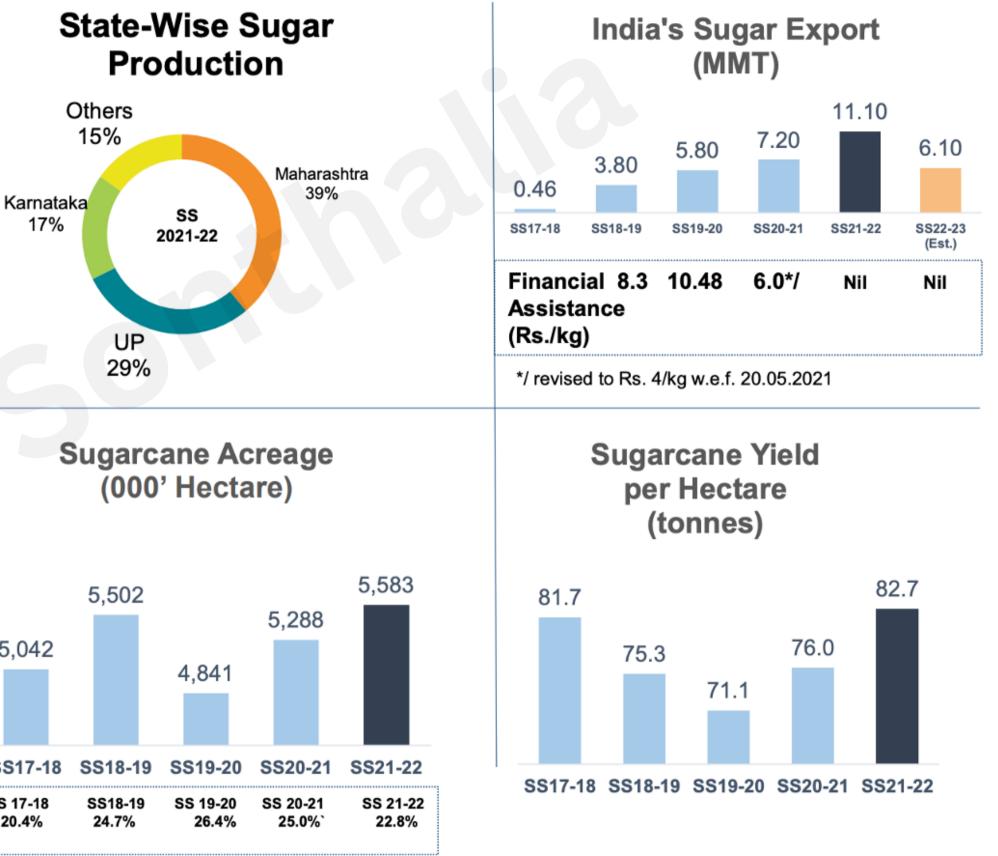
*Revised figures from the Govt.

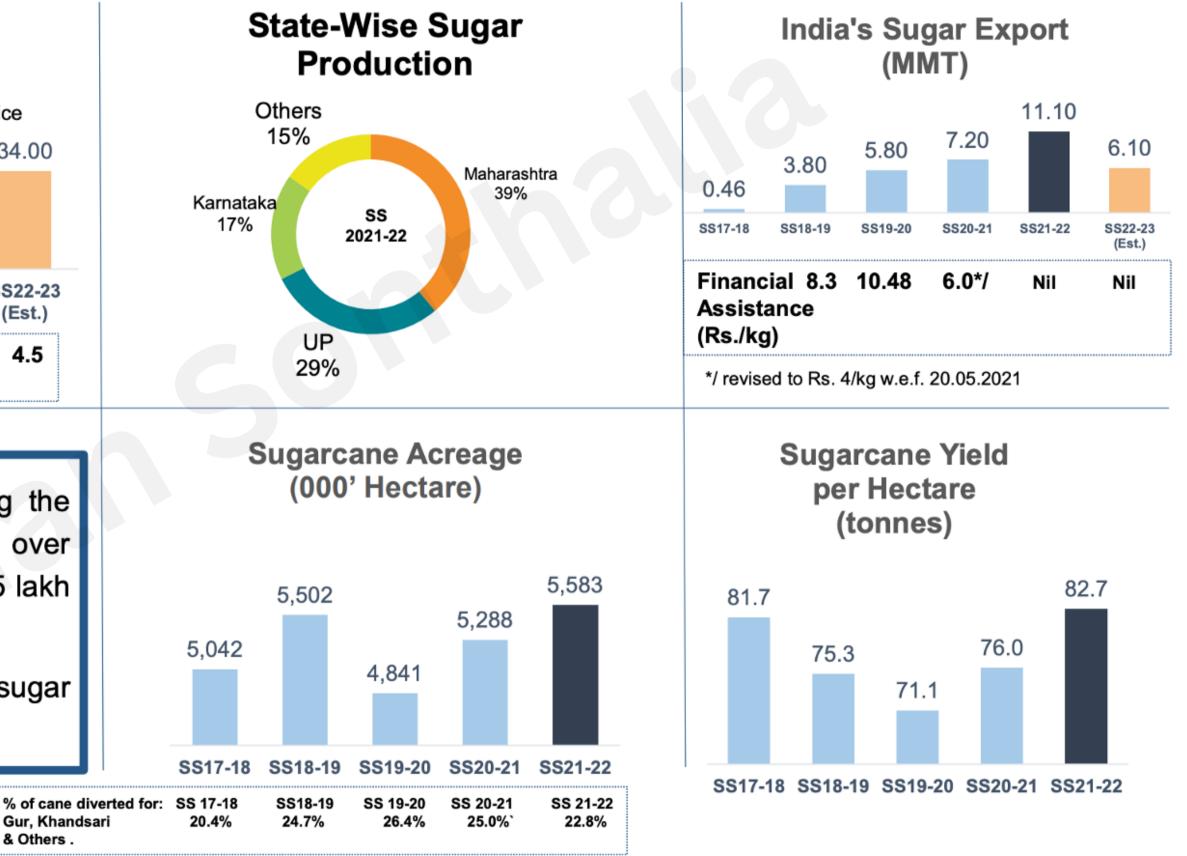
****Production to come down due to El Niño impact.**

India: Has emerged as world's largest Sugar Production Country



Production

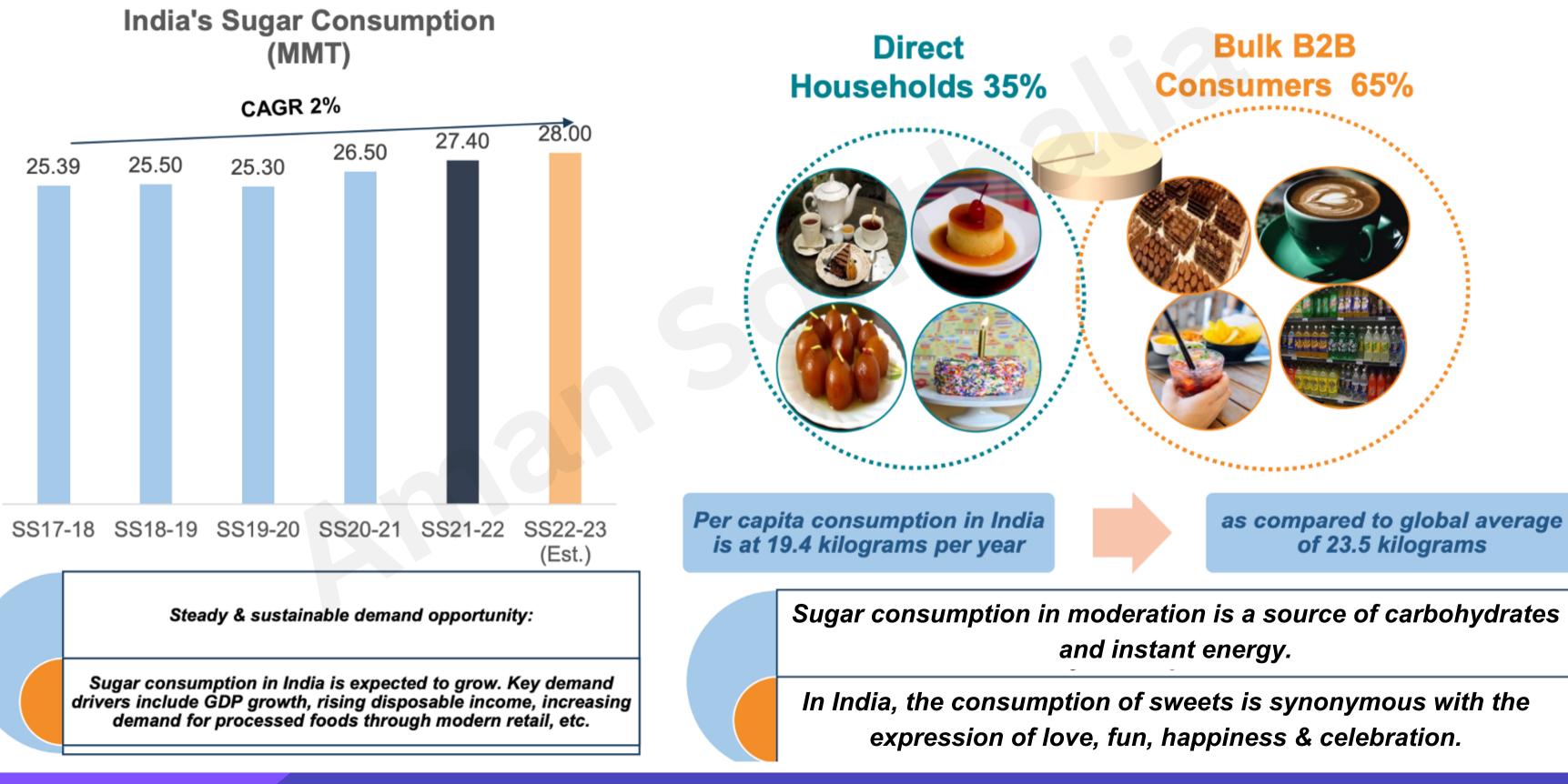




- > Sugarcane farming in India is among the largest agro-based sector, employing over 5 crore sugarcane growers and over 5 lakh workers.
- The country has a potential to export sugar to several countries.

& Others .

India: World's Largest Sugar Consumer





India's Sugar Consumption

Magic of CO-0238

The Magic of CO-0238 by Prof Bakshi Ram

Without a single Rupee Capex, the Output of sugar companies rose substantially.

Balrampur Chini	FY13	FY 19	FY21
Sugarcane Crushing (TCD)	76500	76500	76500
Number of days	106	144	135
Annual Sugar Crushed (It)	81	110	103
Sugar Recovery (%)	9.5%	11.6%	10.6%
Total Sugar produced (It)	7.7	12.8	11.0
Dalmia Bharat Sugar	FY13	FY19	FY21
Sugarcane Crushing (TCD)	25000	34700	35500
Number of days	112	145	145
Annual Sugar Crushed (lakh t	28	50	51
Sugar Recovery (%)	9.9%	12.2%	11.3%
Total Sugar produced (lakh to	2.8	6.1	5.8
Dwarikesh Sugar	FY13	FY19	FY 21
Sugarcane Crushing (TCD)	_21500	21.500	21500
Number of days	1 10	154	185
Annual Sugar Crushed (lakh 1	24	33	40
Sugar Recovery (%)	9.6%	12.3%	11.6%
Total Sugar produced (lake to	2.3	4.1	4.6
	1		

Co-0238 Impact of Sugarcane Yield & Sugar recovery

Source :ISO Datagro, Statista, OECD-FAO Agricultural outlook Bloomberg Intelligence, ICICI Direct research



With the introduction of Sugarcane variety CO-0238, Sugarcane yields have increased by ~40%. This led to the better utilization of sugarcane crushing capacities. Average number of days of crushing increased from 110 days to 150. For some sugar mills crushing days are ass high as 185 days

Further to the improvement of Sugarcane Yields, Sugar recoveries have also gone up by 200-250 bps resulting in sugar production increase of 20-25% without any incremental increased in sugarcane cost

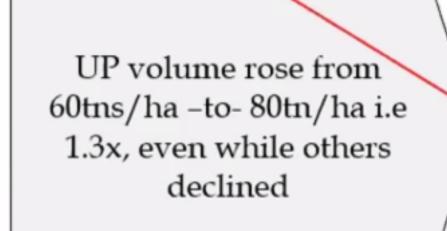
Overall, Sugar production for UP millers have increased by 60-80% in last 7-8 years benefited by change in sugarcane variety Co-0238.

UP Recovery Rate/Production Bump Up

While Maharashtra recovery % remained the same, UP's recovery increased substantially from 9.1% -

to- 11.5% (Every 10bps improvement approx. adds to 4% PAT

For 240bps improvement implies = 2x PAT (Without any incremental capex)



Year	Uttar Pradesh (%)	Maharashtra (%)	
SS11-12	9.1	11.7	
SS12-13	9.2	11.4	
SS13-14	9.3	11.4	
SS14-15	9.5	11.3	
SS15-16	10.6	11.3	
SS16-17	10.6	11.3	
SS17-18	10.8	11.2	
SS18-19	11.5	11.3	
SS19-20	11.62*	11.54*	
SS20-21**	11.48*	11.26*	

production, ** Updates as on 31st May 2021

Exhibit: Co-0238 variety adoption has resulted in increase in UP Sugar Yield (tonnes/ha)

State	SS07	SS08	SS09	SS10	SS11	SS12	SS13	SS14	SS15	SS16	SS17	SS18	SS19	SS20	SS21E	SS22E
Maharashtra	74.9	80.9	79.0	84.9	84.9	84.9	74.6	82.1	82.2	74.7	82.6	92.2	79.5	74.7	78.0	78.0
Uttar Pradesh	59.6	57.2	52.3	59.3	56.7	59.6	59.9	60.5	62.1	[Ş 7.0	64.9	79.3	80.8	80.8	74.0	77.0
Tamil Nadu	105.1	107.5	106.2	101.5	108.4	111.5	97.7	103.7	106.8	101.2	87.1	92.0	98.2	100.0	99.0	98.0
Karnataka	87.9	85.8	83.0	90.3	93.8	90.3	84.1	90.3	91.2	84.1	69.0	80.8	83.0	90.0	90.0	90.0
Average (tonnes/ha)	69.0	68.9	64.6	70.0	70.1	71.7	68.3	70.5	71.5	70.7	69.0	79.6	78.3	77.6	77.6	77.6
Source: SKP Research		/														

Obvious Factors at play

- Govt has many mechanisms to ensure Price Stability, like a monthly quota, stock limit, buffer stock, etc.
- Policy Environment/Market forces indicate more diversion towards Ethanol as more profitable. (e.g. Balrampur Chini 20% Revenue; 56% EBIT contribution)
- Making Sugar is more profitable if sugar prices cross Rs 36.50/kg rather than making Ethanol via the juice route. (as per current ethanol prices set by govt)

Not so obvious Impact Factors

- Demand Supply balance supports higher prices after many years.
- Expected El Nino impact sugar production lower; sugar consumption higher.
- New Steam Saving Technology. (Developed by Spray Engineering Devices Limited)
- Bagasse hidden 'Ace" in the Sugar pack.
- Uttam Sugar and Ponni Sugar appear to be the most Undervalued.

Bagasse Savings

- In the past, 100 Tons of Sugarcane crushing consumed around 54 Tons of Steam.
- With technological improvements, Steam Consumption has come down to around 43 Tons.
- As we advance, Steam Consumption is expected to fall below 28 Tons—1T of Steam reduction results in 0.5T of Bagasse saving.
- So 15T reduction in Steam will result in 7.5 Tons of Bagasse consumption.
- For a company like Uttam Sugar, whose SS 21-22 Steam consumption was around 50T (per 100 T sugarcane crushing), it is likely to save 7.5 Tons of Bagasse/100 tons of sugarcane crushing in the next 2 sugar seasons.
- Total Crushing for Uttam will be around 42 Lakh Tons in the current season (SS22-23); therefore, Company will likely save 4.2 Lakh tons of Bagasse if we extrapolate crushing to the same levels.
- Bagasse market value today is 2600/- per Ton.
- Based on this, Bagasse Sales alone will likely benefit the company by 82 Cr.
- This Bagasse extra availability can be used for captive use in distillery running and grain-based distillery.
- Unlike standalone grain-based distilleries (need to purchase fuel from the Market), sugar companies starting grain-based distilleries will be much more profitable because of in-house bagasse availability. That is why most of the sugar companies have started/plan to start grain-based distilleries, and it will be a significant additional money spinner for sugar companies.

Uttam Sugar

Factory	Region	Cane Growing Area	Capacity (TCD)		Distill	Cogen (MW)	
			Current	After Expansion	Current	After Expansion	
Libberheri, Roorkee	Uttarakhand	Best in Region	6250	7000	50	50	29
Barkatpur, Bijnor	Uttar Pradesh	Mecca of Sugar	7000	8500	150	250	53
Khaikheri, Mujaffarnagar	Uttar Pradesh	Best in Region	4500	4700	-	-	15
Shermau, Saharanpur	Uttar Pradesh	Best in Region	6000	6000	-	-	25
			23750	26200	200	300	122

Uttam Sugar has one of the highest capacity Utilisation in UP and Uttarakhand because of abundant supply of sugarcane (Key differentiating factor unlike others like Renuka with low capacity utilisation due to unavailability of Cane in Maharashtra and Karnataka)

Uttam Sugar is one of the few sugar companies that is Crushing 10% plus more cane this SS 2022-23 (Till Sep 23). Estimated at 4.2 Cr Qunitals (3.81 Cr Quintals in SS 2021-22). For SS 23-24, crushing is again expected to increase by another 10% (due to sugarcane acreage increase, unlike other saturated regions) and high-yield varieties. Distillery Expansion of 100 KLD is happening at the low cost of ~60 Cr.

In case of production of Ethanol from B-Heavy/Syrup distillery capacity will increase by 25%



Uttam Sugar Mills Limited

- One of the highest recovery rates in UP. This year's expected recovery rates will be ~ 11.70%.
- One of the most prominent players in Refined Sugar, Pharma Sugar, and Retail Branded Sugar.
- Sales mainly to Institutional players resulting in a higher realisation of 0.5 to 0.75 paise/kg.
- The Uttarakhand plant has three advantages:-
 - The cogen plant gets a higher rate of Rs 5.20/unit compared to Rs 3.20/unit for plants in UP.
 - For Molasses, there is Zero levy compared to the 18% levy in UP.
 - \circ Sugar prices are higher by ₹0.5/kg.
- The company has reduced debt significantly. As of 31st Dec concessional term loan is 88 Cr, and Working Capital Loan is 235 Cr.
- Expected EPS of Rs 50+ for FY 2023-24.
- With an excellent location, one of the highest capacity utilisation, scope for further expansion, full steam saving technology in place in the next two years (partial gain will be visible in current FY), expansion in distillery capacity, one of the most significant branded sugar player, diversification in high margin pharma sugar, 65% of production comes from high margin refined sugar, strong balance sheet and above all one of the highest recovery in UP makes this company a very attractive buy.

Uttam Sugar/Dwarikesh/Dhampur - Projected Crushing

			SS 22-23		SS 23-24			
Main Trackers	Units	Uttam	Dwarikesh	Dhampur	Uttam	Dwarikesh	Dhampur	
Sugarcane Crushing	Lakh Tons	42 LT	37.5 LT	37.5 LT	45 LT	39	37.5	
Sugarcane Recovery	%	11.7	11.8	12.1	11.8	11.9	12.1	
Avg Sugar Realisation/Kg	Rs	37.75	36.5	37	-	-	-	
Avg Sugarcane Cost/Kg	Rs	31.2	30.95	30.15	-	-	-	
Ethanol Production	Cr Lts	7.35	14	16	11	14	18	

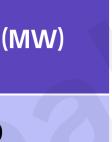
Notes:

- Sugar Price is expected to remain between Rs 36 to Rs 39 in the medium term.
- Sugarcane prices are expected to rise by ₹15/- per quintal in U.P. in SS 23-24.
- Cost rise will be quickly passed on due to a tight demand-supply scenario.
- Ethanol from the Juice route is comparatively less profitable than Producing sugar in UP, as sugar prices have crossed ₹36.50.

Ponni Sugar

State	Region	Cane Growing Area	Current Capacity (TCD)	Cogen (I
Tamil Nadu	Erode	Best in Region	3500	19

- Ponni Sugar has the highest capacity Utilisation in Tamilnadu and the highest Recovery in Tamilnadu. In current SS 22-23, Recovery is expected to touch 10.2% for the first time.
- Tamilnadu has the lowest sugarcane cost, ₹290/quintal (including ₹20/quintal state govt subsidy).
- The company has no distillery and sells its entire C-Heavy Molasses to Poultry farms at very high rates of ₹10000/Ton.
- The company runs its power plant on bio-mass and sells its bagasse to Seshasayee Paper and TNPL at contracted rates of Rs 4000-5000 /Ton. The same calorific value biomass they can get at ₹3000/Ton. The power rate is also highest in Tamil Nadu @ ₹5.20/unit.
- The realisation of Ponni's sugar is highest in Tamilnadu due to the quality, strong marketing team, and the plant being close to big sugar-consuming markets like Erode, Tirupur, Coimbatore and Kerala.
- Their crushing growth will be the highest in Tamilnadu in SS 22-23 compared to SS 21-22. In SS 21-22, the company crushed 6.5 L Tons of sugarcane with a recovery of 9.81 %. This season 22-23, the company will likely cross 9.5 Lakh Tons of sugarcane crushing. This is possible due to very good monsoons and extensive efforts by the company in cane development programs. For next season 23-24 also, Ponni is the only company in Tamilnadu whose cane plantation area is increasing.
- The company is Cash Surplus and also holds 230 Cr worth of Seshasayee Paper shares.
- The expected EPS for the F.Y. 23-24 is likely to cross Rs 75 per share. The company is expected to get higher discounting due to very transparent and efficient Management, unique business model, cash surplus BS, highest power and sugar realisation in Tamilnadu, highest sugar recovery and crushing growth, and good plantation for next season - is available at a Market cap of just 410 Cr (405 Cr Sales TTM).



New Sugarcane Crop/Seed Varieties

- New Varieties must be introduced within 5-6 years of introducing the leading incumbent Varieties.
- If the same variety is repeated even after 5/6 years, there are chances of Pest attack on the sugarcane crop, which impacts both the yield and recovery.
- Sugarcane Varieties gradually replacing 238 Variety
 - · 94184
 - · 15023
 - 0118 Ο
 - · 13225
 - · 14201
- New Variety Yield & Recovery are almost the same as CO 0238.

Challenges/Risk Factors

- Climatic Risk Mainly for Maharashtra, Karnataka & Eastern UP-based Sugar companies as their dependence on monsoon is very high, whereas Western and Central UP-based companies are most negligibly dependent on monsoon.
- Government Policy Risk Government policies favour the sugar industry as fair sugar prices allow sugar companies to pay farmers on time. Timely payment to sugarcane farmers is a prominent political issue.
- International Prices Risk International prices are likely to remain firm as the inventory level is very tight and likely to remain tight, as discussed in the earlier slide.
- Pest Attack Risk Most sugar companies are working on it by changing varieties and spraying pesticides.
- Over-Production Risk With the Ethanol policy in place and a tight international sugar supply scenario, it is less likely to be an issue.

Thank You!







