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Sugarcane Pricing in India: Balancing Farmer Welfare and Industry Viability

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Sugarcane (*Saccharum officinarum*) stands as one of India's most important commercial crops, serving as the backbone of the country's sugar industry—the second largest agro-based processing sector after textiles. With an annual turnover of approximately ₹300 billion and contributing about 2% to the national GDP, sugarcane cultivation supports nearly 7.5% of India's rural population, encompassing about 60 million farmers and their families. India is the world's second-largest producer of sugarcane, accounting for 20% of global production, following Brazil's 40% share. The country cultivates sugarcane over 4.91 million hectares, producing an average yield of 78.6 tonnes per hectare—significantly higher than the global average of 71 tonnes per hectare. Uttar Pradesh leads as the largest producer, contributing 50% of India's total production, followed by Maharashtra (18%) and Karnataka (8.88%).

The pricing of sugarcane has remained a contentious and politically sensitive issue, involving complex trade-offs between ensuring fair returns to farmers, maintaining the viability of sugar mills, and protecting consumer interests. This article examines the evolution of sugarcane pricing mechanisms in India, analyzes trends in area, production, and productivity, and explores the challenges and future directions for sugarcane pricing policy.

Importance of Sugarcane in India's Economy

Sugarcane's significance extends far beyond sugar production. For every 100 tonnes of sugarcane crushed, a sugar factory produces approximately:

Product	Quantity
Sugar	10 tonnes
Molasses	4 tonnes
Filter cake	3 tonnes
Furnace ash	9.3 tonnes
Bagasse	30 tonnes
Electricity	150 kW

The crop serves multiple purposes—food, fuel, fiber, and fodder. Its by-products have substantial industrial applications: bagasse (the fibrous residue) is used in paper production and bioelectricity generation, while sugarcane trash serves as mulch and compost material. With an average per capita sugar consumption of 24 kg annually, sugar remains an essential commodity in Indian households.

Evolution of Sugarcane Pricing Mechanism

From SMP to FRP

The pricing of sugarcane is governed by statutory provisions of the Sugarcane (Control) Order, 1966, issued under the Essential Commodities Act (ECA), 1955. A significant amendment on October 22, 2009, replaced the Statutory Minimum Price (SMP) with the Fair and Remunerative Price (FRP) system. The FRP is the minimum price that sugar mills must pay to farmers for sugarcane purchases. It is announced by the Central Government based on recommendations from the Commission for Agricultural Costs and Prices (CACP), in consultation with state governments and sugar industry associations.

Factors Considered for FRP Fixation

The CACP considers multiple factors while recommending FRP:

1. Cost of production of sugarcane
2. Inter-crop price parity
3. Reasonable margins for growers considering risk and profits
4. Sugar recovery rate from sugarcane
5. Price at which sugar is sold by producers
6. Realization from sale of by-products
7. Availability of sugar to consumers at fair prices

State Advised Price (SAP)

While FRP serves as the minimum price, some major sugarcane-producing states—particularly Uttar Pradesh, Punjab, Haryana, and Uttarakhand—announce their own State Advised Price (SAP), which is generally higher than the FRP. This dual pricing system often creates challenges for sugar mills operating in these states, as they must pay higher prices while competing with mills in other states.

Key Committees on Sugarcane Pricing

Several expert committees have examined sugarcane pricing issues and made recommendations:

Committee	Year	Key Recommendations
Tuteja Committee	2004	Continue SMP with price-sharing benefits as per Clause 5A
Thorat Committee	2009	Government should withdraw from price fixing; mills and farmers to settle prices mutually
Nanda Kumar Committee	2010	Fixed percentage sharing of sugar, bagasse, and molasses realization; guarantee farmers share in price hikes
Dr. C. Rangarajan Committee	2012	Link sugarcane price with sugar and by-product realization; two-step payment mechanism with FRP as floor price

Trends in Fair and Remunerative Price (2013-14 to 2022-23)

The FRP for sugarcane has shown a consistent upward trend over the past decade, reflecting increased production costs and policy emphasis on ensuring farmer welfare.

Table 1: State-wise Average FRP in India (₹ per quintal)

Year	Uttar Pradesh	Maharashtra	Karnataka	Tamil Nadu	All-India Average
2013-14	210	210	210	210	210
2014-15	220	220	220	220	220
2015-16	230	230	230	230	230
2016-17	250	250	250	250	250
2017-18	255	255	255	255	255
2018-19	275	275	275	275	275
2019-20	285	285	285	285	285
2020-21	290	290	290	290	290
2021-22	295	295	295	295	295
2022-23	315	315	315	315	315

Source: Directorate of Sugar & Vegetable Oils, Ministry of Consumer Affairs, Food and Public Distribution

Sugar Recovery Rates and Mill Performance

Sugar recovery rate is a critical factor influencing both farmer payments and mill profitability. Higher recovery rates translate to better prices for farmers, as FRP includes a premium for higher recovery.

Table 2: Sugar Recovery Rates in Major States (2022-23)

State	Number of Mills	Average Recovery Rate (%)	Production (Lakh Tonnes)
Uttar Pradesh	120	10.85	105.0
Maharashtra	195	10.92	95.5
Karnataka	65	10.75	45.2
Tamil Nadu	40	9.85	18.5
Gujarat	15	10.60	12.8
Andhra Pradesh	18	9.70	8.5
All-India	**532**	**10.65**	**328.5**

Source: ISMA and Directorate of Sugar & Vegetable Oils

Cane Price Arrears: A Persistent Challenge

Despite regulatory mechanisms, delayed payments to farmers remain a concern in some states. Cane price arrears reflect the financial stress faced by sugar mills, particularly when sugar prices decline or production costs escalate.

Table 3: State-wise Arrears as Percentage of Total Cane Dues (2022-23)

State	Arrears (%)
Uttar Pradesh	15.2
Bihar	22.5
Punjab	8.3
Haryana	6.7
Uttarakhand	4.1
Maharashtra	0.0
Karnataka	0.0
Madhya Pradesh	0.0
Chhattisgarh	0.0
Odisha	0.0

Source: Directorate of Sugar & Vegetable Oils

Notably, Maharashtra, Karnataka, Madhya Pradesh, Uttarakhand, Chhattisgarh, and Odisha reported no arrears during the 2022-23 sugar season, indicating better payment discipline and mill profitability in these states.

Trends in Area, Production, and Yield

Understanding the dynamics of sugarcane cultivation helps contextualize pricing challenges and outcomes.

Table 4: Trends in Sugarcane Area, Production, and Yield in India

Year	Area (Million Hectares)	Production (Million Tonnes)	Yield (Tonnes/Hectare)
2013-14	4.98	352.1	70.7
2014-15	5.06	362.3	71.6
2015-16	4.85	348.4	71.8
2016-17	4.92	352.2	71.6
2017-18	4.76	376.9	79.2
2018-19	5.04	405.4	80.4

2019-20	4.94	370.5	75.0
2020-21	4.88	399.3	81.8
2021-22	5.11	431.8	84.5
2022-23*	4.91	425.0	86.5

Source: Economics, Statistics & Evaluation Division, Ministry of Agriculture and Farmers Welfare
**First Advance Estimates*

The data reveals significant improvements in productivity, with yield increasing from 70.7 tonnes/ha in 2013-14 to 86.5 tonnes/ha in 2022-23—a growth of over 22% in a decade.

Ethanol: The New Frontier

The ethanol blending program has emerged as a game-changer for the sugar industry, providing an alternative revenue stream and reducing cane price pressure.

Table 5: Ethanol Prices from Sugarcane Feedstocks (₹ per litre)

Ethanol Supply Year	C-Juice	B-Heavy Molasses	C-Heavy Molasses	Damaged Grain
2018-19	43.70	43.70	39.48	38.69
2019-20	54.27	54.27	43.73	42.91
2020-21	57.61	57.61	45.69	44.92
2021-22	63.45	63.45	49.53	48.94
2022-23*	65.60	65.60	52.42	51.82

Source: Directorate of Sugar & Vegetable Oils
**December to October*

Way Forward: A Unified Price Formula

Experts have increasingly advocated for a unified national pricing formula that balances the interests of all stakeholders. The proposed model would offer multiple advantages:

Benefits of a Unified Price Formula

Stakeholder	Advantages
Farmers	Stable pricing; ability to hedge/forecast prices
Sugar Mills	Access to funds; ability to invest in new capacity and improve operations
Consumers	Limited volatility in prices linked with inflation
Government	No cost to exchequer; better control over sugarcane and sugar prices
Commodity Markets	Increased depth; price reset options; reduced volatility

Conclusion

Sugarcane pricing in India represents a complex balancing act involving multiple stakeholders with often conflicting interests. The evolution from SMP to FRP marked an important shift toward ensuring fair and remunerative prices for farmers, yet challenges persist. The dual pricing system—with FRP at the national level and SAP in some states—creates distortions and financial stress for mills operating in SAP-announcing states. Cane price arrears remain a concern, particularly in Uttar Pradesh and Bihar, indicating underlying issues in mill viability or payment discipline.

Encouragingly, productivity gains have been substantial, with average yields increasing by over 22% in the past decade. India's emergence as a consistent sugar exporter, with record exports of 110 lakh tonnes in 2021-22, demonstrates the sector's growing competitiveness. The ethanol blending program offers a promising avenue for diversifying sugarcane utilization and reducing the cyclicality inherent in sugar markets.

Looking ahead, a unified national pricing formula that links cane prices to sugar and by-product realizations could provide a sustainable solution. Such a mechanism would reduce volatility, enable better planning by all stakeholders, and align India's sugarcane pricing with global best practices. The recommendations of the Rangarajan Committee, suggesting a two-step payment mechanism with FRP as floor price and subsequent payments linked to market realizations, deserve serious consideration. As India moves toward higher ethanol blending targets (20% by 2025) and seeks to stabilize its position in global sugar markets, a rational, transparent, and predictable sugarcane pricing policy will be essential for ensuring the long-term sustainability of both sugarcane farming and the sugar industry.

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