

SOUVENIR STAI ANNUAL CONVENTION VOL. 84 (2026)

Sugarcane Agriculture Fast Changing Varietal Scenario In Uttar Pradesh

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Bharat Mandapam, New Delhi 24-26 July,2025

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He presented a detailed paper on the following abstract in the 84th STAI Annual Convention & International Sugar EXPO 2026 in the Dr. Shyama Prasad Mukherjee Indoor Stadium at Goa.

ABSTRACT

Sugarcane represents the foremost commercial cash crop in Uttar Pradesh, contributing substantially to the development and economic viability of the state's sugar and ethanol industries. This study presents a comprehensive analysis of variety-wise sugarcane cultivation trends across Uttar Pradesh during the 2023–24, 2024–25, and 2025–26 crushing seasons. The empirical findings reveal major structural transformations in the state's varietal composition, primarily driven by productivity optimization, urgent disease management imperatives, and organized governmental varietal replacement initiatives. The variety Co.0238, which historically dominated the agrarian landscape with an extensive 59.9% market share in the 2023–24 seasons, demonstrated a continuous and sharp contraction, ultimately occupying a reduced area of approximately 29.2% by the 2025–26 season. Conversely, the cultivation area of Co.0118 expanded steadily from 4.89 lakh hectares in 2023–24 to 7.45 lakh hectares in 2025–26, successfully emerging as the primary substitution cultivar. Additionally, accelerated growth and expansion were recorded for several newly introduced varieties, including Co.15023, Co.Lk.14201, Co.S.17231, and Co.Lk.12207. These structural dynamics signify a highly successful diversification of the state's varietal portfolio, effectively mitigating systemic reliance on a single monoculture. The ongoing varietal transition is expected to optimize average agricultural yields, enhance commercial sugar recovery rates, improve systemic disease resistance, and fortify climate resilience, thereby fulfilling the escalating raw material demands of the domestic sugar and biofuel manufacturing sectors. Finally, this study underscores the critical imperative of sustained varietal replacement cycles, systematic high-quality seed distribution, and comprehensive farmer sensitization programs to ensure the long-term sustainability of the sugarcane ecosystem in Uttar Pradesh.