

Yield Gaps in Sugarcane Cultivation under Irrigated *Vis-à-vis* Rain-fed conditions in Andhra Pradesh- An Econometric Estimation

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ABSTRACT

An econometric estimation of efficiency and yield gap in irrigated *Vis-a-vis* rainfed sugarcane cultivation in Visakhapatnam district of Andhra Pradesh was carried-out during 2021-22. The data on various aspects of costs and returns involved in crop along with constraints collected from farmers based on multistage sampling. Budgeting techniques, Cost Concepts, Benefit Cost Ratio (BCR), Bisliah model of Yield gap Analysis and Response-Priority Index were employed for achieving objectives. The results revealed, for plant crop, the BCR (on Operational Costs) was higher in rainfed (0.86) than irrigated (0.83). There was a 48.80 % yield gap between irrigated and rainfed, in which input usage (26.95%) had higher effect than cultural practices (21.85%). The most important constraint in Sugarcane cultivation is shortage of labour during crucial operations. Hence, irrigated sugarcane method is a more remunerative, yields can be sustainable if constraints are addressed and proper package of practices are followed.

Keywords: *Sugarcane, Yield gap analysis, Response-Priority Index, Srikakulam, Vizianagaram, Visakhapatnam, Andhra Pradesh*