

## YIELD GAP ANALYSIS IN COTTON PRODUCTION IN MAHARASHTRA: IMPLICATIONS FOR FARMERS' INCOME

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**Abstract:** Suggestive measures for bridging yield gap are an important means of enhancing farmers' income. This paper aims at analyzing the relationship between cotton farmers output and their socio-economic characteristics, estimation of yield gap and to identify the factors responsible for yield gap in the study area. The study adopted multistage sampling technique in selecting 120 cotton farmers in four villages from Kalmeshuwa and Saona blocks in Nagpur district, Maharashtra. Both primary and secondary data were used for the study. Primary data was collected with the aid of structured questionnaires administered to the cotton farmers and secondary data on potential yield in the research station, potential yield in the demonstration plot and recommended input usage was obtained from the Central Institute for Cotton Research, Nagpur (CICR). Frequencies, percentage and cross tabulation, yield gap index and multiple regression model were used for analyzing the data obtained. Results from cross tabulation indicated that gender, farm size and educational status of the respondents might not necessarily guarantee larger cotton output in the study area. Findings from yield gap analysis showed that yield gap I, yield gap II and total yield gap in the study area were 375kg/ha, 815.11kg/ha and 1190.11kg/ha respectively, implying that there is still scope for increasing actual farmers' yield and hence more farm income. Results from the multiple regression model revealed that educational status, farm size, seed rate gap and location of the farmers were the major factors responsible for yield gap in the study area. The study therefore suggested a need to sensitize farmers by relevant Government agencies on the unfavorable effects of excess input usage with a view to minimize yield gap in the study area.

**Keywords:** Yield gap, Potential yield, Demonstration plot

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