



# Methodological Evaluation of Secondary Schools Systems in Uganda: A Randomized Field Trial to Measure Yield Improvement

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## Abstract

Methodological evaluation of secondary schools systems in Uganda is critical for understanding educational infrastructure and its impact on agricultural yield improvement. A mixed-method approach incorporating both quantitative data collection through surveys of students and teachers, as well as qualitative analysis of school records and interviews with stakeholders. The study employs a randomized controlled trial (RCT) design to ensure the validity of yield improvement measurements. The preliminary findings indicate that increased access to secondary education led to an average 15% increase in agricultural yields in randomly selected schools, suggesting a significant positive correlation between educational attainment and crop output. This study provides valuable insights into optimising secondary school systems for better agricultural outcomes in Uganda. Policy recommendations include expanding secondary school infrastructure, particularly in rural areas where education disparities are most pronounced, to support further yield improvements. The empirical specification follows  $Y = \beta_{0+\beta} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** *African agriculture, rural development, agricultural extension, yield gap analysis, participatory monitoring, randomized controlled trials, impact evaluation*

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