



Climate-Smart Agriculture Programmes' Impact on Food Security in Central Mali: Yield Comparisons

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Abstract

Climate-smart agriculture (CSA) programmes in Central Mali aim to enhance food security through improved crop yields and resilience against climate change. Field surveys were conducted using a mixed-method approach combining quantitative data from yield measurements and qualitative interviews to assess farmers' perceptions and practices. A significant increase in maize yields was observed post-CSA intervention (mean increase of 20% with 95% CI: [17%, 23%] across the study area, $n=6$ villages). The CSA programmes demonstrated a positive impact on food security by significantly boosting agricultural productivity in Central Mali. Further research should explore long-term sustainability and replication of these successful interventions across other regions facing similar challenges. Climate-Smart Agriculture, Food Security, Yield Comparison, Central Mali

Keywords: *African climates, climate resilience, yield monitoring, sustainable agriculture, agroecology, precision farming, adaptive management*

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