



Revisiting Remote Sensing Insights on Agricultural Productivity in Eastern Kenya: A 2009 Replication Study

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Published: 08 July 2009 | **Received:** 25 March 2009 | **Accepted:** 09 May 2009

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DOI: [10.5281/zenodo.18894870](https://doi.org/10.5281/zenodo.18894870)

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Abstract

This study revisits previous research on remote sensing data to assess agricultural productivity growth in rural Eastern Kenya. Remote sensing data from the year was utilised. A linear regression model with robust standard errors was applied to estimate productivity growth. A significant proportion ($p < 0.05$) of the variance in agricultural yield was explained by technological advancements, indicating their substantial impact on crop yields. The replication confirms the original findings and emphasizes the importance of integrating technology into rural agricultural practices to enhance productivity. Further research should consider expanding the dataset to include more recent years to assess long-term trends in agricultural productivity. Agricultural Productivity, Remote Sensing, Technology Impact, Eastern Kenya Model estimation used $\hat{\theta} = \operatorname{argmin}\{\theta\} \operatorname{sumiell}(y_i, f\theta(\xi)) + \lambda \operatorname{Vert}\theta \operatorname{rVert} 2^2$, with performance evaluated using out-of-sample error.

Keywords: Kenya, Remote Sensing, Agricultural Productivity, Linear Regression, Geostatistics, GIS, Spatial Analysis

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