



Mobile Technologies in Agricultural Extension Services: Adoption and Outreach in Eastern Uganda

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Abstract

Mobile technologies have become increasingly important in modernizing agricultural extension services, especially in resource-limited settings like Eastern Uganda. A mixed-methods approach was employed, including surveys and focus group discussions among farmers and extension workers. During the six-month evaluation period, a 35% adoption rate for mobile apps was observed, with outreach coverage reaching 80 villages across Eastern Uganda. The findings suggest that mobile technologies can significantly enhance agricultural practices in Eastern Uganda, provided appropriate training and support are available. Further studies should focus on the long-term sustainability of these technologies and their impact on farmers' income levels. Model estimation used $\hat{\theta} = \text{argmin} \{ \theta \} \text{sumiell} (y_i, f\theta(\xi)) + \lambda \text{Vert}\theta \text{rVert}^2$, with performance evaluated using out-of-sample error.

Keywords: African Geography, Agricultural Extension, Mobile Applications, Technology Adoption, Participatory Research, Impact Evaluation, Geographic Information Systems (GIS)

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