African Broadcasting Studies

Mobile Agriculture Information Services Adoption by Farmers in Southern Tanzania's Maize Producing Regions: Adoption Rates and Yield Improvements

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Abstract

Mobile agriculture information services (MAIS) have gained traction as a tool for enhancing agricultural productivity in developing regions. A comprehensive search strategy was employed using databases such as PubMed, Google Scholar, and Web of Science. The inclusion criteria were defined based on study design, region, and language. The analysis revealed a moderate adoption rate (35%) among farmers who accessed MAIS, with significant improvements in yield observed for those adopting the services (mean increase: 12% with 95% CI [8%, 16%]). MAIS adoption by farmers in Southern Tanzania's maize-producing regions demonstrates potential for enhancing agricultural productivity. Further research should explore long-term impacts and cost-effectiveness of MAIS, alongside identifying factors that influence MAIS adoption among different farmer groups. Model estimation used $\hat{\{}\theta\}=argmin\{\theta\}sumiell(yi,f\theta(\xi))+\lambda lVert\theta rVert2^{2}$, with performance evaluated using out-of-sample error.

Keywords: *African geography, GIS, participatory rural appraisal, mobile technology adoption, yield gap analysis*

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