Adoption and Financial Outcomes of Mobile Agriculture Apps in Crop Yield Prediction Among Farmers in Eastern Uganda

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Abstract

Mobile agriculture apps have emerged as a tool for improving crop yield prediction in agricultural practices worldwide. In Eastern Uganda, mobile apps are increasingly used by farmers to enhance their farming efficiency and profitability. A mixed-methods approach was employed, involving surveys, interviews, and focus groups with a sample size of 150 farmers from Eastern Uganda. Data were analysed using descriptive statistics and thematic analysis. The findings revealed that 60% of surveyed farmers adopted mobile agriculture apps for crop yield prediction, primarily due to increased accuracy in predicting yields compared to traditional methods. Financial outcomes showed a significant increase in average annual profits by 25%, with higher adoption rates correlating with greater financial gains. Mobile agriculture apps have become an integral part of Ugandan farmers' practices, offering substantial benefits in terms of yield prediction and economic returns. However, continued support is needed to overcome technological barriers and ensure widespread adoption among all farmer demographics. Policy makers should provide subsidies for mobile devices and internet access, while agricultural extension services need to be trained on app usage and its integration into farming practices. Mobile Agriculture Apps, Crop Yield Prediction, Eastern Uganda, Financial Outcomes, Adoption Rates

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