



Mobile Tools in Agricultural Extension: A Methodological Approach in Burkina Faso

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Abstract

Agricultural extension services in Burkina Faso have traditionally relied on face-to-face interactions for knowledge dissemination among farmers. The advent of mobile technology offers a novel approach to enhance these services, particularly through mobile apps and SMS platforms. A mixed-methods approach was employed, integrating surveys with qualitative interviews. Data were collected from 100 randomly selected farmers across three regions of Burkina Faso between January and December. Statistical analysis utilised logistic regression to model the likelihood of farmer engagement based on demographic factors. A significant proportion (65%) of surveyed farmers reported using mobile extension services, with younger farmers showing higher usage rates compared to older generations. Logistic regression revealed that education level and access to electricity were key predictors of engagement. The use of mobile tools for agricultural extension shows promise in Burkina Faso but requires further tailoring to local contexts and improving accessibility. Future research should focus on developing culturally relevant content and enhancing infrastructure to support wider adoption of mobile technology by farmers. The empirical specification follows $Y = \beta_{0+\beta}^{-1} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: African Geography, Mobile Applications, Participatory Action Research, Precision Agriculture, GIS Mapping, Remote Sensing, Community Participation

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