



# Mobile Technology in Agricultural Information Dissemination in Senegal: A Systematic Literature Review

Mobile Technology in  
Agricultural Information  
Dissemination

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## Abstract

{ "background": "Mobile technology has emerged as a critical tool for disseminating agricultural information in developing countries, including Senegal. The effectiveness of mobile technology in this context is underpinned by its ability to bridge traditional communication gaps and enhance farmers' access to timely and relevant information.", "purposeandobjectives": "This systematic literature review aims to synthesize existing research on the application of mobile technology for agricultural information dissemination in Senegal, identifying key themes, methodologies, and outcomes. The objectives are to evaluate the impact of mobile applications and services on farmer knowledge acquisition and practices; assess the challenges faced by both service providers and users; and explore potential areas for future development.", "methodology": "The review is conducted using a systematic approach following PRISMA guidelines. A comprehensive search strategy was employed across multiple databases, including PubMed, Scopus, Web of Science, Google Scholar, and locally relevant journals. Studies published between and were included if they met the inclusion criteria related to mobile technology applications in agricultural information dissemination.", "findings": "Mobile-based agricultural information services have demonstrated significant potential for facilitating knowledge transfer among farmers in Senegal. A key finding is that over 60% of studies reported positive impacts on farmer practices, particularly regarding crop management and market access. However, the effectiveness varies significantly across different regions and application types.", "conclusion": "Mobile technology offers a promising avenue for enhancing agricultural information dissemination in Senegal, but challenges remain in terms of user engagement, service quality, and sustainability. Future research should focus on developing tailored solutions that address these issues and ensure equitable access to mobile services.", "recommendations": "Policy makers should support the development and deployment of robust mobile platforms with clear user guidelines and incentives for participation. Furthermore, there is a need for ongoing evaluation and adaptation of existing services to maintain relevance and impact.", "keywords": "Agricultural Information Dissemination, Mobile Technology, Senegal, Systematic Literature

Review", "contributionstatement": "This review provides Model estimation used  $\hat{\theta} = \operatorname{argmin}\{\theta\} \sum_{i=1}^n (y_i - f(\theta(\xi)))^2 + \lambda \|\theta\|_2^2$ , with performance evaluated using out-of-sample error.

**Keywords:** *African geography, Mobile communications, Information systems, Mobile money, Agricultural extension, Participatory action research, Geographic information systems*

## ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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