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Digital Agriculture Training Workshops in Southern Malawi: Adoption Rates and Yield Improvements Evaluation

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Abstract

Digital agriculture initiatives have been implemented in various regions to improve crop yields and farmer livelihoods. In Southern Malawi, these efforts are particularly aimed at enhancing agricultural productivity through digital training workshops. A comprehensive search strategy was employed, including electronic databases such as PubMed, Scopus, and Web of Science. Studies published between and were considered relevant for inclusion in the review. The analysis revealed that digital agriculture training workshops led to a significant increase in adoption rates among farmers by 47%, with an average yield improvement of 20% reported across various study sites. These results suggest substantial potential for enhancing agricultural productivity through targeted digital interventions. Digital agriculture training workshops have shown promise in improving farmer adoption and crop yields, indicating the need for further research to optimise these programmes for broader implementation. Given the positive findings, recommendations include scaling up successful models, integrating feedback mechanisms into future training sessions, and conducting longitudinal studies to monitor long-term impacts. Model estimation used $\hat{\{\theta\}} = argmin\{\theta\} sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert 2^2$, with performance evaluated using out-of-sample error.

Keywords: *African, GIS, participatory, rural, impact assessment, technology acceptance, yield modelling*

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