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Measuring Post-Harvest Loss Reduction Through Farmer Field Schools in Northern Ghana: A Methodology

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Abstract

In northern Ghana, post-harvest losses (PHL) contribute significantly to food insecurity among smallholder farmers. Farmer Field Schools (FFS) have been employed as a community-based intervention to reduce PHL, but their effectiveness remains under-researched. The study employed a mixed-methods approach, including pre- and post-intervention surveys, focus group discussions, and interviews with farmers participating in FFS programmes. Quantitative data were analysed using regression analysis to estimate the impact of FFS on PHL reduction. A significant proportion (35%) of participants reported improved knowledge about reducing PHL after completing the FFS programme, indicating a positive shift towards more efficient harvest and storage practices. The methodology demonstrated that FFS can effectively enhance farmer knowledge and practices related to post-harvest loss reduction. Further research is recommended to validate these findings across different regions and contexts. Future studies should consider longitudinal assessments of PHL reductions over multiple harvest seasons and explore the long-term sustainability of FFS interventions in Ghanaian farming communities. 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, Geographic Information Systems, Participatory Monitoring and Evaluation, Community-Based Intervention, Food Security Assessment, Quantitative Research Methods, Qualitative Analytical Techniques*

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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