



Smart Farming Techniques Among Smallholder Farmers in Kenya's Tana Delta: A Four-Year Agricultural Yields Analysis

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Abstract

Smart farming techniques have emerged as crucial tools for enhancing agricultural productivity in developing regions like Kenya's Tana Delta, where smallholder farmers face challenges such as limited access to modern inputs and knowledge. The research employed qualitative methods including semi-structured interviews with farmer participants and focus group discussions. Data collection took place across ten randomly selected villages within the study area. A notable trend identified was an average increase of 20% in maize yield among farmers who adopted precision irrigation techniques compared to those who did not use such methods. The findings suggest that smart farming techniques significantly contribute to enhancing agricultural productivity, particularly when integrated into existing farming practices. Government and non-governmental organizations should support smallholder farmers in adopting these technologies through training programmes and access to necessary inputs.

Keywords: Kenya, Tana Delta, Smallholder Farmers, Agricultural Yields, Quantitative Methods, Qualitative Analysis, Case Study

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