African Community Pharmacy

Solar-Powered Irrigation's Impact on Tanzanian Maize Yields and Water Efficiency: A Three-Year Analysis

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Abstract

Solar-powered irrigation systems have been introduced to improve agricultural productivity and water management in Tanzania's maize production sector. The study employed data from farmer surveys and yield measurements conducted annually to evaluate system effectiveness. These findings underscore the potential for solar power in enhancing sustainable agricultural practices in Tanzania. Government and development agencies should invest in further research and infrastructure support for solar-powered irrigation systems to maximise their benefits across diverse farming contexts.

Keywords: *Tanzania, Geographic Information Systems (GIS), Precision Agriculture, Renewable Energy, Maize Production, Water Scarcity, Irrigation Schemes*

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