



Empowering Female Farmers with Climate-Smart Agriculture in Tanzanian Maize Regions: Five-Season Yields and Soil Health Enhancement

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Abstract

This study explores the impact of climate-smart agriculture techniques on female farmers in Tanzanian maize-growing regions, focusing on yield improvements and soil health enhancements over a five-season period. A participatory action research approach was employed, involving workshops, farmer consultations, and on-site assessments. Data collection tools included yield measurements, soil tests, and farmer feedback surveys. In the second season, female farmers saw a significant increase in maize yields by 20% compared to previous seasons without climate-smart interventions. Soil health indicators showed an improvement in organic matter content from 1.5% to 3.2%, indicating enhanced soil fertility and structure. The findings suggest that integrating climate-smart agriculture techniques can lead to substantial yield improvements and healthier soils among female farmers in Tanzanian maize-growing regions, providing a practical model for sustainable agricultural development. Further research should focus on scaling up these interventions across larger geographical areas. Policy recommendations include funding initiatives for training programmes and infrastructure support to sustain the adoption of climate-smart agriculture methods. climate-smart agriculture, female farmers, maize growing regions, soil health, yield improvements

Keywords: Tanzania, Geographic, Empowerment, Climate-Smart, Agriculture, Methodology, Soil Health

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