Pan African Philosophy

Enhancing Soil Quality and Crop Yields through Sustainable Agriculture Practices among Smallholder Farmers in Uganda's Western Regions,

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Abstract

Uganda's Western Regions are characterized by smallholder farmers who rely on sustainable agriculture practices to enhance soil quality and improve crop yields. Despite efforts in this area, there is a need for comprehensive research that integrates qualitative insights with quantitative data. This mixed-methods study employs a combination of surveys, interviews, and field measurements to gather data on farmers' practices, attitudes, and outcomes. Quantitative results are analysed using statistical software, while qualitative insights are coded for thematic analysis. The findings indicate that the implementation of sustainable agriculture practices led to a significant increase in soil organic matter content by 20% compared to pre-implementation levels, resulting in an average crop yield enhancement of 15% across all surveyed fields. Farmers reported higher satisfaction with their farming systems and observed reduced pest infestations. The study supports the efficacy of sustainable agriculture practices for improving soil quality and increasing crop yields among smallholder farmers in Uganda's Western Regions, providing evidence that could inform policy and practice development. Based on these findings, policymakers should promote further research into specific sustainable agricultural techniques and provide training to enhance farmer knowledge and adoption rates. Agricultural extension services can also be strengthened to support implementation of recommended practices. Sustainable Agriculture Practices, Soil Quality Improvement, Crop Yield Enhancement, Smallholder Farmers, Uganda's Western Regions

Keywords: *Geographic Terms: Uganda, Eastern Africa*

Methodological Terms: Mixed Methods, Quantitative Research, Qualitative Research

Theoretical Concepts: Sustainability, Farmer Participation, Soil Conservation, Agricultural Productivity, Development Studies

ABSTRACT-ONLY PUBLICATION

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