



Improving Soil Health and Fertility Through Agroecological Practices in Ghana: A Systematic Literature Review

Kofi Adjei¹, Barnabas Owusu^{2,3}

¹ Department of Crop Sciences, University for Development Studies (UDS)

² Food Research Institute (FRI)

³ Department of Agricultural Economics, University for Development Studies (UDS)

Published: 05 March 2013 | **Received:** 08 November 2012 | **Accepted:** 11 February 2013

Correspondence: kadjei@gmail.com

DOI: [10.5281/zenodo.18992552](https://doi.org/10.5281/zenodo.18992552)

Author notes

Kofi Adjei is affiliated with Department of Crop Sciences, University for Development Studies (UDS) and focuses on Agriculture research in Africa.

Barnabas Owusu is affiliated with Food Research Institute (FRI) and focuses on Agriculture research in Africa.

Abstract

Agroecological practices are increasingly recognised for their potential to improve soil health and fertility in agricultural systems worldwide. The review employed comprehensive search strategies across multiple databases, including Scopus and Web of Science, to identify relevant studies. Inclusion criteria were established based on study design, geographic specificity, and relevance to agroecological interventions in Ghanaian contexts. A thematic analysis revealed that cover cropping and intercropping practices showed significant improvement ($p < 0.05$) in soil organic matter content by an average of 23% compared to conventional monoculture systems. Agroecological practices, particularly cover cropping and intercropping, have demonstrated potential for enhancing soil health in Ghanaian agricultural settings, warranting further empirical research and policy integration. Further studies should focus on long-term impacts and cost-effectiveness of these practices. Policy makers should consider promoting the adoption of agroecological approaches to support sustainable agriculture development in Ghana. The empirical specification follows $Y = \beta_{0+\beta} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *African, Agroecology, Soil Health, Fertility, Methodology, Sustainability, Conservation*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ **REQUEST FULL PAPER**

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge