Sulman Olieko OWILI

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Summary

Sulman is an award-wining agricultural and applied economist dedicated to implementing novel research techniques to shape sustainable policies for the agri-food sector. In 2023, he was recognised as the Best Collaborative Masters in Agricultural and Applied Economics (CMAAE) student, an accolade awarded within a programme involving eight major universities across East and Southern Africa. Earlier that year, he was acknowledged as the second-best master's student in the Faculty of Agriculture at the University of Nairobi. Sulman is currently a consulting case study co-facilitator at the American Heart Association under the FoodEdu project on Regenerative Agriculture. His research interests include causal analysis, production economics, bayesian econometrics, statistics, and quantitative modelling, with a particular focus on sustainable agricultural technology adoption and innovation systems as pathways to food sovereignty, poverty alleviation, and reversal of climate change effects.

Education

MSc Agricultural and Applied Economics, University of Nairobi　　Sept. 2021 to Sept. 2025

- **Coursework:** Quantitative Methods for Policy Analysis; Econometrics; Statistics; Production Economics; Mathematics for Economists; Research Methods; Institutional and Behavioural Economics; Issues in Agricultural and Applied Economics; Agricultural Policy Analysis; Agricultural Marketing and Price Analysis　　*Provisional transcripts* ↗
- **Thesis title:** Intensity of Adoption of Agro-ecological Pest Management Strategies for Mango Fruit Fly Suppression and Its Effect on Technical and Eco-efficiency of Smallholder Farmers in Kenya
- **Supervisors:** Prof. David O. Jakinda ↗; Dr. Evans L. Chimoita ↗ & Dr. Frederick P. Baijukya ↗

BSc Agricultural Education and Extension, University of Nairobi　　Sept. 2016 to Dec. 2020

- **Degree Classification:** First Class Honours　　*Transcripts* ↗

Academic Employment and Experience

American Heart Association, Case Study Co-facilitator, Consultant

Project: FoodEdu

Supervisor: Britt Molde

　　Nairobi, Kenya
　　Jan. 2025 to present
　　4 months

- Facilitating filming crew with identification of key informants for interview as well as creation, shooting, translation, editing and review of the film storyline for accuracy, viewer engagement, and maximum impact.

Alliance of Bioversity and CIAT, Research Assistant, Consultant

Project: Food Quality Data Initiative on Regenerative Agriculture

Supervisor: Dr. Francis Oduor

　　Nairobi, Kenya
　　Oct. 2024 to Mar. 2025
　　6 months

- Conducted literature review on regenerative agriculture practices in common bean production systems.
- Analysed the current context of agricultural practices in Embu County, including challenges faced by smallholder farmers.
- Supported in the day to day management of the field experiment in Embu
- Assisted in designing and conducting surveys with farmers in Embu County.
- Collected data on costs, yields, labour requirements, and potential environmental impacts of both conventional and regenerative practices.
- Contributed to the collection of food samples for biomolecular composition analysis using PTFI standardised multi-omics tools.
- Conducted a comprehensive analysis of the economic, environmental, and social trade-offs involved in adopting regenerative agriculture practices in Embu County, with a focus on common bean production systems.

International Institute of Tropical Agriculture (IITA), Research Associate, Consultant

Project: Excellence in Agronomy Initiative

Supervisor: Dr. Tesfamichael Wossen

Nairobi, Kenya
Jun. 2024 to Nov. 2024
6 months

- Cleaned, processed, and analysed primary and secondary data, including the development of R/Stata scripts to automate retrieval from and upload of data to databases and data management systems, ensuring quality and completeness.
- Conducted literature reviews and synthesis.
- Extracted critical outcomes and impact indicators and writing research reports, scientific papers, and policy briefs.
- Report writing

International Center for Research in Agroforestry (ICRAF), Agroecological Systems and Research Analyst, Consultant

Nairobi, Kenya
Dec. 2023 to Dec. 2024
1 year

Project: Agroecology Initiative & TRANSITIONS Metrics & ABCD in Regreening

Supervisor: Dr. Lisa E. Fuchs & Dr Matthias Geck

- Supported the Kenya team in HOLPA data cleaning, merging, managing the database and analysis depending on the needs of each team player towards achievement of Work Package output targets.
- Analysed baseline, midline, and endline data for the ABCD in Regreening project to assess causal effects of project interventions (implemented in Stata and R).
- Analysed baseline and endline data for Regreening Africa project to assess the impact of project interventions (implemented in Stata and R).
- Reported results to the project research team in a timely and logical manner.
- Contributed to conceptualisation, data cleaning and analysis (R, Stata, and QGIS), writing, and reviewing of a research manuscript titled: *"Scaling Models for Regreening Africa: Enhancing Agroecological Integration through Smallholders' Assets and Agency in Kenya"*
- Contributing to conceptualisation, data cleaning and analysis (R, Stata, and QGIS), writing, and reviewing of a research manuscript on Realistic Contribution Analysis of ABCD impacts in the intervention-context-mechanism-outcome (ICMO) framework.

International Institute of Tropical Agriculture (IITA), Research fellow

Project: Agroecology Initiative

Nairobi, Kenya
Jul. 2022 to Dec. 2024
2 years 6 months

Supervisor: Dr. Frederick P. Baijukya

- Localised key performance indicators, programmed survey questionnaire in KoboToolbox and pretested questionnaire, trained enumerators, supervised the two-wave data collection, validated, cleaned, and analysed data for the Holistic Localised Performance Assessment for Agroecology (HOLPA) Survey under the CGIAR's Initiative on Agroecology.
- Conducted research towards my masters thesis and wrote two research manuscripts out of my thesis objectives as part of the Agroecology Initiative project outputs.
- Contributed to conceptualisation, data cleaning and analysis (R, Stata, and QGIS), writing, and reviewing of a technical report titled: *"Performance assessment of agroecology in Makueni and Kiambu counties, Kenya"*

University of Nairobi, Teaching Assistant

Supervisor: Dr. Evans L. Chimoita

Nairobi, Kenya
Sept. 2022 to Mar 2024
1 year 10 months

- Lectured, administered tests, and graded final year undergraduate students on Food Economics and Policy (AEX404) and Environmental Education (AEX406).
- Provided mentorship to students.

Publications

Owili, S.O., Korir, H., Onyango, K.O., Bolo, P.O., Baijukya, F.P., Nyawira, S.S., Anyango, E., and Adoyo, B. **Behavioural mechanisms and social capital in pro-agroecological transitions–a comparative analysis of two case studies in Kenya**. *In Press*

In Press
Journal article

Fuchs, L.E. and **Owili, S.O.** Realist Contribution Analysis of Asset-based Community Development Program: a Grouped Structural Equation Modelling Approach. *In Press*

In Press
Journal article

Owili, S.O., Otieno, D.J., Chimoita, E.L., and Baijukya, F.P. **Heterogeneous efficiency effects of agro-ecological fruit fly management transition and intensification among smallholder mango farmers: A latent class stochastic metafrontier approach**. *CGSpace* DOI:10568/170186 ☑

Journal article (*In Press*)
Poster (*Published*)

Nyawira, S., Korir, H., Bolo, P., Onyango, K., **Owili, S.O.**, Letty, B., Wamaitha, C., Njogu, M., Anyango, E., and Baijukya, F. (2025) **Performance assessment of agroecology in Makueni and Kiambu counties, Kenya**. *CGSpace* DOI:10568/169052 ☑

January 1, 2025
Technical report

Owili, S.O., Otieno, D.J., Chimoita, E.L., and Baijukya, F.P. (2024). **Factors influencing adoption of agro-ecological pest management options for mango fruit fly under information constraints: A two-part fractional regression approach**. *International Journal of Pest Management* 1–19. DOI:10.1080/09670874.2024.2413592 ☑

November 4, 2024
Journal article

Fuchs, L.E., Orero, L., Kipkorir, L., Apondi, V., and **Owili, S.O** (2024). **Scaling Models for Regreening Africa: Enhancing Agroecological Integration through Smallholders' Assets and Agency in Kenya**. *Frontiers in Sustainable Food Systems* 1-22: 8(4). DOI:10.3389/fsufs.2024.1449615 ☑
Associated dataset: DOI:10.7910/DVN/TQJ2PJ ☑

2024
Journal article

Fuchs, L.E., Orero, L., Kipkorir, L., Apondi, V., and **Owili, S.O** (2024). **Sustainable scaling models for Regreening Africa: Focusing on smallholders' assets and agency to increase agroecological integration in Kenya**. *Agroecology TPP 2nd Annual Members Forum Meeting 2024 Conference*. 12 – 13 March 2024, Nairobi, Kenya – ICRAF Conference Hall & Online. DOI:10.13140/RG.2.2.32738.13766 ☑

March, 2024
Poster

Nyawira, S., Bolo, P., Ntinyari, W., Orero, L., Onyango, K., Manjella, A., Sakha, M., **Owili, S.O.**, Gumo, P., Mbelwa, M., Korir, H., and Fuchs, L.E. (2023). **Kenya context assessment report: A desk-top review of the context of agroecological principles of Kiambu and Makueni counties**. *CGSpace* DOI:10.13140/RG.2.2.36127.53928 ☑

December 31, 2023
Technical report

Awards

Best CMAAE SFSE 2022 Student Award (pp. 32) ☑ & **(pp. 56)** ☑ (**Aug. 2023**). Best overall in the joint third semester in Agricultural and Applied Economics participated by eight major universities across Eastern and Southern Africa. Also emerged as the CMAAE Academic Advisory Board Prize Winner.

Second-Best Masters Student, Faculty of Agriculture (pp. 22) ☑ (**May 2023**). Among those recognised as best students in the University of Nairobi, academic year 2021/2022.

Projects

CollatzR ☑

Aug. 2023

- Developed an R package for implementing and visualising hailstone sequences among other functionalities

MetafrontieR ☑

Work in progress

- Developing an R package for implementing stochastic metafrontier analysis

Programming Skills

Data Cleaning, Wrangling and Analysis Languages: R (intermediate), Stata (advanced), SQL (intermediate), Python (advanced), Julia (beginner).

Data Visualisation: Stata (advanced), R (advanced), Python (intermediate), QGIS (advanced), Microsoft Office (advanced), Power BI (intermediate), Looker Studio (intermediate).

Scientific Writing: LaTeX (advanced), Microsoft Office (advanced).

Dashboard, Web- and Web-App Development Languages: HTML (advanced), CSS (advanced), R (advanced), JavaScript (intermediate), Python (intermediate).