

EBENEZER KWASI NTIRI

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RESEARCH PROFILE

MPhil in Vegetable Crop Production with hands-on experience in field trials, soil amendment experiments, decomposition assays, and high-fidelity field data collection. Skilled in experimental design, georeferenced sampling, data cleaning and analysis in R, and applied agronomy for climate-resilient systems. Research interests: plant–soil interactions, plant growth regulators, seed biology (germination science), root traits, soil organic matter dynamics, microbial drivers of nitrogen cycling.

EDUCATION

MPhil, Vegetable Crop Production

Kwame Nkrumah University of Science and Technology (KNUST), Kumasi - 2023 – June 2025

Thesis: Effect of Calsifert foliar spray and soil amendments on quality of *Corchorus olitorius*.

Supervisor: Dr Newton K. Amaglo.

BSc, Agriculture (Horticulture)

Kwame Nkrumah University of Science and Technology (KNUST), Kumasi - 2017 – 2021

Short courses and training

- Microcontroller Programming and PLC Training, PCN ICT Training Centre, 2020.
- Software Development and IT & Microsoft Suite training, 2017.
- ArcGIS (self-directed training), 2022.

RESEARCH EXPERIENCE

MPhil Research Project - KNUST, Kumasi (2024–2025)

Effect of Bio Stimulant (Calsifert Foliar Spray) and Soil Amendments on Quality of Corchorus olitorius

- Designed and implemented randomized field trials; established plots and managed treatment applications.
- Conducted destructive biomass sampling, root monolith recovery, oven drying, and sample preparation for chemical analysis.
- Performed data cleaning, georeferencing, and statistical analysis in R; supervised undergraduate field teams.

Undergraduate Research Project - KNUST, Kumasi (2021)

Effect of Colloidal Silver Water, Ozone Water and Tap Water on Shelf-Life and Microbial Load of Tomato

- Executed shelf-life assays, microbial load enumeration, and basic statistical comparisons.

Field Data Governance and Digital Lead - International Water Management Institute (IWMI), Ashanti Region (03–26 Oct 2024)

- Led large-scale field enumeration using Kobo Collect; ensured data integrity and delivered cleaned datasets for analysis.

SELECTED PROFESSIONAL EXPERIENCE

Horticultural Development & Research Specialist (Teaching & Research Assistant) - KNUST, Kumasi (Nov 2021 – Present)

- Coordinated research protocols, laboratory experiments, and field surveys for undergraduate and postgraduate projects.
- Delivered tutorials and practical sessions; mentored students in experimental design and data analysis.

Data Analyst and Field Enumeration Specialist - Network of Community Water Services Ltd. (NETCOWAS) (Jul 2025 – Dec 2025)

- Digital Infrastructure Oversight (2025): Served as the main Data Analysis resource and managed the entire digital experience for NETCOWAS, setting standards for data integrity and reporting.
- Water Resource Reporting (2025): Compiled and cleaned water quality data from multiple communities to produce reliable quarterly reports for NETCOWAS, underpinning governance decisions.

Collaboration & Germplasm Utilization Specialist (Seeds for Resilience) - CSIR / Crop Trust, Kumasi (Apr 2023 – Apr 2024)

- Supported participatory germplasm evaluation and farmer needs assessments for indigenous leafy vegetables.

Climate Adaptation and Value Chain Consultant - Eagle Park Innovation / Kukobila Nasia Farms (Sep 2024 – Present)

- Led technical components of climate-adaptation projects; implemented composting and biogas systems.

Entrepreneurship & Market Linkage Consultant - Sankofa Mama Afrika (Moringa Farm) (Oct 2023)

- Advised on sustainable production planning and market integration for Moringa value chains.

Intern - Amas Farms, Accra (Jul 2019)

- Implemented biosecurity measures and production optimizations that reduced flock losses during disease outbreak.

PUBLICATIONS

- Baah E., Dapaah H.K., Essilfie M.E., Ntiri E.K. (2025). Effect of Combined Use of Organic Crop Growth Enhancer, Inorganic and Organic Fertilizers on the Proximate Quality of Maize (*Zea mays* L.). International Journal of Research and Innovation in Applied Science. DOI: 10.51584/ijrias.2025.10100000165. Role: co-author; field sampling and data analysis.
- Baah E., Dapaah H.K., Essilfie M.E., Ntiri E.K. (2025). Socio-Economic Characterisation of Maize Farmers, Profitability, and Yield Performance of Maize under Integrated Nutrient Management in Two Agro-Ecological Zones of Ghana. International Journal of Research and Innovation in Applied Science. DOI: 10.51584/ijrias.2025.10100000160. Role: co-author; data collection and reporting.

TECHNICAL SKILLS

- Field methods: plot establishment; destructive biomass sampling; root monoliths and root washing; litterbag deployment; earthworm and nematode extraction.
- Soil and lab methods: oven drying; sample preparation; basic C/N analysis; soil sieving; SOM fraction handling.
- Data analysis and geospatial: R (advanced) for statistics and visualization; GIS and georeferencing for spatial sampling, including self-taught ArcGIS (2022); data cleaning and management (Kobo Collect, Excel).
- Other: microcontroller basics; PLC exposure; basic Python familiarity.

TEACHING AND CAPACITY BUILDING

- Delivered tutorials and practical sessions for undergraduate and postgraduate students at KNUST (class sizes typically 20–60).
- Supervised undergraduate field teams and assisted with MPhil student practicals.
- Developed and delivered community training modules on sustainable agriculture for youth under the World Food Programme project (Jun 2024).

MAJOR ACHIEVEMENTS

- Invited key stakeholder at CSIR/Crop Trust Seeds for Resilience Germplasm Workshop (Apr 2024).
- Led high-fidelity field enumeration for IWMI using Kobo Collect (Oct 2024).
- Implemented composting and biogas systems for circular economy initiatives in Northern Ghana.
- Designed and executed a biosecurity strategy at Amas Farms that saved ~80% of flock during disease outbreak.

VOLUNTEER WORK

Savana Signatures / World Food Programme - Nutrition in Retail Project (Jun 2024)

- Delivered sustainable agriculture training for youth; developed practical modules on container gardening and open-field cultivation.

LANGUAGES

- English: C1 (full professional proficiency)
- Asante Twi: Native
- Ga: Conversational

REFEREES

Dr Newton K. Amaglo

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Relationship: MPhil supervisor.

Dr Eli Gaveh

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