

Gifty Lad Ayela

Department of Agricultural Economics
Kansas State University
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EDUCATION

- M.S. Agricultural Economics August 2025
Mississippi State University, Starkville, USA
Thesis: Developing Site-Specific Water Response Functions using Historical Soil Moisture Data
- M.Phil. Agricultural Economics July 2022
University of Ghana, Accra, Ghana
Thesis: Socioeconomic assessment of climate smart agricultural Practices and their effects on food security of farmers in the Savannah and upper west regions of Ghana
- Virtual Exchange Program August 2022
Justus Liebig University Giessen, Germany
- B.Sc. Agribusiness, Major in Climate Change and Food Security July 2018
University for Development Studies, Tamale, Ghana
Thesis: Relative Economic Analysis of Cereals Production and Farmer's Perceived Impacts of Input Use in Bawku-West District

RESEARCH FIELDS

Water Resource Management, Land Use Changes, Sustainable Food Systems, Climate Smart Agriculture, Spatial Analysis, Applied Econometrics

PUBLICATIONS

1. **Ayela, G. L.**, Iddrisu, A., and Dittoh, J. S. 2021. Gendered Analysis of Smallholder Cropping Systems in Upper East and Northern Regions of Ghana. *Ghana Journal of Agricultural Economics and Agribusiness (GJAEAB)*, 3(1). (Print Journal)
2. Dittoh, J. S., Synder, K.A., Owusu, M.O. and **Ayela, G. L.** 2020. Farmerled Approaches to Ecosystem-Based Soil Conservation Practices in the White Volta Basin. *International Conference on Irrigation and Agricultural Development, February 2020*. (Print Journal)

WORKING PAPERS

1. **Ayela, G. L.**, Anaman, K. A. and Egyir, I. S. "Socioeconomic Assessment of Climate Smart Agricultural Practices and their Effects on Food Security of Farmers in Ghana"
2. **Ayela, G. L.**, and Dittoh, F. S. "Machine Learning Modelling for Precision Agriculture: Implications for Ghana's Food Production Potential"

CONFERENCE PRESENTATIONS

Ayela, G. L., Li, X., Yun, S., Mills, B. and Tagert, M. L. “Developing Site-Specific Water Response Functions using Historical Soil Moisture Data”. Southern Agricultural Economists Association (SAAE) conference at Irving, Tx **2025**

Ayela, G. L., Anaman, K. A., and Dittoh, J. S. “Climate Smart Agricultural Practices and Their Effects on The Food Security of Farmers in Northern Ghana”. Ghana Association of Agricultural Economists (GAAE) conference at University of Ghana **2022**

Ayela, G. L., Iddrisu, A., and Dittoh, J. S. “Gendered Analysis of Smallholder Cropping Systems in Upper East and Northern Regions of Ghana”. 2019 Sixth International Conference, Abuja, Nigeria 295885, African Association of Agricultural Economists (AAAE) **2019**

Ayela, G. L. and Dittoh, J. S. “Relative Economic Analysis of Cereals Production and Farmers’ Perceived Impacts of Input Use in Bawku-West District”. 2nd Conference of the Ghana Association of Agricultural Economists (GAAE) at the Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana. 8 – 11 August 2018 **2018**

COMPETITIONS

Three Minutes Thesis competition	Finalist
Southern Agricultural Economists Association (SAAE) conference at Irving, Tx	Feb. 2025
Graduate Student Case Study competition	Finalist
Agricultural and Applied Economics Association (AAEA) conference at New Orleans	Jul. 2024

RESEARCH EXPERIENCE

Graduate Research Assistant, Mississippi State University

Dr. Xiaofei Li Aug. 2023 - current

- I clean and analyze soil moisture and yield data from a center pivot irrigation system using R programming.
- I summarize and review the literature on variable rate irrigation systems.
- I use R to run spatial regression models like GWR and run basic machine learning regressions with python.

Research, Policy and Gender Associate, Emperiks Research Limited, Ghana

Dr. Charles Atanga Adongo Feb. 2022 - Jul. 2023

- I utilized Python, Excel, SPSS and Stata in managing, cleaning and analyzing data for report writing
- I worked on impact evaluation for multiple projects in rural Ghana

Assistant Researcher, University for Development Studies

Dr. Joseph Saa Dittoh Mar. 2021 - Jan. 2022

- I co-led a climate smart agricultural research program that investigated how CSA practices influence the food security status of Ghanaian farmers.
- I assisted the Senior Data Analyst in designing survey equipment, supervising 30 enumerators, and analyzing data for a baseline study regarding climate smart agricultural practices in rural Ghana
- I helped conduct interviews with community key informants and organized focus group discussions.

Research Assistant, University for Development Studies

Dr. Joseph Saa Dittoh

Sep. 2018 – Jul. 2019

- I assisted the Data Analyst in supervising about 25 enumerators and analyzing data for a baseline study on food security status of women in the Upper West Region of Ghana
- I assisted in collecting data on a gender study through focus group discussions and key informant interviews
- I helped design survey tools, collected and analyzed data for an irrigation project funded by GIZ Ghana

TEACHING EXPERIENCE

Teaching Assistant, University for Development Studies, Tamale, Ghana

Undergraduate-level

CFS 405: Behavior Change Communication in Food and Nutrition Interventions;

Fall 2018

Dr. Joseph Saa Dittoh

AMF 101: Introduction to Agribusiness;

Spring 2019

Dr. Joseph Saa Dittoh

AWARDS AND SCHOLARSHIPS

Ghana Local Tertiary Scholarship, (\$1,500) Ghana Scholarship Secretariat

2019

PROFESSIONAL AFFILIATION

Agricultural & Applied Economics Association (**AAEA**)

Southern Agricultural Economics Association (**SAEA**)

SERVICE

Graduate Students Department Representative, Mississippi State University

2024-2025

Class President, University of Ghana

2020 - 2022

Editorial Assistant, Ghana Association of Agricultural Economists

2018 - 2019

Student Extension Officer, Farmer Awareness

2017

Student Researcher, University for Development Studies

2015, 2016