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Profile

- Agronomist and Agroforestry Scientist
- Certified Expert in Financing Nationally Determined Contributions (NDCs)
- Specialist in integrated nutrient/soil fertility management and Climate change adaptation
- Specialist in integrating Science with farmers' knowledge.

Educational Background

Institution	Qualification	Year
Libera Università di Bozen (Italy)	PhD in Management of Mountain Environment and Agriculture	2014 – 2017
University of Ghana, Legon (Ghana)	M. Phil Crop Science	2009-2011
University for Development Studies (Ghana)	B.Sc. Agricultural Technology	2003-2007
Ghana Secondary School, Tamale (Ghana)	SSSC (Agriculture Science)	2000-2002

Additional Academic qualification

Institution	Qualification	Year
Frankfurt School of Finance and Management (Germany)	Certificate: Certified Expert in Financing Nationally Determined Contributions (NDCs)	2020-2021
Institute of Natural research and Agronomy (INRA), (Nancy, France)	Certificate: Stable Isotopes in Forest Ecosystem Research	2015

Employment History

2022-Date:

Position: Senior Lecturer

Organization: Kwame Nkrumah University of Science and Technology, Ghana

2018-2022:

Position: Lecturer

Organization: Kwame Nkrumah University of Science and Technology, Ghana

2020-2023:

Position: Research Fellow

Organization: Africa Research and Impact Network (ARIN), Kenya

2020-2021:

Position: Postdoctoral Research Fellow

Organization: The German Academic Exchange Service (DAAD) and West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL)

2013-2014:

Position: Crop officer (Upper East Region)

Organization: Canadian Hunger foundation-ACDEP.

2008 – 2010:

Position: Credit Officer (Operations)

Organization: World Vision Ghana -APED, Tamale - Northern Region

2007 – 2008:

Position: Agronomist and Research assistant.

Organization: University for Development Studies (UDS) Tamale, Ghana.

Past and Current Research/Projects

1. "Improving Drought Tolerance and Survival Rate of Cocoa Seedlings with Potassium Fertilizers and Arbuscular Mycorrhiza" (**2020 to 2021**), sponsored by KReF KNUST/the German Academic Exchange Service (DAAD) under the programme "Climate Research for Alumni and Postdocs in Africa, 2020". Total of 10,000 Euros (Funding ID: 57516494). Principal investigator.
2. "Climate-Smart Cocoa Agroforestry Research in Ghana" (**2020-2025**), sponsored by the DANIDA Fellowship Center. Total amount of DKK 11, 750,000 (Project no. 19-11. GHA) Member of research team and co-lead investigator for Work package 2 (Climate-smart soils for sustainable Cocoa Agroforestry systems).
3. "Integrating Climate Smart Agri-Innovative Technology Adoption and Agribusiness Management Skills to Improve the Livelihoods of Smallholder Cocoa Farmers in Ghana" (**2019-2020**), sponsored by Birkbeck - University of London, UK. Total amount of 8,800 British pounds (Grant's ref:105123-23). Principal researcher for Ghana team.

International and National Awards Received

1. Japan Award 2021: Japan International Award for top three Young Agriculture Researcher from Developing Countries. By: Japanese Ministry of Agriculture, Forestry and Fisheries (MAFF) and Japan International Research Center for Agricultural Sciences (JIRCAS). (https://www.affrc.maff.go.jp/kokusaikenkyu/japan_award_211029.html)
2. ISHS Student Award 2017: Best Oral Presentation at the VIII ISHS symposium on mineral nutrition of fruit crops. By: The International Society for Horticultural Sciences (ISHS).
3. South Tyrol Doctoral Award 2013-2017: By the Province of South Tyrol and Free University of Bozen-Bolzano, Italy.
4. GETFUND Award for 2005/2006 Brilliant and needy student. By: The Ghana Education Trust Fund and The University for Development Studies, Tamale.

Regular Reviewer for the following Journals

- i. Pant and Soil (Springer Nature)
- ii. Waste Management (Elsevier Ltd.)
- iii. Agroforestry Systems (Springer Nature)
- iv. Open Agriculture (De Gruyter Open Access)
- v. Archives of Agronomy and soil science (Taylor & Francis)
- vi. Scientific Africa (Elsevier Ltd)

List of current Research Publications

1. Kwashie, G. K., **Kaba, J. S.**, Appiah-Kubi, Z., Abunyewa, A. A., Asare, A. Y., Agyei, E. K., & Muhammed, H. (2023). Synergic effect of Arbuscular mycorrhizal fungi and potassium fertilizer improves biomass-related characteristics of cocoa seedlings to enhance their drought resilience and field survival. *Open Agriculture*, 8(1), 20220239. <https://doi.org/10.1515/opag-2022-0239>
2. Abukari, A., **Kaba, J.S.**, Dawoe, E., Abunyewa A.A (2022). A comprehensive review of the effects of biochar on soil physicochemical properties and crop productivity. *Waste Dispos. Sustain. Energy*. <https://doi.org/10.1007/s42768-022-00114-2>
3. Yeboah O.S., Amponsah I.K., **Kaba J.S** & Abunyewa A.A (2022). Abundance, richness, and use of medicinal plants under different land uses in the Guinea Savanna Zone of Northern Ghana, *All Earth*. 34:1, 202-214. <https://doi.org/10.1080/27669645.2022.2105485>
4. Yeboah O.S., Amponsah I.K., **Kaba J.S** & Abunyewa A.A (2022). Variability of soil physicochemical properties under different land use types in the Guinea savanna zone of northern Ghana, *Cogent Food & Agriculture*, 8:1, 2105906. <https://doi.org/10.1080/23311932.2022.2105906>

5. **Kaba J.S.**, Asare A.Y., Andoh H., Kwashie G K.S and Abunyewa A.A (2022). Towards sustainable cocoa (*Theobroma cacao* L) production: the role of potassium fertilizer in cocoa seedlings drought recovery and survival. *International Journal of Fruit Science*, 22:1, 618-627. <https://doi.org/10.1080/15538362.2022.2092932>
6. Saah Konadu J.A., **Kaba JS** and Abunyewa AA (2022). Inorganic nitrogen fertilizer, biochar particle size and rate of application on lettuce (*Lactuca sativa* L.) nitrogen use and yield, *All Life*, 15:1, 624-635, <https://doi.org/10.1080/26895293.2022.2080282>
7. Yamoah F.A and **Kaba J.S** (2022). Integrating climate-smart agri-innovative technology adoption and agribusiness management skills to improve the livelihoods of smallholder female cocoa farmers in Ghana, *Climate and Development*, <https://doi.org/10.1080/17565529.2021.2024125>
8. Gorleku, D. O., Badu, G. P. A., Afele, J. T., **Kaba, J. S.**, & Abunyewa, A. A. (2022). Assessing the Efficiency of Moringa oleifera Leaf Meal on the Growth Performance of Broiler Chicken. *Journal of Applied Life Sciences and Environment*. 54 (4): 370-376. <https://doi.org/10.46909/journalalse-2021-032>
9. **Kaba J.S.**, Abunyewa A.A., Kugbe J., Kwashie K.S.G., Ansah O.E and Andoh H (2021). Arbuscular mycorrhizal fungi and potassium fertilizer as plant biostimulants and alternative research for enhancing plants adaptation to drought stress: Opportunities for enhancing drought tolerance in cocoa (*Theobroma cacao* L.), *Sustainable Environment*, 7:1, 1963927, <https://doi.org/10.1080/27658511.2021.1963927>
10. Mas-Ud M., Dokurugu F., **Kaba JS** (2021). Effectiveness of cowpea (*Vigna unguiculata* L.) living mulch on weed suppression and yield of maize (*Zea mays* L.). *Open Agriculture*. 6: 489–497. <https://doi.org/10.1515/opag-2021-0031>.
11. **Kaba JS** and Abunyewa A.A (2021). New aboveground biomass and nitrogen yield in different ages of gliricidia (*Gliricidia sepium* Jacq.) trees under different pruning intensities in moist semi-deciduous forest zone of Ghana. *Agroforest System* 95:835–842. <https://doi.org/10.1007/s10457-019-00414-3>
12. **Kaba JS**, Yamoah F.A and Acquaye A (2021). Towards sustainable agroforestry management: Harnessing the nutritional soil value through cocoa mix waste. *Waste Management* 124:264–272. <https://doi.org/10.1016/j.wasman.2021.02.021>.
13. Yamoah FA., **Kaba J.S**, Botchie D and Amankwah-Amoah J (2021). Working towards Sustainable Innovation for Green Waste Benefits: The Role of Awareness of Consequences in the Adoption of Shaded Cocoa Agroforestry in Ghana. *Sustainability*, 13, 1453. <https://doi.org/10.3390/su13031453>
14. **Kaba JS**, Otu-Nyanteh A., Abunyewa A.A (2020). The role of shade trees in influencing farmers' adoption of cocoa agroforestry systems: Insight from semi-deciduous rain forest agroecological zone of Ghana. *NJAS - Wageningen Journal of Life Sciences*. <https://doi.org/10.1016/j.njas.2020.100332>

15. Yamoah F.A., **Kaba J.S.**, Amankwah-Amoah J and Acquaye A (2020). Stakeholder Collaboration in Climate-Smart Agricultural Production Innovations: Insights from the Cocoa Industry in Ghana. *Environmental Management*. <https://doi.org/10.1007/s00267-020-01327-z>
16. Ochire-Boadu K., Abunyewa A.A., **Kaba J.S.**, Twum-Ampofo K., Dawoe E.L.K., Agbenyega O and Barnes VR (2020). Improved legume fallows: Influence on nitrogen and microbial dynamics, and maize (*Zea mays L*) grain yield in subhumid zone of West Africa. *Cogent Food & Agriculture*, 6:1, 1785778. <https://doi.org/10.1080/23311932.2020.1785778>
17. **Kaba J.S.**, Zerbe S., Agnolucci M., Scandellari F., Abunyewa AA., Giovannetti M., Tagliavini M (2019). Atmospheric nitrogen fixation by gliricidia trees (*Gliricidia sepium* (Jacq.) Kunth ex Walp.) intercropped with cocoa (*Theobroma cacao L.*) in agroforestry systems. *Plant Soil*: 435:323-336. <https://doi.org/10.1007/s11104-018-3897-x>
18. **Kaba J.S.**, Zerbe S., Abunyewa A.A and Tagliavini M (2019). Tracing the nitrogen flow between Gliricidia and cocoa trees in intercropping system using the ¹⁵N natural abundant method. *Acta Horticulturae*. 1242: 587-592. <https://doi.org/10.17660/ActaHortic.2019.1242.86>
19. Badu E., **Kaba J.S.**, Abunyewa, Akwasi A., Dawoe, Evans K., Agbenyega Olivia and Barnes, Rex V (2019). Biochar and Inorganic Nitrogen Fertilizer Effects on Maize (*Zea mays L*) nitrogen use and yield in Moist Semi deciduous Forest zone of Ghana. *Journal of Plant Nutrition*. 42:19, 2407-2422. <https://doi.org/10.1080/01904167.2019.1659347>
20. **Kaba J.S.**, Zerbe S., Zanutelli D., Abunyewa A.A., Tagliavini M (2018). Uptake of nitrogen by cocoa (*Theobroma cacao L*) trees derived from soil decomposition of gliricidia (*Gliricidia sepium* Jacq.) shoots. *Acta Horticulturae*. Pp 263-269. <https://doi.org/10.17660/ActaHortic.2018.1217.33>
21. **Kaba J.S.**, Kumaga F.K., Ofori K (2014). Maximizing peanut (*Arachis hypogaea L*) yield in tropical soils: reducing harvest loss and increasing yield components, Germany. ISBN 978-3-659-22498-0. LAP LAMBERT Academic Publishing (BOOK CHAPTER).