

## Prof. M.A. Busari's Profile



BUSARI, Mutiu Abolanle is a Professor of Soil Physics/Soil Conservation in the Department of Soil Science and Land Management, Federal University of Agriculture, Abeokuta (FUNAAB), Nigeria. His research interests are soil water management, amelioration of degraded soils, soil erosion, irrigation agriculture, crop water use efficiency and digital soil mapping. He also has experience in the application of stable

isotopes in soil studies, especially in monitoring soil carbon and nitrogen dynamics and in fingerprinting pathways of water movement in the soil. He had his B. Agric (First Class Division), M. Agric and Ph.D Degrees in 2002, 2005 and 2011, respectively from the University of Agriculture, Abeokuta, Nigeria. He was the Deputy Director, FUNAAB Conservices Limited (FUCONS) from 2018 to 2021 and now the Director, Directorate of Research, Innovation and Partnerships (DRIP).

He has been nominated as the Technical Facilitator under IITA Excellence in Agronomy (EiA) to facilitate the group's climate change adaptation and mitigation and sustainable intensification practices prioritizations. He is an Ambassador Africa Region of the Association of Commonwealth Universities 2022 till date. He is also a Commonwealth Academic Fellow (of the Commonwealth Scholarship Commission, UK) and a fellow at the Abdul Salam International Centre for Theoretical Physics (ICTP) Trieste, Italy under the International Atomic Energy Agency (IAEA)/ICTP Sandwich Training Educational Programme. Other awards and scholarships to his credits include 2021 African Plant Nutrition Outreach Fellowship, C V Raman International Fellowship for African Researchers (by Government of Indian, Ministry of Science and Technology), Conference of All Muslim Organizations in Nigeria (CAMON) Scholarship award, FUNAAB Postgraduate Scholarship award and University prize for the Best Graduating Student in the College of Plant Science and Crop Production, University of Agriculture Abeokuta in 2002. He has a wide experience in grant management and project coordination and has been engaging in consultancy services involving soil survey, fertility evaluation and land capability classification for crop production and irrigation activities since 2007. He led the activities of the African Cassava Agronomy Initiative (ACAI) in the Southwest Nigeria from 2017 to 2011. ACAI was an IITA project funded by the Bill and Melinda Gates Foundation (2016–2021). Prof. Busari is currently the Co-Project Leader of a grant titled "Digital Soil Mapping for Optimal Agricultural Yield and Sustainable Soil Biodiversity Management in Southwest Nigeria Using Artificial Intelligence (FUNAAB SMARTSOIL)" under the Accelerating Inclusive Green Growth through Agri-based Digital Innovation in Western Africa (AGriDI) sponsored by the European Commission. He has adequate knowledge of soils of many states in Nigeria and their related capability factors. Likewise, he has some experiences working with soils of experimental stations in Lancaster in the United Kingdom, Punjab in India as well as Trieste and Venice in Italy. He has about 35 journal articles, two chapters in books and 8 referred conference proceedings. He enjoys reading, travelling, visitation, playing table tennis and keeping abreast of happenings worldwide. He is happily married with prosperous children.

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iii. Personal information:

- a. Name: BUSARI Mutiu Abolanle
- b. Date of Birth: 26th June, 1972
- c. Place of Birth: Ibadan, Oyo State
- d. Age: 51 years
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vii. Rank: Professor

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xi. Google Scholar Profile:

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xii. Orcid Number: <https://orcid.org/0000-0003-2120-6668>

xiii. Qualification: PhD

xiv. Membership of professional Bodies

- a. Soil Science Society of Nigeria
- b. International Union of Soil Science

xv. Award received:

1. Best Poster Award Certificate given by Soil Conservation Society of India at International Conference on Natural Resource Management for Food Security and Rural Livelihoods, 10-13 February, 2015 at NASC Complex, New Delhi, India. 2015
2. Tertiary Education Trust Fund (TETFund) International Conference Intervention Fund 2012
3. The Abdul Salam International Centre for Theoretical Physics (ICTP) Trieste, Italy:  
IAEA-ICTP Sandwich Training Educational Programme (STEP) Award 2007- 2010
4. Conference of All Muslim Organizations (CAMO) Scholarship Award 2004
- 5.. University of Agriculture, Abeokuta Postgraduate Scholarship Award 2003
6. Commendation and Award Certificate of Excellent Teaching Performance at Islamic Comprehensive College, Ede, Osun State. 2003
7. Best Graduating Student, College of Plant Science and Crop Production, University of Agriculture Abeokuta, Nigeria. 2002
8. Best Graduating Science Student (Olorunda-Abaa Community Gram School, Ibadan) 1989

xvi. Research Conducted:

- a. Multi locational trials involving cassava cultivation in farmers' fields in southwestern states, Nigeria using best planting practices, intercropping, fertilizer recommendation and scheduled planting approaches under the African Cassava Agronomy Initiatives (ACAI). The project was led by IITA, Ibadan and sponsored by Bill and Melinda Gates Foundation.
- b. Digital soil mapping for optimal agricultural yield and sustainable soil biodiversity management in southwest Nigeria using artificial intelligence, sponsored by International Centre for Insect Physiology and Ecology (ICIPE)/European Commission

xvii. Conference Attended:

- i. 13<sup>th</sup> Annual Workshop and Conference of West African Research and Innovation Management Association (WARIMA), November, 22-26, 2021 Dakar, Senegal
- ii. 45<sup>th</sup> Conference of Soil Science Society of Nigeria, 17-21 May, 2021, Iwo, Osun State, Nigeria.
- iii. 42<sup>nd</sup> Annual Conference of the Soil Science Society of Nigeria, March 12 – 16, 2018, Institute of Agricultural Research and Training (IAR&T), Ibadan, Nigeria.
- iv. Regional Seminar on Geospatial Technology in Natural Resource Management, 17-18 March, 2015, Punjab Remote Sensing Centre, Ludhiana, India.
- v. International Conference on Natural Resource Management for Food Security and Rural Livelihoods at NASC Complex, 10-13 February, 2015, New Delhi, India.
- vi. College on Soil Physics – 30<sup>th</sup> Anniversary, the Abdus Salam International Centre for Theoretical Physics (ICTP), February 25 – March 1, 2013, Trieste, Italy.
- vii. 2012 Irrigation Show and Education Conference, November 2–6, 2012 Orange County Convention Centre, Orlando, Florida USA.
- viii. Workshop on simulation, modeling and computer applications in R & D, Nigerian Institute of Food Science and Technology, July 2–5, 2008, University of Agriculture, Abeokuta, Nigeria.
- ix. Workshop on Understanding and Evaluating Radioanalytical Measurement Uncertainty, November 8–16, 2007, the Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.
- xviii. Publications:
  1. **Busari, M.A.**, Salako, F.K. and Adetunji, M.T. (2008). Soil chemical properties and maize yield after application of organic and inorganic amendments to an acidic soil in southwestern Nigeria. *Spanish*

*Journal of Agricultural Research* 6 (4): 691-699. Publisher: INIA, Spain. Indexed in Scopus. Indexed in SCImago [www.inia.es/sjar](http://www.inia.es/sjar)

2. Adekunle, I.O., **Busari, M.A.** and Sorinola, A.O. (2009). Effect of animal manures on macro and micro nutrients contents of lubricating oil contaminated soil. *Nigerian Journal of Soil Science* 19 (1): 137-142. Publisher: Soil Science Society of Nigeria. <http://ajol.info/index.php/njss>
  
3. **Busari, M.A.**, Salako, F.K., Adetunji, M.T. and Bello, N.J. (2009). Effect of selected soil amendments on physical properties of an Alfisol in Abeokuta, southwestern Nigeria. *Nigerian Journal of Soil Science* 19 (1): 93-99. Publisher: Soil Science Society of Nigeria. <http://ajol.info/index.php/njss>
  
4. Olosunde, O.M., **Busari, M.A.**, Salau, W.A. and Fatoki, F.E. (2012). Growth and flowering of flamingo flower (*Anthurium andraenum*) as influenced by fertilizer source and growing medium. *International Journal of Organic Agriculture Research and Development* 6: 130-140. Publisher: Nigerian Organic Agriculture Network. [www.ijoard.org](http://www.ijoard.org)
  
5. **Busari, M.A.**, Salako, F.K., Adetunji, M.T., Olagookun, J.S. and Solarin, L.O. (2012). Description and nutrient management of upland and lowland soils in Abeokuta, Southwestern Nigeria. *International Journal of Organic Agriculture Research and Development* 6: 27-45. Publisher: Nigerian Organic Agriculture Network. [www.ijoard.org](http://www.ijoard.org)
  
6. **Busari, M.A.**, Azeez, J.O. and Orelaja, O.O. (2012). Impact of long term (9 years) deposition of animal wastes on soil physical properties in Abeokuta, south-western Nigeria: Implications for soil management. *The Journal of Solid Waste Technology and Management* 38 (4) 271-278. Publisher: School of Engineering, Widener University, USA. [www.solid-waste.org](http://www.solid-waste.org)
  
7. **Busari, M.A.**, Salako, F.K., Tuniz, C., Zuppi, G.M., Stenni, B., Adetunji, M.T. and Arowolo, T.A. (2013). Estimation of soil water evaporative loss after tillage operation using the stable isotope technique. *International Agrophysics* 27: 257-264. Publisher: Polish Academy of Sciences, Poland. Indexed in SCImago [www.international-agrophysics.org](http://www.international-agrophysics.org)

8. Azeez, J.O., Yusuf, O.M., **Busari, M.A.** and Salaudeen, G.T. (2013). Evaluation of the heavy metals remediation potential of cashew (*Anacardium occidentale*) on EDTA-applied acidic and basic soils. ***Journal of Applied Agricultural Research*** 5(2): 205-216. Publisher: Agricultural Research Council of Nigeria. [www.jaar-ng.org](http://www.jaar-ng.org)
9. **Busari, M.A.** and Salako, F.K. (2012). Effect of tillage and poultry manure application on soil infiltration rate and maize root growth in a sandy Alfisol. ***Agro-science: Journal of Tropical Agriculture, Food, Environment and Extension*** 11: 24-31. Publisher: Faculty of Agriculture, University of Nigeria Nsukka. [www.agrosciencejournal.com](http://www.agrosciencejournal.com)
10. **Busari, M.A.** and Salako, F.K. (2013). Effect of tillage, poultry manure and NPK fertilizer on soil chemical properties and maize yield on an Alfisol at Abeokuta, south-western Nigeria. ***Nigerian Journal of Soil Science*** 23 (2): 206-218. Publisher: Soil Science Society of Nigeria. <http://ajol.info/index.php/njss>
11. **Busari, M.A.** and Salako, F.K. (2015). Soil hydraulic properties and maize root growth after application of poultry manure under different tillage systems in Abeokuta, southwestern Nigeria. ***Archives of Agronomy and Soil Science*** 61: 223-237. Publisher: Taylor and Francis, United Kingdom. Indexed in SCImago <http://www.tandfonline.com>.
12. **Busari, M.A.**, Kukal, S.S., Amanpreet, K., Bhatt, R. and Dulazi, A.A. (2015). Conservation tillage impacts on soil, crop and the environment. ***International Soil and Water Conservation Research*** 3: 119-129. Publisher: Elsevier, Netherlands. Indexed in Scopus [www.elsevier.com/locate/iswcr](http://www.elsevier.com/locate/iswcr)
13. Bhatt, R., Kukal, S.S., **Busari, M.A.** Arora, S., and Yadav, M. (2016). Sustainability issues on rice-wheat cropping system. ***International Soil and Water Conservation Research*** 4: 68-83. Publisher: Elsevier, Netherlands. Indexed in Scopus [www.elsevier.com/locate/iswcr](http://www.elsevier.com/locate/iswcr).
14. **Busari M.A.**, Salako F.K. and Tuniz C. (2016). Stable isotope technique in the evaluation of tillage and fertilizer effects on soil carbon and nitrogen sequestration and water use efficiency. ***European Journal of Agronomy*** 73: 98-106. Publisher: Elsevier, Netherlands. Indexed in Scopus [www.elsevier.com/locate/eja](http://www.elsevier.com/locate/eja).

15. Onasanya, O.O., Salako, F.K., Ajiboye, G.A. and Busari, M.A. (2016). Prediction of saturated hydraulic conductivity using soil texture and organic carbon under different land use types. *Nigerian Journal of Soil Science* 26: 311-318. Publisher: Soil Science Society of Nigeria. <http://ajol.info/index.php/njss>
16. Eruola, A.O., Ayoola, K.O., Adejuwon, J.O., **Busari, M.A.** and Makinde, A.A. (2016). Evaluation of reference-crop evapotranspiration models, crop evapotranspiration methods and water supply methods for the determination of crop coefficient of Kenaf. *Applied Tropical Agriculture* 21(3): 83-89. Publisher: School of Agriculture and Agricultural Technology, Federal University of Technology, Akure, Nigeria, <http://journals.futa.edu.ng/index.php/ATA>.
17. Kuforiji, H.I., Akinyemi, O.D., **Busari, M.A.** and Bello, R. (2017). Estimation of thermal inertia of Abeokuta Ogun State, southwestern Nigeria. *Arabian Journal of Geosciences* 10: 1-8. Publisher: Springer, Germany. Indexed in SCImago [www.springer.com/journal/12517](http://www.springer.com/journal/12517)
18. **Busari, M.A.** (2017). Soil physical properties in relation to maize (*Zea mays*) yield after tillage and application of organic and inorganic fertilisers in Abeokuta, southwestern Nigeria. *Soil Research* 55: 704-714. Publisher: CSIRO, Australia. Indexed in SCImago <http://www.publish.csiro.au/sr/SR16162>.
19. Bhatt, R., Arora, S. and **Busari, M.A.** (2017). Zero tillage for sustaining land and water productivity in northern India. *Journal of Soil and Water Conservation* 16: 228-233. Publisher: Soil Conservation Society of India. DOI: <https://10.5958/2455-7145.2017.00031.5>
20. Ojo, P.A., **Busari, M.A.** and Afolabi, J.O. (2018). Assessment of soil productivity under planted and natural forests in FRIN Arboretum, Ibadan, southwestern Nigeria. *Nigerian Journal of Soil Science* 28 (1): 1-12. Publisher: Soil Science Society of Nigeria. <http://ajol.info/index.php/njss>
21. **Busari, M.A.**, Lawal, I.O., Olanite, J.A., Ologunde, O.H and Popoola, D.T. (2018). Cattle trampling in Yewa North area of Ogun State: implication on soil and crop productivity. *Nigerian Journal of Soil Science* 28 (1): 183-192. Publisher: Soil Science Society of Nigeria. <http://ajol.info/index.php/njss>
22. Alarima, C.I., Busari, M.A., Awotunde, J.M., Olaniyi, O.O., Masunaga, T. and Wakatsuki, T.

- (2018). Physico-chemical and geochemical properties of soils under *sawah* system of inland valleys in Nigeria. *Journal of Agricultural Science and Environment*. 18(1): 69-86. Publisher: Federal University of Agriculture, Abeokuta. <https://journal.unaab.edu.ng/index.php/JAgSE/>
23. Adaikwu, A.O., Salako, F.K., **Busari, M.A.** and Azeez, J.O. (2020). Restorative effects of amendments on artificially degraded soils in the Southern Guinea Savanna of Nigeria. *Nigerian Journal of Soil Science* 30 (1): 124-132. Publisher: Soil Science Society of Nigeria. <http://ajol.info/index.php/njss>
24. Nwokoro, C.C., Kreye, C., Necpalova, M., Olojede, A., **Busari, M.**, Tariku, M., Tokula, M., Olowokere, F., Pypers, P., Hauser, S. and Six, J. (2021). Developing recommendations for increased productivity in cassava-maize intercropping systems in Southern Nigeria. *Field Crops Research* 272: 108283. Publisher: Elsevier, Netherlands. Indexed in Scopus <https://doi.org/10.1016/j.fcr.2021.108283>
25. Oladoye, A.O., **Busari, M.A.**, Abiodun, F.O., Ojekunle, O.O., Oyebamiji, N.A. and Olaife, B.A. (2021). Phosphorus forms and distributions in soils under selected land use practices at the Federal University of Agriculture, Abeokuta, Ogun State, Nigeria. *Annals of Tropical Research* 43 (2): 51-66. Publisher: Visaya State University, Philippines. <https://doi.org/10.32945/atr4325.2021>
26. Sakariyawo, O.S, Danbauchi, G.H., Fofana, M., **Busari, M.A.** and Adeyemi, N.O. (2022). Grain yield and leaf gas exchange in upland NERICA rice under repeated cycles of water deficit at reproductive growth stage. *Agricultural Water Management* 264: 107507. doi.org/10.1016/j.agwat.2022.107507. Publisher: Elsevier, Netherlands. Elsevier, Netherland. Indexed in Scopus [www.elsevier.com/locate/iswcr](http://www.elsevier.com/locate/iswcr).
27. **Busari, M.A.**, Kukal, S.S., Bhatt, R. and Amanpreet, K. (2022). Role of mulching in regulating soil temperature in a rice-wheat system. *Journal of Natural Resource Conservation and Management* 3(1): 1-11. Publisher; **Academy of Natural Resource Conservation and Management (ANRCM)**, Lucknow, U.P, India. doi: <https://10.51396/ANRCM.3.1.2022.1-11>
28. **Busari, M.A.**, Bankole, G.O., Adiamo, I.A., Abiodun, R.O and Ologunde. O.H. (2023).



Influence of mulch and poultry manure application on soil temperature, evapotranspiration and water use efficiency of dry season cultivated okra. *International Soil and Water Conservation Research*, <https://doi.org/10.1016/j.iswcr.2022.09.003>. Elsevier, Netherlands.

Indexed in Scopus [www.elsevier.com/locate/iswcr](http://www.elsevier.com/locate/iswcr).

29. Folorunso O., Ojo O., **Busari M.**, Adebayo M., Joshua A., Folorunso D., Ugwunna C., Olabanjo O.

and Olabanjo O. (*In press*): Exploring Machine Learning Models for Soil Nutrients Properties Prediction: A Systematic Review. *Big Data Cognitive Computing*

### (ii) Chapters in Books

29. Bhatt, R., Hossain, A., **Busari, M.A.**, Meena, R.S. (2021). Water Footprint in Rice Based

Cropping Systems of South Asia. In: Banerjee A., Meena R.S., Jhariya M.K., Yadav D.K. (eds) Agroecological Footprints Management for Sustainable Food System Chapter 9, pp 273-314. Publisher: Springer, Singapore. [https://doi.org/10.1007/978-981-15-9496-0\\_9](https://doi.org/10.1007/978-981-15-9496-0_9).

30. **Busari, M.A.** and Salako, F.K. (2022). Soil water management. In: Ibrahim S.A. and Raji B.A.

(eds) Introduction to Sol Science **Chapter 11, pp 315-334. Tertiary Education Trust Fund (TETFund) Supported Production.**

### (iii) Edited conference proceedings

31. **Busari, M.A.**, Salako, F.K., Sobulo, R.A., Adetunji, M.T. and Bello, N.J. (2005): Variation in

soil pH and maize yield as affected by application of poultry manure and lime. In: Salako, F.K., Adetunji, M.T., Ojanuga, A.G., Arowolo, A.T. and Ojeniyi, S.O. (editors), Managing Soil Resources for Food Security and Sustainable Environment. *Proceedings of the 29<sup>th</sup> Annual Conference of Soil Science Society of Nigeria (SSSN)*. December 6-10, 2004, University of Agriculture, Abeokuta, pp. 139-142.

32. **Busari M.A.**, Adekunle I.O. and Azeez J.O. (2005): Effect of poultry manure phosphorus

application on the productivity and fodder quality of two *Centrosema* species in an Alfisol.

In: Salako F.K., Adetunji M.T., Ojanuga A.G., Arowolo A.T. and Ojeniyi S.O. (editors),

Managing Soil Resources for Food Security and Sustainable Environment. ***Proceedings of the 29<sup>th</sup> Annual Conference of Soil Science Society of Nigeria (SSSN)***. December 6-10, 2004, University of Agriculture, Abeokuta, pp. 133-137.

33. **Busari, M.A.**, Salako, F.K., Tuniz, C., Zuppi, G.M., and Adetunji, M.T. (2010). Estimation of evaporation after tillage and manure application using stable isotope of oxygen. In: Taiwo, Ojeniyi, S.O. (Editor), Emerging challenges to soil resources in times of global climate change and food crisis. ***Proceedings of the 34<sup>th</sup> annual conference of the Soil Science Society of Nigeria*** (volume 1). March 22 – 26, 2010, Institute of Agricultural Research and Training (IAR&T), Ibadan, Nigeria, pp. 123-127.
34. Ayoola K.O., **Busari M.A.**, Eruola A.O. and Makinde A.A. (2014). Mulching and irrigation frequency effect on evapotranspiration and crop coefficient of okra. In: Tyubee, B.T., Ocheri M.I. and Mage J.O. (editors), Climate Change and Sustainable Economic Development. ***Proceedings of the International Conference of the Nigerian Meteorological Society***. November 9<sup>th</sup>-14<sup>th</sup>, 2014, Benue State University, Markudi. Pp. 259-268.
35. **Busari, M.A.**, Adams, K.A. and Fakeye, A.L. (2016): Effect of poultry manure on soil loss and water percolation in a sandy soil cultivated with maize (*Zea mays*) In: Ojeniyi, S.O., Amalu, A.C., Okon-Inyang, P.B and Onwukwe, A.A. (Eds), Promoting use of Nigeria's Soil Resources for Sustainable Ecosystem Services, Climate-Smart Agriculture, Food and Nutrition Security. ***Proceedings of the 40<sup>th</sup> annual conference of the Soil Science Society of Nigeria***. March 14 – 1, 2016, The University of Calabar, Cross River State, Nigeria Pp 70-75.
36. **Busari, M.A.** and Akinyemi, A.E. (2018). Effect of Irrigation frequencies and poultry manure on Evaporation and water use efficiency of Amaranth (*Amaranthus Cruentus*). In: Oluwatosin, G.A., Ande, O.T, Adediran, J.A.and Anikwe, M.A.N. (Eds) Sustainable Management of Soil and Water Resources for Food Security, Climate Change Adaptation and Mitigation, Proceedings of the 42<sup>nd</sup> Annual Conference of the Soil Science Society of Nigeria March 12 – 16, 2018, Institute of Agricultural Research and Training (IAR&T), Ibadan, Nigeria, pp. 384-391.
37. **Busari M.A.**, Gao, P., Boyle, R.K.A. and Dodd, I.C. (2019). Reconciling physiological and agronomic effects of irrigation frequency. *Acta Horticulturae*. 1253: 253-260. In: Ben-Gal A., de Haan J. and Fallahi E. (Eds) International Symposium on Water and Nutrient Relations

and Management of Horticultural Crops. Proceedings of the International Society for Horticultural Science, Belgium. Indexed in SCImago  
[doi.org/10.17660/ActaHortic.2019.1253.34](https://doi.org/10.17660/ActaHortic.2019.1253.34)

38. **Busari, M.A.**, Samuel, A.M. and Mahmoud, I.O. (2021). Evapotranspiration, water use Efficiency and yield of okra (*Abelmoschus esculentus*) under varied irrigation water volumes and Different soil textural classes. In: Ogunwole J.O. and Anikwe M.A.N. (Eds) Understanding soil organic Matter dynamics: Key to sustainable ecosystem health. Proceedings of 45<sup>th</sup> Conference of Soil Science Society of Nigeria May 17-21, 2021 Bowen University Iwo, Osun State, Nigeria. Colloquia 45, 217-220.