

**OBAFEMI AWOLOWO UNIVERSITY, ILE-IFE, NIGERIA**  
**CURRICULUM VITAE**

**A. PERSONAL DATA**

1. **Full Name:** SALAMI Abiodun Olusola (Nee Ladoye)  
(Surname first and in Capitals)
2. **Contact Details:**
  - (a) **Residential Address:** House 27A, Road 18, Senior Staff Quarters, O.A.U., Ile-Ife.
  - (b) **E-mail Address (es):** [aosalami@oauife.edu.ng](mailto:aosalami@oauife.edu.ng); [sola1salami@yahoo.com](mailto:sola1salami@yahoo.com)
  - (c) **Mobile Telephone Number(s):** +234 803 234 8318
3. **Nationality:** Nigerian
4. **State of Origin:** Oyo
5. **Senatorial District:** Oyo-East
6. **Local Government Area:** Ibadan-North
8. **Permanent Home Address:** No.1, Ayo Salami Close, Adetokun Area, Eleiyele, Ibadan.
9. **Marital Status:** Married
10. **Number of Children and their Ages:** Three (3)
11. **Next of Kin:** Prof. Ayobami T. Salami
12. **Contact Details of Next of Kin:** Institute of Ecology and Environmental Studies, Obafemi Awolowo University, Ile-Ife.
13.
  - (a) **Residential Address:** House 27A, Road 18, Senior Staff Quarters, O.A.U., Ile-Ife.
  - (b) **E-mail Address (es):** [asalami@oauife.edu.ng](mailto:asalami@oauife.edu.ng) ; [ayobasalami@gmail.com](mailto:ayobasalami@gmail.com)
  - (c) **Mobile Telephone Number(s):** +234 803 376 1041
14. **Date of Assumption of Duty:** August 1, 2005
15. **Rank/Status on First Appointment:** Senior Lecturer
16. **Present Status:** Professor
17. **Faculty/Directorate:** Agriculture
18. **Department/Unit:** Crop Production and Protection

**B. EDUCATIONAL BACKGROUND** (*chronologically arranged from the earliest to latest*)

1. **Higher Educational Institutions Attended with Dates:**
  - (i) Oyo State College of Education, St. Andrew's Campus, Oyo.
  - (ii) Obafemi Awolowo University, Ile-Ife, Nigeria
  - (iii) University of Ibadan, Ibadan, Nigeria

**Academic/ Professional Qualifications and Distinctions Obtained with Dates:**

- (i) National Certificate of Education (Biology/Chemistry)
- (ii) B.Sc. (Hons.) Biology
- (iii) M.Sc. Botany (Plant Pathology/Soil Microbiology)
- (iv) Ph.D. Botany (Plant Pathology/Soil Microbiology)

2. **Other Distinctions and Awards with Dates:**

- (a) **Scholarships:**

- (i) Associate for LEAD International Inc.'s Leadership for Environment and Development (LEAD) Programme-Nigeria (Cohort 9) (2000)

- (ii) Fellow, LEAD International (2002)
- (iii) UNESCO Award (2006)
- (iv) African Women in Agricultural Research and Development (AWARD) (2013)
- (v) International Women Leadership Forum Award (2014)

**(b) Fellowships:**

- (i) UNESCO/People's Republic of China Co-Sponsored Fellowship (2006)
- (ii) MASHAV Fellowship on "Biotechnology in agriculture in a world of global Environmental Changes". Hebrew University of Jerusalem, Rehovoth, Israel. (2009)
- (iii) NFP/Nuffic Fellowship on Integrated Pest Management (IPM) and Food Safety". Wageningen International, Lawickse Allee 116701 AN Wageningen, The Netherlands. (2009)
- (iv) NFP/Nuffic Fellowship on Facilitating Multi stakeholder Processes and Social Learning". Wageningen International, Lawickse Allee 116701 AN Wageningen, The Netherlands. (March-June, 2012)
- (v) International Visiting Research Scholar, United States Department of Agriculture (USDA), Sidney, Montana, USA. (October-December, 2012)
- (vi) International Women's Forum (IWF), World Leadership Conference & Hall of Fame Awards Gala in Boston (2015).
- (vii) African Women in Agricultural Research and Development (AWARD) Mentor, Kenya.
- (viii) International Women's Forum (IWF), World Leadership Fellowship (Hall of Fame Awards Gala in Boston), U.S.A (2015).
- (ix) International Women's Forum (IWF) World Leadership Fellowship, Atlanta Georgia, U.S.A.
- (x) Harvard Executive Education Fellowship, Harvard Business School, Cambridge, Massachusetts, U.S.A. (2016)
- (xi) Women Leaders Global Change Program, INSEAD, Fontainebleau, France (2016).
- (xii) International Scientific Commonwealth Fellowship, Royal Society, Singapore (2017).
- (xiii) Nuffic/OKP Scholarship for short course on Food systems for healthy and sustainable diets, at the Wageningen Centre for Development Innovation (WCIDI), The Netherlands (2020)

**(c) Research Grants:**

- (i) (i) Introducing mycorrhizal biotechnology to peasant farmers in Nigeria: many problems and several possibilities. Senate Research Grants Award (SRG/FSC/1998/61<sup>B</sup>), University of Ibadan, Nigeria.
- (ii) Bio-control effect of some soil-borne antagonist (mycorrhiza) on pathogen. Senate Research Grants Award (SRG/FSC/2000/27<sup>A</sup>). University of Ibadan, Nigeria.
- (iii) Investigation of Microbial Control of some pathogens of cassava, cowpea and maize on farmer's plot. Obafemi Awolowo University Research Council Grant (2008).
- (iv) TETFund Research Project Intervention: Alleviation of Hunger through Large Scale Production of Edible Oyster Mushroom Using Different Agro-waste (2011-2014).

**(d) National Awards:**

- (i) NIL

**(e) International Awards:**

- (i) Winner, Women in Science Competition 2009
- (ii) Visiting Scholar Award 2012
- (iii) International Women's Forum for Leadership Foundation 2014-2016
- (iv) Organization for Women in Science for the developing World 2016
- (v) Royal Society Commonwealth Science Award 2017

**C. WORK EXPERIENCE WITH DATES:**

**1. Previous Work Experience outside the University System:**

- (i) N.Y.S.C: Uhiele Grammar School, Ekpoma, Bendel State.

**2. Previous Work Experience in Other Universities:**

- (i) Assistant Lecturer, Department of Botany and Microbiology, Faculty of Science, University of Ibadan (April 1997 - February 1999).
- (ii) Lecturer, Department of Botany and Microbiology, Faculty of Science, University of Ibadan (February, 1999-August, 2005).
- (iii) Visiting Lecturer (Plant Pathology), Faculty of Science and Agriculture, University of The Gambia, **The GAMBIA**, 2000/2001 Session.
- (iv) Visiting Lecturer in Plant Pathology, Department of Botany, University of Dar es Salaam, P.O. Box 35060, Dar es Salaam, **TANZANIA** (2002/2003).

**3. Work Experience in Obafemi Awolowo University:**

- (i) (i) Lecturer I (Temporary Appointment)  
(ii) Senior Lecturer  
(iii) Reader  
(iv) Head, Department of Crop Production & Protection  
(v) Professor

**4. Graduate Student Supervision: (to list names, Registration numbers and titles of theses)**

**(a) By Research: (Some of them are):**

- (i) Ajiboye, A. E. (2004). Effect of different media on the growth of rot pathogens of cassava, M.Sc. (Botany) Botany and Microbiology Department, Faculty of Science, University of Ibadan, Ibadan, Nigeria.
- (ii) Popoola, O.O. (2006). Thermal control effect on the incidence of some post-harvest rot pathogens of *Solanum tuberosum* L. (Irish potato) and *Ipomea batatas* L. (Sweet potato) M.Sc. (Botany). Botany and Microbiology Department, Faculty of Science, University of Ibadan, Ibadan, Nigeria.
- (iii) Bamigboye, R.A. (2007). Interactions of *Glomus mosseae*, *Sclerotium rolfsii* and *Meloidogyne incognita* in selected legumes. M.Phil. Crop Production and Protection Department, Faculty of Agriculture, Obafemi Awolowo University, Ile-Ife, Nigeria.
- (iv) Idowu, O. O. (2009). Molecular analysis and genetic diversity of rice blast fungus (*Magnaporthe grisea*) in Nigeria. M.Phil. Crop Production and Protection Department, Faculty of Agriculture, Obafemi Awolowo University, Ile-Ife, Nigeria. .
- (v) Afolabi, A. B. (2010). Arbuscular Mycorrhiza and Spent Mushroom Compost contributions to the phytoremediating ability of Tomato plant. M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (vi) Ogunya, T.T. (2010). Bioremediating ability of *Pleurotus pulmonarius* and *Glomus musseae* on the growth of *Corchorus olitorius* in an engine oil polluted soil. M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (vii) Elum, E. A. (2010). Bioremediation Activities of spent compost of *Pleurotus pulmonarius* (a white rust fungus) and *Glomus mosseae* (mycorrhiza) on the rate of growth of *Amaranthus*

*hybridus* in a crude oil polluted soil M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.

- (viii) Olawole, O.I. (2011). Tritrophic interactions of pathogenic bacterium, rhizobium and mycorrhiza on the growth of two cultivars of cowpea. M.Phil. Crop Production and Protection Department, Faculty of Agriculture, Obafemi Awolowo University, Ile-Ife, Nigeria.
- (ix) Lawani, O.Y. (2011) Effect of spent mushroom compost on the interaction between a nematode and a bacterium in two soybean cultivars. M.Sc. Crop Production and Protection Department, Faculty of Agriculture, Obafemi Awolowo University, Ile-Ife, Nigeria.
- (x) Adeniyi, M. A. (2011). Population and behaviour of both indigenous and introduced Mycorrhizal inoculum on the growth of tomato plant. M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xi) Oni A. C., (2015). Enzymes Production in *Pythium aphanidermatum* infected sweet pepper (*Capsicum annum*) as induced by three *Trichoderma* species. M.Sc., Department of Crop Production and Protection. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xii) Imoni A. C., (2015). Bioremediation of a Crude oil polluted soil with the mycelia of *Pleurotus sajor-caju* and *Pseudomonas aeruginosa* using *Solanum lycopersicum* as the Test plant. M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xiii) Owasoyo O. D., (2015). Bioremediation of Petrochemical effluent polluted soil with *Glomus hoi* and *Pseudomonas aeruginosa* using *Amaranthus cruentus* as a test plant. M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xiv) Aderemi K. A., (2016). Assessment of Biodegrading ability of *Tricoderma harzianum* and *Pseudomonas aeruginosa* on heavy metal contaminated soil using *Solanum lycopersicum* as test plant. M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xv) Coker O. O., (2016). Assesment of soil fertility improvement potential of Neem (*Azadirachta indica* A. Juss.) and Sun flower (*Tithonia diversifolia* Hemsl.) on the growth and yield of Tomato (*Solanum lycopersicum*). M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xvi) Salako, Y. A., (2016). Bio-control Potentials of *Bacillus subtilis* against *Trichoderma harzianum* causing green mould disease of Oyster mushroom (*Pleurotus florida*). M.Phil., Department of Crop Production and Protection. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xvii) Gbadeyan T. S., (2017). Screening of Rice accessions for Blast resistance in Niger state and assessment of the effect of Mycorrhiza on their resistance. M.Sc., Department of Crop Production and Protection. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xviii) Oluyemi O. I, (2017). Effect of *Glomus hoi* and *Trichoderma harzianum* on Rice infected with rice (*Magnaporthe grisea*). Ph.D., Department of Crop Production and Protection. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xix) Bankole F. A. (2017). Improved Production of Oyster Mushroom (*Pleurotus florida*) based on substrates formulation using augmented Agro-wastes. M.Phil. Department of Crop Production and Protection. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xx) Edih Rita Ovieraye, (2017). Growth response of *Capsicum annum* L. under the influence of *Glomus mosseae* (Nicolson and Gerd) and spent mushroom compost on Crude oil polluted

soil. M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.

- (xxi) Olufunsho A. T., (2017). A study of the effect of *Glomus mosseae* on the growth and nutritional quality of *Solanum lycopersicum* L. grown in spent engine oil polluted soil. M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xxii) Opadiran A. E., (2017). Effect of *Trichoderma harzianum* and *Glomus mosseae* on the Growth and Yield of Sweet Pepper (*Capsicum annum* L.) Grown on Heavy Metal Polluted Soil. M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xxiii) Awe O. O. (2017). Effects of *Glomus mosseae* N.&G. and *Gliricidia sepium* J. on the growth and yield of *Capsicum annum* L. (sweet pepper). M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria. M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xxiv) Awosemo O. O., (2017). Effect of *Pseudomonas aeruginosa* and *Glomus hoi* on the growth of *Corchorus olitorius* grown on the soil from Tourmaline mining site in Ile-Ife. M.Sc. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xxv) Bankole F. A. (2021). Multiple Disease Resistance in Early and Extra-early Maturing Maize inbred lines and the Community Structure of *Exserohilum turcicum*. PhD (Plant Science). Department of Crop Production and Protection, Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xxvi) Coker O.O. (2021). Effect of Leaf Extracts of Selected Common Plants with *Glomus hoi* On *Fusarium lateritium* Infected Tomato. PhD. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (xxvii) Adebisi K. A. (2021). Bioremediation Assessment of Spent-Engine Oil Contaminated Soil with Combined Application of Manure and *Glomus hoi* Using Maize as Test Crop. PhD. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.

**(b) By Long Essay:**

- (i) Elum, E. A. (2009). Bioremediation Activities of *Pleurotus pulmonarius* (a white rust fungus) and *Glomus mosseae* (mycorrhiza) on the rate of growth of *Amaranthus hybridus* in a crude oil polluted soil. PgD Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.
- (ii) Awosemo O. O., (2014). Detection of indigenous mycorrhiza on a fallow ground in Obafemi Awolowo University teaching and Research farm, Ile-Ife. PgD. Institute of Ecology and Environmental Studies. Obafemi Awolowo University, Ile-Ife, Nigeria.

**5. Undergraduate Students Supervision**

More than 30 students

**D. MEMBERSHIP OF PROFESSIONAL BODIES WITH DATES: (Current financial member)**

- |  |                 |
|--|-----------------|
| (i) Botany Society of Nigeria (BOSON)                | 1999 till date. |
| (ii) Nigerian Mycological Society (NMS)              | 2004 till date  |
| (iii) Nigerian Society for Plant Protection (NSPP)   | 2006 till date. |
| (iv) American Phyto-pathological Society (APS)       | 2006 till date. |
| (v) International Society for Plant Pathology (ISPP) | 2006 till date. |
| (vi) British Society for Plant Pathology (BSPP)      | 2006 till date. |
| (vii) American Society of Agronomy (ASA)             | 2013 till date  |
| (viii) Crop Science Society of America (CSSA)        | 2013 till date  |

**E. PUBLICATIONS:****1. Theses/Dissertations:** (*to be listed in Roman figures*)

- (i) M.Sc. Dissertation (1993): Influence of Vesicular-Arbuscular Mycorrhiza (VAM) on disease incidence of *Lycopersicon esculentum* (tomato) and *Capsicum annum* (Pepper).
- (ii) Ph.D Thesis (1999): Biochemical interactions of Mycorrhiza (*Glomus etunicatum*) and Soil-borne microorganisms on the growth of pepper (*Capsicum annum* Linn.) seedlings.

**2. Books and Monographs:**(a) **Authored:** (*not below Senior Lecturer*)

Nil

(b) **Edited:**

Nil

**3. Contribution to Books:**

- (i) **Salami, A.O.** and Popoola, O. (2008). Hot water treatment for the control of some post-harvest rot pathogens on sweet potato (*Ipomea batatas* L.): In- Food, Health and Environmental Issues in Developing Countries: The Nigerian Situation. (ed) Adebooye, O.C.; Kehinde, A.T. and Fatufe, A.A. Book Project Alexander von Humboldt Stiftung/ Foundation, Bonn, Germany. pp. 104-116. ISBN: 978-3-86727-771-6.
- (ii) **Salami, A.O.** (2009). An Agro-biotechnology System for Improving Traditional Land- use System in Sub-Saharan Africa. In: Kevin Urama, Judith Francis, Marsden Momanyi, Sheila Ochugboju, Arnold Ominde, Nicholas Ozor and Guy Manners (Editors). *Agricultural Innovations Sustainable Development*. (2) 1: 60-65. ISBN: 98/9966-7434-3-X.
- (iii) **Salami, A.O.** and Bankole, F.A. (2020). Bioconversion of agro-wastes using mushroom technology. In: Research advances in the fungal world. Editors: Chaurasia, P.K. and Bharati, S.L. Nova Science Publishers, Inc. Pp221-235, ISBN: 978-1-53617-197-6.

**4. Published Journal Articles:**

- (iv) Odebode, A.C., **Ladoye, A.O.** and Osonubi, O.O. (1995). Influence of arbuscular mycorrhizal fungi on disease severity of pepper and tomato caused by *Sclerotium rolfsii*. *Journal of Science Research* 2 (1): 49-52.
- (v) Odebode, A.C., **Ladoye, A.O.** and Osonubi, O.O. (1997). Effect of *Pythium aphanidermatum* and the arbuscular mycorrhizal fungus (*Glomus deserticola*) on disease severity and growth of pepper. *International Journal of Tropical Plant Diseases* 15: 85-92.
- (vi) **Salami, A.O.** and Osonubi, O. (1999). Introducing mycorrhizal biotechnology to peasant farmers in Nigeria: many problems and several possibilities. *Journal of Science Research* 5 (1): 51-55.
- (vii) **Salami, A. O.** (2000). Resistant effect of arbuscular mycorrhiza fungus *Glomus etunicatum* on pepper (*Capsicum annum* Linn.) seedlings against pathogenic Infection. *Journal of Research* 6(2): 78-82.
- (viii) Odebode, A.C., **Salami, A.O.** and Osonubi, O. (2001). Oxidative enzymes activities of mycorrhizal inoculated pepper plant infected with *Phytophthora infestans*. *Archives of Phytopathology and Plant Protection* 33: 473-480.

- (ix) **Salami, A.O.**, Odebode A.C. and Osonubi, O. (2001). Interactions of soil microorganisms on growth and disease incidence of pepper (*Capsicum annum*). *Archives of Agronomy and Soil Science*, 46:485-492.
- (x) Odebode, A.C., **Salami, A. O.** and Osonubi, O. (2001). Production of cell wall enzymes in pepper seedlings inoculated with arbuscular mycorrhiza (*Glomus etunicatum*). *Tanzania Journal of Science* 27: 1-8.
- (xi) **Salami, A. O.** (2002). Influence of mycorrhiza inoculation on disease severity and growth of pepper (*Capsicum annum*) Linn. *International Journal of Tropical Plant Diseases* 17: 51-60.
- (xii) **Salami, A.O.** and Osonubi, O. (2002). Improving the traditional land-use system through agro-biotechnology: a case study of adoption of vesicular arbuscular mycorrhiza (VAM) by resource-poor farmers in Nigeria. *Technovation* 22 (11): 725-730.
- (xiii) **Salami, A.O.** and Osonubi, O. (2003). Influence of mycorrhizal inoculation and different pruning regimes on fresh root yield of alley and sole cropped Cassava (*Manihot esculenta* Crantz) in Nigeria. *Archives of Agronomy and Soil Science* 49 (3): 317-323.
- (xiv) Odebode, A. C. and **Salami, A. O.** (2004). Biochemical contents of pepper seedlings inoculated with *Phytophthora infestans* and arbuscular mycorrhiza *Journal of Agricultural Sciences* 49 (2): 251-257.
- (xv) **Salami, A. O.**, Odebode, A. C. and Osonubi, O. (2005). The use of Arbuscular Mycorrhiza (AM) as a source of yield increase in sustainable alley cropping system. *Archives of Agronomy and Soil Science*, 51(4): 385-390.
- (xvi) **Salami, A. O.**, Oyetunji, O. J. and Igwe, N. J. (2005). An investigation of the impact of *Glomus clarum* (mycorrhiza) on the growth of tomato (*Lycopersicum esculentum* mill.) on both sterilized and non-sterilized soils”, *Archives of Agronomy and Soil Science* 51 (6): 579 – 588.
- (xvii) **Salami, A.O.** and Osonubi, O. (2006). Growth and yield of maize and cassava cultivars as affected by mycorrhizal inoculation and alley cropping regime. *Journal of Agricultural Sciences* 51 (2): 123-132.
- (xviii) **Salami, A.O.** (2007). Assessment of VAM Biotechnology in improving the agricultural productivity of Nutrient-deficient soil in the tropics. *Archives of Phytopathology and Plant Protection*. 40 (5): 338-344.
- (xix) **Salami, A.O.** and Popoola, O.O. (2007). Thermal control of some post-harvest pathogens of Irish potato (*Solanum tuberosum* L.). *Journal of Agricultural Sciences*, 52 (1): 17-31.
- (xx) **Salami, A.O.** and Akintokun, A.K. (2008). Post-harvest enzymatic activities of healthy and infected cassava (*Manihot esculenta* Crantz) tubers. *Emirate Journal of Food and Agriculture* 20(1): 01-17.
- (xxi) **Salami, A.O.** (2008), “Bio-control of fusarium wilt of pepper (*Capsicum annum*

Linn.) with *Glomus mosseae* and *Trichoderma viride*. *Ife Journal of Agriculture*, Vol. 23 (1): 40-54.

- (xxii) Awotoye, O.O.; Adewole, M.B.; **Salami, A.O.** and Ohiembor, M.O. (2009). Arbuscular mycorrhiza contribution to the growth performance and heavy metal uptake of *Helianthus annuus* (Linn.) in pot culture. *African Journal of Environmental Science and Technology*. Vol. 3(6) 157-163pp.
- (xxiii) **Salami, A.O** and Elum, Ejiro Anslem (2010), Bioremediation of a Crude Oil Polluted Soil with *Pleurotus Pulmonarius* and *Glomus Mosseae* Using *Amaranthus Hybridus* as a Test Plant. *J. Bioremed. & Biodegrad.* **1:113**. doi: **10.4172/21556199.1000113**
- (xxix) Adewole M.B., Awotoye O.O., Ohiembor M.O and **Salami, A.O.** (2010). Influence of Mycorrhizal Fungi on Phytoremediation Potential and yield of Sunflower in Cd and Pb Polluted soils. *Journal of Agricultural Sciences* 55 (1): 17-28.
- (xxv) **Salami, A.O.** (2004). Environmental assessment of VAM mediation of heavy metal uptake by maize on refuse dump soil. *Proceedings of Scientific Symposium on Environment, University of Dar es Salaam, Tanzania* Edited by Mgaya, Y.D., Msaki, P.K. and Kivaisi, A.K. pp 170-173.
- (xxvi) Bamigboye, R.A. and **Salami, A.O.** (2010). Antifungal Effects of Three Tropical Leaf Extracts on *Sclerotium rolfsii*. *Proceedings of International Conference on Research and Development*, 3: (42) 61-66.
- (xxvii) **Salami, A.O.** and Akintokun, A.K. (2010). Activities of Oxidative enzymes of both Healthy and Fungi-infected Cassava roots. *Ife Journal of Agriculture*, Vol. 25 (1). In Press.
- (xxviii) Oyetunji O.J. and **Salami A.O.** (2011) Study on the control of *Fusarium* wilt in the stems of mycorrhizal and trichodermal inoculated pepper (*Capsicum annum* L.). *Journal of Applied Biosciences*. 45: 3071-3080. ISSN 1997-5902.
- (xxix) **Salami, A.O.** and Olawole, O.I. (2011). Ditrophic Interaction between *Glomus mosseae* and *Phytophthora infestans* in Jute Mallow (*Corchorus Olitorius*) Seedlings at Different Ages. *International Journal of Agricultural Sciences, Science, Environment and Technology (ASSET)*.
- (xxx) **Salami, A.O.**; Olawole, O.I. and Oni, A.A. (2011). Effect of interactions between *Glomus mosseae* and *Pythium aphanidermatum* on the growth performance of okra plant seedlings. *Journal of Science Research*.
- (xxxi) Bamigboye, R.A. and Salami, A.O. (2011). Mycorrhizal fungi as potential agent of biodiversity conservation. In: *Environmental Research and Challenges of sustainable development in Nigeria*. ISBN: 978-136-188-3.
- (xxxii) Idowu O. O., Salami A. O., Akinwale R.O., Ajayi S. A. and Sere Y. (2013). Varietal resistance of rice to blast fungus *Magnaporthe oryzae* at two sites in southwestern Nigeria. *African Journal of Biotechnology*, Vol.12 (33), pp 5173 – 5182.
- (xxxiii) Lartey, R.T., TheCan Caesar-TonThat, **Salami, A.O.**, Hanson, S.L., Erika Balogh and Soumitra Ghoshroy (2013). Impact of interaction of *Cercospora beticola* and *Pyrenophora teres* on their potential for survival.



- (xxxiv) Lartey, R.T., **Salami, A.O.**, TheCan Caesar-TonThat, Hanson, S.L., Erika Balogh and Soumitra Ghoshroy (2013). Investigation of *Peniophora nuda* for biological control of *Cercospora beticola* and *Pyrenophora teres*.
- (xxxv) **Salami, Abiodun Olusola**; Oni, Ayodeji Christopher; Idowu, Oluyemi Olawumi (2015). In Vitro and Enzymatic Studies of Inhibitory Activities of Three *Trichoderma* Species against *Pythium Aphanidermatum* in Infected Sweet Pepper. International Journal of science Vol. 4(9), pp 28-45.
- (xxxvi) O. O. Idowu, O. I. Olawole, O. O. Idumu and **A. O. Salami** (2015). Bio-control Effect of *Trichoderma asperellum* (Samuels) Lieckf. and *Glomus intraradices* Schenk on Okra Seedlings Infected with *Pythium aphanidermatum* (Edson) Fitzp and *Erwinia carotovora* (Jones). America Journal of Experimental Agriculture Vol.10 (4), pp1-12.
- (xxxvii) **Salami, A.O.**; Oni, Ayodeji Christopher; and Idowu, Oluyemi Olawumi (2016). The interactive effects of three *Trichoderma* species and damping off causative pathogen *Pythium aphanidermatum* on emergence indices, infection incidence and growth performance of sweet pepper. International Journal of Recent Scientific Research, Vol. 7(4) pp. 10339 – 10347.
- (xxxviii) **Salami A.O.**, Bankole F.A. and Olawole, O.I. (2016). Effect of different substrates on the growth and protein content of oyster mushroom (*Pleurotus florida*). Int. J. Biol. Chem. Sci. 10(2): 475-485. DOI: [10.4314/ijbcs.v10i2.2](https://doi.org/10.4314/ijbcs.v10i2.2)
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- (xlii) **Salami A.O.**, Bankole F.A., and Salako, Y.A. (2017). Nutrient and Mineral Content of Oyster Mushroom (*Pleurotus florida*) Grown on Selected Lignocellulosic Substrates. *Journal of Advances in Biology & Biotechnology*, 15 (1): 1-7.
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- (xlv) **Salami, A.O.**, Aderemi, K.A. Bankole, F.A. (2017). Potentials of *Pseudomonas aeruginosa* and *Trichoderma harzianum* on the growth of *Solanum lycopersicum* in heavy metal contaminated soil. *Journal of Agriculture and Ecology Research International*. Vol 13(3):1-11

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- (lii) **Salami A.O.**, O. O. Coker and O. O. Idowu. (2018). Evaluation of soil fertility Improvement Potential of Water and Methanolic Neem (*Azadirachta India* A.) leaf extract on the growth and yield of tomato (*Solanum lycopersicon* L.). *Archives of Current Research International*. ISSN: 2454-7077, 13(1):1-11.
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- (liv) Oluwaranti A., **Salami A. O.**, Bankole F. A., Akintayo V. O. And Eyiowuawi O. R; (2020). Genotypic Response of Maize to Micro and Macro Nutrients as Influenced by Arbuscular Mycorrhiza Fungi (*Glomus facultative*) in a Rainforest Location. *Ife Journal of Agriculture*, 2020, Volume 32, Issue 3.
- (lv) Fagbohun, O.F., Joseph, J.S., **Salami, A.O.** and Msagati, T.A.M. (2020). Exploration of Modern Chromatographic Methods Coupled to Mass Spectrometric Techniques for Trace Element and Chemical Composition Analyses in the Leaf Extracts of *Kigelia Africana*. *Biological Trace Element Research (Springer Nature)*, pp16. <https://doi.org/10.1007/s12011-020-02274-w>.
- (lvi) Bankole, Faith A., Baffour Badu-Apraku, **Abiodun O. Salami**, Titilayo D.O. Falade, Ranajit Bandyopadhyay, Alejandro Ortega-Beltran (2022). Identification of early and extra-early maturing tropical maize inbred lines with multiple disease resistance for enhanced maize production and productivity in sub-Saharan Africa. *Plant Disease*. <https://doi.org/10.1094/PDIS-12-21-2788-RE>.
- (lvii) Olabiyi Olatunji Coker, **Abiodun Olusola Salami** and Faith A. Bankole (2022). Effect of Aqueous Extracts of *Carica papaya* and *Chromolaena odorata* on Mycelia Growth of *Fusarium lateritium*. *Asian Basic and Applied Research Journal*. 6(2): 1-8.

(lviii) Olabiya Olatunji Coker and **Abiodun Olusola Salami** (2022). Phytochemical Assay of *Azadirachta indica*, *Tithonia diversifolia*, *Carica papaya* and *Chromolaena odorata* from Ile-Ife, Nigeria. *Asian Research Journal of Current Science*, 4(1): 274-278.

**5. Edited Conference Proceedings:**

**(a) Refereed:**

Nil

**(b) Non-Refereed:**

Nil

**6. Articles Accepted for Publication:**

(i)

(ii) etc.

**7. Manuscripts Submitted for Publication:**

Nil

**8. Creative Works/Patents:**

Nil

**9. Technical Reports:**

Nil

**10. Papers and Works in Progress:**

(i) Salami, A.O. Influence of Mycorrhiza and Agrolyser on the growth of two varieties of maize.

(ii) **Salami, A.O.** and Oluwaranti, A. Assessment of streak virus and downy mildew disease in Quality Protein Maize (**QPM**).

(iii) **Salami, A.O.** Effect of *Glomus clarum* (Mycorrhiza) and Agolyser on the rate of Development and Yield of Tomato (variety UC 82 B) plant.

(iv) **Salami, A.O.** Bio and synthetic control effects on the activities of *Fusarium oxysporum* and *Glomus clarum* on the growth of *Phytosanthes cucumerina*

**F. PROFESSIONAL ACCOMPLISHMENTS:**

I have made the following significant contributions:

(a) **Bio-control processes in plant-microbe interaction** (with reference to bio-control of pathogens using mycorrhiza and other antagonists): The interactions between these organisms have been studied through their effects on plant growth and yield. I have studied the enzymatic mechanisms involved in the ability of mycorrhiza and *Trichoderma* species in suppressing the pathogenic effect on plants, in order to reduce food insecurity. The results show that arbuscular mycorrhiza (AM) aids maintenance and improvement of soil structure, the uptake of relatively immobile elements; both macronutrients (phosphorus) and micronutrients (zinc), the alleviation of the toxicity of some elements, the interactions with other beneficial soil organisms (nitrogen-fixing rhizobia), and improved protection against pathogens. My research has shown that mycorrhizal associations enable a better use of sparingly soluble phosphorus pools.

(b) **Mycorrhiza agro-biotechnology –Landuse improver**: Traditional landuse involves the practice of shifting cultivation and high input of fertilizer in agriculture in the sub-Saharan region of the tropics. These practices are no longer feasible in Nigeria, due to the high cost and scarcity of supply of the fertilizers as well as the fallow periods that have been drastically reduced. Major factors that constrain tropical soil fertility and sustainable agriculture are low nutrient capital, moisture stress, erosion, high P fixation, high acidity with aluminium toxicity, and low soil biodiversity. The fragility of many tropical soils limits food production in annual cropping systems. Because some tropical soils under natural conditions have high biological activity, an increased use of the biological potential of

these soils to counter the challenges of food production problems has been proposed in my studies. My research efforts have provided evidence that careful fertilizer use, proper residue or tree pruning management with vesicular arbuscular mycorrhizal (VAM) inoculation management can ensure stable and high crop yields in the tropical soils. This strategy is to develop soil improvement generated by trees (particularly leguminous trees) and cropping system together, assisted by microbiological resource (VAM) which can be supplemented with chemicals like fertilizers and biocides when available. The underlying principles is that the quality and quantity of the soil organic matter from the land systems will allow appropriate refinements of the traditional and improved systems to ensure sustainability of the system.

(c) **Community Engagement with Resource-Poor Farmers:** The results of my research have been made available to the local farmers through community engagement in Nigeria and East Africa. In Nigeria, peasant farmers in some villages (Ajibode, Ilupeju, Elewonta, etc) were trained on alley farming/agro-forestry system which they eventually embraced as well as how to propagate mycorrhizal inoculum on their farms and apply same using locally adapted methods. This engagement with the farmers was conducted for a period of 3 years and resulted in improved crop yield and income for these resource poor famers. On the basis of the success recorded in this engagement, I was contacted by Acres for Life (Providence Design and Development, 139 Kelton Court, Simi Valley, CA 93065, U.S.A.) to replicate the same approach in some local communities in Uganda, East Africa. This was done with great success in 2006.

(d) **Mushroom Cultivation:** I have been able to cultivate *Pleurotus pulmonarius* (White Mushroom) which is an edible mushroom in the Department of Crop Production and Protection for people's consumption (2009/2010). This cultivation as also been taken further for use in the area of Bioremediation of polluted soils (crude oil and spent engine oil soil), where it was discovered that with the inoculation of mycorrhiza, bioremediation activities will be effected to salvage the deteriorating conditions for improved agricultural practices (Salami and Elum, 2010). In my work, I have been able to find that *P. pulmonarius* is a potential bio-remediating agent in sites filled with organo-pollutants like crude oil. At cultivation, sawdust that has be used to grow this mushroom is being recycled in the process into a much useful Spent Mushroom Compost (SMC) and an Agricultural amendment. The work demonstrates on a small scale, that the mycelium and spent mushroom compost of *Pleurotus pulmonarius* are useful tools for bioremediation of crude oil polluted soil. Also, that a crude oil polluted soil undergoing bioremediation can be bio-stimulated with mycorrhiza in order to enhance high crop productivity which will eventually lead to poverty alleviation and food security. However, more work is still going on in this area especially as it relates to in-situ application and long-term studies of the associated crops and soil type.

(e.) **Inaugural Lecture Delivered** -Titled: "*Hunger on rampage: fungi to the rescue!*"

#### **G. CONFERENCES, SEMINARS AND WORKSHOPS ATTENDED WITH DATES (Some include):**

- (i) 11<sup>th</sup> Annual Lecture and Symposium of the International Association of Research Scholars and Fellows (IARSAF), 26<sup>th</sup> January, 2006, International Institute of Tropical Agriculture (IITA), Ibadan.
- (ii) Annual Conference of Nigerian Mycological Society, May 2 – 4, 2006, University of Ado-Ekiti, Nigeria.
- (iii) Annual Conference of Nigerian Society for Plant Protection, May 7 – 11, 2006, Ahmadu Bello University, Zaria, Nigeria.
- (iv) Annual Conference of Nigerian Society for Plant Protection, 17<sup>th</sup>-22<sup>nd</sup> September 2007, Nassarawa State University, Nassarawa, Nigeria.

- (v) Workshop on Seed Testing and Seedling Analysis for Seed Analysts, 25<sup>th</sup>-29<sup>th</sup> February 2008. Seed Science Laboratory, Obafemi Awolowo University, Ile-Ife.
- (vi) Alexander von Humboldt Conference on Food, Health and Environmental Issues in Developing Countries: The Nigerian Situations, August 3<sup>th</sup>-7<sup>th</sup>, 2008, Conference Centre, Obafemi Awolowo University, Ile-Ife.
- (vii) 9<sup>th</sup> International Congress of Plant Pathology, 24<sup>th</sup>-29<sup>th</sup> August, 2008, Torino, Italy
- (viii) International Conference on Bioenergy: Harnessing Plant Metabolism. The Otto Warburg Mineva Center for Agricultural Biotechnology, The Hebrew University of Jerusalem, Rehovoth, Israel. 24-25 February, 2009.
- (ix) Ecorhizophiomentology and Soil Health conference, March 14<sup>th</sup>-16<sup>th</sup>, 2011, University of Ibadan, Ibadan.
- (x.) IWF World Leadership Training, Atlanta, Georgia, U.S.A., 2014.
- (xi.) Harvard Executive Education Training, Harvard Business School, Cambridge, Massachusetts, U.S.A. 2015.
- (xii.) Women Leaders Global Change Program, INSEAD, Fontainebleau, France. 2015.
- (xiii.) International Scientific Commonwealth Conference, Royal Society, Singapore, 2017.
- (xiv.) Keynote Speaker at the 12th Annual Conference of the Mycological Society of Nigeria. Federal University of Technology, Akure. Chronicles of a latent but resourceful Kingdom: Fungi. 24<sup>th</sup> – 27<sup>th</sup> October 2021.

## **H. CURRENT RESEARCH ACTIVITIES:**

- (i) Effect of pathogenic bacteria on the growth and yield of a variety of tomato UC 82 B.
- (ii) Biocontrol effects of spent mushroom compost and Mycorrhiza on the activities of pathogenic bacteria on the growth of *Amaranthus hybridus*.
- (iii) Bioremediation activities of mycorrhiza on growth of jute mallow (*Corchorus olitorius*) seedlings grown on spent engine-oil polluted soil.
- (iv) Population and behavior of microbial load of both indigenous and inoculated mycorrhiza on tomato plants.

## **I. OTHER RELEVANT INFORMATION:**

### **1. Services within the Department:**

- (i) Chairperson, Equipment & Infrastructure Committee, 2006- 2007.
- (ii) Member, Academic and Curriculum Planning Committee 2006-2008.
- (iii) Staff-in-charge, New Dam Experimental Plots, Teaching and Research Farm 2007-2008.
- (iv) Member, Examination Coordination Committee 2007-2008.

### **2. Services within the Faculty:**

- (i) Member, Greenhouse Committee, Faculty of Agriculture 2007-2008.
- (ii) Member, Editorial Board, Ife Journal of Agriculture, Obafemi Awolowo University, Ile-Ife 2007- 2010.

### **3. Services within the University:**

**4. Services outside the University:**

- |       |   |             |
|-------|---|-------------|
| (i)   | Reviewer for International Journal of Plant Diseases, U. S. A. and Archives of Agronomy and Soil Science, Germany.  | 2006 - 2007 |
| (ii.) | Member, Programme Planning and Implementation Committee, Chrisland University, Nigeria.   | 2007 -2013  |
| (iii) | Member, Curriculum Development Committee, Eko University of Medicine and Health Sciences.   | 2006        |
| (iv)  | Education and Demonstration of Field Investigations in Uganda. In collaboration with Providence Design and Development, 139 Kelton Court, Simi Valley, CA 93065, U.S.A. | 2006        |
| (v)   | Member, Curriculum Development Committee of Caleb University, Nigeria.  | 2005 - 2008 |
| (vi)  | Member, National Universities Commission (NUC) Panel for Curriculum Development on Entrepreneurship Education for Nigerian Universities                                 | 2004        |

**J. CONTRIBUTION TO KNOWLEDGE:**

The main focus of my work has hinged on the sustainability of bio-control of pathogens with the use of mycorrhiza especially Vesicular Arbuscular Mycorrhiza (VAM) and food security. My research interest focuses on the biotechnology of bio-control in the area of plant-microbe interactions revealing the enzymatic activities of these interactions and the microbial control in plant diseases and their management. The results of these studies have been published in both local and international journals.

Another thrust of my work is on the influence of Vesicular-Arbuscular Mycorrhiza (VAM) on disease incidence of some food crops in order to guarantee continuous yield and production of these food crops. To this, I have carried out studies on the effect of Pathogen (*Pythium aphanidermatum*) and the arbuscular mycorrhizal fungus (*Glomus deserticola*) on disease severity and growth of pepper as well as investigated the influence of arbuscular mycorrhizal fungi on disease severity of pepper and tomato caused by *Sclerotium rolfsii* (3a i, ii, iv, viii, xiii, & 3c xix).

My research also focused on changing the activities of resource-poor farmer from the traditional landuse which involves the practice of shifting cultivation and high input of fertilizer in agriculture, this is because they are no longer feasible due to the high cost and scarcity of supply of the fertilizers as well as the fallow periods that have been drastically reduced due to population-induced pressure. My research provides the basis for the introduction of intensification of land-use through a strategy involving proper residue use or tree pruning management with vesicular arbuscular mycorrhiza (VAM). This is important for food security in Africa given the burgeoning population, the attendant continuous decline in the land area per capita and the inability of resource-poor farmers to practice agricultural system with high fertilizer input. The strategy is aimed at generating higher or sustainable yields per unit of land while preserving the resource base and also alleviating the problem being faced by resource-poor farmers by improving the traditional land-use system in Nigeria through the newly emerging agro-biotechnology of mycorrhiza (3a iii, vi, ix, x, xii, xiv, xv, & 3b xviii).

My work further hinged on studies that will also expose or reveal the biochemical pathways involved in the interactions (plant-microbe-pathogen) that could have induced resistance in plants. My desire to look at the details of the biochemical basis of the arbuscular mycorrhiza-plant-pathogen interactions led to the study of hypersensitivity reactions which involves the production of secondary metabolites especially enzymes (both extra-cellular and oxidative) and their different levels of activities. This is in order to characterize the basis of the induced resistance that will lead to a significant growth and yield increase of plants on field. This will also prolong the shelf lives of stored crops especially after harvesting (3v, vii, xi, xvi & xvii).

Another thrust of my work is based on both the cultivation and propagation of some of the fungal organisms as well as their bio-remediating abilities. For instance, fungus *P. pulmonarius* (an edible white rust fungus) has been found to be a potential bio-remediating agent in sites filled with organo-pollutants like crude oil. Sawdust that can be used to grow this mushroom is being recycled in the process into a much useful Spent Mushroom Compost (SMC) as agricultural amendment. My work demonstrates (though on a small scale), that the mycelium and spent mushroom compost of *Pleurotus pulmonarius* are useful tools for bioremediation of crude oil polluted soil. The results of the study suggest that a crude oil polluted soil undergoing bioremediation can be bio-stimulated with mycorrhiza fungus. This is in order to enhance crop productivity that can eventually lead to poverty alleviation and then aid food security. However, more work is still going on in this area especially, as it relates to in-situ application and long-term studies of these fungal organisms and their associated crops and soil types.

**Date:** 14/11/2022