



RESEARCHER ID :

SCOPUS ID :

ORCHID: 0000-0002-3278-0502

Position: Research Scientist (Integrated Soil Fertility Management)

1. PERSONAL INFORMATION

- | | |
|---------------------------|--|
| 1.1. NAME | Riziki Umazi Mwadalu |
| 1.2. ADDRESS | 20412-00200, Nairobi, Kenya |
| 1.3. PHONE | +254 727 555 260 |
| 1.4. EMAIL ADDRESS | zikiemwa@gmail.com or rmwadalu@kefri.org |
| 1.5. NATIONALITY | Kenyan |
| 1.6. GENDER | Female |

2. QUALIFICATIONS

2.1. Academic Qualifications

2018-Date: PhD. Integrated Soil Fertility Management: Kenyatta University (On-going)

2012-2015: MSc. Integrated Soil Fertility Management: Kenyatta University, Kenya

2006-2010: B.Sc. Environmental Studies (Resource Conservation): Kenyatta University, Kenya

2.2. Key Competencies

Data analysis using R and SAS software

2.3. Other Courses

1-5th September 2014: Rapid Carbon Stock Assessment, KEFRI Kitui, Kenya

17-20th February 2015: FTIR Training for soil analysis and prediction of soil properties, Nairobi, Kenya

6-8th February 2019: British Council Researcher Connect Workshop on Proposal Development, Radisson Blu Hotel, Nairobi Kenya

9th May 2019: National Determined Contributions (NDCs) Training (Pre-congress training during 4th World Agroforestry Congress), Montpellier, France.

3. EMPLOYMENT HISTORY

July 2019-Date: Research Scientist II, Kenya Forestry Research Institute

July 2014- June 2019: Assistant Research Scientist, Kenya Forestry Research Institute

Jan 2014-June 2014: Research Assistant, Edulink Project, Kenyatta University

4. ADMINISTRATIVE RESPONSIBILITY

November 2020-Date: Head of Soils Section, Central Highlands Eco-Region Research Programme

July 2014-October 2020: Head of Soils Section, Coast Eco-Region Research Programme

5. PUBLICATIONS

5.1. Journal papers

Mwadalu, R and Mwangi, M. (2013). The potential role of sorghum in enhancing food security in Semi-Arid Eastern Kenya (A Review). *Journal of Applied Biosciences* 71:5786-5799.

Mwadalu, R. U., Mochoge, B., & Danga, B. (2020). Effects of biochar and manure on soil properties and growth of *Casuarina equisetifolia* seedlings at the coastal region of Kenya. *Scientific Research and Essays*, 15(3), 52-63.

Mwadalu, R., Mochoge, B. and Danga, B. (2021). Assessing the Potential of Biochar for Improving Soil Physical Properties and Tree Growth, *International Journal of Agronomy*, vol. 2021, Article ID 6000184, 12 pages, 2021. <https://doi.org/10.1155/2021/6000184>.

Mwadalu, R., Gathara, M., Muturi, G. and M.T.E Mbuvi (2021). Potential of *Casuarina equisetifolia* and *Melia volkensii* Tree Species in Improving Soil Fertility in Kwale And Kilifi Counties, Kenya. *E. Afri. Agri. For. J* (Pg. 18 -30 Special Issue).

5.2. Books

5.3. Book Chapter

Riziki Mwadalu and Mary Gathara (2018). Edaphic characteristics of Arabuko Sokoke forest, In Ochieng' D., Luvanda A., Wekesa C., Mbuvi M.T.E and Ndalilo L. (Eds). *Biodiversity Status of Arabuko Sokoke Forest, Kenya*. Kenya Forestry Research Institute, Nairobi, Kenya.

Riziki Mwadalu and Mary Gathara (2019). Edaphic characterization of Buda forest, In Kamondo B., Muturi G., Mbuvi M.T.E, Ochieng D., Wekesa C., Riziki M., Akinyi L. Malonza P. K., Ogwoka B., Mulwa R.K., and Marhaba D.M. (Eds). *Biodiversity Status of Buda Forest, Kenya*. Kenya Forestry Research Institute, Nairobi, Kenya.

5.4. Technical Notes /Protocols/Guidelines

R. Mwadalu, N. Leley and A. Amur. Cost and management procedures for establishment of woodlots (CERRP guidelines 2015)

R. Mwadalu, N. Leley and A. Amur. Guidelines for establishment of seeds stands (CERRP Guidelines 2015)

R. Mwadalu, C. Many, P. Mukirae and K. Mulatya (2017). Status of Soils at the Coast.

5.5. Policy Briefs

6. RESEARCH

6.1. Completed

Principal Investigator on AGRA's Soil Health Project on Improving Sorghum Grain Yield Through Use of Mineral Fertilizers and Farm Yard Manure for Smallholder Farmers in Makueni and Machakos Counties, 2012-2013.

6.2. Ongoing research

Principal Investigator on Kenya Climate Smart Agriculture Project "Validation and Promotion of Mixed Trees-Shrubs Legume-Fallows for Improved Livelihood and Provision of Resilience Against Climate Change", 2020-2022.

6.3. Mentorship and supervision

7. INNOVATIONS AND PATENTS (Intellectual Property)

8. CONFERENCES/SEMINARS/WORKSHOPS

8.1. Presentation of Papers at Academic and Professional Conferences

Riziki Mwadalu, Benson Mochoge and Maina Mwangi. Effects of farm yard manure and inorganic fertilizer on Sorghum yield in Semi-arid Eastern Kenya. The Soil Science Society of East Africa (SSSEA) in collaboration with African Soil Science Society (ASSS), Nakuru, Kenya 20-25 October 2013.

Riziki Mwadalu and Maina Mwangi. The potential of horticultural crops production in the Semi-arid areas of Eastern Kenya. 13th Workshop on Sustainable Horticultural Production in the Tropics between 3rd and 6th December 2013 at Meru University of Science and Technology, Meru.

Riziki Mwadalu, Benson Mochoge and Maina Mwangi. 2014. Effects of Nitrogen and Phosphorus mineral fertilizer on sorghum N uptake in semi-arid Eastern Kenya. Proceedings of AGRA, Kenyatta University, University of Nairobi, Horticultural Association of Kenya (HAK) and RUFORUM held at Kenyatta University between 1st -5th Dec 2014.

Riziki Mwadalu, Gabriel Muturi and MTE Mbuvi. The effect of *Casuarina equisetifolia* and *Melia volkensii* agroforestry on soil fertility status of Kwale and Kilifi Counties. Kenya Coastal Development Project Conference, Voi, Kenya 21-23 March 2016.

Riziki Mwadalu and Gabriel Muturi. The potential of *Casuarina equisetifolia* and *Melia volkensii* agroforestry in improving soil fertility in Kwale and Kilifi Counties. National Science Week Conference, KICC, Nairobi Kenya; 16th -20th May 2016.

Riziki Mwadalu, Chemuku Wekesa, Nereoh Leley, Gabriel Muturi, and Mary Gathara. 2017. Understanding Mangrove Ecosystem Soils for Effective Management: A Case of Manda Island, Lamu County, Kenya. XIII International May conference on strategic management IMKSM 2017, held from 19th to 21st May 2017, University of Belgrade, Serbia.

Riziki Mwadalu, Gabriel Muturi, MTE Mbuvi and Mary Gathara. Impact of Climate Change on Forest Soil: Case of Arabuko Sokoke Forest, Kilifi County, Kenya. National Science Week Conference, KICC, Nairobi Kenya; 22nd -26th May 2017.

Riziki Mwadalu, Gabriel Muturi. M.T.E. Mbuvi and Mary Gathara. Benchmarking edaphic properties of Arabuko Sokoke forest for long-term biodiversity monitoring. 5th KEFRI Conference, Muguga, Kenya 17th -19th April 2018.

Riziki Mwadalu, Gabriel Muturi, Musingo Mbuvi, and Kevin Muema. The Potential of *Casuarina equisetifolia* and *Melia volkensii* systems in Improving Soil Fertility in Kwale and Kilifi Counties, Kenya. 5th KEFRI Conference, Muguga, Kenya 17th -19th April 2018.

Riziki Mwadalu, Gabriel Muturi. M.T.E. Mbuvi and Mary Gathara. Soil nutrient dynamics in Coastal Forests: A case of Arabuko Sokoke Forest, Kilifi County, Kenya. North America Forest Soils Conference /International Symposium on Forest Soils 2018 June 10-16, 2018, Quebec City, Quebec, Canada.

Mwadalu, R., Muturi, G., Mbuvi, M. and Gathara, M. Role of *Casuarina equisetifolia* and *Melia volkensii* systems in Improving Soil Fertility in Coastal Kenya. 4th World Congress on Agroforestry, 20th to 22nd May 2019, Montpellier, France.

Mwadalu, R., Mochoge, B., and Danga, B. Effect of biochar and Manure on soil properties and growth of *Casuarina equisetifolia* seedlings at the Coast, TWAS-SAREP Regional young scientists' conference, 23rd-25th, October 2019, Nairobi, Kenya.

8.2. Participation in Workshops/Conferences

8.3. Convening/Coordinating Conferences

9. PROFESSIONAL ENGAGEMENT

- 9.1. Training
- 9.2. Consultancies
- 9.3. Collaboration with external organizations

10. EXTERNAL AND INTERNAL RESEARCH GRANTS

Kenya Climate Smart Agriculture Project (KCSAP) Adaptive Research Grant (KES, 21.9m)

11. LOCAL, REGIONAL & INTERNATIONAL APPOINTMENTS

- 11.1. Local
- 11.2. Regional
- 11.3. International

12. AWARDS AND RECOGNITION

2012: Alliance for a Green Revolution in Africa (AGRA) Masters Scholarship under the Soil Health Programme, Kenyatta University, Kenya.

13. CONTRIBUTION TO KEFRI's ADVANCEMENT

14. MEMBERSHIP TO PROFESSIONAL BODIES

15. REFEREES

Prof. Benson Mochoge, Senior Soil Science Professor, Kenyatta University, P.O. Box 43844-00100, Nairobi. Phone: +254720874195. Email: bensonmochoge@gmail.com

Prof. Maina Mwangi, Senior Lecturer, Kenyatta University, P.O. Box 43844-00100, Nairobi. Phone: +254710860550. Email: mmaina@gmail.com

Dr. Linus Wekesa, Regional Director, Kenya Forestry Research Institute, Coast Eco-Region Research Programme, P.O. Box 1078- 80200, Malindi. Phone: +254721385833, Email: weknus@yahoo.com