

PROF. JAYNE NJERI MUGWE; BSc, Mphil, PhD
CURRICULUM VITAE

<http://agriculture.ku.ac.ke/index.php/faculty-profiles/faculty/78-template-details/design-a-features/70-dr-jayne-mugwe>

1.1 PERSONAL INFORMATION

1.1.1 Prof. Jayne Njeri Mugwe

	Qualifications: BSc (Moi); M Phil (Moi); PhD (Kenya). ASSOCIATE PROFESSOR Area of Specialization: Integrated Soil Fertility Management. Email: mugwe.jayne@ku.ac.ke; jaynemugwe@yahoo.com Designation: Associate Professor Google Scholar: ORCID ID Research gate: Publons
---	---

Google Scholar



Prof Jayne Mugwe

Professor of Soil Science and Research Methods [Kenyatta University](#)

Verified email at ku.ac.ke - [Homepage](#)

[Soil fertility Agroforestry Agr...](#)

[FOLLOW](#)

Cited by

	All	Since 2021
Citations	4991	2680
h-index	36	29
i10-index	88	62

[VIEW ALL](#)

1.1.2 Academic Qualifications and Professional Qualifications

Certificate	Institution	Qualification	Date awarded
Ph D	Kenyatta University	Soil Fertility Management	2007
M Phil	Moi University	Soil Science	1997
BSc	Moi University	Forestry	1989
KACE	Kangaru High School	3 principal passes and one subsidiary	1984
KCE	Mary Hill High School	Division one	1982

1.1.3 EMPLOYMENT HISTORY/WORKING EXPERIENCE

February 2020 to Date: Associate Professor in the School of Agriculture and Environmental Sciences

Duties

- Teaching and supervising undergraduate and postgraduate students
- Examination of PhD and Masters thesis
- Attend oral examination for PhD and Masters students
- Research and community service
- Member of Departmental postgraduate board
- Member of School Postgraduate board

January 2022 to November 2022: Ag. Registrar, Research, Innovation and Outreach: Kenyatta University

Duties

Work closely on a day-to-day basis with the Deputy Vice-Chancellor of Research, Innovation and Outreach in Coordination and Administration of Kenyatta University's Research Vision and Mission.
Specific roles include;

1. Coordinate and implement programmes and activities that support research, innovation, outreach and extension-related activities
2. Encourage and support the development and implementation of high-quality research initiatives while maintaining a culture of compliance among faculty staff and students
3. Build, strengthen and enhance skills and competencies for research and innovation among faculty staff and students

February 2020 to December 2021 **Associate Professor:** Department of Agricultural Science and Technology

Duties

- Teaching and supervising undergraduate and postgraduate students
- Examination of PhD and Masters thesis
- Attend oral examination for PhD and masters students
- Member of departmental post graduate studies
- Member of Departmental quality Management systems

Units Taught

Graduate Courses: KCU 801: Research Methods, KRM 813 Advanced Agriculture and Environment, KRM 802: Soil Fertility Evaluation, KRM 804: Cropping Systems and Agroforestry

Undergraduate courses: KCU 400: Research Project, KRM 305: Research Methods and Agricultural Experimentation; KCU 202: Principles of Soil Science, KRM 300 Soil Fertility and plant nutrition; KST 422: Agroforestry Development

May 2013 to January 2020: Senior Lecturer (KU)

September 2017 to May 2018: Sabbatical leave at the University of Embu (Reviewed Curriculum in BSc Agriculture, and taught Research Methods courses at both undergraduate and post graduate levels)

August 2011 to February 2017: Chairperson: Department of Agricultural Resource Management

April 2009 to May 2013: Lecturer (KU)

2004 to 2009:	Senior Research Officer: Kenya Forestry Research Institute (KEFRI) HQs
1991 to 2004:	Research Officer: KEFRI
1990 to 1991:	Assistant Research Officer: KEFRI

Area of Specialization

- Integrated Soil Fertility Management; Research Methods

Research Interests

- Soil Health and fertility
- Soil productivity
- Legume cropping systems
- Adoption of agricultural technologies
- Climate Change

ADMINISTRATIVE RESPONSIBILITIES

- January 2022 to November 2022: Registrar, Research, Innovation and Outreach
- August 2011 to February 2017: Chair of Department of ARM
- 3rd March to 15th April, 2015: Ag Dean, School of Agriculture and Enterprise Development.
- April 2009 to August 2011: In charge of Timetable; Department Brochure development
- April 2009 to August: In charge of Field trips coordination
- Chairperson: Soil Science Society of East Africa (2010 to 2011)

COMMITTEE MEMBERSHIP

1. 28th January, 2022 to September, 2022: Chairperson of Science, Technology and Innovation Mainstreaming Strategy Committee
 - Monitor Implementation of KU STI Strategy and propose areas of improvement/interventions as guided by NACOSTI.
2. 3rd March, 2022, Member to committee to develop a staff performance appraisal tool as per public service guidelines.
3. 11th March, 2022 to September, 2022: Secretary to the University Research Advisory Board
 - Administer the University Research & Innovation Fund, provide capacity building and advancement of research and provide bi-annual reports to the MB.
4. 15th March 2022, Member of Committee on Improving Completion Rate of Postgraduate Studies.
 - Review the current processes, Procedures, Practices, & Policies in Postgraduate Training.
 - Recommend for ways of dealing with postgraduate students who have not completed studies within the timelines, ways of ensuring postgraduate students remain engaged, ways of enhancing the completion rate and ways of increasing the enrollment.
5. 16th May 2022, Member to the 51st Graduation Ceremony Organizing Committee
6. 6th June, 2022, Member of Committee to prepare for audit and projects by Universities Fund/Ministry of Education on 20th June, 2022.

1.1.4 Major Achievements

1. **January 2026: Book titled: “Research Methodology in Agricultural Sciences” published by Springer nature: <https://link.springer.com/book/10.1007/978-981-95-1892-0>**
2. **September 2020 to December 2022: Research Grant by Kenya Climate Smart Agriculture Project (KSCAP). “Balanced nutrition for management of soil acidity and nutrient deficiency for sustained**

agricultural productivity”; **KES 9,524,813.**

3. **February, 2020.** Promoted to Associate Professor of Soil Fertility Management
4. **May 2019:** Grant to Host East Africa Community Masters scholarships (Masters in Integrated Soil Fertility Management)
5. **April 2019:** Proposal to Host PASET PhD scholarships in Integrated Soil Fertility Management) selected for on-site visits
6. **Publications:** > **110 journal articles and conference papers**
7. **Published** 39 Book Chapters)
8. **Published Eight (8)** project Reports
9. **Postgraduate supervision:** Successfully supervised Five (5) PhD students and 41 Masters students since Joining KU in 2009.
10. **External Examiner:** South Eastern University, Captain Cook University, Jomo Kenyatta of Agriculture and Technology
11. **Administration:** Chair of Department (ARM) for 5.6 years (Headed accreditation of Animal Health and production programme and creation of the Department of Animal Sciences; initiated open learning programmes)
12. **Grants:** Winning Research Grant to carry of (AGRA 2013 SHP 014) that started in May 2014 and ended in April 2017 (closure letter received) Title: Scaling up soybean and climbing beans using a value chain approach in maize-based systems of the central Highlands of Kenya (**USD 549,645**)
<https://jaynemugwe.org/projects/>
13. Best paper in food security during the 11th Egerton University conference held in March, 2017
14. **Grants:** Successfully completing Donor funded project (AGRA 2009 SHP 022) and receiving closure letter after fulfilling requirements of the grant (**USD 806,629**)
<http://research.ku.ac.ke/index.php/en/component/content/article/119-latest-research-news/286-dirt-matters-invest-in-soils-improve-livelihoods>
15. Participating in a Nine Months Sabbatical leave at University of Embu
16. Supporting 15 Masters students in their Research Projects through AGRA SHP 014 Grant (Self Initiative)
17. Supporting two (2) Masters student with CONNESSA Grant
18. Community outreach through working with farmers and preparing extension materials

2.0 RESEARCH AND PUBLICATIONS

2.1 PAPERS/PUBLICATIONS IN REFEREED JOURNALS

1. Oduor, N. O., Yatoo, A. M., Opande, T., Nicholas, O. O., Merwad, A.-R. M., Mugwe, J. N., Al-Sadi, A. M., Meng, L., & Elrys, A. S. (2025). *How does copper influence the nitrification inhibition efficiency of dicyandiamide under varying soil moisture levels?* **Ecotoxicology and Environmental Safety**, **307**, 119410. <https://doi.org/10.1016/j.ecoenv.2025.119410>
2. Maina, M. N., **Mugwe J.M.**, Benjamin, D. *et al.* (2025). Improving soil fertility, sorghum productivity and economic returns through organic and inorganic inputs in semiarid Kenya. *Discover. Soil* **2**, 44. <https://doi.org/10.1007/s44378-025-00068-x>
3. Otieno, E., Mucheru-Muna, M., Kifuko-Koech, M., Kamau, C. N., Magiroi, K. W. N., Mogaka, H., & **Mugwe, J. N.** (2024). Strategic research in the domain of secondary nutrients, micronutrients, liming and 4R stewardship in sub-Saharan Africa: Review. *Environmental Challenges*, **16**, 100960. <https://doi.org/10.1016/j.envc.2024.100960>
4. Nungula EZ, **Mugwe JN**, Boniface H. J. Massawe, Mahmoud F. Seleiman, Nawab Ali & Harun I. Gitari (2024) GIS-AHP based approach in land evaluation and suitability assessment for sunflower (*Helianthus annuus*) production, *Cogent Food & Agriculture*, **10:1**, DOI: [10.1080/23311932.2024.2309831](https://doi.org/10.1080/23311932.2024.2309831)
5. Njeru, N.M., **Mugwe J.**, Mucheru-Muna, M. and Kimani S. (2024)). The effects of integrated soil fertility management and cropping systems on soil water content on sorghum and cowpea production in central highlands of Kenya. *Tropical and Subtropical Agroecosystems* **27** 133.

6. Nungula EZ, **Mugwe J**, Massawe BHJ, Gitari HI (2023). Morphological, Pedological and Chemical Characterization and Classification of Soils in Morogoro District, Tanzania. Agric Res <https://doi.org/10.1007/s40003-023-00693-4>
7. Nungula, EZ, **Mugwe JN**, Jamal Nasar, Boniface H. J. Massawe, Anne N. Karuma, Sagar Maitra, Mahmoud F. Seleiman, Turgay Dindaroglu, Naeem Khan & Harun I. Gitari (2023). Land degradation unmasked as the key constraint in sunflower (*Helianthus annuus*) production: Role of GIS in revitalizing this vital sector, *Cogent Food & Agriculture*, 9:2, DOI: [10.1080/23311932.2023.2267863](https://doi.org/10.1080/23311932.2023.2267863)
8. Chappa, L.R., **Mugwe, J.**, Gitari, H.H. and Maitra, S. (2023). Upholding Sunflower (*Helianthus annuus*) Yield and Profitability while Maintaining Soil Fertility Under Intercropping with Sunn Hemp and Mineral Fertilizer Application. *International Journal of Bioresource Sciences*, 10(01): 31-49.
9. Rugendo M, Gichimu B, **Mugwe JN**, Mucheru Muna M and Mugendi DN (2023). Surface runoff and soil erosion from Nitisols and Ferralsols as influenced by different soil organic carbon levels under simulated rainfall conditions. *Heliyon* 9: e17684
10. Kwezirimana S, **Mugwe JN** and Bekele N (2023). Impact of collective marketing participation on farmers' income: Evidence from smallholder avocado farmers of Murang'a County, Kenya. *Social Sciences & Humanities Open*: 100614. [https://www.sciencedirect.com/science/article/pii/S259029112300219X#:~:text=Participation%20in%20avocado%20collective%20marketing,\(889.7%20kg\)%20in%202020](https://www.sciencedirect.com/science/article/pii/S259029112300219X#:~:text=Participation%20in%20avocado%20collective%20marketing,(889.7%20kg)%20in%202020).
11. Ndegwa JK, Gichimu BM, **Mugwe JN**, Mucheru-Muna M, Mugendi DN (2023) "Integrated soil fertility and water management practices for enhanced agricultural productivity – A Review" submitted to the journal "International Journal of Agronomy. <https://doi.org/10.1155/2023/8890794>
12. Kibet P, **Mugwe JN**, Korir NK, Mucheru-Muna MW, Ngetich FK, Mugendi DN (2023). Granular and powdered lime improves soil properties and maize (*Zea mays* L.) performance in humic Nitisols of central highlands in Kenya. *Heliyon* 9. <https://doi.org/10.1016/j.heliyon.2023.e17286>
13. Ndung'u M, **J.N. Mugwe**, Mucheru M F.K. Ngetich, F.S. Mairura, D.N. Mugendi (2023). Tied-ridging and soil inputs enhance small-scale maize productivity and profitability under erratic rainfall conditions in central Kenya. *Agricultural Water Management*. <https://doi.org/10.1016/j.agwat.2023.108390>
14. Oduor N, Mucheru-Muna M, **Mugwe JN**, Sijali I, Nyabuga G, Mugendi ND (2023). Soil water use efficiency under integrated soil management practices in the drylands of Kenya. *Heliyon* 9. 5. <https://doi.org/10.1016/j.heliyon.2023.e16145>
15. Ogega S, **Mugwe JN** and Micheni A (2023). Interactive effects of tillage methods and inorganic nutrients on maize and beans performance in Embu County, Kenya. *International Journal of Agriculture and Environmental Research* ISSN: 2455-6939 Volume: 09, Issue: 01 https://ageconsearch.umn.edu/record/333672/files/ijaer_09_07.pdf
16. Michoma J, **Mugwe JN**, Korir N and Mwangi M. (2023). Effect of hydrogel and mulching on soil moisture, yields, economics of yellow passion fruit in Embu and Kiambu counties, Kenya. *Asian Journal of Agricultural and Horticultural Research* Volume 10, Issue 4, Page 9-21, 2023; Article no. AJAHR. 98703 ISSN: 2581-478. <https://doi.org/10.9734/ajahr/2023/v10i4240>
17. Akello M, **Mugwe JN**, Nasar Jamar, Kisaka O, Ranja S and Gitari H, (2023). Role of phosphorus and inoculation with bradyrhizobium in enhancing soybean production. *Advances in Agriculture*; Article ID 3231623. <https://ops.hindawi.com/view.manuscript/aag/3231623/1/>

18. Otara, E.N., Mogaka, H.R., Ndirangu, S. N., **Mugwe, J. N.** (2023). Socioeconomic factors influencing uptake of regenerative agriculture technologies in the dry-lands of Embu County, Kenya. *Journal of Agricultural Extension*, Vol. 27 (1), 1-12. <https://dx.doi.org/10.4314/jae.v27i1.1>
19. Chappa LR, **Mugwe JN**, Maitra S and Gitari H (2022). Current Status and Prospects of Improving Sunflower Production in Tanzania Through Intercropping with Sunn Hemp International Journal of *Bioresource Science* Citation: IJBS: 09(01): 01-08, June 2022 DOI: 10.30954/2347-9655.01.2022.1
20. Oduor N, Mucheru-Muna M, **Mugwe JN**, Sijali, Nyambuga, Mugendi DN (2022). Nutrient and organic carbon losses by erosion, and their economic and environmental implications in the drylands of Kenya. *Environmental Challenges* 7 <https://doi.org/10.1016/j.envc.2022.100519>
21. Akello M, **Mugwe JN**, Ali Raza M, Seleiman MF, Maitra S and Gitari H. (2022) Aggrandizing soybean yield, phosphorus use efficiency and economic returns under phosphatic fertilizer application and inoculation with Bradyrhizobium. *Journal of Soil Science and Plant Nutrition* <https://doi.org/10.1007/s42729-022-00985-8>.
22. Kithome, M., Rasugu, H. M., **Mugwe, J. N.**, & Nyarindo, H. I. (2022). Factors Influencing Adoption of Irrigation Technologies among Smallholder Farmers in Machakos County, Kenya. *Journal of Agricultural Extension*, 26(3), 44-59.
23. Njenga MW, **Mugwe JN**, Mogaka H, Nyabuga G, Kiboi MN, Ngetich F, Mucheru-Muna M, Sijali I, Mugendi D (2021). Determinants of Farmers' Knowledge on Soil and Water Conservation Technologies in Dry Zones of Central Highlands, Kenya. *Journal of Agricultural Extension*, 25: 127-143, <http://www.journal.aesonnigeria.org/index.php/jae/article/view/297>
24. Mugi-Ngenga EW, Kiboi MN, Mucheru-Muna MW, **Mugwe JN**, Mairura FS, Mugendi DN, Ngetich FN (2021). Indigenous and conventional climate-knowledge for enhanced farmers' adaptation to climate variability in the semi-arid agro-ecologies of Kenya. *Environmental Challenges* 5 (2021) 100355, <https://doi.org/10.1016/j.envc.2021.100355>
25. Njenga MW, **Mugwe JN**, Mogaka H, Nyabuga G, Kiboi MN, Ngetich F, Mucheru-Muna M, Sijali I, Mugendi D (2021). Communication factors influencing adoption of soil and water conservation technologies in the dry zones of Tharaka-Nithi County, Kenya. *Heliyon*, <https://doi.org/10.1016/j.heliyon.2021.e08236>
26. Kimiti W W, Mucheru-Muna MW, **Mugwe JN**, Ngetich KF, Kiboi MN and Mugendi DN (2021). Lime, manure and Inorganic Fertilizer Effects on Soil Chemical Properties, Maize Yield and Profitability in Acidic Soils in Central Highlands of Kenya . *Asian Journal of Environment & Ecology*, Page 40-51 DOI: [10.9734/ajee/2021/v16i330250](https://doi.org/10.9734/ajee/2021/v16i330250). Published: 21 September 2021
27. G.G. Mwaura , M.N. Kiboi , **J.N. Mugwe** , G. Nicolay , E.K. Bett, A. Muriuki , C.M. Musafiri , F.K. Ngetich (2021) Economic evaluation and socioeconomic drivers influencing farmers' perceptions on benefits of using organic inputs technologies in Upper Eastern Kenya, *Environmental Challenges* doi: <https://doi.org/10.1016/j.envc.2021.100282>
28. Ndeke AM, **Mugwe JN**, Mogaka H, Nyabuga G, Kiboi M, Ngetich FK, Mucheru-Muna M, Sijali I, Mugendi DN. (2021). Gender-specific determinants of Zai technology use intensity for improved soil water management in the drylands of Upper Eastern Kenya" *Heliyon* 7 e07217. <https://doi.org/10.1016/j.heliyon.2021.e07217>
29. **Mugwe J.N** and Oduor E.O. (2021). Integrated Soil Fertility Management Approaches for Climate Change Adaptation, Mitigation, and Enhanced Crop Productivity. Springer Nature Switzerland AG 2021. W.

Leal Filho et al. (eds.), Handbook of Climate Change Management, https://doi.org/10.1007/978-3-030-22759-3_325-1

30. Mucheru-Muna MM, Ada MA, **Mugwe JN**, Mairura SM, Ada A, Mugi-Ngenga E, Zingore S, Mutegi JK (2021). Socio-economic predictors, soil fertility knowledge domains and strategies for sustainable maize intensification in Embu County, Kenya. *Heylion* 7:2 e06345. <https://doi.org/10.1016/j.heliyon.2021.e06345>
31. Mwaura, G. G., Kiboi, M. N., Bett, E. K., **Mugwe, J. N.**, Muriuki, A., Nicolay, G., & Ngetich, F. K. (2021). Adoption Intensity of selected organic-Based soil fertility management technologies in the Central Highlands of Kenya. *Frontiers in Sustainable Food Systems*, 4. <https://doi.org/10.3389/fsufs.2020.570190>
32. **Mugwe, JN.**, Ayieko D, Bett E and Mogaka., H (2020). Determinants of smallholders farmers' participation in collective marketing of maize in the central highlands of Kenya. *African Journal of Rural Development*, [S.l.], v. 4, n. 2, p. 225-241., April, 2020. ISSN 2415-2838. <https://www.afjrd.org/jos/index.php/afjrd/article/view/2000>.
33. **Mugwe JN**, Ngetich FK and Oduor E (2019). Integrated Soil Fertility Management: Evolving paradigms toward integration© Springer Nature Switzerland W. Leal Filho et al. (eds.), *Zero Hunger*. https://doi.org/10.1007/978-3-319-69626-3_71-1
34. Mwende N, Danga B, **Mugwe J.N.**, and Kizito (2019). Effect of Integrating Tied ridging, Fertilizers and Cropping Systems on Maize Performance' in Arid and Semi-Arid Lands of Eastern Kenya. *African Journal of agricultural Science and technology*: 5: (2) 86-91 <http://www.ajest.info/index.php/ajest/article/view/355>
35. Murage, FM, **Mugwe J.N.**, Ngetich, K.F, Mucheru-Muna, M.M and Mugendi, DN (2019). Adoption of soybean by smallholder farmers in the Central Highlands of Kenya. *African Journal of Agricultural economics and Rural Development* 7 (5) 1-12. <https://ir-library.ku.ac.ke/handle/123456789/19470>
36. Mwebia F,W.. **Mugwe, J.N.**, Mucheru-Muna M., Mugendi, D.N. (2019). Influence of farmer groups' characteristics on up scaling uptake of soil fertility technologies in Eastern Kenya. (2019). *Journal of Agriculture* 6 (1) 1-17 <http://www.researchjournali.com/view.php?id=4848>
37. Bett, E., **Mugwe, J.**, Nyalugwe, N. Haraman, E., Williams, F., Tambo, J., Wood, A. and Bundi, M. (2018). Impact of plant clinics on disease and pest management, tomato productivity and profitability in Malawi. *CABI Working Paper* 11, 30pp. <https://dx.doi.org/10.1079/CABICOMM-25-8089>
38. Verde, B., Danga, B., **Mugwe J.**, (2018). Interactive effect of goat manure, phosphate fertilizer and lime on soil fertility in Embu County, Kenya. *Discovery Agriculture*: 4:1-8. <http://ir-library.ku.ac.ke/handle/123456789/18731>
39. Kiboi, M.N., Ngetich, K.F., Diels, J., Mucheru-Muna, M., **Mugwe, J.**, Mugendi, D.N (2017). Minimum tillage, tied ridging and mulching for better maize yield and yield stability in the Central Highlands of Kenya. *Soil & Tillage Research*, 170: 157-166. <https://doi.org/10.1016/j.still.2017.04.001>
40. Njeru, P., Maina, I., Lekasi J., Kimani, S., Esilaba, A, **Mugwe, J.** and Mucheru-Muna, M (2016). Climate Smart agriculture adaptation strategies for rainfed agriculture in drought prone areas of central Kenya. *International Journal of Agricultural Resources, Governance and Ecology*. Vol 12 (2) 113-124. <https://doi.org/10.1504/IJARGE.2016.076928>
41. Mugi-Ngenga EW, Mucheru-Muna MW, **Mugwe JN**, Ngetich FK, Mairura FS, and Mugendi DN (2016). Household's socio-economic factors influencing the level of adaptation to climate variability in the dry zones of Eastern Kenya. *Journal of Rural Studies* 43 (2016) 49-60. <https://doi.org/10.1016/j.jrurstud.2015.11.004>

42. Musyoki JK, **Mugwe JN**, Mutundu K & Muchiri M. (2016) Factors influencing level of participation of community forest associations in management forests in Kenya, *Journal of Sustainable Forestry*, 35:3, 205-216, DOI: 10.1080/10549811.2016.1142454. <http://dx.doi.org/10.1080/10549811.2016.1142454>
43. Masika KO, Mucheru-Muna MM, Ngetich FK, **Mugwe JN**, Mugendi DN, Mairura F, Shisanya C and Makokha GL (2015). Potential of deterministic and geostatistical rainfall interpolation under high rainfall variability and dry spells: case of Kenya's Central Highlands. *Theoretical and applied climatology* Vol 199 No 3-4. ISSN 0177-798X. *Theoretical Applied Climatology*. DOI 10.1007/s00704-015-1413-2. <https://hdl.handle.net/10568/73658>
44. Masika OK, Mucheru-Muna MM, Ngetich F K, **Mugwe JN**, Mugendi DN, Mairura FK and Muriuki J (2015). Using APSIM Model as a Decision –support tool for long term integrated nitrogen management and maize productivity under semi arid conditions in Kenya. *Experimental Agriculture*: 52 (2) 279-299 <https://doi.org/10.1017/S0014479715000095>
45. Kabirigi M., Musana B., Ngetich F, **Mugwe J**, Mukuralinda A and Nabahungu NL (2015). Applicability of conservation agriculture for climate change adaptation in Rwanda's situation. *Journal of Soil Science and Environmental Management*: 6 (9) 241-248. DOI 10.5897/JSEM15.0508 . <https://hd.handle.net/10568/76573>
46. Masika OK, Mucheru-Muna MM, Ngetich FK, **Mugwe JN**, Mugendi DN and Mairura FK (2015). Rainfall Variability, Drought Characterization, and Efficacy of Rainfall Data Reconstruction: Case of Eastern Kenya. *Advances in Meteorology* Volume 2015 (2015), Article ID 380404, 16 pages. <http://dx.doi.org/10.1155/2015/380404>
47. Bashagaluke J., Nicole N., Didier F. , Mochoge B., **Mugwe J**, Walangululu J., (2015). Application of infrared technique in soil properties characterization in South Kivu province of DR Congo. *African Journal of Food Science and Technology* (ISSN: 2141-5455) Vol. 6(2) pp. 58-67. <http://www.interestjournals.org/AJFST>
48. Muchai S K, Mucheru-Muna MW, **Mugwe JN**, Mugendi DN and Mairura FK (2014). Client focused Extension approach for disseminating soil fertility management in central Kenya. International journal of Agricultural Extension (*IJAE*) 02 (02) 129-136. <http://escijournals.net/index.php/IJAE/article/view/801> <http://ir-library.ku.ac.ke/handle/123456789/11707>
49. Ahmat1 FL, **Mugwe JN**, Kimani S, Gweyi JO (2014). Maize response to Tithonia diversifolia and rock phosphate application under two maize cropping systems in Kenya. *Journal of Applied Biosciences* 79:6983 – 6991 ISSN 1997–5902. <http://dx.doi.org/10.4314/jab.v79i1.18>
50. Macharia JM, **Mugwe JN**, Mucheru-Muna M, Mugendi DN (2014). Socioeconomic factors influencing levels of knowledge in soil fertility management in the central highlands of Kenya. *Journal of Agricultural Science and Technology*; 701-711 ISSN 1939-1250 doi: 10.17265/2161-6264/2014.09.003. <https://ir-library.ku.ac.ke/handle/123456789/10372>
51. Ngetich, K. F., Diels, J., Shisanya, C. A., **Mugwe, J. N.**, Mucheru-Muna, M. and Mugendi, D. N. (2014). Effects of selected soil and water conservation techniques on runoff , sediment yield and maize productivity under sub-humid and semi-arid conditions in Kenya. *Catena*, 121, 288-296. doi: 10.1016/j.catena.2014.05.026. <https://doi.org/10.1016/j.catena.2014.05.026>
52. Mucheru-Muna, M, Mugendi, D.N., Pypers P, **Mugwe, J.N.**, Kungu, J., Vanlauwe, B. and Merckx, R (2014). Enhancing maize productivity and profitability using organic inputs and mineral fertilizer in central Kenya smallhold farms. *Experimental Agriculture*, volume 50 (2), pp. 250 <https://doi.org/10.1017/S0014479713000525>

53. Matusso JMM, **Mugwe JN** and Mucheru-Muna MW (2014). Effect of different maize (*Zea mays* L.) – soybean (*Glycine max* (L.) Merrill) intercropping patterns on yields and land equivalent ratio. ***Journal of Cereals and Oilseeds***: 4 (4)48-57. <http://ir-library.ku.ac.ke/handle/123456789/8781>
54. Ngetich, F.K., Mucheru-Muna, M., **Mugwe, J.N.**, Shisanya, C.A., Diels, J., Mugendi, D.N. (2014). Length of growing season, rainfall temporal distribution, onset and cessation dates in the Kenyan highlands. ***Agricultural and Forest Meteorology*** 188: 24-32. **doi:** 10.1016/j.agrformet.2013.12.011. <https://doi.org/10.1016/j.agrformet.2013.12.011>
55. Matusso JMM, **Mugwe JN** and Mucheru-Muna MW (2014). Effect of different maize (*Zea mays* L.) – soybean (*Glycine max* (L.) Merrill) intercropping patterns on yields, light interception and leaf area index in Embu West and Tigania East sub counties. ***Academic Research Journal of Agricultural Science and Research*** Vol. 2(2), pp. 6-21.
56. Matusso JMM, **Mugwe JN** and Mucheru-Muna MW (2014). Changes of Soil Inorganic N, Soil Organic C and N Uptake by Maize and Soybean under Different Intercropping Patterns in Embu West and Tigania East Counties of Central Kenya. ***Academic Research Journal of Agricultural Science and Research*** Vol. 2(2), pp. 22-33, April 2014
57. Okeyo, A.I., Mucheru-Muna, M., **Mugwe, J.N.**, Ngetich, F.K., Mugendi, D.N., J. Diels, C.A. Shisanya, (2014). Effects of selected soil and water conservation technologies on nutrient losses and maize yields in the central highlands of Kenya. ***Agricultural Water Management***, 137, 52-58. <http://www.sciencedirect.com/science/article/pii/S0378377414000390>
58. Matusso, J. M. M., **Mugwe J. N.** and Mucheru-Muna M. (2014) Effects of Different Maize (*Zea mays* L.) – Soybean (*Glycine max* (L.) Merrill) Intercropping Patterns on Yields and its Economics. ***Advanced Journal of Agricultural Research*** Vol. 2(003), pp. 038-048, ISSN: 2360-9354 Advanced Journals <http://www.advancedjournals.org/AJAR>
59. Matusso, M., **Mugwe, J.N.**, Mucheru-Muna, M. (2014). Effects of different maize (*Zea mays* L.) – soybean (*Glycine max* (L.) Merrill) intercropping patterns on soil mineral-N, N-uptake and soil properties ***African Journal of Agricultural Research: Vol 9 (1)***, pp. 42-55, 2 January, 2014 DOI: 10.5897/AJAR2013.7178 ISSN 1991-637X ©2014. <http://ir-library.ku.ac.ke/handle/123456789/8762>
60. Verde BS, Danga BO and **Mugwe JN** (2013). Effects of manure, lime and mineral P fertilizer on soybean yields and soil fertility in a Humic Nitisol in the central highlands of Kenya. ***International Journal of Agricultural Science Research*** : 2 (9) 283-291.
61. Nduwumuremyi A, Ruganzu R, **Mugwe JN**, Rusanganwa AC (2013). Effects of unburned lime on soil pH and base cations in acidic soil. ***ISRN Soil Science*** Volume 2013, Article ID 707569, 7 pages. <http://dx.doi.org/10.1155/2013/707569>
62. Verde BS, Danga BO and **Mugwe JN** (2013). The effects of Manure, Lime and fertilizer on N uptake and Soybean Yields (*Glycine Max* (L.) Merril) in the central highlands of Kenya. ***Journal of Environmental Science and Engineering*** B2 111 – 116 ISSN a1934-8932.
63. Athanase N, **Mugwe JN**, Ruganzu V, Rusanganwa C and Nyirinkwaya B (2013). Effects of Travertine on Selected Soil Properties and yield of Irish Potato (*Solanum Tuberosum* L) in acidic soils. ***Journal of Agricultural Science and Technology*** A3 175 – 182 ISSN 1939-1250.
64. Verde, B, Danga BO., **Mugwe JN** (2014). Soil microbial biomass changes with application of organic and inorganic in acid soil in Embu County, Kenya. ***Scholarly journal of agricultural Sciences***. 4 (1) 27-31. <http://www.scholarly-journals.com/sjas/archive/2014/January/pdf/Benvido%20et%20al.pdf> <http://ir-library.ku.ac.ke/handle/123456789/10304>

65. Ngetich KF, Mucheru-Muna M, **Mugwe JN**, Shisanya CA, Diels J, Mugendi DN (2014). Length of growing season, rainfall temporal distribution, onset and cessation dates in the Kenyan highlands. *Agricultural and Forest Meteorology* 188 (2014) 24– 32. <http://ir-library.ku.ac.ke/handle/123456789/9342>. <https://doi.org/10.1016/j.agrformet.2013.12.011>
66. Musyoki JK, **Mugwe JN**, Mutundu K and Muchiri M (2013). Determinants of Household Decision to Join Community Forest Associations: A Case Study of Kenya," **ISRN Forestry**, vol. 2013, Article ID 902325, 10 pages, 2013. doi:10.1155/2013/902325. <http://dx.doi.org/10.1155/2013/902325>
67. Matusso, J.M., **Mugwe, J.N.**, and Mucheru-Muna, M. (2014). Potential role of cereal-legume intercropping systems in integrated soil fertility management in smallholder farming systems of Sub-Saharan Africa. **Research Journal of Agriculture and Environmental Management**. Vol. 3(3), pp. 162-174, March, 2014, ISSN 2315 - 8719© 2014 Apex Journal International.
68. Njeru PNM, **Mugwe J**, Mucheru-Muna M, Maina I, Mwangi, S. Amboga S. Miruka S, J.K. Lekasi JK, Kimani SK, Miriti J, Gitari J, Mahasi M. (2013) Integrating scientific and farmers' evaluation of water harvesting and soil fertility technologies in sorghum productivity in Eastern Kenya. **East Africa Agriculture and Forestry Journal**. (2013) 78(3), 143-150
69. Nduwumuremyi, A, Ruganzu, V., **Mugwe, J.N.** Sylvestre, H. (2013). Soil acidification and lime quality: sources of soil acidity, its effects on plant nutrients, efficiency of lime and liming requirements, **Agricultural Advances**: 2(9) 259-269, ISSN 2251-7820, DOI: 10.14196/aa.v2i9.988.
70. Nduwumuremyi, A., **Mugwe, J.N.**, Rusanganwa C. A. and Mupenzi J. (2013). Mapping of limestone deposits and determination of quality of locally available limestone in Rwanda, **Journal of Soil Science and Environmental Management**, Vol. 4(5), pp. 87-92, ISSN 2141-2391, DOI 10.5897/JSEM12.20. <https://www.researchgate.net/publication/272712968>
71. Njeru PNM, **Mugwe J**, Maina I, Mucheru-Muna M, Mugendi D, Lekasi JK, Kimani SK, Miriti J, Esilaba AO and Muriithi F (2013). Integrating scientific and farmers' perception towards evaluation of rain-fed agricultural technologies for sorghum and cowpea productivity in Central Kenya. **Journal of Soil Science and Environmental Management** Vol. 4(7), pp. 123-131, November, 2013. <http://ir-library.ku.ac.ke/handle/123456789/8751>
72. Kimaru SM, **Mugwe J**, Mucheru-Muna MW, Mugendi DN (2013). Gender disparities in uptake of information on soil fertility management in the central highlands of Kenya. **International Journal of Agricultural Science and research (IJASR)** 3 (2) 197-206. <https://www.researchgate.net/publication/262680353>
73. Kimaru SM, **Mugwe J**, Mucheru-Muna MW, Mugendi DN (2012). Influence of Education Levels on Dissemination of Soil Fertility Management Information in the Central Highlands of Kenya. *Journal of Agriculture and Rural Development in the Tropics and Subtropics (JARTS)*; **113 2: 89-99**. URN: <http://nbn-resolving.de/urn:nbn:de:hebis:34-urn:nbn:de:hebis:34-2012092441785>
74. Mucheru-Muna M, Pypers P, Mugendi D, **Mugwe J**, Merckx R and Vanlauwe B (January 2010). A staggered maize .legume intercrop arrangement robustly increases crop yields and economic returns in the highlands of Central Kenya. **Field Crops Research** **115: 132-139**. <https://doi.org/10.1016/j.fcr.2009.10.013>
75. **Mugwe JN**, Mugendi DN, Mucheru Muna M, Odee D and Franklin Mairura (2009). Effect of selected organic materials and inorganic fertilizer on soil fertility in a Humic Nitisol in the Central highlands of Kenya. **Soil Use and Management** **25: 434 - 440**
76. Mucheru-Muna MW, Mugendi D, **Mugwe J**, and Kung'u J (2009). Soil mineral N dynamics in a maize crop following different soil fertility amendments in different soil fertility status in sub-humid and semiarid regions in Central Kenya. **Research Journal of Agriculture and Biological Sciences** 5 (6): 978-993

77. **Mugwe JN**, Mucheru-Muna MM, Mugendi DN, Kung'u JB, Bationo A and Mairura F (2009) Adoption potential of selected organic inputs for improving soil fertility in the central highlands of Kenya. *Agroforestry Systems*, 76: 467-485
78. **Mugwe JN**, Mugendi DN, Kung'u J, Mucheru-Muna M (2009). Crop yields responses to application of organic and inorganic soil inputs under on-station and on-farm trials *Experimental Agriculture*, 45:47-59
79. **Mugwe JN**, Mugendi DN, Mucheru-Muna M, Merckx R, Chianu J and Vanlauwe B (2009) Determinants of the decision to adopt integrated soil fertility management practices by smallholder farmers in the central highlands of Kenya. *Experimental Agriculture*, 45:61-75
80. Mucheru-Muna MW, Mugendi D, **Mugwe J**, Kung'u J (2008). Maize yields and mineral-N movement as affected by organic and inorganic inputs in a humic Nitisol in Meru South District, Kenya. *African Journal of Environmental Studies and Development* 1: 99-108
81. Mugendi D, Mucheru-Muna MW, **Mugwe J**, Kung'u J, Bationo A (2008). Best bet soil fertility technologies for improved food production in the Central highlands of Kenya. *African Journal of Environmental Studies and Development* 1: 8-15
82. Mucheru-Muna MW, Mugendi D, Kung'u J, **Mugwe J**, Bationo A (2007). Effects of organic and mineral fertilizer inputs on maize yield and soil chemical properties in a maize cropping system in Meru South District, Kenya. *Agroforestry Systems* 69: 189-197
83. Mucheru-Muna M, Mugendi DN, **Mugwe J**. 2008. Maize yields and mineral movement as affected by organic and inorganic inputs in a humic Nitisol in Meru South District, Kenya. *African Journal of Environmental studies and development* 1: 99-107
84. Mugendi DN, Kanyi MK, Kung'u JB, Wamicha MN and **Mugwe JN** 2004. The role of agroforestry trees in intercepting leached nitrogen in the farming systems of the central highlands of Kenya. *East African Agricultural and forestry Journal* 69: 69-79.
85. Mugendi DN, Nair PKR, Graetz , Mugwe J N, O'Neill (1999) Recovery by alley-cropped maize and trees from ¹⁵N-labeled tree biomass in the sub-humid highlands of Kenya.
<https://link.springer.com/article/10.1007/s003740050630>
86. Mugendi DN, Nair PKR, **Mugwe JN**, O'Neill MK and Woomer PL 1999. Alley cropping of maize with Calliandra and leucaena in the subhumid highlands of Kenya. Part 1. Soil fertility changes and maize yields. *Agroforestry systems* 46: 39-50
87. Mugendi DN, Nair PKR, **Mugwe JN**, O'Neill MK and Woomer PL 1999. Alley cropping of maize with Calliandra and leucaena in the sub-humid highlands of Kenya. Part 2. Biomass decomposition, N mineralization, and N uptake. *Agroforestry systems* 46: 51-64.
<https://link.springer.com/article/10.1023/A:1006288301044>

2.2: Other Publications

2.2.1 PEER-REVIEWED BOOK CHAPTERS WITH ISBN NUMBERS

2.2.1 Since May, 2013

S/n	Author	Year	Title	ISBN/ISSN Reference No.
1	<u>Mugwe J.N. and Runo S.</u>	2026	Foundations of Agricultural Research. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_1
2	<u>Mugwe J.N. and Runo S.</u>	2026	The Research Process, Key Concepts, and Terminologies. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_2
3	<u>Mugwe J.N. and Runo S.</u>	2026	From Topic Selection to Research Objectives and Hypothesis. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_3
4	<u>Mugwe J.N. and Runo S.</u>	2026	Literature Review. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_4
5	<u>Mugwe J.N. and Runo S.</u>	2026	Research Proposal. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_5
6	<u>Mugwe J.N. and Runo S.</u>	2026	Ethical, Legal, and Administrative Issues in Research. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_6
7	<u>Mugwe J.N. and Runo S.</u>	2026	Overview of Research Designs. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_7
8	<u>Mugwe J.N. and Runo S.</u>	2026	Fundamentals of Experimentation. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_8
9	<u>Mugwe J.N. and Runo S.</u>	2026	Common Experimental Designs and Layout of Experiments. In: Research Methodology in Agricultural Sciences. Springer,	https://doi.org/10.1007/978-981-95-1892-0_9

			Singapore.	
10	<u>Mugwe J.N. and Runo S.</u>	2026	Farming Systems Research and On-Farm Experiments. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_10
11	<u>Mugwe J.N. and Runo S.</u>	2026	Research Designs for Impact Evaluation Studies. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_11
12	<u>Mugwe J.N. and Runo S.</u>	2026	Nonexperimental Designs 1: Surveys. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_12
13	<u>Mugwe J.N. and Runo S.</u>	2026	Nonexperimental Designs 2: Qualitative and Participatory Approaches. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_13
14	<u>Mugwe J.N. and Runo S.</u>	2026	Common Approaches for Qualitative Research. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_14
15	<u>Mugwe J.N. and Runo S.</u>	2026	Mixed Methods Research Designs. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_15
16	<u>Mugwe J.N. and Runo S.</u>	2026	Sampling. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://link.springer.com/chapter/10.1007/978-981-95-1892-0_16#citeas
17	<u>Mugwe J.N. and Runo S.</u>	2026	Methods of Data Collection from Experiments. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_17
18	<u>Mugwe J.N. and Runo S.</u>	2026	Methods and Tools of Data Collection in Non-experimental Designs (Surveys). In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_18
19	<u>Mugwe J.N. and Runo S.</u>	2026	Methods and Tools of Data Collection in Nonexperimental Designs II (Qualitative Approaches). In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_19

20	<u>Mugwe J.N. and Runo S.</u>	2026	Quantitative Data Analysis II (Inferential Analysis). In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_21
21	<u>Mugwe J.N. and Runo S.</u>	2026	Quantitative Data Analysis II (Inferential Analysis). In: Research Methodology in Agricultural Sciences. Springer, Singapore	. https://doi.org/10.1007/978-981-95-1892-0_21
22	<u>Mugwe J.N. and Runo S.</u>	2026	Survey Data Analysis Using Statistical Packages for Social Sciences (SPSS). In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_22
23	<u>Mugwe J.N. and Runo S.</u>	2026	Qualitative Data Analysis. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_23
24	<u>Mugwe J.N. and Runo S.</u>	2026	Data Presentation and Visualization. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_24
25	<u>Mugwe J.N. and Runo S.</u>	2026	Disseminating Research Findings. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_25
26	<u>Mugwe J.N. and Runo S.</u>	2026	Structure of a Scientific Paper. In: Research Methodology in Agricultural Sciences. Springer, Singapore	https://doi.org/10.1007/978-981-95-1892-0_26
27	<u>Mugwe J.N. and Runo S.</u>	2026	Journal Selection, Submission, and Review of Manuscript. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_27
28	<u>Mugwe J.N. and Runo S.</u>	2026	Scientific Writing Skills and Presentations. In: Research Methodology in Agricultural Sciences. Springer, Singapore.	https://doi.org/10.1007/978-981-95-1892-0_28
29	<u>Mugwe JN and Oduor E</u>	2020	<i>Integrated soil fertility management approaches for climate change adaptation, mitigation, and enhanced crop productivity</i>	Handbook on Climate Change https://link.springer.com/rwe/10.1007/978-3-030-22759-3_325-1

30	Mugwe JN , Ngetich FK and Oduor E	2019	Integrated Soil Fertility Management: Evolving paradigms toward integration	© Springer Nature Switzerland AG 2019 W. Leal Filho et al. (eds.), Zero Hunger, https://doi.org/10.1007/978-3-319-69626-3_71-1
31	Njeru PNM, Mugwe JN , Mucheru-Muna M, Maina I, Kimaini S and Lelgut D	2018	Drought tolerant crops in Kirinyaga County, Kenya. Climate Smart Agriculture Adaptation Strategies.	In Leal Filho W (eds) Handbook for Climate Change Resilience. Springer, Cham. https://doi.org/10.1007/978-3-319-71025-9_80-1
33	Harawa R, Sileshi G, Miguel M, Kanampiu JF, Mugwe J , Baijukya F; Karanu M, Ngwira A. Odendo M	2016	Scaling Out Maize/Soybean Production Systems in Sub-Saharan Africa In: Going beyond demos to transform African Agriculture. The journey to AGRA's soil Health programme. Alliance for a Green Revolution in Africa	ISBN No. 978-0-9980765-0-8 https://agra.org/technical-documents/
34	Kisaka MO, Mucheru-Muna M, Ngetich F, Mugwe J , Mugendi DN, Mairura F	2015	Seasonal Rainfall Variability and Drought Characterization: Case of Eastern Arid Region, Kenya. In: WL Filho, AO Esilaba, KPC Rao, G Sridhar (Eds). Adapting African Agriculture to Climate Change Climate Change Management 2015, pp 53-71	(Springer NL ISBN 978-3-319-13000-2; DOI 10.1007/978-3-319-13000-2_5
35	Njeru, P.N.M. Mugwe, J.N. , Maina, I, Mucheru-Muna, M., Mugendi, D.N, Lekasi, J.K (2015).	2015	Integrating Farmers and Scientific Methods for Evaluating Climate Change Adaptation Options in Embu County. Eds Walter Leal Filho, Anthony O. Esilaba, K. P. C. Rao and G. Sridhar. Adapting African Agriculture to Climate Change. Climate Change Management 2015, pp 185-197	(Springer NL ISBN 978-3-319-13000-2; DOI 10.1007/978-3-319-13000-2_5
36	Njeru PNM, Mugwe JN , Maina I, Mucheru-Muna M, Mugendi DN, Lekasi JK, Kimani SK, Wamuongo J, Oeba VO and Muriithi F).	2014	Adapting Rain-fed Agriculture to Climate Change: An Overview of Sorghum (<i>Sorghum bicolor</i> (L.) Moench) and Cowpea Production in agro-Pastoral Areas of Eastern Kenya. In: Eds, Khalif Z, Gachene CKK, Gicheru P, Mburu DW, Gakahu CG. Sustainable Land Management in Dry Lands of Kenya Improving Land Productivity through Participatory Research and	United Nations Development Programme - Kenya 2014, pp 137-145 (ISBN 978 9966 1805 5 1)

			Technology Transfer.	
37	Mugwe JN and Ngoga N	2014	Climbing up with climbing beans in Rwanda and Kenya. In AGRA and IIRR (2014) Investing in Soil: Cases and lessons from AGRA's Soil Health Programme. Alliance for a Green Revolution in Africa and International Institute of Rural construction pp 59 -64	ISBN: 978-9966-754-08-0
38	Kimaru-Muchai S.W, Mugwe J.M. , Mairura F.S and Mugendi D.N. (2013)	2013	Communication channels used in dissemination of soil fertility management practices in the Central Highlands of Kenya. In: Bernard Vanlauwe, Piet van Asten, Guy Blomme (Eds) Agro-Ecological Intensification of Agricultural Systems in the African Highlands. Pp 281 - 290	ISBN-10: 0415532736, ISBN-13: 978- 0415532730

2.2.2:Book Chapters before February 2013

1. Mugendi DN, Mucheru-Muna MW, and **Mugwe JN**, 2012. Organic Materials. Soil Fertility: Enhancing Community Extension. Manilla Publishers, Nairobi, Kenya. **ISBN 9966-9821-1-6**
2. Ngetich, K.F., **Mugwe, J.N.**, Mucheru-Muna, M., Shisanya, C.A., Diels, J. and Mugendi, D.N. (2011). Assessment of strategies that optimize water productivity in maize: Simulation and testing of crop field practices using AquaCrop and field experimentation in central highlands of Kenya. In; Ardakanian, R. & Walter, T. (eds) 2011. Capacity Development for Farm Management Strategies to Improve Crop-Water Productivity using AquaCrop: Lessons Learned. Knowledge Series No. 7, UNW-DPC, Bonn, Germany Pp 88. Available from: www.unwater.unu.edu/file/get/222
3. **Mugwe JN**, Mucheru-Muna M, Mugendi D.N and Mwebia F (2012). Organic materials. Methodologies and approaches for uptake and scaling up soil fertility management In: Mugendi DN, Mucheru-Muna MW and **Mugwe JN** (Eds.) 2nd Revised Edition (2012). Soil Fertility: Enhancing Community Extension. Manilla Publishers, Nairobi, Kenya. **(ISBN 9966-9821-1-6) pgs 116 – 128.**
4. Felix K. Ngetich, Chris A. Shisanya, **Jayne Mugwe**, Monicah Mucheru-Muna and Daniel Mugendi (2012). The Potential of Organic and Inorganic Nutrient Sources in Sub-Saharan African Crop Farming Systems, Soil Fertility Improvement and Integrated Nutrient Management - A Global Perspective, Joann K. Whalen (Ed.), ISBN: 978-953-307-945-5, InTech, Available from: <http://www.intechopen.com/articles/show/title/the-potential-of-organic-and-inorganic-nutrient-sources-in-sub-saharan-african-crop-farming-systems>
5. Kimaru-Muchai S, Mugwe JN, Mugendi DN and Mucheru-Muna M.W (2012). In: Mugendi DN, Mucheru-Muna MW and **Mugwe JN** (Eds.) 2nd Revised Edition (2012). Soil Fertility: Enhancing Community Extension. Manilla Publishers, Nairobi, Kenya. **(ISBN 9966-9821-1-6) pgs 129-138.**
6. **Mugwe JN**, Mugendi DN, Mucheru-Muna M and Muthamia JM (2012). Methodologies and approaches for uptake and scaling up soil fertility management In: Mugendi DN, Mucheru-Muna MW and **Mugwe JN** (Eds.) 2nd Revised Edition (2012). Soil Fertility: Enhancing Community Extension. Manilla Publishers, Nairobi, Kenya. **(ISBN 9966-9821-1-6) pgs 116 – 128.**
7. **Mugwe JN**, Mugendi DN, Mucheru-Muna M, Odee D and Kungu J (2011). Soil inorganic N and N uptake by maize following application of legume biomass, tithonia, manure and inorganic fertilizer in

- central Kenya In: Innovations for a Green Revolution In Africa: Exploring The Scientific Facts; Bationo A, Waswa B, Okeyo J, Maina. Springer ISBN 978-90-481-2541-8. DOI 10.1007/978-90-481-2543-2. Vol 2 pgs 605 – 616
8. Mucheru-Muna W.M, Mugendi DN, Pypers P, **Mugwe JN**, Vanlauwe B, Merckx R and Kung'u JB (2011). Effect of organic inputs and mineral fertilizer on maize yield in a Ferralsol and a Nitisol in central Kenya. In: Innovations for a Green Revolution In Africa: Exploring The Scientific Facts; Bationo A, Waswa B, Okeyo J, Maina. Springer ISBN 978-90-481-2541-8. DOI 10.1007/978-90-481-2543-2. Vol 1 pgs 191-204
 9. Mucheru-Muna W.M, Mugendi DN, Pypers P, **Mugwe JN**, Vanlauwe B, Merckx R and Kung'u JB (2011). Increasing productivity through Maize-legume intercropping in central Kenya. In: Innovations For a Green Revolution In Africa: Exploring The Scientific Facts; Bationo A, Waswa B, Okeyo J, Maina. Springer ISBN 978-90-481-2541-8. DOI 10.1007/978-90-481-2543-2. Vol 2 pgs 843 – 858
 10. Kirumba EG, Mugendi DN, Karega R and **Mugwe J**. (2011). Gender differentials in adoption of soil nutrient technologies in Meru South District, Kenya. In: Innovations For a Green Revolution In Africa: Exploring The Scientific Facts; Bationo A, Waswa B, Okeyo J, Maina. Springer ISBN 978-90-481-2541-8. DOI 10.1007/978-90-481-2543-2. Vol 2 pgs 887 – 904
 11. Mugendi DN, **Mugwe JN**, Mucheru-Muna M, Karega R, Muriuki J, Vanlauwe B and Merckx R. (2011). Dissemination of integrated soil fertility management technologies using participatory approaches in the central highlands of Kenya. In: Innovations For a Green Revolution In Africa: Exploring The Scientific Facts; Bationo A, Waswa B, Okeyo J, Maina. Springer ISBN 978-90-481-2541-8. DOI 10.1007/978-90-481-2543-2. Vol 2 pgs 1279 – 1298
 12. Ngetich, K.F., **Mugwe, J.N.**, Mucheru-Muna, M., Shisanya, C.A., Diels, J. and Mugendi, D.N. (2011). Assessment of strategies that optimize water productivity in maize: Simulation and testing of crop field practices using AquaCrop and field experimentation in central highlands of Kenya. In: Ardakanian, R. & Walter, T. (eds) 2011. Capacity Development for Farm Management Strategies to Improve Crop-Water Productivity using AquaCrop: Lessons Learned. **Knowledge Series No. 7**, UNW-DPC, Bonn, Germany Pp 88.
 13. Mucheru-Muna MW, Mugendi DN, **Mugwe J**, and Kung'u J (2007). Economic evaluation of local inputs in Meru South District, Kenya. In A. Bationo (eds.) Advances in Integrated Soil Fertility Management in Sub-Saharan Africa: Challenges and Opportunities, pp 443–448, Springer NL. **ISBN 978-1-4020-5759-5**
 14. Mugendi DN, Mucheru-Muna MW, Waswa B and Mugwe J (2007). Agroforestry for land and water management in Kenya. In: Waswa F, Otor S, Olukoye G and Mugendi D (Eds) 2007. Environment and Sustainable Development: A Guide for Higher Education in Kenya, Vol 2. School of Environmental Studies and Human Sciences, Kenyatta University. **ISBN: 9966-776-34-6**
 15. Mugendi DN, Mucheru-Muna MW, **Mugwe J**, Kung'u J and Bationo A (2007). Improving food production using 'best bet' soil fertility technologies in the Central highlands of Kenya. In: A. Bationo (eds.) Advances in Integrated Soil Fertility Management in Sub-Saharan Africa: Challenges and Opportunities, pp 345–351, Springer NL. **ISBN 978-1-4020-5759-5**
 16. **Mugwe JN**, Mucheru-Muna MW, Mugendi DN and Mwebia F (2006). Organic Materials. In: Mugendi DN, Mucheru-Muna MW and Mugwe JN (Eds) 2006. Soil Fertility: Enhancing Community Extension. Manilla Publishers, Nairobi, Kenya. **ISBN 9966-9821-1-6**
 17. Shisanya C, Mburugu G, Kungu J, Mucheru M and **Mugwe JN** (2006) Legumes for soil fertility, food and fodder. In: Mugendi DN, Mucheru-Muna MW and Mugwe JN (eds) SOIL FERTILITY: ENHANCING COMMUNITY EXTENSION. Manilla Publishers, Nairobi, Kenya. pg 58 -72.

18. Karega R, Njuki J, Kungu J, **Mugwe J**, Muriu F and Mucheru M (2006) Participatory problem diagnosis, monitoring and evaluation and scaling up. In: Mugendi DN, Mucheru-Muna MW and Mugwe JN (eds) 2006. SOIL FERTILITY: ENHANCING COMMUNITY EXTENSION. Manilla Publishers, Nairobi, Kenya pg 73 - 92.
19. Mugendi DN, Mucheru-Muna MW, **Mugwe JN**, Kung'u J, and Bationo A (2005). Improvement of food production using different sources of nitrogen in Central Kenya. Science Press USA Inc, Monmouth Junction, New Jersey, USA. *ISBN 1-933100-10-9*
20. Micheni A, Mugendi DN, Mucheru M, **Mugwe J**, Kung'u J, Otor S, Muriithi F and Gitari J (2003). Low cost soil fertility amendment strategies for improved food production in maize cropping systems in central Highlands of Kenya. In: Mureithi JG, Macharia PN, Gichuru M, Mburu MWK, Mugendi DN and Gachene CKK (eds.) Proceedings of the 18th Soil Science Society of East Africa (SSSEA) Conference held in Mombasa on 4th–8th December 2000. pp 111-118.
21. Mucheru MW, Mugendi DN, Micheni A, **Mugwe J**, Kung'u J, Otor S and Gitari J (2003). Improved food production by use of soil fertility amendment strategies in the Central Highlands of Kenya. In: Bationo A (ed.) Managing Nutrient Cycles to Sustain Soil Fertility in Sub-Saharan Africa. pp 585-594. Academy Science Publishers, Nairobi, Kenya.
22. Mucheru MW, Mugendi DN, **Mugwe J**, Adiel K, Kung'u J, and Micheni A (2003). Organic Resources in Soil Fertility Management in Eastern Kenya. In: Savala CEN, Omare MN and Woomer PL (ed.) Organic Resource Management in Kenya: Perspectives and Guidelines. pp 26-33. Forum for Organic Resource Management and Agricultural Resource Management (FORMAT)
23. Mugendi DN, Mucheru-Muna M, **Mugwe J**, & Bationo A (2003). Enhancement of food productivity using leguminous shrubs in the Eastern highlands of Kenya. African Crop Science Conference Proceedings, Vol. 6. 581-586
24. Mucheru-Muna M, Mugendi DN, Kangai R, Kung'u J, **Mugwe J** and Otor S (2004). Farmer participation in enhancing food productivity through agroforestry in the central highlands of Kenya. In Temu AB, Chakeredza S, Mogotsi K, Muthali D and Mulinge R (eds.). Rebuilding Africa's capacity for agricultural development: the role of tertiary education. Reviewed papers presented at ANAFE Symposium on Tertiary Agricultural Education, April 2003. ICRAF, Nairobi, Kenya. ISBN:92-9059-1609
25. **Mugwe JN**, Mugendi DN, Mucheru M, Micheni A and Kung'u JB (2004). Agroforestry trees for soil productivity improvement in small scale farms of central Kenya. In: Muchiri MN, Kamondo B, Tuwei P and Wanjiku J. Recent advances in forestry research and technology development for sustainable forest management. Proceedings of the 2nd KEFRI Scientific Conference pg 55-62
26. Mucheru M, Mugendi DN, Micheni A, **Mugwe J**, Kung'u JB, Gitari J (2004). Enhancement of food productivity using locally available nutrient replacements in the central highlands of Kenya. In: Msaky JJ, Msumali GP and Rwehumbiza FBR (Eds), Soil Science Research and Technologies: Foundations for Sustainable Food Security: Proceedings of the 19th SSSEA Conference, 2-7 December 2001, Moshi, Tanzania
27. Kangai A, Mugendi DN, Mucheru MW, Otor SCJ, Waswa BS, Kung'u J, **Mugwe J** (2005). Cost-benefit analysis of farmer-tested soil fertility replenishment technologies in Kirege Location, Chuka Division, Eastern Kenya. In: Mugendi DN, Kironchi G, Gicheru PT, Gachene CKK, Macharia PN, Mburu M, Mureithi JG and Maina F (eds.) 2005. Proceedings of the 21st Soil Science Society of East Africa (SSSEA) Conference held in Eldoret on 1st – 5th December 2003. Eldoret, Kenya.

28. Mugwe J., D Mugendi, B Okoba, P Tuwei, M O'Neill (2004). Soil conservation and fertility improvement using leguminous shrubs in central highlands of Kenya. NARFP Case study. Managing nutrient cycles to sustain soil fertility in sub Saharan Africa. Africa Academy Publishers pp 277
29. Mugwe J., O Mick, G Samual, M Jonathan, M Jack (2001). Participatory Evaluation of water harvesting for establishing improved mango varieties Sustaining the Global Farm. 10th International Soil Conservation Organization Meeting'. (Eds DE Stott, RH Mohtar and GC Steinhartt.) pp 1152 -1157

2.2.2 Books published/edited

1. Mugendi DN, Mucheru-Muna MW and **Mugwe JN** (Eds.) 2nd Revised Edition (2012). Soil Fertility: Enhancing Community Extension. Manilla Publishers, Nairobi, Kenya. (**ISBN 9966-9821-1-6**)
2. Kirumba E, Mugendi DN and **Mugwe JN** (2010). Gender Differentials in Adoption of Agricultural Innovations in Kenya. Publisher: Lap Lambert Academic Publishing Ag & Co Kg; ISBN: 9783838397832: Germany. 128 pages
3. Mugendi DN, Mucheru-Muna MW and **Mugwe JN** (Eds.) (2006). Soil Fertility: Enhancing Community Extension. Manilla Publishers, Nairobi, Kenya. (**ISBN 9966-9821-1-6**)

2.2.3 Peer reviewed Conference papers

1. Omenda, J., Kiboi, M., Ngetich, F., Dercon, G., **Mucheru-Muna, M.**, Mugwe, J., Hami, S. A., Kaburu, F., Netey, S. N. A., Mugendi, D., Merckx, R., and Diels, J.: Sorghum water use efficiency and yield variations discerned by ¹³C isotopic technique under managed agricultural practices in Upper Eastern Kenya, **EGU General Assembly 2024**, Vienna, Austria, 14–19 Apr 2024, EGU24-3544, <https://doi.org/10.5194/egusphere-egu24-3544>, 2024. (**with student**)
2. Nkatha F., Mucheru-Muna M., Kamau C.N, Oduor E.O., **Mugwe J.** (2022): Influence of household socio-economic factors on the magnitude of soil fertility gradients in Tharaka-Nithi county. SEKU Conference (**with student**)
3. Omenda JA, Ngetich KF, Kiboi MN, Mucheru-Muna MW, Mugwe JN, Mugendi DN 2022. Effects of soil and water conservation techniques on sorghum yield, runoff and soil moisture content in Upper Eastern Kenya. African Journal of Science, Technology and Social Sciences. 2022 Sep 26;1(1).
4. Kamau C., **Mugwe J.N.**, E. Otieno, E.O., Kifuko-Koech, M.N., Ndung'u- Magiroi, K.W., Mucheru-Muna M. (2022): Determinants of intensity of use of integrated soil fertility management practices in semi-arid areas of Tharaka Nithi County, Kenya. SEKU Conference
5. Mwende N, Danga B.O, **Mugwe J**, Kwena K. 2018. Effect of Tied Ridges, Fertilizers and Cropping Systems on Maize Profit margin in the Semi – arid Areas of Machakos County, Kenya. University: 12th Egerton University International Conference
6. Mwende N, Danga B.O, **Mugwe J**, Kwena K. 2018. Effect of Tied Ridges, Fertilizers and Cropping Systems on Soil Moisture Content and Maize Yield in Semi – arid Areas of Machakos, County, Kenya University: 11th Egerton University International Conference 29th - 31st March, 2017, Page 38.
7. Mwende N, Danga B.O, **Mugwe J**, Kwena K. 2018. Response of Yield and Yield Components of Maize as affected by Tied Ridges, fertilizers and cropping systems in the Semi – arid Areas of Machakos County, Kenya University: 2nd School of Agriculture and Enterprise Development, Kenyatta University, 29th – November – 2nd December, 2016, Page 84.
8. Ada, M.A, **Mucheru-Muna, M.W**, Mugwe, J.M, Zingore, S, Mugi-Ngenga, E, Mairura, F, Ayieko, D. (2016). Determinants of use of integrated soil fertility management strategies and phosphorus management for maize production intensification in Runyenjes sub-County, Kenya. In: Wanjohi W,

- Kyalo DW, Nguhiu P and Gichaga C (Eds). Proceedings of the 2nd Biennial International Conference on Enhancing Sustainable Agricultural Production and Marketing Systems, held in Kenyatta University on 29th November to 2nd December 2016, pp 198-213 (*with student*)
9. Murage, F.M, Mugwe, J.N, Ngetich, K.F, **Mucheru-Muna, M.M.** and Mugendi, DN (2016). Effect of phosphorous on yield and growth of soybean (*Glycine max L*) varieties in central highlands of Kenya. In: Wanjohi W, Kyalo DW, Nguhiu P and Gichaga C (Eds). Proceedings of the 2nd Biennial International Conference on Enhancing Sustainable Agricultural Production and Marketing Systems, held in Kenyatta University on 29th November to 2nd December 2016, pp 356-367
 10. Mwebia F.W., Mucheru-Muna M.W., **Mugwe J.N.** and Mugendi D.N. (2015). Farmer Groups' Characteristics Influencing Application of Soil fertility Technologies in the Central Highlands of Kenya. In: Isutsa, D.K. Proceedings of the First International Research Conference held in Chuka University, 29th to 31st October, 2014 Chuka, Kenya, pp 81-90 (*with student*)
 11. Mwebia F.W., Mucheru-Muna M.W., **Mugwe J.N.** and Mugendi D.N. (2015). Farmer Groups' Members' Household Factors Influencing Selection of Soil fertility Technologies in the Central Highlands of Kenya. In: Isutsa, D.K. Proceedings of the First International Research Conference held in Chuka University, 29th to 31st October, 2014 Chuka, Kenya, pp 90-100 (*with student*)
 12. Kisaka MO, Mucheru-Muna M, Ngetich FK, **Mugwe J.** Mugendi D, Mairura F (2014). Does long term low rate and inorganic nitrogen management guarantee maize yield under semi arid conditions of eastern Kenya. In Fourth RUFORIM Biennial Conference. pp 487- 493
 13. Ngie M, Danga BO, **Mugwe J** and Kwena K (2014). Response of yields and yields components of maize as affected by tied ridges, fertilizers and cropping systems in the semi arid areas of Machakos County, Kenya (2014). In Waceke Wanjohi, Daniel Kyalo, Purity Nguhiu and Cyrus Gichaga. 2nd Biennial international Conference on enhancing sustainable agricultural production and marketing systems; from 27th November to 2nd December 2014. pp 409 -415
 14. Murage F, **Mugwe J.** Mucheru_Muna M and Mugendi DN (2014). Effect of Phosphorous on yield and growth of soybean (*Glycine Max L*) Varieties in central highlands of Kenya. In Waceke Wanjohi, Daniel Kyalo, Purity Nguhiu and Cyrus Gichaga. 2nd Biennial international Conference on enhancing sustainable agricultural production and marketing systems; from 27th November to 2nd December 2014. pp 356 – 367
 15. Ada M, Mucheru –Muna, **Mugwe JN**, Zingore S, Mugi_Ngenga E, Mairura F and Ayieko D. 2014. Determinants of use of integrated soil fertility management strategies and phosphorous management for maize production intensification in Runyenjes sub county, Kenya. In Waceke Wanjohi, Daniel Kyalo, Purity m. Nguhiu and Cyrus Gichaga. 2nd Biennial international Conference on enhancing sustainable agricultural production and marketing systems; from 27th November to 2nd December 2014. Pp 409 -415 In Waceke Wanjohi, Daniel Kyalo, Purity Nguhiu and Cyrus Gichaga. 2nd Biennial international Conference on enhancing sustainable agricultural production and marketing systems; from 27th November to 2nd December 2014. Pp 198 -213.
 16. Kisaka, M.O. Mucheru-Muna, F.K., Ngetich, **J. Mugwe**, D. Mugendi and F. Mairura (2013). Characterization of seasonal rainfall variability and drought probability of the semi arid areas of Mbeere region in Embu County, Kenya. In: Githunguri C, Kimani S, Esilaba A, Njeru P, Lekasi J, Gachene C, Baaru M, Muriuki A, Nyamwaro S, Maina F, Muniafu M, Kibunja C, Mangale N. Transforming rural livelihoods in Africa: How can land and water management contribute to enhanced food security and address climate change adaptation and mitigation? Joint proceedings of the 27th Soil Science Society of East Africa and the 6th African Soil Science Society. pp 64-75
 17. P.N.M. Njeru, I. Maina, **J. Mugwe**, M. Mucheru-Muna, D. Mugendi, J.K. Lekasi, S.K. Kimani, J. Miriti B.J. Mugo, H. Mwangi, V.O. Oeba, A.O. Esilaba and F. Muriithi (2013). Drought mitigating technologies: lessons learnt from sorghum and cowpea production in semi-arid areas of Embu County,

- eastern Kenya. In: Githunguri C, Kimani S, Esilaba A, Njeru P, Lekasi J, Gachene C, Baaru M, Muriuki A, Nyamwaro S, Maina F, Muniafu M, Kibunja C, Mangale N. Transforming rural livelihoods in Africa: How can land and water management contribute to enhanced food security and address climate change adaptation and mitigation? Joint proceedings of the 27th Soil Science Society of East Africa and the 6th African Soil Science Society. pp 203-211
18. Mucheru-Muna MW, Ngetich F, Mugendi DN, **Mugwe JN**, Vanlauwe B, Diels J and Merckx R (2013) Soil chemical properties as influenced by organic inputs and mineral fertilizer in Mbeere District, Kenya. In: Githunguri C, Kimani S, Esilaba A, Njeru P, Lekasi J, Gachene C, Baaru M, Muriuki A, Nyamwaro S, Maina F, Muniafu M, Kibunja C, Mangale N. Transforming rural livelihoods in Africa: How can land and water management contribute to enhanced food security and address climate change adaptation and mitigation? Joint proceedings of the 27th Soil Science Society of East Africa and the 6th African Soil Science Society. Pp 328-340
 19. Abuli, J.S, **J. N. Mugwe**, M. Mucheru-Muna, D. N. Mugendi (2013) Economic suitability of selected phosphorus sources on soybean yield in central highlands of Kenya. In: Githunguri C, Kimani S, Esilaba A, Njeru P, Lekasi J, Gachene C, Baaru M, Muriuki A, Nyamwaro S, Maina F, Muniafu M, Kibunja C, Mangale N. Transforming rural livelihoods in Africa: How can land and water management contribute to enhanced food security and address climate change adaptation and mitigation? Joint proceedings of the 27th Soil Science Society of East Africa and the 6th African Soil Science Society. pp 456-463
 20. Ndung'u, A.M., **J.N. Mugwe**, M. Mucheru-Muna (2013). Effect of Rhizobia inoculation, and three Phosphorus fertiliser levels on nodulation and yield of soybean in central highlands of Kenya (2013). In: Githunguri C, Kimani S, Esilaba A, Njeru P, Lekasi J, Gachene C, Baaru M, Muriuki A, Nyamwaro S, Maina F, Muniafu M, Kibunja C, Mangale N. Transforming rural livelihoods in Africa: How can land and water management contribute to enhanced food security and address climate change adaptation and mitigation? Joint proceedings of the 27th Soil Science Society of East Africa and the 6th African Soil Science Society. pp 768-778
 21. J.M.M. Matusso, J.N. **Mugwe**, M. Mucheru-Muna (2013). Effects of different Maize (*Zea mays* L.) – Soybean (*Glycine max* (L.) Merrill) Intercropping Patterns on Soil Mineral-N, N-uptake and Soil Properties. In: Githunguri C, Kimani S, Esilaba A, Njeru P, Lekasi J, Gachene C, Baaru M, Muriuki A, Nyamwaro S, Maina F, Muniafu M, Kibunja C, Mangale N. Transforming rural livelihoods in Africa: How can land and water management contribute to enhanced food security and address climate change adaptation and mitigation? Joint proceedings of the 27th Soil Science Society of East Africa and the 6th African Soil Science Society. pp 1046 -1061
 22. J.M.M. Matusso, **J.N. Mugwe**, M. Mucheru-Muna (2013). Effects of different maize, soybean intercropping patterns on yields and its economics. In: Githunguri C, Kimani S, Esilaba A, Njeru P, Lekasi J, Gachene C, Baaru M, Muriuki A, Nyamwaro S, Maina F, Muniafu M, Kibunja C, Mangale N. Transforming rural livelihoods in Africa: How can land and water management contribute to enhanced food security and address climate change adaptation and mitigation? Joint proceedings of the 27th Soil Science Society of East Africa and the 6th African Soil Science Society. pp 1062-1075
 23. Kisaka M, Mucheru-Muna M, Ngetich FK, **Mugwe JN**, Mugendi DN, Mairura FK (2013). Seasonal rainfall variability and aptness of Geographical (GIS) interpolation techniques in the arid regions of Embu County, Kenya. African Crop Science Proceedings, 11: 883-893. ISSN 1023-070X/2013. In African Crop Science Proceedings 11: 883 -893. ISSN 1023-070X/2013

2.2.4: Refereed Learning Modules

- KRM 801:E-Module on Research Methods: Topic on Data Management and analysis (PUCU)
- KRM 813: Agriculture and Environment
- KCU 202: Principles of Soil Science

PROJECT REPORTS

SINCE PROMOTION IN 2020

PROJECT REPORTS

1. 2nd Year (2020-2021) Climate smart options allowing agricultural intensification for smallholders in the dry zones of the Central Highlands of Kenya supported by VLIRUOS
2. 3rd Year (2021-2022) Climate smart options allowing agricultural intensification for smallholders in the dry zones of the Central Highlands of Kenya supported by VLIRUOS
3. 4th Year (2022-2023) Climate smart options allowing agricultural intensification for smallholders in the dry zones of the Central Highlands of Kenya supported by VLIRUOS
4. October 2020-2022, Project No. KCSAP CGS/CRGS-AD 2019/LWA/04-8 on Balanced Nutrition for Management of Soil Acidity and Nutrients Deficiency for Sustained Agricultural Productivity supported by the Kenya Climate Smart Agriculture Project (KCSAP)

S/n	Authors	Project Report Title	Client/Donor
1	Jayne Mugwe	Final Report: May 15 2014 to April 15, 2017 (AGRA 2013, SHP 014) Scaling up soybean and climbing beans using a value chain approach in maize-based systems of central Highlands of Kenya; Soy & Bean Commercialization Project (<i>SoCo Project</i>)	Alliance for a Green Revolution in Africa
2	Jayne Mugwe	Interim Report: April 2016 to September 2016 (AGRA 2013, SHP 014) Scaling up soybean and climbing beans using a value chain approach in maize-based systems of central Highlands of Kenya; Soy & Bean Commercialization Project (<i>SoCo Project</i>)	Alliance for a Green Revolution in Africa
3	Jayne Mugwe	Interim Report: October 2015 to March 2016 (AGRA 2013, SHP 014) Scaling up soybean and climbing beans using a value chain approach in maize-based systems of central Highlands of Kenya; Soy & Bean Commercialization Project (<i>SoCo Project</i>)	Alliance for a Green Revolution in Africa
4	Jayne Mugwe	Interim Report: April 2015 to September 2015 (AGRA 2013, SHP 014) Scaling up soybean and climbing beans using a value chain approach in maize-based systems of central Highlands of Kenya; Soy & Bean Commercialization Project (<i>SoCo Project</i>)	Alliance for a Green Revolution in Africa
5	Jayne Mugwe	Interim Report: October, 2014 to March 2015 (AGRA 2013, SHP 014) Scaling up soybean and climbing beans using a value chain approach in maize-based systems of central Highlands of Kenya; Soy & Bean Commercialization Project (<i>SoCo Project</i>)	Alliance for a Green Revolution in Africa
6	Jayne Mugwe	Interim Report: April 2014 to September 2014 (AGRA 2013, SHP 014) Scaling up soybean and climbing beans using a value chain approach in maize-based systems of central Highlands of Kenya; Soy & Bean	Alliance for a Green Revolution in Africa

		Commercialization Project (<i>SoCo Project</i>)	
7	Jayne Mugwe	Final Report: May 15 2014 to April 15, 2017 (AGRA 2013, SHP 022) Enhancing Productivity and Market Development of Soybeans and Climbing Beans in Central Highlands Kenya	Alliance for a Green Revolution in Africa
8	Jayne Mugwe	ERAFRICA-IC-080: CONNEcting knowledge, scales and actors; an integrated framework for adaptive organic resource management, targeting soil aggradation and agro-ecosystems' resilience in SSA (CONNESSA)	Alliance for a Green Revolution in Africa

2.2.6 Presentation of Papers at Professional Conferences (from 2007)

S/No	Presenter	Title of Paper presented	City/Country	Date of Conference	Funding (US\$)
1.	<u>Mugwe, J.N.</u> , Mutesa, F., Ngetich, F.K., Mucheru-Muna, M., and Mugendi, D.N. (2018).	Mulching and Soil Fertility Amendments Effects on Maize yields, Soil Carbon and Nitrogen in Embu County, Kenya	12 th Egerton University International Conference, Njoro, Kenya	27 th to 29 th March 2018	OWN
2.	Macharia, M., Mucheru-Muna, M.N, <u>Mugwe, J. N.</u> , Ngetich. F. and Mugendi, D.N (2018).	Effects of tied ridging, manure and Tithonia combined with Fertilizer on maize-soybean yields and their profitability in central highlands of Kenya	12 th Egerton University International Conference, Njoro, Kenya	27 th to 29 th March 2018	OWN
3.	Kimiti, W, Mucheru-Muna M.N ¹ , <u>Mugwe J N</u> , Ngetich F and Mugendi D.N (2018).	Effect of lime, manure and fertilizer on soil acidity and maize performance in Tharaka Nithi County	12 th Egerton University International Conference, Njoro, Kenya	27 th to 29 th March 2018	OWN
4.	Kibet P, <u>Mugwe JN</u> , Korir N K, , Mucheru-Muna M.N and Ngetich FK, Mugendi D.N (2018).	Granular and powdered limes effects on soil properties and maize (<i>Zea mays</i> L) performance in soils of Tharaka Nithi County, Kenya	12 th Egerton University International Conference, Njoro, Kenya	27 th to 29 th March 2018	OWN
5.	Ngetich, K.F., Diels, J., <u>Mugwe, J.N.</u> , Mucheru-Muna, M.W., Shisanya, C.A. & Mugendi, D. N. (2018)	Rainfall distribution, sowing date and timing of nitrogen fertilizer application effects on soil water content and maize productivity in Tharaka-Nithi County, Kenya	12 th Egerton University International Conference, Njoro, Kenya	27 th to 29 th March 2018	OWN

6.	Mwende N., Danga B.O., <u>Mugwe J.</u> and and Kwena K. (2018)	Profit margin in maize production under tied ridges, fertilizers and cropping systems in semi-arid areas of Machakos County, Kenya	12 th Egerton University International Conference, Njoro, Kenya	27 th to 29 th March 2018	OWN
7.	<u>Mugwe JN</u> , Sibomana D., Ngetich FK, Mucheru-Muna MM and Mugendi DN	Response of Maize and Soybean to Tied Ridging and Combined Application of Manure, Tithonia and Fertilizer in the Central Highlands of Kenya	11 th Egerton University International Conference and Innovation week	29 th to 31 st March 2017	AGRA
8.	Mate H., <u>Mugwe JN</u> , Wambugu SK, Mucheru-Muna M and Mugendi DN,	Factors affecting the participation of smallholder farmers in collective marketing initiatives in the f Eastern Highlands of Kenya	11 th Egerton University International Conference and Innovation week	29 th to 31 st March 2017	Farm Concern International
9.	Njagi EW., Mucheru-Muna, M., <u>Mugwe, J.</u> , Ngetich, K F., and Mugendi, D N.	Collective action in seed distribution; Case of soybean (<i>Glycine max</i>) in Mbeere South, Meru South and Imenti South sub counties of Eastern Kenya	11 th Egerton University International Conference and Innovation week	29 th to 31 st March 2017	AGRA
10.	Murage, F.M., <u>Mugwe, J.N.</u> , Ngetich, K.F., Mucheru-Muna, M.M. and Mugendi, D.N	Effect of phosphorus on growth and yields of soybean (<i>Glycine max L</i>) varieties in the central highlands of Kenya	11 th Egerton University International Conference and Innovation week	29 th to 31 st March 2017	AGRA
11.	Kibet P ^{1*} , NK Korir ¹ , <u>Mugwe J N</u> , Mucheru-Muna M.N ³ and Mugendi D.N ⁴	Effects of agricultural lime types on soil properties and maize (<i>Zea mays L</i>) performance in acidic soils of Tharaka Nithi county, Kenya	11 th Egerton University International Conference and Innovation week	29 th to 31 st March 2017	AGRA
12.	Njoroge GM, <u>Mugwe.J.</u> , Ngetich K.F, Mucheru-Muna. M, Bett. E, and Mugendi.D	Agroecological suitability screening of soybean (<i>Glycine max</i>) varieties in Meru and Tharaka Nithi counties	11 th Egerton University International Conference and Innovation week	29 th to 31 st March 2017	RUFORUM

13.	Masika OK, Mucheru-Muna Ngetich FK, Mugwe JN , Mugendi DN and Mairura F	Spatial-temporal maize productivity and stability response to soil-water-use efficiency strategies under high rainfall variability agroecologies	Third International Conference, Chuka University 26 th to 28 th October 2016	26 th to 28 th October 2016	AGRA -SHP 014
14.	Masika O.K, Mugwe JN , Ngetich FK, Mucheru-Muna M, and Mugendi D	Performance evaluation of the Apsim-model on maize productivity in integrated soil fertility management in Kenya's dryer agroecosystems	Third International Conference, Chuka University 26 th to 28 th October 2016	26 th to 28 th October 2016	
15.	Benvindo VS, Danga BO and Mugwe JN	Influence of manure, phosphate fertilizer and lime on soil available phosphorus	International Conference on Building a new generation of Agricultural Scientists	1 st to 5 th December 2014	AGRA
16.	Nduwumuremyi A, Mugwe J , Ruganzu V, Habimana S and Mupenzi J	Suitability and quality analysis of locally available limestones for rectifying soil acidity in Rwanda	International Conference on Building a new generation of Agricultural Scientists (pg 85- book of abstracts)	1 st to 5 th December 2014	AGRA
17.	Matusso J M, Mugwe JN and Muna Mucheru-Muna	Effects of Different maize (Zeamays L) – Soybean (Glycine Max (L) Merrill) intercropping patterns and Yields and Its profitability	International Conference on Building a new generation of Agricultural Scientists (pg 88- book of abstracts)	1 st to 5 th December 2014	AGRA
18.	Mugi EW, Mucheru_Muna MW, Mugwe JN , Ngetich FK, Mugendi DN and Mairura FS	Households Socio-economic factors influencing the level of adaptation to climate variability in the dry zones of Eastern Kenya	International Conference on Building a new generation of Agricultural Scientists	1 st to 5 th December 2014	RUFORUM

19.	Mwebia F.W., Mucheru-Muna M.W., <u>Mugwe J.N.</u> and Mugendi D.N. (2014).	Farmer Groups' Characteristics Influencing Application of Soil fertility Technologies in the Central Highlands of Kenya.	1 st International Research Conference of Chuka University (Kenya)	29 th – 31 st October 2014.	ASARECA (ASARECA) NRM/09/01
20.	Mwebia F.W., Mucheru-Muna M.W., <u>Mugwe J.N.</u> and Mugendi D.N. (2014).	Farmer Groups' Members' Household Factors Influencing Selection of Soil fertility Technologies in the Central Highlands of Kenya	1 st International Research Conference of Chuka University (Kenya)	29 th – 31 st October 2014.	ASARECA(A SARECA)NR M/09/01
21.	Mugi EW., Muna M.W, <u>Mugwe J.N.</u> , Ngetich FK, Mugendi D.N. and Mairura FS 2013	Integrating Indigenous and Conventional knowledge-based Climate forecasts for farmers enhanced adaptation to Climate Variability in the drier zones of Eastern Kenya	Cathay Hotel, Nakuru; Kenya	20-25 th October 2013	RUFORUM
22.	Ndung'u A.M, <u>Mugwe J.N.</u> , Mucheru M-Muna	Effect of Rhizobia inoculation, and Phosphorus fertilizer levels on nodulation and yield of Soybean (<i>Glycine Max</i> L Merril)	Cathy Hotel, Nakuru; Kenya	20-25 th October 2013	AGRA
23.	<u>Mugwe J.N</u> and Bett E	Soybean value chain in the central highlands of Kenya	Entebbe, Uganda	14 th – 17 th October, 2013	AGRA
24.	<u>Jayne Mugwe</u> , Monicah-Mucheru Muna, Joses muthamia and Daniel Mugendi	Effect of inputs application on yields of soybean and climbing a maize-legume rotation in central Kenya	Safari park hotel, Nairobi, Kenya	22 to 26th October, 2012	AGRA SoCo (SHP 022)
25.	Nicholas Muba, <u>Jayne Mugwe</u> , Wambugu SK and Eric Bett	Profitability of rotation systems under varied integrated soil fertility management regimes in the central highlands of Kenya	Safari park hotel, Nairobi, Kenya	22 to 26th October 2012	AGRA Training SHP 024)
26.	Mucheru-Muna M, Ngetich FK, Mugendi DN, <u>Mugwe J.N.</u> , Pypers P, Vanlauwe B, Diels J and Merxk R	Effect of inputs application on yields of soybean and climbing a maize-legume rotation in central Kenya	Safari park hotel, Nairobi, Kenya	22 to 26th October 2012	VLIR
27.	Athanase Nduwumuremyi, Vicky Ruganzu and <u>Jayne</u>	Relative effectiveness of agricultural Lime and local lime	Safari park hotel, Nairobi,	22 to 26th October	AGRA training (SHP

	<u>Mugwe</u>	materials in reducing soil acidity in Rwanda	Kenya	2012	024)
28.	Felix Ngetich, an Diel, Chris Shisanya, Jayne Mugwe , Monicah-Mucheru Muna and Daniel Mugendi	Effects of soil and water conservation techniques on runoff, sediment yield and maize productivity	Safari park hotel, Nairobi, Kenya	22 to 26th October 2012	VLIR
29.	Irene Okeyo Monicah Mucheru-Muna, Jayne Mugwe, Felix ngetich, Daniel Mugendi, Jan Diels	Effect of selected soil and water conservation techniques on rainfall use efficiency and maize productivity in central highlands of Kenya	Safari park hotel, Nairobi, Kenya	22 to 26th October 2012	VLIR
30.	Mugwe JN , Mugendi DN and Mucheru Muna	Farm and socio-economic factors influencing farmers' decision to cultivate soybeans in the central highlands of Kenya	Safari park hotel, Nairobi, Kenya	22 to 26th October 2012	AGRA (SHP 022)
31.	Macharia JM, Mugwe JN , Mucheru-Muna M, Mairura S, Kimani SK and Mugendi DN	Training needs in soil fertility management for farmers and extension workers in central highlands of Kenya	KARI Hqs, Nairobi , Kenya	22 to 28 th October 2012	ASARECA
32.	Mugwe JN , Mairura F and Muchai S.	Determinants of Adoption and Utilization of Integrated Soil Fertility Management by Small holders in Central Kenya	Karatina University, Kenya	25 th – 28 th July 2012	AGRA training Programme
33.	Matusso, J, Mugwe JN Jayne and Mucheru-Muna, MW	Potential Role of Cereal-legume Intercropping Systems in Integrated Soil Fertility Management in Smallholder Farming Systems of Sub-Saharan Africa	Karatina University, Kenya	25 th – 28 th July 2012	AGRA training Programme
34.	Sianje A, Mugwe, J Mucheru-Muna, MW and Mugendi DN	Effects of phosphorus sources and starter nitrogen on soybean yields and soil properties in the central highlands of Kenya	Karatina University, Kenya	25 th – 28 th July 2012	AGRA training Programme
35.	Nduwumuremyi. A, Mugwe JN and Ruganzu V	Effects of Agricultural Lime and Local Lime Materials on Irish Potato Yield in Acidic Soils, Burera district, Rwanda.	Karatina University, Kenya	25 th – 28 th July 2012	AGRA training Programme
36.	Macharia JM, Mugwe JN , Mucheru-Muna M, Mang'uriu DN, and Mugendi DN	Socioeconomic factors influencing levels of knowledge in soil fertility management in the central highlands of Kenya	Karatina University, Kenya	25 th – 28 th July 2012	VLIR-OUS

37.	Okeyo, I. A., Mucheru-Muna, M., Mugwe, J. , Ngetich, F. K., Mugendi, D. N. & Shisanya, C.A	Effects of selected SWC treatments on soil nutrient loss and maize yields in the central highlands of Kenya	Karatina, Kenya	25 th – 28 th July 2012	VLIR- OUS
38.	Kimaru-Muchai S.W., <u>Mucheru-Muna M.</u> , Mugwe J.M. , Mairura F.S and Mugendi D.N.	Factors that influence reliability of information sources on soil fertility management practices in the Central Highlands of Kenya	JKUAT, Juja, Kenya	16-18 November, 2011	ASARECA
39.	Mugwe JN , Mwebia F, Muna MM, Mugendi DN	Maize Yields Response to Intercropping and Application of Manure, Tithonia and Fertilizer in the Central Highlands of Kenya	Kigali, Rwanda	24 – 27, October 2011	Conference on Agricultural Intensification of the African Humid Highlands (CIALCA)
40.	Kimaru-Muchai S.W., <u>Mucheru-Muna M.</u> , Mugwe J.M. , Mairura F.S and Mugendi D.N.	Dissemination Approaches used in Up-scaling Soil fertility Management Practices in the Central Highlands of Kenya.	Kigali, Rwanda	24 -27 October 2011	CIALCA
41.	<u>Ngetich K.F.</u> , Mugwe J.N. , <u>Mucheru-Muna M.</u> , <u>Shisanya C.A.</u> , Diels J ² and <u>Mugendi D.N.</u>	Planting dates effect on maize yield performance under rainfed conditions in the Central Highlands of Kenya	Kigali, Rwanda	24-27 October 2011	CIALCA
42.	Mugendi DN, Mucheru-Muna MW, Ngetich KF, Mugwe J , Vanlauwe B, Merckx R and Diels J	Organic inputs and mineral fertilizer effects on soil water content and maize productivity in Mbeere District, Kenya. Paper	Leuven, Belgium.	11-14 July 2011,	Symposium on Soil Organic Matter
43.	<u>Ngetich, K. F.</u> , <u>Shisanya, C. A.</u> , Mugwe, J. , <u>Mucheru-Muna, M.</u> , <u>Mugendi, D. N.</u> and <u>Diels,</u>	Tillage and surface management effects on soil water content and maize productivity in the Central Highlands of Kenya	Kenyatta University, Kenya.	14-18 March 2011	Lake and Catchment Research Symposium (LARS)
44.	Ngetich, K.F., Mugwe, J.N. , Mucheru-Muna, M., Shisanya, C.A., Diels, J. and Mugendi, D.N.	Assessment of strategies that optimize water productivity in maize: Simulation and testing of crop field practices using AquaCrop and field experimentation in central highlands of Kenya.	Yogyakarta, Indonesia	8-9 th Oct 2010.	FAO / UNW-DPC / ICID
45.	Mugwe JN , Mucheru-Muna M and Mugendi DN, Muthamia Joses	Methodologies and Approaches for Up-scaling Soil Fertility Management in Kenya: A Review	Moshi, Tanzania	7 – 11 th December 2009, in Moshi, Tanzania	ASARECA

46.	Mugwe JN , Mugendi DN, Kungu JB, Mucheru-Muna MM and Merckx R	Soil Fertility Management Using Organic and Inorganic Inputs in the Central Highlands of Kenya	Nairobi, Kenya (KARI conference)	10 th .14 th November, 2008	KARI
47.	Muriuki JP, Kung'u J B, Mugendi DN, Mugwe J N and Mucheru-Muna MW, Merckx R	Economic Returns of Organic and Mineral Fertilizer Inputs for Soil Nutrient Replenishment	Muguga, Kenya (KEFRI conference) 2008	November, 2008	KEFRI

2.2.7 Other Publications

Modules in Higher Education

1. **Mugwe JN. (2020). KCU 801:** Research Methods, Kenyatta University Digital School, interactive module for Blended learning; e-tivities
2. **Mugwe JN (2020). KRM 813:** Agriculture and Environment;. Kenyatta University, Digital School, interactive module for Blended learning; e-tivities
3. **Mugwe JN. (2020). KCU 202:** Principles of Soil Science Kenyatta University Digital School, interactive module for Blended learning; e-tivities
4. **Mugwe JN. (2020). KRM 804:** Cropping Systems and Agroforestry: Kenyatta University Digital School, interactive module for Blended learning; e-tivities
5. **Mugwe JN. (2020). KAS 301: Research Methods for Agriculture:** Kenyatta University Digital School, interactive module for Blended learning; e-tivities
6. **Mugwe JN. (2020). KST 422:** Agroforestry Development. Kenyatta University Digital School, interactive module for Blended learning; e-tivities
7. **Mugwe JN (2020).** KRM 305: Research Methods and Agricultural Experimentation; Kenyatta University Digital School, interactive module for Blended learning; e-tivities
8. **Mugwe JN. 2012:** KCU 801: Research Methods and Scientific Writing, Digital School of Virtual and Open Learning, *Interactive Module*, Kenyatta University (Revised)
9. **Mugwe JN. 2012:** KRM 813: Agriculture and Environment, Digital School of Virtual and Open Learning, *Interactive Module*, Kenyatta University (Revised)
10. **Mugwe JN. 2011:** PUCU: Research Methodology: Quantitative data analysis *Interactive Module*, Kenyatta University

Training manuals

1. Mutuma S. **Mugwe J.**, Mucheru- Muna M., Ngetich F., Bett K, Mutuma S. and Mugendi D. (2017). Training manual on integrated soil fertility management: for use by extension service providers to train farmer groups
2. **Mugwe J.**, Murimi L., Mucheru- Muna M., Ngetich F., Bett K, Mutuma S. and Mugendi D. (2017). Soybean production for increased income and health.
3. **Mugwe J.**, Murimi L., Mucheru- Muna M., Ngetich F., Bett K, Mutuma S. and Mugendi D. (2017). Training manual on post harvest management of grains: for use by extension service providers to train farmer groups

Brochures

1. **Mugwe J.**, Mucheru- Muna M., Ngetich F., Bett K, Mutuma S. and Mugendi D. (2017). Farmer groups approach to upscaling agricultural technologies. A pamphlet for use by extension service providers and farmer groups in Kenya. AGRA-KU. Brochure No 1

2. **Mugwe J.**, Mucheru- Muna M., Ngetich F., Bett K, Mutuma S. and Mugendi D. (2017). Going beyond demos through the mother baby approach. A pamphlet for use by extension service providers and farmer groups in Kenya. AGRA-KU. Brochure No 2
3. Githaiga R., **Mugwe J.**, Mucheru- Muna M., Ngetich F., Bett K., Mutuma S. and Mugendi D (2017) . Soybean value addition for increased income. A pamphlet for use by extension service providers and farmer groups in Kenya. AGRA-KU. Brochure No 3
4. Bett K., Ayieko D., **Mugwe J.**, Mucheru-Muna M., Ngetich F., Mutuma S. Mugendi D. (2017). Marketing and economics of climbing beans. A pamphlet for use by extension service providers and farmer groups in Kenya. AGRA-KU. Brochure No 4
5. Bett K., Ayieko D., **Mugwe J.**, Mucheru-Muna M., Ngetich F., Mutuma S. Mugendi D. (2017). Marketing and economics of soybean. A pamphlet for use by extension service providers and farmer groups in Kenya. AGRA-KU. Brochure No 5
6. **Mugwe, J.N.**, Mugendi, D.N., Muna, M.W. and Kimaru S. (2011). Good management of cattle manure for increased yields. A Pamphlet for use by Extension Personnel and Farmers in Kenya. KU-ASARECA. Brochure No 1
7. **Mugwe, J.N.**, Mugendi, D.N., Muna, M.W. and Kimaru S. (2011). Improve soil productivity by integrating leguminous trees into farmlands. A Pamphlet for use by Extension Personnel and Farmers in Kenya. KU-ASARECA. Brochure No 3
8. **Mugwe, J.N.**, Mugendi, D.N., Muna, M.W. and Kimaru S. (2011). Tithonia for increased yields. A Pamphlet for use by Extension Personnel and Farmers in Kenya. KU-ASARECA. Brochure No 4
9. Muna M. W., Kimaru, S., **Mugwe, J.N.** and Mugendi D.N (2011). Mother baby Extension Approachi. A poster for use by extension personnel. KU-ASARECA. Poster no. 1
10. Muna M. W., Kimaru, S., Mugwe, J.N. and Mugendi D.N (2011) Kamuingi Koyaga Ndiri. A poster for use by extension personnel. KU-ASARECA. Poster no. 2
11. Muna M. W., Kimaru, S., **Mugwe, J.N.** and Mugendi D.N (2011). Soil is Wealth; Lets protect it. A poster for use by extension personnel. KU-ASARECA. Poster no. 3
12. **Mugwe JN**, Mugendi DN, Mucheru-Muna MW and Kung'u JB (2006). *Calliandra calothyrsus* for increased crop yields (Pamphlet)
13. **Mugwe JN**, Mugendi DN and Mucheru-Muna MW (2006). Cattle manure for increased crop yields (Pamphlet)
14. Mugendi DN, Mugwe JN, Mucheru-Muna MW and Kung'u JB (2006). *Tithonia diversifolia* green manure for increased yields (Pamphlet).
15. Mucheru-Muna MW, Mugwe JN and Mugendi DN (2006). *Mucuna pruriens* for soil fertility improvement (Pamphlet)
16. Mucheru MW, Mugendi DN, Micheni A, Mugwe JN, Kung'u JB, and Gitari JN (2001). Improved food production using herbaceous legumes in the central highlands of Kenya. *Legume Research Network Project Newsletter* 5:15-17

Thesis

Ph D: An evaluation of integrated soil fertility management practices in Meru south District, Kenya.

Msc: Effect of soil incorporated leaf prunings on soil productivity in alley and sole cropping systems using *Leucaena leucocephala* (Lam.) and *Calliandra calothyrsus* Meissn

2.3 QUALITY TEACHING, LEARNING AND MENTORSHIP

1.3.1 STUDENT EVALUATION

1. Evaluated on several courses where the score was above 85% (Reports not provided recently)

2.3.1 : Student Evaluation

1. 2018/2019 KU: KCU 801= 100% KCU 300 = 98.85%
2. Student evaluation at University of Embu (100%)
3. Student Evaluation (2012/2013) (98%)
4. Students Evaluation (KU) (90.5%)
5. Students Evaluation (KU) (90.8%)

2.3.2: Training in Higher Education Teaching

1. November 2022: Understanding open access publishing by Taylor and Francis
2. November 2021: One-day training on postgraduate supervision, examination and mentorship in University of Embu
3. March 2019: Two-day training on “Agroforestry **Curricula Development Workshop**” at Kenyatta University, organized by African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE) and World Agroforestry Centre (WAC)
4. May 2016: Two-day training on **statistical analysis software (SAS)** by AGRA funded project at Embu University College on May 5-6, 2016
5. August 2014: Certificate in **Experimentation and Economic data collection and analysis**; Training workshop from August 8th to 10th, 2014 at Embu University College, Embu County, Kenya
6. August 2013: Certificate in **Impact Assessment of Agricultural Technologies**; Training workshop from August 9th to 10th, 2013: Embu, Kenya
7. Certificate: Training on Master Public Speaking on 21st July 2018; Lilian Towers
8. Certificate: The Philosophy of Greatness Transformational Training at BTL; 7th March 2017
9. Certificate: Training on Statistical Analysis Software at University of Embu on 5th to 6th May 2016
10. Certificate: Linking Integrated soil fertility to markets; Agricultural value chain analysis training 13th to 17th May 2013
11. Certificate : Implementation and out-scaling of balanced Crop Nutrition in Africa 6th to 10th July 2015

2.3.3: Ongoing (PhD)

1. **Esther Wangomb’e (N85/11241/2008)** Impact of Participatory Forest Management in Mt. Kenya Forest, Kenya. School of Environmental Studies, Kenyatta University.
2. **Malingumu Richard (A99/EA/24066/2024)**. Optimization of Black Soldier Fly Composted Organic Fertiliser for Improved Soil Fertility And Sorghum Productivity in Buikwe District, Uganda
3. **Daniel Kapsandui Malinga. A99/20147/2023**; Waste Management of Organic Slaughterhouse Wastes Through Composting and Pyrolysis for Use in Sustainable Farming
4. **Joses Muthamia (A808/326/2022)**. Tailoring Soil and Nutrient Management Technologies to Diverse Socio-ecological Conditions of Smallholder Maize Farmers in Kenya. Department of Water and Agricultural Resource Management
5. **Michelle Awuor Otieno (A99/20391/2023)**. Climate-smart practices’ influence on soil fertility, Pyrethrum yield and quality, and farmers’ Income in Nakuru county, Kenya.
6. **Erick Mainya Omanwa. A99/25922/2024**. Soil Fertility Enhancement for Rangelands Agriculture North Eastern Kenya: a case of Marsabit County. Department of Agricultural Science and technology. Kenyatta University

2.3.4 Masters Supervision (On going)

1. Gladys Chelangat: Economic assessment of integrated soil fertility technologies combined with mulching in maize-soybean production systems in Embu and Meru Counties, Eastern Kenya”. Department of Agribusiness, Management and Trade, Kenyatta University.
2. Winfred Ileri (A148/CE/23456/2010). Effects of tillage and residue on soil water and organic matter in maize – bean cropping systems in Embu County, Central Kenya. Department of Agricultural Resource Management. Kenyatta University.
3. Musa Sang (A147/OL/22343/11). Effectiveness of a designed KARI-ATDC walking tractor seeder operation on conservation agriculture in different soils. Department of Agricultural Resource Management. Kenyatta University.
4. Murithi Timothy Kimathi (A147/OL/23447/2012). Effect of bio-fertilisers, cattle manure and mineral fertilizer on growth and yield of maize in Meru County. Department of Agricultural Resource Management. Kenyatta University.
5. Kivuva M Gabriel (A147/33088 /2014). Soil productivity in maize soybean cropping systems under integrated soil fertility management and mulching in Embu and Meru Counties, Kenya. Department of Agricultural Resource Management. School of Agriculture & Enterprise Development, Kenyatta University
6. Robert Kipyego Oroiyo A147/OL/NKU/24850/2014: Growth and Yield Response of Selected Sweet Potato Varieties to Water-deficit in Nakuru County, Kenya
7. Jackson Muganda Nyongesa A148/OL/KKA/26579/2014: Effect of Tithonia and phosphorus on yields under intercropping systems in Kakamega County, Kenya
8. Miriam Nyokabi: A148/ 39531/2016. Response of sorghum yields and soil fertility to integration of manure and fertilizers in Tharaka-Nithi County, Kenya. Department of Agricultural Resource Management. School of Agriculture & Enterprise Development, Kenyatta University
9. Elizabeth Maina A144/OL/CTY/25786/2018: Phosphorous use efficiency, growth and yield of upland rice as influenced by various levels of phosphorus in Kirinyaga County, Kenya.
10. Patrick Lemargoi Lpopiroi. A149/OL/NKU/32836/2016. Factors influencing adoption of greenhouse farming among smallholder farmers in Samburu Central Sub-County, Kenya
11. Margaret Wangari Mwangi A148/37112/2017. Long-term influence of application of organic and inorganic substrates on soil microbial community, in a maize-soybean rotation system in Tharaka-Nithi County, Kenya
12. Jackline Kanana Ndegwa. A500/1340/2019. Integrated Soil fertility and water management practices for enhanced sorghum productivity in the drylands of Tharaka-Nithi County, Kenya. University of Embu.
13. Nirere Claudia Axelle (A148EA/20694/2020). Influence of Lime and Soil Fertility Inputs on Soil Chemical Properties, Maize Yields and Economic Returns in Gisozi, Burundi.
14. Arthemone Manariyo (A142EA/20985/2020). Farmers' perception, adoption, and yield impact of fall armyworm mitigation technologies in maize cropping systems in Imbo Plain, Burundi
15. Ingabire Vestine (A148EA/20939/2021). Chia Grain Yield, Selected Soil Properties, Nutrient Content And Economic Returns Under Farm Yard Manure And Spacing In Bugesera And Gicumbi Districts, Rwanda
16. Caroline Mumbe Nzilu (A142/CTY/PT/21796/2020). Adoption of integrated soil fertility management technologies in green gram farming among smallholder farmers in Tharaka Nithi County, Kenya
17. Jane Gaconi Njagi (BSc) N50/CTY/PT/21622/2022: Optimizing Post-Treatment Of Black Soldier Fly Frass For Improved Fertilizer Quality , Environmental Sustainability And Crop Production In Western, Kenya. Department of Environmental Sciences. Kenyatta University
18. Korir Godwin (N50/CE/22232/2022): Availability And Suitability of Organic Wastes For The Production Of Black Soldier Fly For Feed And Fertilizer In Central Kenya. Department of Environmental Sciences. Kenyatta University
19. Rukwaro Risper Thigi (N50/CTY/PT/22043/2022). Determinants and impacts of fruit tree-based agroforestry in Tetu Sub-County Nyeri County, Kenya

2.3.5. Ph D Completed

1. **Felix Ngetich (I84/11873/2008).** Enhancing Farmers' Agricultural Productivity Through Improved Water and Nutrient Use Efficiency in the Central Highlands of Kenya. Geography Department, Kenyatta University (**Graduated in December, 2012**)
2. **Ahmat Filbert Leone (A99F/24650/2011)** Use of rock phosphate with *Tithonia diversifolia* in maize-bean intercrop for improved maize yield under two contrasting agroecologies in Kenya. Department of Agricultural Science and Technology, Kenyatta University (**Graduated in 2014**)
3. **Abdi Zeila Dubow (A99/27181/2011)** Effect of Mulching and Nitrogen Application on Resource Use Efficiency, Yields and Soil Properties in Maize-soybean Rotations in Tharaka Nithi County, Kenya. Department of Agricultural Science and Technology, Kenyatta University (**Graduated in December, 2018**)
4. **Mwende Ngie (A99/29362/2014).** Enhancing dryland farming through integrated management practices for water conservation in the semi-arid areas of Machakos County Department of Agricultural Resource Management, School of Agriculture & Enterprise Development, Kenyatta University (**Graduated in July, 2019**)
5. **Nathan Oduor A806/243/2018:** Integrated soil fertility and water management practices for enhanced sorghum (*sorghum bicolor*) productivity in the drylands of Tharaka-Nithi county, Kenya. School of Agriculture. University of Embu (**Graduated in 2023**)
7. **Peterson Newton Muchiri Njeru, (A99/14218/2009)** Integrated soil fertility management technologies in sorghum and cowpea production systems in semi-arid areas of Kenya. Department of Agricultural Resource Management. Kenyatta University (**Graduated in December 2025**).

2.3.6. MASTERS COMPLETED

1. Serah Wairimu Kimaru (N50/CE/11927/2007). Enhancing communication for effective up scaling of soil fertility management technologies in the central highlands of Kenya. (Masters; 2009-current). Department of Environmental Studies and Community Development. School of Environmental Studies, Kenyatta University; **Graduated in December, 2011.**
2. Josephine Kamene Musyoki (N50/11900/07). The role of community forest in participatory forest management in Timau Region, North Central Kenya (Masters; 2011-current). Department of Environmental Education. School of Environmental Studies, Kenyatta University. **Graduated in December 2012**
3. Joseph Maina Macharia (N50/CE/15044/2008). Stakeholders' training needs for enhanced uptake and utilization of soil fertility management technologies in Meru South and Mbeere districts, Kenya. Department of Environmental Education. School of Environmental Studies, Kenyatta University. **graduated in December 2012**
4. James Macharia Chege (N50/CE/11939/2007). Household and farm characteristics influencing adoption of water harvesting structures among smallholder farmers in Kilifi District, Kenya. (Masters; 2009-current). Department of Environmental Studies and Community Development. School of Environmental Studies, Kenyatta University. **GRADUATED IN DECEMBER 2012**
5. Athanase Nduwumuremyi (A148/EA/20180/2010). Effect of Agricultural lime and local lime materials on soil properties and yield of Irish potatoes (*Solanum tuberosum* L.) in Burera District, Rwanda. Department of Agricultural Resource Management. Kenyatta University. **GRADUATED IN DECEMBER 2013**
6. Jackson Sianje (A148/20170/2010). Effects of phosphorus sources and starter Nitrogen on Soil properties and yields of soybean in central highlands of Kenya. Department of Agricultural Resource Management. Kenyatta University. **Graduated in December, 2013.**
7. Okeyo, Akinyi Irene (N50/20444/2010). Effects of Selected Soil and Water Conservation Strategies on the Soil Nutrient Status in the Central Highlands of Kenya. Department of Environmental

Education. School of Environmental Studies, Kenyatta University. **GRADUATED IN DECEMBER 2013**

8. Benvindo Serafim M. M. Verde: (A148F/25514/2011). Effects of Manure, Lime and Mineral Fertilizer on Soybean (*Glycine max* L. Merrill) Yields, Soil Properties and Microbial Biomass in Acid Soil of Central Highland of Kenya. Department of Agricultural Resource Management. Kenyatta University. **Graduated in July 2014**
9. Esther Wangeci Mugi (BSc.): N50/24880/2011. Integrating indigenous and conventional-based climate-based forecast for farmers enhanced adaptation to climate variability in Tharaka-Nithi and Kitui counties. Department of Environmental Sciences. **Graduated in July 2014**
10. Janvier Bashagaluke Bigabwa (A148F/20182/2010). Validation of a Novel approach for soil characterization by Infra red scanning and Land Sat in the Democratic Republic of Congo. Department of Agricultural Resource Management. Kenyatta University. **Graduated in December, 2014**
11. Titus Mbaluka Luta (A148/22275/2010) Effects of Organic Residues type and placement on Carbon sequestration, and Nitrogen and yields in Machakos County. Department of Agricultural Resource Management. Kenyatta University. **Graduated in December 2014**
12. Josias Mateus Matusso (A148F/23965/2011). Effect of Manure and Mineral Fertilizer on the Yields of Maize and Soybean under Intercrop and Monocrop Systems. Department of Agricultural Resource Management. Kenyatta University. **GRADUATED IN DECEMBER 2014**
13. Mwebia Frashiah Wangeci (N50/10715/2008). Farmer groups approach in upscaling of soil fertility management technologies in the central highlands of Kenya. Department of Environmental Sciences. School of Environmental Studies, Kenyatta University. **GRADUATED IN JULY 2015**
14. Esther Wanjue Njagi (N50/20702/2012). Farmer Groups' Characteristics influence on Soybean seeds dissemination in Embu, Tharaka Nithi and Meru Counties. (Masters; 2014-2016). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University (**Graduated in July 2016**)
15. Mulinganya Bazibuhe Noel (A148F/21207/2012). Potential of local rhizobia strains to enhance nitrogen fixation by bio-fortified beans in South Kivu, Easter DRC Congo. Department of Agricultural Resource Management. Kenyatta University. (**Graduated in July 2016**)
16. Damascene Sibomana (A148EA/20759/2012). Effects of Integrated Soil Fertility Management and Tied-Ridging on Selected Soil Properties and Crop Yields in Meru County, Kenya. Department of Agricultural Resource Management. Kenyatta University. (**Graduated in December, 2016**)
17. Ada Mildred Achieng (N50/CTY/PT/26495/2013). Factors influencing adoption of integrated soil fertility management strategies for maize production in Embu County. Department of Environmental Sciences Kenyatta University (**Graduated in December, 2016**)
18. Harold Mate (A103/12343/09). Factors affecting the participation of farmers in collective marketing initiatives in Mbeere and Meru South District in Central Highlands of Kenya . Department of Agribusiness and trade, Kenyatta University. (**Graduated in December 2016**)
19. Albert Mwaniki (A148/22325/2011). Effects of inoculation and Phosphorous levels on Soybean (*Glycine max* L.Merril) yields and selected soil properties in Embu County Kenya. Department of Agricultural Resource Management. Kenyatta University (**Graduated in December, 2018**)

20. Peter Kibet (A144/31598/2015) Effects of agricultural limes on physiochemical soil properties and maize (*Zea mays* L) performance on acidic soils of Tharaka Nithi County. Department of Agricultural Resource Management. Kenyatta University **(Graduated in December, 2018)**
21. Mercy Ngum A152F/31805/2015. Analysis of soybean value chain in Embu, Tharaka-Nithi and Meru counties. Department of Agribusiness Management and Trade, School of Agriculture & Enterprise Development, Kenyatta University **(Graduated in July, 2019)**
22. Kimiti Winnie Wanjiru (N50/CTY/PT/33497/2014). Effect of lime, organic and inorganic inputs on soil acidity and productivity in Kirege, Tharaka Nithi, County). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University. **Graduated in December, 2018)**
23. Steven Ogega (A147/30858/2015). Effect of inorganic nutrients on soil and crop productivity under conventional and conservation agriculture in Central Kenyan Highlands. Department of Agricultural Resource Management. School of Agriculture & Enterprise Development, Kenyatta University **(Graduated in December, 2019)**
24. Francis Mucira (A500/1092/2016). Enhancing soybean production, economics and adoption among smallholder farmers in the central Highlands of Kenya. Department of Agricultural Resource Management. University of Embu **(Graduated September, 2019)**
25. Macharia Mohamed Ndung'u (N50/31038/2015). Tied ridging and integrated soil fertility management (ISFM) technologies for improved soybean/maize productivity in the Central Highlands of Kenya. Department of Environmental Sciences, School of Environmental Studies, Kenyatta University **(Graduate in July, 2019)**
26. Benjamin Munganga (A148F/29060/2014). Effect of Manure, tithonia and mineral fertilizer on soil properties and cassava yield in DR Congo, south-Kivu. Department of Agricultural Resource Management. Kenyatta University. **(Graduated in December, 2019)**
27. Justine Mwambi Michoma: A144/30875/2015. Soil water, growth, and yield of yellow passion fruit response to mulch and hydrogel in Embu and Kiambu Counties, Kenya. **(Graduated in December, 2019)**
28. Ruth Wanjiku Kinuthia (A147/23533/2013) Assessment of soil and water conservation structures in establishment of agroforestry trees in East Shewa and West Shewa zone in Ethiopia. Department of Agricultural Resource Management. Kenyatta University. **(Graduated in December, 2020)**
29. George Gacheru Mwaura: A142/37489/2017 Socio-economic and cultural factors influencing adoption of organic-based soil fertility management technologies in Meru south and Gatanga subcounties. **(Graduated June, 2021)**
30. Julieth Joseph Balilemwa (A147/28986/2013). Effect of water in-situ water harvesting on maize yields and soil properties in Morogoro Tanzania Department of Agricultural Resource Management. Kenyatta University **(Graduated June, 2021)**
31. Maureen Wairimu Njenga (A512/1234/2018). Influence of communication on uptake of selected climate smart agriculture practices among smallholder farmers in drylands of Tharaka-Nithi, Kenya. Department of Agricultural Economics, University of Embu. **(Graduated September, 2021)**

32. Amos Mwenda Ndeke A510/1187/2017: Gender influence on soil fertility management technologies uptake among smallholder farmers in Tharaka-Nithi County, Kenya. Department of Agricultural Economics and Extension. University of Embu. **(Graduated September, 2021)**
33. Mary Kaluki Kithome (A510/1282/2019). Effect of irrigation technologies on productivity and profitability among smallholder farmers in Machakos county. University of Embu. Graduated in 2022
34. Elvin Nyaboe Otara (A150/1351/2020). Uptake of regenerative agriculture technologies and productivity of selected cereals and pulses in the drylands of Embu county. University of Embu. Graduated in 2021
35. Jackline Wangui Kithome: Gender participation in soil fertility management in Mbeere South and Sabatia Sub Counties, Kenya. Kenyatta University, Department of Sociology **(Graduated December 2022)**
36. Mirriam Okello. A148EA/27574/2019. Optimizing soybean yield, phosphorus use efficiency and economic returns using phosphatic fertilizer and inoculation with *Bradirhizobium* in Lira City, Uganda **(Graduated in June, 2023)**
37. Mwigwirwa Joshua Gitaare: Effect of tied ridging soil fertility and polysaccharide inputs on maize, soil moisture and soil properties. Department of Agricultural Resource Management. School of Agriculture & Enterprise Development, Kenyatta University **(Graduated in June, 2023)**
38. Luciana Raphael Chappa (A148EA/21760/2020): Soil chemical properties, sunflower (*helianthus annuus*.) Yield and profitability under intercropping with Sunn hemp and Mineral fertilizer Application in Dodoma, Tanzania (Graduated in December 2023)
39. Samuel Kwezirimana (A152EA/CTY/PT/38991/2017). Impact of collective marketing participation on smallholder farmers in come in collective marketing in Muranga county, Kenya. Graduated in December 2023
40. Nungula Zephahline Emmanuely (A148EA/20690/2021). GIS-Based Land Evaluation and Suitability Assessment for Sunflower (*Helianthus Annus*) Production In Morogoro District, Tanzania (Graduated in 2024).
41. Rugendo Kangai Mercy A500/1352/2019. Resilience of Nitisols and Ferralsols to erosion as influenced by levels of soil organic matter in Tharaka-Nithi County, Kenya. University of Embu (Graduated in 2025).

2.3.7: Mentorship

1. July 2025: Postgraduate Refresher Training on Applied Data Analysis and Publishing: School of Agriculture and Environmental Sciences (ORGANIZER AND RESOURCE PERSON)
2. September 2020: Training workshop on Data Management, Analysis and Scientific Writing. Organised under VLIR OUS-funded project “Climate Smart Options allowing agricultural intensification for smallholder farmers of the central highlands of Kenya (ORGANIZER AND RESOURCE PERSON)
3. PowerPoint presentations on SLIDESHARE and RESEARCHGATE
4. Website: jaynemugwe.org

2.4 PROFESSIONAL/CONSULTING

2.4.1 Networking

1. International Centre for Research in Agroforestry (ICRPE). – 2019 to date (*collaboration in research and*

- development projects, hosting students in projects, students' supervision) Contact person: Dr Dennis Beesigamukama; dbeesigamukama@icip.e.org Dr Chia Saphan schia@icip.e.org.
2. Katholieke Universiteit Leuven (KU-Leuven) - 2004 to 2023 (Research projects and developed a training programme involving students from Belgium, co supervision of students); Contact persons: Jan Diels: jan.diels@biw.kuleuven.be; Roel Merckx: Roel.Merckx@ees.kuleuven.be
 3. African Plant Nutrition Institute (APNI) – 2019 to date (*collaboration in research and development projects, hosting students in projects, students' supervision*) Contact person: Dr James Mutegei; J.MUTEGI@apni.net and Dr Ivan Adolwa I.Adolwa@apni.net
 4. University of Embu – 2012 to date (Student supervision, Collaborative projects, Mobilizing stakeholders involved in research work); Contact Persons: Prof Daniel Mugendi dmugendi@yahoo.com; Dr Bernard Gichimu. gichimu.bernard@embuni.ac.ke; Dr Rebecca Yegon yegon.rebecca@embuni.ac.ke
 5. International Plant Nutrition Institute (IPNI) – 2012 to 2019 (*collaboration in research and development projects, hosting students in projects, students supervision*) Contact person: Dr Shamie Zingore; SZingore@ipni.net
 6. Kenya Agricultural Research Institute (KARLO) – 2000 to date (*Networking and collaboration in research and development projects, laboratory analysis, students' supervision*). Contact persons: Dr Ann Muriuki, muriukianne@gmail.com; Dr Mary Kifuko-Koech, wambuihm@yahoo.com ; kifukom@yahoo.com
 7. Ministry of Agriculture (MOA) – 2000 to date (*Networking and collaboration in extension, Farmer training*); Contact persons: Samuel Mutuma mutumapatson@gmail.com; Elizabeth Gathogo lizzbetty81@gmail.com
 8. Kamurugu Agricultural Development Initiatives -2003 to 2017 (Community Empowerment) ; Contact person: Peter Mbogo; Director kadi@jambo.co.ke
 9. ASARECA - 2004 to 2014 (Research and students supervision) contact person: Dr Hezron Mogaka hmogaka@asareca.org
 10. Alliance for a green revolution in Africa (AGRA) – 2004 to 2017 (Collaborative research and students support); Contact person: Dr Rebbie Harawa Rharawa@agra.org; Mr Abed Kiwia Akiwia@agra.org
 11. International Centre for Insect Physiology and Ecology (ICIPE) - 2006 to date (*collaboration in research, development projects and Member of the Scientific Steering Committee*). Contact persons: Dr. Martha Wangu, mmusyoka@icip.e.org
 12. University of Eldoret; (2016 to 2018) (CONNESSA project and student supervision) Dr Abigael Otinga abigaelno@gmail.com
 13. 26-27 June 2019: Shell Thiogro and IPNI meeting at Vella Kempinsikii
 14. African Green Revolution Forum: Invitation to the African Green Revolution forum (AGRF) 2018 in Kigali, Rwanda: 5-8, September, 2018
 15. University of Embu: Sabbatical Leave from September 2017 to May 2018
 16. AGRA/IFDC: Training workshop on implementation and outscaling of balanced crop nutrition in Africa 6th to 10th July 2016
 17. University of Eldoret: Joint workshop on EARFRICA-CONNESSA project partners coordination workshop from 1st to 5th February 2016
 18. AGRA: Workshop on synthesis of knowledge gaps on lime and fertilizer use for extension staff and stakeholders in ESA from 6th to 12th November 2016

2.4.2: Referee of Journal manuscripts

1. **May 2025:** Understanding interdependence that shape the use off soil fertility management practices in Northern Ghana: a relational perspective on adoption
2. **May 2025: (Third Review).** Adoption of improved livestock technologies in South West Ethiopia: factors influencing adoption and barriers to improved technologies (HELIYON-Elsevier)
3. **March, 2025:** Response of crop yield, phosphorus losses and phosphorus budget in winter wheat summer maize rotation system to long-term fertilization and cultivation (Soil and Tillage research)
4. **March 2025:** Adoption of improved livestock technologies in south West Ethiopia: factors influencing adoption and barriers to improved technologies (HELIYON-Elsevier- STILL-D-25-00533)

5. **January 2025:** Determinants of soil-nutrient best management practices: evidence from smallholder farms from Nepal. EAG-D-24-00025 (Experimental Agriculture)
6. **August 2023:** Improved forage technologies adoption in the central highland of Ethiopia HELIYON-D-22-11710 (Elsevier).
7. **July 2023:** Determinants of Dairy Technologies Adoption in Angolela-Tera District, North Shewa Zone, Ethiopia HELIYON-D-22-14609 (Elsevier).
8. **January 2023:** Enhancing sustainable agri-food systems using multi-nutrient fertilizers in Kenyan smallholder farming systems HELIYON-D-22-30398(Elsevier).
9. **November 2022:** Effect of rainfall and temperature variability on maize yield in the Asante Akim North District of the Ashanti Region, Ghana. HELIYON-D-22-21168
10. **October 2022:** Sustainable agricultural intensification Practices: What are the drivers of adoption and adoption intensity? Scientific African Journal (Elsevier)
11. **April, 2022:** Cover crops and mechanical scarification in the yield and industrial quality of upland rice. Frontiers in Environmental Science
12. **February, 2022:** Ridge-furrow plastic mulch enhances grain yield and yield stability of rainfed maize by improving resources capture and use efficiency in semi-humid drought-prone regions: a five-season field study (AGWAT-D-22-00239)
13. **February, 2022:** Effect of rainfall and temperature variability on maize yield in the Asante Akim North 2 District of the Ashanti Region, Ghana. AGWAT-D-22-00239
14. **January, 2022:**Scientific African Journal: Willingness of arable crop farmers to adopt organic farming practices in Oyo State, Nigeria (SCIAF-D-21-02070)
15. **January 2021:** Long-term effects of living grass mulching on soil hydrology and fruit yield of citrus orchard in south China
16. **July 2020: Agricultural Water Management:** Interactive effects of Zai pits and soil fertility amendments on soil properties in drier upper Eastern Kenya
17. **February 2020:** Integrated soil nutrient management technologies improve smallholder farmers' maize productivity in the Central Highlands of Kenya
18. **January 2020:** Agricultural Water Management: AGWAT_2019_708; Water productivity and its allometric mechanism in mulching cultivated maize (*Zea mays* L.) in semiarid Kenya
19. **January, 2020:** Experimental Agriculture: EAG-D-19-00344: Determinants of smallholder farmers' decisions on fertilizer use for cereal crops in the Ethiopian highlands
20. **September, 2019: African Scientific Journal:** Manuscript Number: SCIAF-D-19-00063; (September,2019) Temporal characterisation of droughts using selected indices in the Upper Tana River Watershed, Kenya
21. **February 2019: Agricultural Water Management: Manuscript number** AGWAT_2019_29 (February, 2019). Strategies of dual-mulching of ridge-and-furrow to improve maize productivity in semi-humid regions of the Loess Plateau
22. **December, 2018: Agricultural Water management: Manuscript number** AGWAT_2018_1224 (December, 2018) Vertical rotary sub-soiling and ridge-furrow with plastic mulch relieves drought stress by increasing soil water supply capacity and potato water uptake in a semiarid area
23. **September, 2018: Referee of Experimental Agriculture Journal: Reviewed Manuscript (September, 2018)** ref.: ms. no. EAG-d-18-00167 Farmers' Determinants of soil fertilization practices: ethnographic and econometric evidence from the semi-arid Ethiopian rift valley.

2.4.3: National Board Member

SATREPS Steering committee Rice Research project

2.4.4: Professional Consultant

Professional Consultant for CABI (November –December 2017): Impact of plant Clinics on Pest and disease Management in Malawi: Data analysis and writing a **Peer-Reviewed Working Paper**

OTHERS

1. Contracted by KTDA to explore the potential for sustainable biomass fuel production for the KTDA-owned tea factories in Kenya (June – September 2006).

2. Contracted by RELMA in ICRAF to document the most profitable agroforestry innovations/systems in Kenya (August 2005). <https://www.cifor-icraf.org/publications/downloads/Publications/PDFS/B15073.pdf>

2.4.5 External Examination (University –based)

1. **External examiner at South Eastern University, Kenya:** Role: Moderate examination papers and scripts in all semesters. I moderate examinations for the Department of Natural Resources Management

Thesis examination (External)

1. **University of Embu. August 2021;** Mycorrhizal fungi associated with *Aspilia pluriseta* on Phosphorus availability and growth of sorghum plants (**PhD**)
2. **University of Zimbabwe: August 2021:** Justin Chipombo Maize and weed response to fertilizer management across a soil fertility gradient in sub-humid Zimbabwe (**PhD**)
3. **University of Nairobi.** April 2021. Wilson Nguru Maina. Factors affecting the adoption of soil organic carbon enhancement technologies and their spatial distribution among small scale farmers in Kenya and Ethiopia (**Msc**)
4. **University of Nairobi:** March 2021. Stephen Muhati Ichami. Refining fertilizer recommendations using digital property maps, soil and plant testing for smallholder maize production systems in western Kenya. University of Nairobi (**Ph D**)
5. **University of Eldoret:** March 2021. Akoko Evans.“ Influence of phosphorus fertilizer on potato (*Solanum Tuberosum* L) seed production in acidic soils in Kenya (**Msc**)
6. **University of Zimbabwe** September 2018: Examination of Masters Thesis for Nyasha Marble Kafesu titled “Maize fertilization under conservation agriculture systems on heterogeneous smallholder farms in Zimbabwe (**Msc**)
7. **Jomo Kenyatta University of Agriculture and Technology:** John Nyaga Mwangi: October 2017. SC421-2926/2012 “Impact of trees on water and nutrients dynamics in smallholder maize-based farming systems in Rift Valley, Kenya. (**Ph D**)
8. **University of Embu:** September, 2016) “Effects of Tillage and Mulching on maize yield, soil water content and organic carbon in Kirege, Tharaka Nithi County, University of Embu by Evelyn Wambui Njogu-Murithi (**MSc**)”
9. **Jomo Kenyatta University of Agriculture and Technology:** Examination of 9 Masters Projects in July 2017
10. **James Cook University:** Examination of Fiona Mwaniki PhD thesis: (2016) Kenyan Farmers perception of adaptation of to climate change before and after a radio program interventions. James Cook University, Australia (**Ph D**)
11. Sydney Mwamba (October, 2016) MSc Research Methods. Root Knot Nematodes (*Meloidogyne Incognita*) interaction with selected Astaraceae plants and their potential use for nematode management. Jomo Kenyatta of Agriculture and Technology (**Masters**)
12. Ogeya Fredrick Odoyo Determination of best fit model for the distribution and crop loss associated with bacterial wilt of tomatoes. Jomo Kenyatta of Agriculture and Technology (**Masters**)
13. Megersa Tadese Jirtata Occurrence, distribution and management strategies for ascochyta blight (*Ascochyta rabiei* pass) of check pea (*Cicer arietinum* L.) in Ethiopia. (**Masters**)
14. Mambo Wilson Optimal compaction pressure, particle size and binder ratio for quality briquettes made from maize cobs. Jomo Kenyatta of Agriculture and Technology (**Masters**)

2.4.6 Thesis Examination (Internal)

1. 2010: Ruth Mwongeli (N50/10253/06) M. Env. Thesis entitled “Integrated Assessment of smallscale water harvesting and saving technologies in Machakos District, Kenya ”Planning and Management, Kenyatta University (**Masters**)

2. 2011: Kirera Samuel Jacob Muthuri's (156/10104/2007) Masters Thesis entitled "Analysis of some physical soil properties on water availability in Ngaciuma-Kinyaritha Sub-Catchment, Upper Tana Basin, Kenya" (**Masters**)
3. 2012: Robert Kaalisa (156EA/12149/2009). Masters entitled "Factors Influencing adoption and use of soil and water conservation measures in Bufundi sub catchment, Kabale District, Uganda, Kenya." (**Masters**)
4. **June 2012:** Ms. Zirhahwakuhingwa Wivine Munyahali (N50F/13010/2009) M. Env. Thesis titled "Assessment of the effects of commercial chemical products on maize yields in different agroecological zones of Kenya" (**Masters**)
5. **March 2013:** Ms Mercy Nyambura Kamau (A148/13234/09) Masters of Science in Integrated Soil Fertility Management. Thesis title "Characterization of Africa's Soil Mineralogy in relation to Soil fertility functional properties" (**Masters**)
6. **May 2013:** Mr Celestine Ndayisamba Pierre (N50EA/12339/2009) M. Env. Thesis titled "Grain legumes and Mineral Fertilizers for soil productivity improvement in maize based systems of the Eastern Province of Rwanda" (**Masters**)
7. **June 2013:** Ms Nadia Musaninkindi (A148EA/20179/2010) Masters of Science in Integrated Soil Fertility Management. Thesis title "Effect of cattle manure, mineral fertilizer and rhizobium inoculation on climbing beans production and soil properties changes in Burera District, Rwanda" (**Masters**)
8. **July 2013:** Mr Muambole Arlindo (A148F/21175/2010) Masters of Science in Integrated Soil Fertility Management. Thesis title "Efficiency of integrated incorporation of cattle manure and mineral fertilizers on maize yield in acidic soils of Beira Corridor, Mozambique" (**Masters**)
9. **August, 2013:** Mr. James Kinyae Ngulu (N50/CE/20983/10) M. Env. Thesis entitled "An assessment of the adoption of improved mango varieties as an adaptation strategy to Climate change in Makueni County, KENYA" (**Masters**)
10. **June 2014:** Ms Salome Muriuki (N85/13276/2009). Ph D Thesis: Potential of Biogas technology for climate change Mitigation and improving livelihoods of smallholder farmers in Kiambu County, Kenya" (**PhD**)
11. **November 2013:** Ms Immaculee Nyampinga (A148EA/20984/2010) Msc thesis : The effect of method, rate of urea application on nitrogen use efficiency and yield of wetland rice in Rwamagana District, Rwanda (**Masters**)
12. **April 2014:** Ms Thandar Nyi (N85F/24868/2011) Ph D Thesis title: Improving Agronomic Efficiency in Cassava-based farming system in Central Africa using organic and Inorganic Inputs" (**Ph D**)
13. **October 2014:** Mr Sylvester Nyongesa Aura: (N50/CTY/20277/2010). Msc Thesis: Effects of Integrated soil fertility management technologies on crop yields and income for smallholder farmers in Mbale Division, Kenya" (**Masters**)
14. **July 2015:** Michel Kabirigi MSc "Effects of Conservation Agriculture on bean and maize yield, soil properties and water productivity in Bugesera District, Rwanda" (**Masters**)
15. **June 2015:** Joas Tugizimana's. Effects of soil and water conservation technologies on soil productivity and bean yield in Nyamashere District, Rwanda" (**Masters**)
16. Ms. Lilian Shukuru Bahati's (A148F/212062012) "Effect of *B. Japonicum* strains on soybean nodulation and indigenous AMF colonization and their survival in Walungu Peat under different storage conditions" (**Masters**)
17. August 2016 Mr Stephen Chege Wairuri "Dynamics of conflict in decentralized forest management in Mt Kenya" (**Ph D**)
18. **October 2016:** Naomi Ongucha (A148/20168/2010) Effect of NP fertilizers and manure application on maize-bean yields, and nitrogen mineralization in the Luvisols of Katumani, Machakos County (**Masters**)
19. **October 2016:** Sarah Wairimu Kimaru (N85/24932/2012). Effects of water harvesting techniques on agricultural production in the low midland zone of Tharaka-Nithi County, Kenya (**Ph D**)
20. **October 2016:** Lucy Wangui Nganga (N85/20710/2012) Soil carbon sequestration potential of different land use types on smallholder farms of Muranga County, Kenya (**Ph D**)

21. **February 2016:** Winnie Jelagat Kimutai's (A144/24125/CTY/OL/2014). Effect of selected bradyrhizobium on growth, biological nitrogen fixation and yield of cowpea in Kilifi and Embu Counties **(Masters)**
22. March 2018: Ms Openda G. Susan A148/21591/2010 MSc Thesis "Improving maize-bean yields through improved soil moisture storage using trapezoidal bunds and manure in Machakos County-Eastern Kenya" **(Masters)**
23. **October 2018.** Ms Ngetich Alice Rotich A144/CE/24267/2013 MSc Thesis titled "Influence of spacing, plant architecture and nitrogen rates on the growth, yield and plasticity of grain Amaranth in Kiambu County" **(Masters)**
24. **May 2019:** Etabo Edung Mathew A144/OL/24077/2013: MSc Thesis titled "Effects of irrigation Scheduling and phosphatic fertilizer on yield of Nerica Rice (Oryza Sativa) in Mwea, Kirinyaga District" **(Masters)**
25. **June 2019:** Fidelis Githua A144/27027/2014 MSc Thesis titled "Effects of Acidulated Rock Phosphate on Growth and yield performance of Selected Leafy vegetables in Kiambu County. **(Masters)**
26. **June 2019:** Desire Nduwanama: titled "Effect of Nitrogen Fertilizer on Maize performance, nitrogen use efficiency and soil nitrogen transformation in smallholder farms in Rongo, Kenya" **(Masters)**
27. **September, 2019:** Heeran Mutuku: PHD/032/2029 "Tree cover perspectives and climate change resilience in the drylands of south Eastern Kenya: The case of Matungulu sub county, Machakos County" **(Masters)**
28. **October 2019:** Doris Gakii : M/TH/138: "Impact of smallscale irrigation projects on household livelihoods in Chuka/Igambangombe Constituency, Tharaka Nithi County. Kenya**(Masters)**
29. **January 2020:** Effects of Biochar and compost on soil physicochemical properties and maize from an acidic Ferrasols soil in Kamiti Sub-catchment, Kiambu County, Kenya**(Masters)**
30. **Ann Karanja April, 2020:** PhD Thesis: Quantifying Greenhouse gas emissions and carbon stocks in maize based cropping systems of Siaya County, Kenya **(Ph D)**
31. **Dennis May 2021** PHD thesis Production of Quality Organic Fertilizer from Black Soldier Fly Frass for crop production and soil Health management in Nairobi City County, Kenya. **(Ph D)**
32. **April 2021:** Effects of Human encroachment on natural Regeneration of indigenous tree seedlings in Kimakia Forest, Muranga County, Kenya **(Masters).**
33. **March 2023: Peter Omondi Bolo:** Microbial indicators of soil quality under integrated Soil Fertility Management Practice effects in Madeya, Siaya County, Kenya
34. **September, 2024:** Mercy Cherotich. Black Soldier Fly Frass Fertilizer Effects on Soil Fertility and Biological Nitrogen Fixation of Beans (Phaseolus Vulgaris) In Kiambu County **(Masters)**
35. **September 2024:** Simon Njinju (PhD). Physiological, Morphological and biochemical responses of Sorghum varieties to progressive water stress and rehydration in Siya and Baringo counties, Kenya

2.5 ADMINISTRATION AND RESPONSIBILITIES

2.6.1: Chairman: Department of Agricultural Resource Management

1. Acting Registrar, Research Innovation and Outreach (January to November, 2022)
2. Acting Dean; School of Agriculture and Enterprise Development (October 2018)
3. Renewal of appointment as Chairman: Department of Agricultural Resource Management from 7th February 2015
4. Confirmation of appointment as Chairman: Department of Agricultural resource Management from 7th February 2015
5. Appointment as Acting Chairman: Department of Agricultural Resource Management from August 2011

Achievements

1. Accreditation of BSc in Animal Health and Management programme

2. Creation of Department of Animal Sciences
3. Initiated digital Mode of learning for Four Masters Programmes

2.6.2: Staff Mentor

- Staff Mentor (2018)
- Staff Mentor for 2014/2015 Academic year

2.6 COMMUNITY SERVICE AND OTHER CONTRIBUTIONS

2.6.1: Attracting Research Grants and Development Funding

1. **May 2025:** Research grant on “Harnessing engineered microbes to boost sustainable farming in Kenya (1.5 USD);
2. **September, 2020:** Research Grant by Kenya Climate Smart Agriculture Project (KSCAP). Balanced nutrition for management of soil acidity and nutrients deficiency for sustained agricultural productivity; Ksh 9,524,813. (Two-year Project: 2020 to 2023)
3. **June 2019-** EAC Masters scholarships on Integrated Soil Fertility Management
4. **January 2019 – December 2022 (4 years):** Climate smart options allowing agricultural intensification for smallholders in the dry zones of the Central Highlands of Kenya (€ 279, 113)
5. **October 2014 – September 2018:** CONNEcting knowledge, scales and actors; An integrated framework for adaptive organic resource management, targeting soil aggradation and agroecosystems’ resilience in SSA; ERAfrica Project-NACOSTI-Kenya. 1,052, 106 EUR; **Nine partners and I was contact person, Kenyatta University Chapter**
6. **June 2014 – May 2017:** Alliance of a Green Revolution in Africa (AGRA) USD 549,645 on “Scaling up soybean and climbing beans using a value chain approach in maize-based systems of central Highlands of Kenya” www.socoproject.org
7. **September 2012-December 2013:** Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA NRM/2012/09) USD 525,003; on “Integrated Soil Fertility management for improved Livelihoods”
8. **2011 – 2013:** International Atomic Energy Association (IAEA) USD 53, 013. Unravelling beneficial impacts of Nitrogen, carbon and water dynamics in mulch-based systems on crop productivity in heterogeneous biophysical environment of the central highlands of Kenya
9. **2011-2013:** RUFORUM Graduate Research Grants: USD 60,000. Enhancing crop productivity through soil water conservation and integrated drought prediction and preparedness techniques in the drier zones of central highlands of Kenya
10. **2010-2013;** The Alliance for a Green Revolution in Africa (AGRA) (USD 806,629) on “Enhancing Productivity and Market Development of Soybeans and Climbing Beans in Central Highlands of Kenya”
11. **2008-2013,** The Flemish Inter-University Council Own Initiative (VLIR - UOS) Belgian Government funded grant (Euro 309,998.58) to conduct research on “Enhancing farmers’ benefits from integrated soil fertility management through improved water use efficiency and better marketing strategies in the highlands of central Kenya”
12. **2009-2012;** Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) funded proposal (USD 577,000.00) on “Accelerated Uptake and Utilization of Soil Fertility Management Best-Bets Practices in ECA Region”
13. **2004-2007,** The Flemish Interuniversity Council (VLIR - Belgium)
14. **2004-2006,** FARM Africa MATF Grant (UK£ 60,000) to conduct research on “participatory scaling-up of soil nutrient management technologies for increased crop yields in smallholder farms of central highlands of Kenya”.
15. **2006-2007,** Commission for Higher Education (CHE) funded proposal on “Food Security enhancement using soil nutrient replenishing technologies in the small holder farms of the central highlands of Kenya (Ksh. 3 million)”.
16. **2001 – 2004:** The Bentley Fellowship in cropping systems (20,000 Canadian Dollars). Funded research on on-farm Participatory Evaluation and Promotion of Integrated Soil Fertility Management Practices within the smallholder farms of central Kenya

2.6.2: Community Outreach Programmes:

1. Working with farmers in the field; Field days and training farming communities
2. Secretary to Christian Education Committee of Ridges PCEA Church from 2015 to 2018
3. Resource person on 19th September 2018: Scientific Writing Training, organized by Graduate School
4. Website (jaynemugwe.org) to share information on Research Methods and ISFM

2.6.3: Recognition, Awards and Honours

- 1) Certificate: Best paper award 2017; Symposium on climate change and Drought resilience in Africa; 7th to 9th November 2017
- 2) Top ten best KU Researchers in publishing by Elsevier
- 3) Best Oral Paper; Food Security Theme during 11th Egerton International Conference and Innovation week (March, 2017)
- 4) Best scientific presentation in Socio-economics and Biometrics Section (November 2006: 10th KARI Biennial conference)
- 5) Third Best scientific presentation in Gender Integration in Research category (November 2002: 8th KARI Biennial conference)
- 6) Second Best scientific presentation in Soil Fertility Category (November 2002: 8th KARI Biennial conference)
- 7) Second Best scientific presentation in Soil and Water Management Category (November 2002: 8th KARI Biennial conference) Pan-paper mills prize for best

2.7 OTHERS

2.7.1 Participation in Workshops/Conferences from 2011 to date

1. **July 2022: Bench marking visit for 7 days in Germany (Technology transfer)**
2. **29th to 31st March 2017:** 11th Egerton University International Conference and Innovation week
3. **29th November to 2nd December, 2016.** Conference by the School of Agriculture and Enterprise Development. Kenyatta University
4. **6th to 12th November 2016:** Workshop on lime and fertilizer use for East and Southern Africa, Kigali, Rwanda
5. **5th to 9th September, 2016:** Agriculture Green Revolution Forum (AGRF), UN, Nairobi, Kenya
6. **28th February to 4th March 2016:** Pan – African Grain Legume and World Cowpea conference at Avani Victoria Falls Resort, Zambia
7. **1st to 5th February 2016:** Writeshop on ISFM: ISFM writeshop at Simba Lodge, Naivasha, Kenya
8. **6th to 10th July 2015:** Implementation and Out scaling of balanced Crop Nutrition in Africa. By International Fertilizer Development Centre, Nairobi, Kenya
9. **4th to 7th February 2015:** Kick off workshop on CONNEcting knowledge, scales and actors; An integrated framework for adaptive organic resource management, targeting soil aggradation and agroecosystems' resilience in SSA, University of Eldoret, Eldoret, Kenya.
10. **1st - 5th December 2014;** International Conference on Building a new generation of Agricultural Scientists; Kenyatta University, Nairobi
11. **30 June to 4 July:** International Grantees Workshop at the Mount Meru Hotel in Arusha, Tanzania.
12. **20 – 25th October, 2013:** Soil Science Society of East Africa/African Soil Science Society Conference, Nakuru, Kenya
13. **3rd-7th September, 2013:** African Green Revolution Forum (AGRF) symposium Maputo, Mozambique
14. **14 – 17th October, 2013:** 11th African Crop Science Conference, Imperial Botanical Hotel, Entebbe, Uganda
15. **August 9th to 10th, 2013:** Training workshop on Impact Assessment of Agricultural Technologies: Embu, Kenya

16. May 2013 (15th to 17th): Agricultural Value Chain analysis (3 days) at Kaguru Training Centre, Maara, Kenya
17. January 2013: Data Management and analysis; Kenyatta university, Kenya
18. 22nd to 26th October 2012. Integrated Soil Fertility Management: From microbes to Markets. Safari Park hotel, Nairobi
19. 25th – 28th July 2012: 1st international conference on natural resources, peace and Conflicts. Karatina university College, Karatina, Kenya.
20. 4th to 8th June 2012: Workshop organized by Alliance for a Green revolution in Africa, Windsor Golf Hotel, Nairobi
21. October 2012 (One week): Agricultural Innovation Systems (AIS) and Value chain Development (VCD), Kigali, Rwanda
22. February 2011: Training workshop on group facilitation skills. Held at Embu Agricultural Training Centre on 13th February 2012
23. 23rd - 27th October, 2011; Conference on Agricultural Intensification of the African Humid Highlands (CIALCA). August 8th to 10th, 2014: Training workshop on Experimentation and Economic data collection and analysis, Embu University College, Embu County, Kenya

2.7.2 Conferences /workshops/writeshops organized

1. September 2020: Virtual training workshop on data management, analysis and scientific writing on (8th - 10) and (14th-16th), September 2020 (I was a resource person)
2. 17th to 21 October 2016: Writeshop to develop training manuals for farmer groups at AICAD, JKUAT, JUJA
3. 17th to 19th February 2016: Editing writeshop for documentation committee at Mountain Breeze Hotel, Embu
4. 16th to 20th November 2015; Writeshop to develop knowledge sharing products for integrated soil fertility management promotion; Sagana Getaway Resort; Murang'a
5. 19th – 20th February 2015: Training workshop for Field Extension Officers on ISFM, Group Dynamics and Leadership at Kaguru FTC
6. 8th to 10th August 2014: Experimentation and Economic data collection and analysis, Embu University College: Funded by AGRA
7. 13th and 17th May 2013: Value Chain stakeholders analysis workshop, Kaguru Farmers Training Centre, Chogoria: Funded by ASARECA
8. April 2013: End of AGRA SoCo project workshop, Panesic Hotel, Embu
9. 30th April and 1st May 2012: Monitoring and Evaluation workshop, Panesic Hotel Embu: Facilitator, Dr. Vincent Oeba
10. May 5-6 2003: Two-day stakeholders workshop on integrated soil fertility management strategies at Salkan hotel, Embu, Kenya
11. December 2003: One-week 21st Soil Science Society of East Africa conference, Eldoret, Kenya
12. November 2007: One-week 24th Soil Science Society of East Africa conference, Embu, Kenya
13. July 2009: Two days Inception workshop for Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop, Safari Park Hotel, Kenya.
14. January 2011: Three days Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop, Safari Park Hotel, Kenya.
15. September 2011: Three days Project closing workshop for Association for Strengthening Agricultural

2.7.3 Professional Competencies

- Competent in use of EXCEL; SPSS; Competent in use of SAS and GENSTAT
- I used these programmes extensively for analyzing my PhD data, and continue using them in my research work
- Data analysis; both experimental and survey data
- Socially, I have worked with various teams; teams to develop research proposals; implementation of research projects. I work with several social groups from the church and in my local community (spiritual and welfare groups)

2.7.4: Academic Leadership

- 2016 Chair: Subcommittee on Coding of programmes in the School of Agriculture and Enterprise development
- 2016: Spearheaded Accreditation of Animal Health and Production Programme
- 2016: Spearheaded creation of Department of Animal Sciences from the ARM Department
- Chair: Department of Agricultural Resource Management from August 2011 to February 2017e
- Coordinated a stakeholders One-day workshop for BSc Animal Health and production in July 2016
- Coordinated development of MSc Dryland Agriculture and MSc Animal Nutrition and Management
- Coordinated the development of BSc Animal Health and production programme in 2015 which was approved in March 2016
- Coordinated development of Digital School programmes in MSc integrated soil fertility management, MSc Land and water management, MSc animal Nutrition and Management and MSc Dryland agriculture from 2012 to 2013

2.7.5 Research Leadership

1. **Co PI (KU Chapter)** Research Grant by Kenya Climate Smart Agriculture Project (KSCAP). “Balanced nutrition for management of soil acidity and nutrients deficiency for sustained agricultural productivity”; **KES 9,524,813.**
2. Project Manager for AGRA project (2013 SHP 014), March 2010 to February 2013. Donor; AGRA Contact Person; Dr. Abed Kiwia; E mail; akiwia@agra-alliance.org
3. Project Leader for ASARECA Project NRM/2012/09; Upscaling soil fertility management for improved livelihoods. Donor; ASARECA Contact Person: Dr Hezron Mogaka. E mail hezronmogaka@gmail.com
4. Project Manager for AGRA project (SHP 022), March 2010 to February 2013. Donor; AGRA Contact Person; Dr. Abed Kiwia; E mail: akiwia@agra-alliance.org
5. Project Leader for ASARECA Project (NRM/09/01) July 2009 to September 2011. Donor; ASARECA Contact Person: Dr Hezron Mogaka. E mail; hezronmogaka@gmail.com

2.7.6 Capacity Building

1. January 2025: Training on “Speak to inspire” Organised by Animal People (Certificate awarded)
2. September 2020: Training on Data management, Analysis and Scientific writing for Postgraduate students from KU, UoEm, SEKU and Chuka
3. May 2016: Organised a two-day training on the use of SAS (18 participants)
4. March 2016: Organised a writeshop to develop knowledge sharing products on integrated soil fertility management
5. October 2015: Organized a two –day Agro-dealer training workshop
6. August 2015: Organized a two-day training workshop for Local processors/entrepreneurs

2.7.7: Professional Associations

1. Soil Science Society of East Africa – 2001 to date
2. Member of the African Network (AfNet) of Tropical Soil Biology and Fertility Institute of CIAT – 2000 to date
3. Chairperson: Soil Science Society of East Africa: Kenya Chapter (2010 – 2011)
4. Soil Science Society of East Africa – 2001 to date
5. African Crop Science Society – 2001 to date

6. Member of African Forestry Research Network (AFRONET)

Contribution to University Advancement

1. **June 2019:** Masters Degree in Integrated Soil Fertility Programme selected to host East African Scholarships
2. **April 2019:** PhD in Integrated Soil Fertility Management (PhD ISFM) selected for on-site visits by Partnership for Skills in Applied Sciences, Engineering and Technology (PASET)
3. Chair: Committee on development of proposals for African Union 2016
4. Chair: School farm relocation committee
5. Committee Member: Dairy Tech farm Committee
6. Committee Member: Harmonization of Credit Waiver
7. Member: Development of On line Research methodology Course (PUCU 500)
8. Committee Member: Institute of African studies

Community participation

1. September 2023-current: Chair of Christian Education in PCEA Ridges Parish
2. April 2024: Resource person and mentor in University Orientation seminar of PCEA Ridges Parish: Topic: Academic Excellence at Institutions of Higher Learning
3. April 2023: Resource person and mentor in University Orientation seminar of PCEA Ridges Parish. Academic Excellence at Institutions of Higher Learning
4. March 2024-current: Member of Board of Management: PCEA Ridges School; member of the Academic Committee
5. January 2019 to 2024: Member of Board of Management: PCEA Ridges School; Chair of Academic Committee
6. Working with farmers: Development of Extension materials and promotion of technologies through field days; Training of farmers
7. 2015 February to Date: Member of Christian Education Committee, PCEA Ridges Church.
8. 2010 to Date: Coordinator: Membley Gracious Ladies Organization
9. 2008 – 2009 Deacon: PCEA; Membley Church
10. 2017 to 2019: Chair of Gracious Girls Welfare Group (12 Members)
11. 2017 to Date: Patron: Greenberry Mentorship Initiative
12. 2014 to date: Member Woman's Guild PCEA Church: Commissioned on 14th April, 2019
13. 2015 to 2022: Church School teacher; Ridges PCEA church: Commissioned on 1st September 2019

12.0 REFEREES

Prof. Daniel Mugendi
Vice Chancellor
University of Embu
P.O. Box 60100, Embu
Email: dmugendi@yahoo.com or mugendi.daniel@embuni.ac.ke

Prof. Waceke Wanjohi
DVC, Academics
Kenyatta University
P. O. Box 43844-00100, Nairobi. Kenya.
Tel No. 0712744925
Email: wanjohi.waceke@ku.ac.ke

Prof. James B. Kung'u
Ag Deputy Vice Chancellor (Administration)
Kenyatta University,
P. O. Box 43844-00100, Nairobi. Kenya.
Tel: +254-02-810901-19 ext. 57216/218; Mobile: +254-722-740719
Email: kungu.james@ku.ac.ke