

CURRICULUM VITAE

1.0 PERSONAL PROFILE

1.1 PERSONAL INFORMATION

Name: Prof. Monicah Wanjiku Mucheru-Muna
Date of Birth: 13th September 1975
E-Mail: moniquechiku@yahoo.com;
muna.monica@ku.ac.ke
Citizenship: Kenyan
Area of specialization: Intergrated Soil Fertility
Research interest: Integrated soil fertility management, Climate change
& adaptation, Environmental Impact Assessment

Research Affiliations

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Publons • Web of Science Researcher ID [X-6087-2019](https://publons.com/researcher/3100788/monicah-mucheru-muna/)

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Semantics Scholar: <https://www.semanticscholar.org/author/Prof-Monicah-Wanjiku-Mucheru-Muna/1403061818>



1.2 ACADEMIC AND PROFESSIONAL QUALIFICATIONS

1.2.1 ACADEMIC

University: 2004-2008: Kenyatta University, PhD in Soil Science

2000-2003: Kenyatta University, Masters Degree in Environmental Studies
(Agroforestry and Rural development)

1995-1999: Kenyatta University, Bachelor of Environmental Studies (Science)
Second Class Honours (Upper Division)

High School: 1990-1993: Bishop Gatimu Ngandu Girls High School (KCSE - B+)

Primary School: 1982-1989: Tetu Girls Primary School (KCPE - A)

1.2.2 PROFESSIONAL

1. 2009: Registered NEMA Environmental Impact Assessment Lead Expert

1.3 FELLOWSHIPS

1. 2000-2003, The Rockefeller Foundation Forum on Agricultural Husbandry Fellowship for Masters studies at Kenyatta University, Kenya
2. 2004-2007, The Flemish Interuniversity Council (VLIR - Belgium) Fellowship for Ph.D. studies at Kenyatta University, Kenya

1.4 WORKING EXPERIENCE

- February 2020 to date: Associate Professor, Kenyatta University
Duties include:
- Teaching undergraduate and graduate students
 - Supervising undergraduate, and graduate students
 - Attending students' thesis defenses
 - Examination of PhD and Masters theses
- August 2013 to Feb 2020: Senior Lecturer, Kenyatta University
Duties included:
- Teaching undergraduate and graduate students
 - Supervising undergraduate, and graduate students
 - Attending students' thesis defenses
 - Examination of PhD and Masters theses
- August 2008 to August 2013: Lecturer at Kenyatta University
Duties included:
- Teaching undergraduate and graduate students
 - Supervising undergraduate, and graduate students
 - In charge of School Brochure development
 - In charge of Departmental Brochure development
 - Secretary of the African Journal of Environmental Studies and Development Committee
 - Attending students' thesis defenses
 - Departmental Examination Coordinator
- September 2003 to July 2008: Teaching as a Tutorial Fellow at Kenyatta University
Duties included:
- Teaching several undergraduate courses
 - Undertaking my PhD Research
 - Supervising Undergraduate projects
 - Undertaking developmental and research projects
- June –August 2003: Part-time teaching in Kenyatta University
Duties included
Teaching undergraduate students

2.0 RESEARCH AND PUBLICATIONS

2.1 PAPERS/PUBLICATIONS IN REFEREED JOURNALS

1. Ndeleko-Barasa EM, **Mucheru-Muna MW**, Ngetich KF 2021. Agronomic and financial benefits of direct Minjingu phosphate rock use in acidic humic nitosols of Upper Eastern Kenya. *Helijon*, <https://doi.org/10.1016/j.helijon.2021.e08332>.
2. Kebenei MC, **Mucheru-Muna M**, Muriu-Ng'ang'a F, Ndung'u CK 2021. Zai Technology and Integrated Nutrient Management for Improved Soil Fertility and Increased Sorghum Yields in Kitui County, Kenya. *Front. Sustain. Food Syst.* 5:714212, DOI: 10.3389/fsufs.2021.714212
3. 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>

4. 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>
5. 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>
6. Kinyua M, **Mucheru-Muna M**, Bolo P, Kihara J 2021. Optimizing interaction between crop residues and inorganic N under zero tillage systems in sub-humid region of Kenya. *Heliyon*, <https://doi.org/10.1016/j.heliyon.2021.e07908>.
7. Kimaru-Muchai SW, Ngetich FK, **Mucheru-Muna MW**, Baaru M 2021. Zai pits for heightened sorghum production in drier parts of Upper Eastern Kenya. *Heliyon*, <https://doi.org/10.1016/j.heliyon.2021.e08005>
8. Kimiti WW, **Mucheru-Muna MW**, Mugwe JN, Ngetich FK, Kiboi MN, 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*: 16(3): 40-51, DOI: 10.9734/ajee/2021/v16i330250
9. Ndung'u a M, Ngatia LW, Onwonga RN, **Mucheru-Muna MW**, Fud R, Moriasi DN, Ngetich KF 2021. The influence of organic and inorganic nutrient inputs on soil organic carbon functional groups content and maize yields. *Heliyon*, <https://doi.org/10.1016/j.heliyon.2021.e07881>
10. Ndeke AM, Mugwe JN, Mogaka H, Nyabuga G, Kiboi K, Ngetich F, **Mucheru-Muna M**, Sijali I, Mugendi D 2021. Gender-specific determinants of Zai technology use intensity for improved soil water management in the drylands of Upper Eastern Kenya. *Heliyon*, <https://doi.org/10.1016/j.heliyon.2021.e07217>
11. Kiboi MN, Ngetich FK, **Mucheru-Muna MW**, Diels J, Mugendi DN 2021. Soil nutrients and crop yield response to conservation-effective management practices in the sub-humid highlands agro-ecologies of Kenya, *Heliyon*, <https://doi.org/10.1016/j.heliyon.2021.e07156>.
12. Nyamwange MM, Njeru EM, **Mucheru-Muna M** 2021. Tillage, Mulching and Nitrogen Fertilization Differentially Affects Soil Microbial Biomass, Microbial Populations and Bacterial Diversity in a Maize Cropping System. *Front. Sustain. Food Syst.* 5:614527. doi: 10.3389/fsufs.2021.614527
13. Omenda JA, Ngetich KF, Kiboi MN, **Mucheru-Muna MW**, Mugendi DN 2021. Phosphorus availability and exchangeable aluminum response to phosphate rock and organic inputs in the Central Highlands of Kenya. *Heliyon*, Volume 7, Issue 3, 2021, <https://doi.org/10.1016/j.heliyon.2021.e06371>.
14. **Mucheru-Muna MW**, Ada MA, Mugwe JN, Mairura FS, 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. *Heliyon* Volume 7, Issue 2, 2021, <https://doi.org/10.1016/j.heliyon.2021.e06345>
15. Bolo P, Kihara J, **Mucheru-Muna M**, Mugendi EN, Kinyua M, Sommer R 2021. Application of residue, inorganic fertilizer and lime affect phosphorus solubilizing microorganisms and microbial biomass under different tillage and cropping systems in a Ferralsol. *Geoderma* 390, 114962. <https://doi.org/10.1016/j.geoderma.2021.114962>.
16. Murimi DN, **Mucheru-Muna MW**, Mugi-Ngenga E, Zingore S, Kinyua JM 2020. Nutrient management options for enhancing productivity and profitability of conservation tillage under on-farm conditions in central highlands of Kenya. *AIMS Agriculture and Food*, 5(4): 666–680. DOI: 10.3934/agrfood.2020.4.666
17. Rabach V, Koske J, **Mucheru Muna MW**, Muriuki J, Ngare IO 2020. Carbon sequestration in agroforestry systems between conservation agriculture and conventional practice in the ASAL area of Machakos County, Kenya. *Journal of Applied Agricultural Science and Technology* 4 (2): 118-133

18. Macharia JM, Pelster DE, Ngetich FK, Shisanya CA, **Mucheru-Muna M**, Mugendi DN 2020. Soil greenhouse gas fluxes from maize production under different soil fertility management practices in East Africa. *Journal of Geophysical Research: Biogeosciences*, 125, e2019JG005427. <https://doi.org/10.1029/2019JG005427>
19. Kimaru-Muchai, SW, Ngetich FK, Baaru, M, **Mucheru-Muna MW** 2020. Adoption and utilisation of Zai pits for improved farm productivity in drier upper Eastern Kenya. *Journal of Agriculture and Rural Development in the Tropics and Subtropics*, 121:13–22. <https://doi.org/10.17170/kobra-202002281030> ISSN: 2363-6033 (online)
20. Omenda JA, Ngetich KF, Kiboi MN, **Mucheru-Muna MW**, Mugendi DN 2019. Soil Organic Carbon and Acid Phosphatase Enzyme Activity Response to Phosphate Rock and Organic Inputs in Acidic Soils of Central Highlands of Kenya in Maize. *International Journal of Plant & Soil Science* 30(2): 1-13
21. Musyoka MW, Adamtey N, Muriuki AW, Bautze D, Karanja EN, **Mucheru-Muna M**, Fiaboe KKM, Cadisch G 2019. Nitrogen leaching losses and balances in conventional and organic farming systems in Kenya. *Nutrient Cycling Agroecosystems*, <https://doi.org/10.1007/s10705-019-10002-7>
22. Murage FM, Mugwe JN, Ngetich KF, **Mucheru-Muna MM**, Mugendi DN 2019. Adoption of soyabean by smallholder farmers in the Central Highlands of Kenya. *African Journal of Agricultural Economics and Rural Development*, 7(5) 001-012, <https://ir-library.ku.ac.ke/handle/123456789/19470>
23. Musyoka MW, Adamtey N, Buñemann EK, Muriuki AW, Karanja EN, **Mucheru-Muna M**, Fiaboe KKM, Cadisch G 2019. Nitrogen release and synchrony in organic and conventional farming systems of the Central Highlands of Kenya. *Nutrient Cycling Agroecosystems* <https://doi.org/10.1007/s10705-019-09978-z>
24. Mwebia FW, Mugwe JN, **Mucheru-Muna MW**, Mugendi DN 2019. Influence of farmer groups' characteristics on up scaling uptake of soil fertility technologies in Eastern Kenya. *Research Journal of Agriculture* No 1 Jan 2019 1-17, <http://www.researchjournali.com/view.php?id=4848>
25. Nyamwange MM, Njeru EZ, **Mucheru-Muna M** and Ngetich F 2018. Soil management practices affect arbuscular mycorrhizal fungi propagules, root colonization and growth of rainfed maize. *AIMS Agriculture and Food*, 3 (2): 120–134
26. Muriu-Ng'ang'a FW, **Mucheru-Muna MW**, Waswa F, Mairura FS 2017. Socio-economic factors influencing utilisation of rain water harvesting and saving technologies in Tharaka South, Eastern Kenya. *Agricultural Water Management* 194 (2017) 150–159.
27. 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>
28. Muthaura C, **Mucheru-Muna M**, Zingore Z, Kihara J and Muthamia J 2017. Effect of application of different nutrients on growth and yield parameters of maize (*Zea mays*), Case of Kandara Murang'a County. *ARPJN Journal of Agricultural and Biological Science*, Vol. 12, No. 1, January 2017.
29. Adamteya N, Musyok M, Zundel C, Guillermo J, Cobo, Karanja E, Fiaboe K, Muriuki A, **Mucheru-Muna MW**, Vanlauwe B, Berseta E, Messmera M, Gattingera A, Bhullara G, Cadisch G, Fließbach A, Mädera P, Niggli U, and Foster D. 2016. Productivity, profitability and partial nutrient balance in maize-based conventional and organic farming systems in Kenya. *Agriculture, Ecosystems and Environment* 235 (2016) 61–79
30. 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. Inderscience Publishers Ltd, <https://doi.org/10.1504/IJARGE.2016.076928>
31. 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>
32. Kisaka MO, **Mucheru-Muna M**, Ngetich F, Mugwe J, Mugendi DN, Mairura F, Shisanya C & GL

- Makokha 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* DOI 10.1007/s00704-015-1413-2, <https://hdl.handle.net/10568/73658>
33. Kisaka MO, **Mucheru-Muna M**, Ngetich F, Mugwe J, Mugendi DN, Mairura F 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*, <https://doi.org/10.1017/S0014479715000095>
 34. **Mucheru-Muna MW**, Mugendi DN, Pypers P, Mugwe JN, Kung'u JB, Vanlauwe B and Merckx R 2014. Enhancing maize productivity and profitability using organic inputs and mineral fertilizer in central Kenya small-hold farms. *Experimental Agriculture* 50: 250-269, <https://doi.org/10.1017/S0014479713000525>
 35. Matusso JMM, Mugwe JN and **Mucheru-Muna MW** 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,
 36. 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>
 37. Matusso JMM, Mugwe JN and **Mucheru-Muna MW** 2014. Effects of different maize (*Zea mays* L.) – soybean (*Glycine max* (L.) Merrill) intercropping patterns on yields and economics. *Advanced Journal of Agricultural Research* Vol. 2(003), pp. 38-48, March, 2014, <http://www.advancedjournals.org/AJAR>
 38. 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, <https://doi.org/10.1016/j.agrformet.2013.12.011>
 39. Okeyo AI, **Mucheru-Muna M**, Mugwe J, Mugendi DN, Diels J and Shisanya CA 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>
 40. Njenga NW, **Mucheru-Muna MW** and Muriuki J 2014. Assessing perceived impacts of climate change and how small scale farmers adapt in N in North Kinangop Location, Kenya. *The International Journal of Innovative Research and Studies* 3: 68-85
 41. Matusso JMM, Mugwe JN and **Mucheru-Muna MW** 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
 42. 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, April 2014
 43. 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
 44. Nyi T, **Mucheru-Muna MW**, Shisanya C, Lama JP, Mutuo PK, Pypers P, Vanlauwe B 2014. Effect of Delayed Cassava Planting on Yields and Economic Returns of a Cassava-Groundnut Intercrop in the Democratic Republic of Congo. *World Journal of Agricultural Research* 2(3):101-108.
 45. Ngetich KF, Diels J, Shisanya CA, Mugwe JN, **Mucheru-Muna M**, Mugendi DN. 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 (2014) 288–296, <https://doi.org/10.1016/j.catena.2014.05.026>
 46. Kimaru SM, **Mucheru-Muna MW**, Mugwe J, Mairura FS and Mugendi DN 2014. Client Focused

- Extension Approach for Disseminating Soil Fertility Management in Central Kenya *International Journal of Agricultural Extension*. Vol 2, No 2 (2014) 129-136: *Int. J. Agric. Ext.* ISSN: 2311-6110 (Online), 2311-8547 (Print) <http://www.escijournals.net/IJAE>, <http://escijournals.net/index.php/IJAE/article/view/801> <http://ir-library.ku.ac.ke/handle/123456789/11707>
47. Kisaka MO, **Mucheru-Muna M**, Ngetich F, Mugwe J, Mugendi DN, Mairura F 2014. Rainfall Variability, Drought Characterization, and Efficacy of Rainfall Data Reconstruction: Case of Eastern Kenya. *Advances in Meteorology*, Volume 2014, Article ID 380404, 16 pages
 48. Macharia J, Mugwe J, **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* 4, 701-711, ISSN 1939-1250, doi: 10.17265/2161-6264/2014.09.003, <https://ir-library.ku.ac.ke/handle/123456789/10372>
 49. Njenga NW, **Mucheru-Muna MW** and Muriuki J 2013. Climate Change Impacts on Small Scale Farmers in North Kinangop Location, Kenya. *The International Journal of Climate Change: Impacts and Responses*. Volume 5, 2013
 50. 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://irlibrary.ku.ac.ke/handle/123456789/8751>
 51. Njeru PNM, Mugwe J, **Mucheru-Muna M**, Maina I, Mwangi DM, Amboga S, Miruka M, Lekasi JK, Kimani SK, Miriti J, Gitari J, Mahasi M, Mutea K and Muriithi F 2013. Integrating Scientific and Farmers' Evaluation of Water Harvesting and Soil Fertility Technologies on Sorghum Productivity in Eastern Kenya. *E. Afr. agric. For. J.* (2013) 78(3), 143-150
 52. Kimaru SM, **Mucheru-Muna MW**, Mugwe J, Mairura FS and 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)* Vol. 3, Issue 1, Mar 2013, 197-206, <https://www.researchgate.net/publication/262680353>
 53. Mutegi EM, Kung'u JB, **Mucheru-Muna MW**, Mugendi DN 2012. Consequences of organic-mineral N soil fertility amendments on nitrogen uptake and maize grain yield in the smallholder farms of Meru South district, Kenya. *Sky Journal of Soil Science and Environmental Management* Vol. 1(1), pp. 9–14
 54. 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: 89–99, <http://nbn-resolving.de/urn:nbn:de:hebis:34-urn:nbn:de:hebis:34-2012092441785>
 55. Mutegi1 EM, Kung'u JB, **Mucheru-Muna MW**, Pypers P, Mugendi DN 2012. Complementary effects of organic and mineral fertilizers on maize production in the smallholder farms of Meru South District, Kenya. *Agricultural Sciences* 3: 221-229
 56. **Mucheru-Muna MW**, Pypers P, Mugendi D, Kung'u J, Mugwe J, Merckx R and Vanlauwe B 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>
 57. Mugwe J, Mugendi D, **Mucheru-Muna MW**, Odee D and Mairura F 2009. Effect of selected organic materials and inorganic fertilizer on the soil fertility of a Humic Nitisol in the central highlands of Kenya. *Soil Use and Management* 25: 434–440
 58. **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 semi-arid regions in Central Kenya. *Research Journal of Agriculture and Biological Sciences* 5 (6): 978-993

59. Mugwe J, **Mucheru-Muna MW**, Mugendi DN, Kung'u J, Bationo A, Mairura F 2009. Adoption potential of selected organic resources for improving soil fertility in the central highlands of Kenya. *Agroforestry Systems* DOI 10.1007/s10457-009-9217-y
60. Shisanya CA, **Mucheru MW**, Mugendi DN and Kung'u JB. 2009. Effect of organic and inorganic nutrient sources on soil mineral nitrogen and maize yields in central highlands of Kenya. *Soil and Tillage Research*, 103(2), 239-246
61. 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
62. **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
63. Mugwe J, Mugendi D, **Mucheru-Muna MW**, Merckx R, Chianu J and Bernard V 2008. Determinants of the decision to adopt integrated soil fertility management practices by small holder farmers in the central highlands of Kenya. *Experimental Agriculture* 45: 61-75.
64. Mugwe J, Mugendi D, Kung'u J and **Mucheru-Muna MW** 2008. Maize yields response to application of organic and inorganic inputs under on-station and on-farm experiments in central Kenya. *Experimental Agriculture* 45: 47-59
65. **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

2.2 PEER-REVIEWED BOOK CHAPTERS WITH ISBN NUMBERS

1. Njeru PNM, Mugwe J, **Mucheru-Muna M**, Maina I, Kimani SK, and Lelgut DK 2018. Drought-Tolerant Crops in Kirinyaga County, Kenya: Climate-Smart Agriculture Adaptation Strategies W. In Leal Filho (ed.), Handbook of Climate Change Resilience, Springer Nature Switzerland AG 2018. (https://doi.org/10.1007/978-3-319-71025-9_80-1)
2. 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**).
3. Njeru PNM, Mugwe JN, Maina I, **Mucheru-Muna M**, Mugendi DN, Lekasi JK 2015. Integrating Farmers and Scientific Methods for Evaluating Climate Change Adaptation Options in Embu County. In: 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**).
4. Njeru PNM, Mugwe JN, Maina I, **Mucheru-Muna M**, Mugendi DN, Lekasi JK, Kimani SK, Wamungo J, Oeba VO and Muriithi F 2014. Adapting Rain-fed Agriculture to Climate Change: An Overview of Sorghum (*Sorghum bicolor* (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 Technology Transfer. United Nations Development Programme - Kenya 2014, pp 137-145 (*ISBN 978 9966 1805 5 1*)
5. Kimaru-Muchai S.W., **Mucheru-Muna M**, Mugwe J.M., Mairura F.S and Mugendi D.N. 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. (Routledge, **3 Dec 2013; ISBN-10: 0415532736, ISBN-13: 978-0415532730**), pp 281-290

6. Ngetich KF, Shisanya CA, Mugwe JN, **Mucheru-Muna MW** and Mugendi DN 2012. The potential of organic and inorganic nutrient sources in sub-Saharan African crop farming systems. In Soil Fertility Improvement and Integrated Nutrient Management - A Global Perspective. Edited by: Joann K. Whalen. InTech, *ISBN 978-953-307-945-5*
7. 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.*
8. Kimaru-Muchai S, Mugwe JN, Mugendi DN and **Mucheru-Muna MW** (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.*
9. 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.*
10. Ngetich KF, Mugwe JN, **Mucheru-Muna MW**, Shisanya CA, Diels J and Mugendi DN 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.
11. Mugendi DN, Waswa BS, **Mucheru-Muna MW**, and Kimetu JM 2011. Strategies to adapt, disseminate and scale out legume-based technologies. In A Bationo, Waswa B, Okeyo J, Maina F, Kihara J and Mokuwunya U (eds). Fighting poverty in sub-saharan Africa: The multiple Roles of legumes in integrated soil fertility management, pp 85-116, Springer NL. *ISBN 978-94-007-1535-6*
12. Mugendi DN, Waswa BS, **Mucheru-Muna MW**, Kimetu JM and Palm C 2011. Comparative analysis of the current and potential role of legumes in integrated soil fertility management in East Africa. In A Bationo, Waswa B, Okeyo J, Maina F, Kihara J and Mokuwunya U (eds). Fighting poverty in sub-saharan Africa: The multiple Roles of legumes in integrated soil fertility management, pp 151-173, Springer NL. *ISBN 978-94-007-1535-6*
13. **Mucheru-Muna M**, Mugendi D, Pypers P, Mugwe J, Vanlauwe B, Merckx R and Kung'u JB 2011. Increasing productivity through maize-legume intercropping in central Kenya. In A Bationo, Waswa B, Okeyo J, Maina F, and Kihara J (eds). Innovations as key to the Green Revolution in Africa – Vol 1, Exploring the Scientific Facts. Pp 843-858, Springer NL *ISBN 978-90-481-2541-8*
14. Mugwe J, Mugendi D, **Mucheru-Muna M** and Kung'u JB 2011. Soil inorganic N and N uptake by maize following application of legume biomass, tithonia, manure and mineral fertilizer in central Kenya. In A Bationo, Waswa B, Okeyo J, Maina F, and Kihara J (eds). Innovations as key to the Green Revolution in Africa – Vol 1, Exploring the Scientific Facts. Pp605-616, Springer NL *ISBN 978-90-481-2541-8*
15. **Mucheru-Muna M**, Mugendi D, Pypers P, Mugwe J, Vanlauwe B, Merckx R and Kung'u JB 2011. Effect of organic inputs and mineral fertilizer on maize yield in a ferralsol and nitisol soil in central Kenya. In A Bationo, Waswa B, Okeyo J, Maina F, and Kihara J (eds). Innovations as key to the Green Revolution in Africa – Vol 1, Exploring the Scientific Facts. Pp 191-203, Springer NL *ISBN 978-90-481-2541-8*
16. Mugendi DN, Mugwe J, **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 A Bationo, Waswa B, Okeyo J, Maina F, and Kihara J (eds). Innovations as key to the Green Revolution in Africa – Vol 1, Exploring the Scientific Facts. Pp 1279-1296605-616, Springer NL *ISBN 978-90-481-2541-8*
17. 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**
18. 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**
 19. **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**
 20. Kaburu D, **Mucheru-Muna MW** and Mugendi DN 2006. Mineral Fertilizers. 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**
 21. Mugwe J, **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**
 22. 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**
 23. **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**
 24. **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.
 25. **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)

2.3 REVIEWED CONFERENCE PAPERS (PROCEEDINGS)

1. Njue, A.M, **Mucheru**, M.and Maina, M. (2016). Pesticide use knowledge, attitude and perception influence residue occurrence in french bean (*Phaseolus vulgaris*) pods in murang'a county, Kenya. In: Isutsa, D.K. *Proceedings of the First International Research Conference held in Chuka University, 28th to 30th October, 2015 Chuka, Kenya*, pp 179-185
2. 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
3. Vincent Rabach, **Monicah Mucheru-Muna**, Jonathan Muriuki and James Koske (2016). Combining agroforestry with conservation agriculture for soil fertility enhancement in the dryland context: case of Machakos 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 214-229
4. F.W. Ng'ang'a, **M. Mucheru-Muna**, F. Waswa, F.S Mairura (2016). Farmer knowledge and utilization of rainwater harvesting and conservation technologies in a semi-arid agro-ecozone 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 239-254
 5. 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
 6. 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
 7. 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
 8. Muchai, S.W.K. Baaru, M., Ngetich, K. F. and **Mucheru-Muna, M.W.M.** (2015). Adoption and Utilization of Zai Pits for Improved Farm Productivity in Tharaka-Nithi County, Kenya. In: Isutsa, D.K. Proceedings of the First International Research Conference held in Chuka University, 29th to 31st October, 2014 Chuka, Kenya, pp 126-130
 9. M.O. Kisaka, **M. 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
 10. 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
 11. **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
 12. J.S. Abuli, 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
13. A.M. Ndung'u, J.N. Mugwe, **M. Mucheru-Muna** 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
 14. 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
 15. 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
 16. Zundel C, Schneider M, Musyoka M, Muriuki A, Vanlauwe B, **Mucheru-Muna M**, Chabi-Olaye A and Niggli U (2009) Long term performance of organic crop rotations in the tropics: First results from a high and medium potential site in sub-humid Central Kenya. African Organic Conference, Kampala, Uganda, 19-22 May 2009. In: Ssekyewa C and Neuhoff D (EDS). Fast tracking sustainable development in Africa through harnessing organic agriculture and bio-technology, Uganda Martyrs University, Faculty of Agriculture, Kampala, Uganda pp 30-31
 17. 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.
 18. 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
 19. **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
 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. 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

22. Mugendi DN, **Mucheru MW**, Micheni A, Mugwe JN, Kung'u JB and Otor S 2001. Soil fertility strategies for improved food production in the central highlands of Kenya. Proceedings of the 5th Africa Crop Science Conference, Lagos, Nigeria. 5:897-904. **ISSN 1023-070X**

2.4 NON REVIEWED CONFERENCE PAPERS

1. Ngetich KF, Mugwe JN, **Mucheru-Muna MW**, Shisanya CA, Diels J and Mugendi DN (2010) Evaluation of strategies that optimizes water productivity in maize; simulation and testing of crop field practices using AquaCrop model in the Central Highlands of Kenya. Conference paper presented during the First East African Regional Scientific Conference of Pure and Applied Science. 10-13th August 2010, Kenyatta University, Kenya.
2. Musyoka M, Zundel C, Chabi-Olaye A, Muriuki A, **Mucheru-Muna MW** and Vanlauwe B (2010) Site-specific organic and conventional crop yields in a long-term farming systems comparison in sub-humid central Kenya. Paper presented during the Tropentag, Zurich, Switzerland, 14-16 September 2010
3. Pieter P, Munyahali W, Mutegi E, Musyoki M, Mburu M, Okalebo R, **Mucheru-Muna M** and Lessueur D (2010) An evaluation of alternative methods of P application for increased maize production under smallholder farmers' conditions in Kenya. Paper presented during the 4th International symposium on phosphorus dynamics in the soil – plant continuum (ISPDSPC), Beijing, China, 19th to 23rd September 2010.
4. Ngetich KF, Mugwe JN, **Mucheru-Muna MW**, Shisanya CA, Diels J and Mugendi DN (2010) 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. Paper presented during the 6th Asian Regional Conference (ICID) Yogyakarta, Indonesia. 8-16th Oct 2010
5. Macharia JM, **Mucheru-Muna MW**, Mugwe JN, Mairura SF and Mugendi DN (2011) Knowledge levels and training needs of smallholder farmers in Meru south and Mbeere south districts, Kenya. Paper presented at Safaripark Kenya in Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop. 24th to 26th January, 2011. **(with student)**
6. Kimaru-Muchai SW, **Mucheru-Muna MW**, Mugwe JN, Mairura F, Kimemia J and Mugendi DN (2011) Gender disparities in uptake of information on soil fertility management in the Central Highlands of Kenya. Paper presented at Safaripark Kenya in Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop. 24th to 26th January, 2011. **(with student)**
7. Kimaru-Muchai SW, **Mucheru-Muna MW**, Mugwe JN, Mairura F, Kimemia J and Mugendi DN (2011) Extension system analysis in dissemination of soil fertility technologies in the Central Highlands of Kenya. Paper presented at Safaripark Kenya in Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop. 24th to 26th January, 2011. **(with student)**
8. Kimaru Muchai SW, **Mucheru-Muna MW**, Mugwe JN, Mairura F, Kimemia J and Mugendi DN (2011) Enhancing communication for effective up-scaling of soil fertility technologies in central Kenya. Paper presented at Safaripark Kenya in Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop. 24th to 26th January, 2011. **(with student)**
9. Ngetich KF, Shisanya CA, Mugwe J, **Mucheru-Muna MW**, Mugendi DN and Diels J (2011) Tillage and surface management effects on soil water content and maize productivity in the Central Highlands of Kenya. Conference paper presented during Lake and Catchment Research Symposium (LARS) 2011. 14-18 March 2011, Kenyatta University, Kenya.
10. Mugendi DN, **Mucheru-Muna MW**, Ngetich KF, Mugwe J, Vanlauwe B, Merckx R and Diels J (2011) Organic inputs and mineral fertilizer effects on soil water content and maize productivity in Mbeere District, Kenya. Paper presented during the International Symposium on Soil Organic Matter 11-14 July 2011, Leuven, Belgium.

11. Kimaru-Muchai SW, **Mucheru-Muna MW**, Mugwe JN, Kimemia J, Mugendi DN and Macharia JM (2011) The effect of education levels in dissemination of soil fertility management practices in the central highlands of Kenya. Paper presented during the Kenyatta University International Conference 20-22nd July (*with student*)
12. Mugendi DN, Ngetich KF, Mugwe J, **Mucheru-Muna M**, Shisanya CA and Diels J (2011). Effects of sub-soiling and soil surface management on maize productivity in the central highlands of Kenya. Conference paper presented during the ASA CSSA SSSA International Annual Meetings on 16-19th Oct 2011, San Antonio, TX USA.
13. Jefwa JM, Asrat A, Hermann L, Jemo M, Kavoo A, Lesueur D, Majengo C, **Mucheru M**, Mukhongo R, Mulet F, Munyahali W, Mutegi E, Mwangi E, Ncho C, Nwoke OC, Okalebo R, Pypers P, Were B and Yusuf A (2011) Do commercial biological and chemical products increase crop yields and economic returns under smallholder farmer conditions? CIALCA Conference on Agricultural Intensification of the African Humid Highlands held on 24th -27th October 2011 in Kigali, Rwanda.
14. Ngetich F, Mugwe JN, Mucheru-Muna M, Shisanya CA, Diels J and Mugendi DN (2011) Planting dates effect on maize yield performance under rainfed conditions in the Central Highlands of Kenya. CIALCA Conference on Agricultural Intensification of the African Humid Highlands held on 24th - 27th October 2011 in Kigali, Rwanda.
15. Kimaru-Muchai S.W., **Mucheru-Muna M.**, Mugwe J.M., Mairura F.S and Mugendi D.N. (2011) Factors that influence reliability of information sources on soil fertility management practices in the Central Highlands of Kenya. The sixth JKUAT scientific, technological and industrialization conference held on 16th -18th November 2011 in JKUAT Main Campus Juja Nairobi, Kenya. (*with student*)
16. Munyahali W, Mutegi E, **Mucheru-Muna M**, Didier L and Pieter P (2011) Evaluation of commercial chemical products for increased maize production through the use efficiency of applied P under smallholder farmers' conditions in different agro-ecological zones of Kenya. CIALCA Conference on Agricultural Intensification of the African Humid Highlands held on 24th -27th October 2011 in Kigali, Rwanda. (*with student*)
17. Mugwe J, Mugendi D, Mwebia FW, Kimaru S and **Mucheru-Muna M** (2011) Maize yield response to intercropping and application of manure, tithonia and fertilizer in the central highlands of Kenya. CIALCA Conference on Agricultural Intensification of the African Humid Highlands held on 24th -27th October 2011 in Kigali, Rwanda.
18. Macharia JM, Mugwe JN, **Mucheru-Muna MW**, Mairura S, Kimani SK and Mugendi DN (2012) Training needs in soil fertility management for farmers and extension workers in central highlands of Kenya. KARI Conference, KARI Hqs, Nairobi, Kenya, 22 to 28th October 2012. (*with student*)
19. **Mucheru-Muna MW**, Ngetich F, Mugendi DN, Mugwe JN, Pypers P, Vanlauwe B, Diels J and Merckx R (2012) Effect of inputs application on yields of soybean and climbing a maize-legume rotation in central Kenya. Presented in the Integrated Soil Fertility Management: From microbes to Markets. Safari Park hotel, Nairobi, Safari park hotel, Nairobi, Kenya, 22 to 26th October 2012. (*with student*)
20. Mugwe JN, **Mucheru-Muna MW**, Muthamia J and Mugendi DN (2012) Effect of inputs application on yields of soybean and climbing a maize-legume rotation in central Kenya. Presented in the Integrated Soil Fertility Management: From microbes to Markets. Safari Park hotel, Nairobi, Safari park hotel, Nairobi, Kenya, 22 to 26th October 2012.
21. Mugwe JN, Mugendi DN and **Mucheru-Muna MW** (2012) Farm and socio-economic factors influencing farmers' decision to cultivate soybeans in the central highlands of Kenya (2012) Safari park hotel, Nairobi, Kenya. Presented in the Integrated Soil Fertility Management: From microbes to Markets. Safari Park hotel, Nairobi, Safari park hotel, Nairobi, Kenya, 22 to 26th October 2012.
22. Okeyo I, **Mucheru-Muna MW**, Mugwe JN, Ngetich F, Mugendi DN, Diels J (2012) Effect of selected soil and water conservation techniques on rainfall use efficiency and maize productivity in central highlands of Kenya. Presented in the Integrated Soil Fertility Management: From microbes to

- Markets. Safari Park hotel, Nairobi, Safari park hotel, Nairobi, Kenya, 22 to 26th October 2012. (*with student*)
23. Ngetich F, Diel J, Shisanya C, Mugwe JN, **Mucheru-Muna MW** and Mugendi DN (2012) Effects of soil and water conservation techniques on runoff, sediment yield and maize productivity. Presented in the Integrated Soil Fertility Management: From microbes to Markets. Safari Park hotel, Nairobi, Safari park hotel, Nairobi, Kenya, 22 to 26th October 2012
 24. Mugendi DN, Ngetich KF, Mugwe JN, **Mucheru-Muna M**, Shisanya CA and Diels J (2013) Subsoiling and soil surface management effects on maize productivity in the central highlands of Kenya. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013
 25. Mugwe JN, **Mucheru-Muna M**, Muthamia J and Mugendi D (2013) Effect of inputs application on yields of soybean and climbing bean in a maize - legume rotation system in central Kenya. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013
 26. Mugi EW, Ngetich FK, **Mucheru-Muna MW**, Mugwe JN, Mugendi DN and Mairura F (2013) Integrating indigenous and conventional knowledge-based seasonal climate forecasts for farmers enhanced adaptation to climate variability in Tharaka-Nithi and Kitui counties. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013 (*with student*)
 27. Kiboi MN, **Mucheru-Muna MW**, Ng'etich FK, Mugwe JN, Mugendi DN and Wambugu S (2013) Effects of selected soil water conservation strategies on maize yield through farmer managed trials in the central highlands of Kenya. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013 (*with student*)
 28. Adamtey, N., Cobo, J.G., Musyoka, M., Karanja, E., Fiaboe, K.M., Muriuki, A., **Mucheru-Muna, M.**, Berset, E., Fliessbach, A., Forster, D., (2014). Productivity of maize and baby corn in organic and conventional farming systems. Tropentag. "Bridging the gap between increasing knowledge and decreasing resources". 17-19 September, Prague, Czech Republic.
 29. Mugendi DN, Ngetich FK, Mugwe JN, **Mucheru-Muna MW**, Shisanya AC and Diels J. (2014). Sowing Date and Timing of Nitrogen Fertilizer Application Effects on Soil Water Content and Maize Yield in the Central Highlands of Kenya. Paper presented during International Annual Meetings of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America held on November 2 to 5, 2014.
 30. Kiboi MN, Ngetich FK, **Mucheru Muna M**, Diels M, Mugwe J and Mugendi DN (2014) Effects of soil water conservation strategies on maize yield stability in farmer managed trials at Embu and Tharaka-Nithi Counties, Embu International Conference on Building a new generation of Agricultural Scientists (**Pg 141-book of abstracts**) 1st to 5th December 2014 (*with student*)
 31. Sibomana JD, Mugwe JN, Ngetich FK, **Mucheru-Muna** and Mugendi DN (2014) Effect of integrated soil fertility management and tied-ridging on selected soil properties and crop yields in Meru County, Kenya International Conference on Building a new generation of Agricultural Scientists (**Pg 142-book of abstracts**) 1st to 5th December 2014 (*with student*)
 32. Njeru PNM, Mugwe JN, **Mucheru Muna M**, Maina I, Mugendi D, Esilbaba AO (2014) Rainfed agriculture adaptation to climate change variability for sorghum productivity in semi arid areas of Embu County International Conference on Building a new generation of Agricultural Scientists (**Pg 153-book of abstracts**) 1st to 5th December 2014 (*with student*)
 33. Matusso J M, Mugwe JN and M **Mucheru-Muna** (2014) 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) 1st to 5th December 2014 (*with student*)
 34. Mugi EW, **Mucheru_Muna MW**, Mugwe JN, Ngetich FK, Mugendi DN and Mairura FS (2014) 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 *(with student)*
35. Masika OK, Mucheru-Muna, Ngetich FK, Mugwe JN, Mugendi DN and Mairura F (2016). Spatial-temporal maize productivity and stability response to soil-water-use efficiency strategies under high rainfall variability agroecologies. Third International Conference, Chuka University 26th to 28th October 2016 *(with student)*
 36. Masika O.K, Mugwe JN, Ngetich FK, **Mucheru-Muna M**, and Mugendi D (2016). Performance evaluation of the Apsim-model on maize productivity in integrated soil fertility management in Kenya's dryer agroecosystems. Third International Conference, Chuka University 26th to 28th October 2016 *(with student)*
 37. Mugwe JN, Sibomana D., Ngetich FK, **Mucheru-Muna MM** and Mugendi DN (2017). Response of Maize and Soybean to Tied Ridging and Combined Application of Manure, Tithonia and Fertilizer in the Central Highlands of Kenya. 11th Egerton University International Conference and Innovation week (29th to 31st March 2017)
 38. Njagi EW., **Mucheru-Muna, M.**, Mugwe, J., Ngetich, K F., and Mugendi, D N. (2017). Collective action in seed distribution; Case of soybean (*Glycine max*) in Mbeere South, Meru South and Imenti South sub counties of Eastern Kenya. 11th Egerton University International Conference and Innovation week (29th to 31st March 2017) *(with student)*
 39. Murage, F.M., Mugwe, J.N., Ngetich, K.F., **Mucheru-Muna, M.M.** and Mugendi, D.N (2017). Effect of phosphorus on growth and yields of soybean (*Glycine max* L) varieties in the central highlands of Kenya. 11th Egerton University International Conference and Innovation week (29th to 31st March 2017)
 40. Kibet P, NK Korir, Mugwe J N, **Mucheru-Muna M** and Mugendi D.N (2017). Effects of agricultural lime types on soil properties and maize (*Zea mays* L) performance in acidic soils of Tharaka Nithi county, Kenya. 11th Egerton University International Conference and Innovation week (29th to 31st March 2017)
 41. Njoroge GM, Mugwe,J, Ngetich K.F, **Mucheru-Muna. M**, Bett. E, and Mugendi.D (2017). Agroecological suitability screening of soybean (*Glycine max*) varieties in Meruu and Tharaka Nithi counties. 11th Egerton University International Conference and Innovation week (29th to 31st March 2017)
 42. Kimiti W, **Mucheru-Muna MW**, Mugwe JN, Ngetich F and Mugendi D (2018) Effect of lime, manure and fertilizer on soil acidity and maize performance at Tharaka Nithi County, Kenya. 12th Egerton University International Conference and Innovation week (27th to 29th March 2018) pp 24
 43. Ngetich KF, Diels J, Mugwe JN, **Mucheru-Muna MW**, Shisanya CA and Mugendi DN (2018). Rainfall distribution, sowing date and timing of nitrogen fertilizer application effects on soil water content and maize productivity in Tharaka Nithi County, Kenya. 12th Egerton University International Conference and Innovation week (27th to 29th March 2018) Pp 13
 44. Kibet, P, Korir NK, Mugwe JN, **Mucheru-Muna MW**, Ngetich FK and Mugendi DN (2018). Granular and powdered limes effects on soil properties and maize performance in soils of Tharaka Nithi County, Kenya. 12th Egerton University International Conference and Innovation week (27th to 29th March 2018) Pp 23
 45. Mugwe JN, Mutesa F, Ngetich KF, **Mucheru-Muna MW** and Mugendi DN (2018). Mulch application increase maize and soyabean yields in central highlands of Kenya. 12th Egerton University International Conference and Innovation week (27th to 29th March 2018) Pp 16
 46. Ndungu M, **Mucheru-Muna MW**, Mugwe JN, Ngetich FK and Mugendi DN (2018). Effects of tied-ridging, manure and tithonia combined with mineral fertilizer on maize-soyabean yields and their profitability in Cental Highlands of Kenya (2018). 12th Egerton University International Conference and Innovation week (27th to 29th March 2018) Pp25
 47. Omenda JA, Ngeich KF, **Mucheru-Muna MW**, Kiboi MN, Mugendi DN (2019). Response of soil organic carbon and acid phosphatase enzyme activity to phosphate rock and organic inputs on acidic

soils of central highlands of Kenya. Kenyatta University Biennial Research and Innovation Conference (23rd to 25th October 2019). Pp 107 (*with student*)

48. Ndeleko-Barasa EM, **Mucheru-Muna MW**, Ngetich KF (2019). Response of phosphate rock fertilizer on maize yields in acidic soils of Tharaka-Nithi County. Kenyatta University Biennial Research and Innovation Conference (23rd to 25th October 2019). Pp 85-86 (*with student*)

2.5 BOOKS PUBLISHED/EDITED

1. 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. 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*)

2.6 TECHNICAL PUBLICATIONS

1. **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
2. Mugwe JN, Mugendi DN, **Mucheru-Muna MW** and Kung'u JB (2006). *Calliandra calothyrsus* for increased crop yields (Pamphlet)
3. Mugwe JN, Mugendi DN and **Mucheru-Muna MW** (2006). Cattle manure for increased crop yields (Pamphlet)
4. Mugendi DN, Mugwe JN, **Mucheru-Muna MW** and Kung'u JB (2006). *Tithonia diversifolia* green manure for increased yields (Pamphlet).
5. **Mucheru-Muna MW**, Mugwe JN and Mugendi DN (2006). *Mucuna pruriens* for soil fertility improvement (Pamphlet)
6. **Mucheru-Muna MW**, Kimaru S, Mugwe JN and Mugendi DN (2012). Mother baby Extension Approach. A poster for use by extension personnel. KU-ASARECA. Poster no. 1
7. **Mucheru-Muna MW**, Kimaru S, Mugwe JN and Mugendi DN (2012) Kamuingi Koyaga Ndiri. A poster for use by extension personnel. KU-ASARECA. Poster no. 2
8. **Mucheru-Muna MW**, Kimaru S, Mugwe JN and Mugendi DN (2012). Soil is Wealth, Lets protect it. A poster for use by extension personnel. KU-ASARECA. Poster no. 3
9. Mugwe JN, Mugendi DN, **Mucheru-Muna MW** and Kimaru S (2012). Good management of cattle manure for increased yields. A Pamphlet for use by Extension Personnel and Farmers in Kenya. KU-ASARECA. Brochure No 1
10. Mugwe JN, Mugendi DN, **Mucheru-Muna MW** and Kimaru S (2012). 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
11. Mugwe JN, Mugendi DN, **Mucheru-Muna MW** and Kimaru S (2012). Tithonia for increased yields. A Pamphlet for use by Extension Personnel and Farmers in Kenya. KU-ASARECA. Brochure No 4
12. Mugi, E., **Mucheru-Muna M. W.**, Mugwe J. N., Ngetich K. F., Mugendi D. N. and Mairura, F. (2014). Improve weather forecasting by integrating local indicators into conventional knowledge. A pamphlet for use by extension personell and farmers in Tharaka and Kitui Central Sub-Counties. Funded by RUFORUM.
13. Kisaka, O. **Mucheru-Muna M. W.**, Mugwe J. N., Ngetich K. F., Mugendi D. N. and Mairura, F. (2014). High rainfall variability and the role of water use efficient technologies in maize productivity. A pamphlet for use by extension personell and farmers in Mbeere Sub-County, Embu County. Funded by RUFORUM.
14. Kisaka, O. **Mucheru-Muna M. W.**, Mugwe J. N., Ngetich K. F., Mugendi D. N., Mairura, F. and Kiboi, M. (2014). Seasonal rainfall variability and drouhgt dynamics in Eastern Kenya. A pamphlet for use by extension personnel and farmers in Mbeere Sub-County, Embu County. Funded by RUFORUM.

15. Mugi, E., **Mucheru-Muna M. W.**, Mugwe J. N., Ngetich K. F., Mugendi D. N., Mairura, F. and Kiboi, M. (2014). Adaptaion mechanisms to curb the impacts of climate (rainfall and temperature) variability. A pamphlet for use by extension personell and farmers in Tharaka and Kitui Central Sub-Counties. Funded by RUFORUM.

2.7 EXTERNAL/INTERNAL RESEARCH GRANTS

1. 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”.
2. 2005-2006, International Foundation of Sciences (IFS) Grant (\$ 10,700) to conduct research on “Nitrogen dynamics as affected by soil fertility status and nutrient replenishment inputs in Mbeere District, Kenya”
3. 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)”.
4. 2008-2013, The Flemish Interuniversity 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”
5. 2009-2012; Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) funded proposal (Euro 412,000.00) on “Accelerated Uptake and Utilization of Soil Fertility Management Best-Bets Practices in ECA Region”
6. 2009-2012; Alliance for a Green Revolution in Africa (AGRA) funded project (USD 806,629) on “Enhancing Productivity and Market Development of Soybeans and Climbing Beans in Central Highlands Kenya”
7. 2011-2013; Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) (USD 60,000) on “Enhancing crop productivity through soil-water conservation and integrated drought prediction and preparedness techniques in the drier zones of Central Highlands of Kenya”
8. 2012-2013; The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) (USD 525,003) on “Scaling up integrated soil fertility management for improved livelihoods”
9. 2012-2016; International Atomic Energy Agency (IAEA) (Euro 24,000) on “Unraveling beneficial impact of Nitrogen, carbon and water dynamics in mulch-based systems on crop productivity in heterogeneous biophysical environment of the Central Kenyan highlands”
10. 2012-2014; The Flemish Interuniversity Council Own Initiative (VLIR - UOS) Belgian Government funded grant (Euro 54,212) on “Strengthening Integrated Natural Resources Management Training Programs at Masters and Undergraduate level at Kenyatta University, Kenya”
11. 2014-2017; Alliance for a Green Revolution in Africa (AGRA) funded project (US\$ 549,645) on “Scaling up soybean and climbing beans using a value chain approach in maize-based systems of central Highlands of Kenya”
12. 2015 to 2017; MoHEST and ERAfrica funded project (EUR 70,720.51) “Connecting knowledge, scales and actors; An integrated framework for local adaptation of organic resource management towards rehabilitation of degraded soils and enhanced agroecosystems resilience in SSA (CONNESSE)”
13. 2017-2019; National Research Fund funded project (Kshs. 19,999,000.00) on “Climate Smart Rainwater Harvesting and Conservation Technologies for improved Food Security in selected Parts of Kitui County”.
14. September 2017 to August 2019; 2016 Vice-Chancellors Research Grant (Kshs. 550,000.00) on “Agronomic and Economic effects of Phosphate Rock on acidic soils in TharakaNithi County”
15. January 2019 to December 2022; The Flemish Interuniversity Council Own Initiative (VLIR - UOS)

Belgian Government funded grant (Euro 279,113) on “Climate smart options allowing agricultural intensification for smallholders in the dry zones of the Central Highlands of Kenya”

16. October 2020 – 2021; KCSAP Collaborative Research Grants. Balanced Nutrition for management of soil acidity and nutrients deficiency for sustained agricultural productivity (KSh. 9,524,858.127)
17. October 2020 – 2021; KCSAP Collaborative Research Grants. Integrated Weed and Soil Fertility Management Climate Resilient Technologies and Innovations for improving cereal production in Kenya (KSh 7,029,876)

2.8 CONFERENCES/SEMINARS/WORKSHOPS

2.8.1 PARTICIPATION IN CONFERENCES/WORKSHOPS

1. May 2001: one-week 8th African Network (AfNet) workshop sponsored by TSBF at Arusha, Tanzania
2. May 21st-22nd, 2001: FORUM (Rockefeller Foundation, Forum for Agricultural Resource Husbandry) In-country meeting, Nairobi
3. October 2001: One- week 5th African Crop Science Society (ACSS) conference in Lagos, Nigeria
4. November 7th-9th, 2001: FORMAT (Forum for Organic Resource Management and Agricultural Technologies) workshop at Village market, Nairobi. Theme: Strengthening Kenyan Partnership in Organic Resource Management
5. December 2001: one-week 19th Soil Science Society of East Africa (SSSEA) conference at Moshi, Tanzania
6. May 6-7 2002: Two-day stakeholders workshop on integrated soil fertility management strategies at Izaak Walton hotel, Embu, Kenya
7. August 2002: One-week 5th Regional Rockefeller Foundation Forum Meeting at Uganda.
8. September 18th-20th, 2002: FORMAT (Forum for Organic Resource Management and Agricultural Resource Management) workshop at Village market, Nairobi. Theme: Surely nothing is useless
9. Nov 2002: one-week ASA, CSSA, SSSA annual conference at Indianapolis, Indiana, USA
10. December 2002: one-week 20th Soil Science Society of East Africa (SSSEA) conference at Mbare, Uganda
11. October 2003: one-week Africa Crop Science Conference, Nairobi, Kenya
12. December 2003: One-week 21st Soil Science Society of East Africa (SSSEA) conference at Eldoret, Kenya
13. November 2006: Two-week Global Youth Exchange Program on “Environment and Economic Development: Searching key ideas to create harmony in the 21st century” in Japan
14. May 2004: 1-week AfNet TSBF-CIAT Symposium at Yaounde, Cameroon
15. 2007: 1-week RUFORUM Biennial Meeting in Malawi
16. 2007: 1-week TSBF-AfNet International Symposium at Arusha, Tanzania on Innovations as Key to the Green Revolution in Africa: Exploring the Scientific Facts
17. 2007: 1 week 24th Soil Science Society of East Africa Conference, Embu
18. 2008: 1-week Participatory Research Networking roundtable meeting in Uganda organized by IDRC
19. 2008: 1 week second International Workshop for the Teaching of Biometry in Africa in Cape Town, South Africa
20. 2008: 1 week 4th Kenya Forestry Research Institute (KEFRI) Scientific Conference
21. 2009: 1-week training on Monitoring and Evaluation by Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), Nairobi
22. 2011: 3 days Regional Workshop by Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop, Nairobi.

23. 2011: 4 days Association for Green Revolution in Africa (AGRA) Soil Health Programme (SHP 022) Project Team Building and Planning Workshop, Nyeri, Kenya
24. 2011: 1 Week training on Proposal Writing Training at ARC Conference Centre – South Africa
25. 2012: 1-week conference on Integrated Soil Fertility Management: From microbes to Markets. Safari Park hotel, Nairobi
26. 2013: 1 Week 2nd Research Coordination workshop on “Soil quality and nutrient management for sustainable food production in mulch-based cropping systems in sub Saharan Africa” of the Food and Agriculture Organization of the United Nations (FAO) and FAO/IAEA Programme of Nuclear Techniques in Food and Agriculture in Antananarivo, Madagascar on 14th to 18th October 2013.
27. 2013: 1 week 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013.
28. 2014: Learning Event on Organic Agriculture in the Tropics in Switzerland from 23rd to 29th August 2014.
29. 2014: 1st International Research Conference of Chuka University (Kenya) held on 29th – 31st October 2014
30. 2014: International Conference on building a new generation of Agricultural Scientists at Kenyatta University, 1st to 5th December 2014
31. 2015: 3rd Research Coordination meeting on “Soil quality and nutrient management for sustainable food production in mulch-based cropping systems in sub Saharan Africa” of the Food and Agriculture Organization of the United Nations (FAO) and FAO/IAEA Programme of Nuclear Techniques in Food and Agriculture in Harare, Zimbabwe on 4th to 8th May 2015
32. 2016: Farming systems comparison stakeholder’s meeting held on 28th June 2016 at KARLO Kandara, Kenya
33. 2016: One-week workshop by Kenya Plant Health Inspectorate Services (KEPHIS) to develop organic standards in Kenya from **29th June to 1st July 2016**, in Nakuru
34. 2016: One week sixth African Green Revolution Forum (AGRF) FROM **September 5-9 2016**, UN Complex, Nairobi
35. 2017: One day workshop on Agrarian Transformation, Nairobi on 26th January 2017 organised by African Centre for Technology Studies (ACTS) and STEPS Centre (Sussex, UK)
36. 2017: Egerton University 11th Annual International Conference and Exhibition on “*Knowledge and Innovation for Social and Economic Development*” held on 29th -30th March, 2017.
37. 2017: Three days SysCom Kenya Workshop from 6th to 8th June 2017 at Hotel La Mada
38. 2018: Water security and climate change conference in Kenya School of Monetary Studies, Nairobi on 3rd to 5th December 2018

2.8.2 PRESENTATION OF PAPERS AT ACADEMIC AND PROFESSIONAL CONFERENCES

1. **Mucheru MW**, Mugendi DN, Kung’u JB, Mugwe J and Micheni A (2001) Improved food production by use of soil fertility amendment strategies in the central highlands of Kenya. Paper presented at the 8th African Network (AfNet) workshop in Arusha (May 2001)
2. Mugendi DN, **Mucheru MW**, Micheni A, Mugwe JN, Kung’u JB and Otor S (2001) Soil fertility strategies for improved food production in the central highlands of Kenya. Paper presented at the Africa Crop Science Conference, Lagos, Nigeria. (November 2001)
3. **Mucheru MW**, Mugendi DN, Kung’u JB, Mugwe J and Micheni A (2001) Enhancement of food productivity using locally available soil replenishment inputs in the central highlands of Kenya. Paper presented in the 19th Soil Science Society of East Africa (SSSEA) conference at Moshi, Tanzania (December 2001)
4. **Mucheru MW**, Mugendi DN, Kung’u JB, Mugwe J and Micheni A (2002) Enhancement of soil productivity using local technologies in the smallholder farms of central highlands of Kenya. Paper

- presented in 5th Regional Rockefeller Foundation Forum Meeting in Entebbe, Uganda. (August 2002)
5. **Mucheru MW**, Mugendi DN, Kung'u JB, Kangai AR, Mugwe J and Micheni A (2002) Enhancement of food productivity using local technologies in Chuka, Kenya. Paper presented in the FORMAT (Forum for Organic Resource Management and Agricultural Resource Management) workshop at Village market, Nairobi. Theme: Surely nothing is useless (September 2002)
 6. Mugwe J, Mugendi DN, Micheni A, **Mucheru MW**, Kung'u J, and Gitari J (2002) Promotion of leguminous plants and organic inputs for improving soil productivity in smallholder farms of Central Highlands of Kenya. Paper presented during the 8th biennial Scientific Conference held at KARI, Nairobi, Kenya. (November, 2002)
 7. **Mucheru MW**, Mugendi DN, Kung'u JB, Kangai AR, Mugwe J and Micheni A (2002) Improved food production using local technologies in Meru South District, Kenya. Paper presented in the 20th Soil Science Society of East Africa (SSSEA) conference at Mbare, Uganda (December 2002)
 8. Kangai RA, **Mucheru MW**, Mugendi DN, Otor SCJ, Waswa BS (2002) Pre-survey of the Adoption Potential of Soil Fertility Improvement Strategies in Chuka, Eastern Kenya. Paper presented in the 20th Soil Science Society of East Africa (SSSEA) conference at Mbare, Uganda (December 2002)
 9. **Mucheru MW**, Mugendi DN, Kangai AR, Kung'u JB, Mugwe J and Otor S (2003) Farmer Participation In Enhancing Food Productivity Through Agroforestry In The Central Highlands, Kenya. Paper Presented in the ANAFE Symposium on Building Agricultural and natural resources education in Africa: quality and relevance of tertiary education, held in Kenyatta University, Nairobi, Kenya. (April 14-16th, 2003)
 10. **Mucheru-Muna M**, Mugendi DN, Kangai AR, Kung'u JB, and Mugwe J (2003) Soil Productivity improvement technologies for increased food production in Meru South District, Kenya. Paper presented at the Africa Crop Science Conference, Nairobi, Kenya. (October 2003)
 11. Mugendi DN, **Mucheru-Muna M**, Kangai AR, Kung'u JB, and Mugwe J (2003) Enhancement of food productivity using leguminous shrubs in the Eastern highlands of Kenya Paper presented at the Africa Crop Science Conference, Nairobi, Kenya. (October 2003)
 12. **Mucheru-Muna M**, Mugendi DN, Kangai AR, Kung'u JB, and Mugwe J (2003) Farmer Participation In Improving Food Productivity using locally available inputs in Meru South District, Kenya. Paper presented in the 21st Soil Science Society of East Africa (SSSEA) conference at Eldoret, Kenya (December 2003)
 13. Mugendi DN, **Mucheru-Muna M**, Kung'u JB, Mugwe J, and Bationo A (2004) Improving food production using leguminous shrubs in the central highlands of Kenya. Paper presented at the AfNet TSBF-CIAT Symposium, Yaounde, Cameroon (May 2004)
 14. **Mucheru-Muna M**, Mugendi DN, Kung'u JB, and Mugwe J. (2004) Economic evaluation of local inputs in Meru South District, Kenya. Paper presented at the AfNet TSBF-CIAT Symposium, Yaounde, Cameroon (May 2004)
 15. Mugwe J, Mugendi DN, **Mucheru-Muna M** and Kung'u J (2004) Adoption of leguminous trees and other organic resources for soil fertility improvement in Meru South District, Kenya. Poster presented at the 1st World Agroforestry Congress, Orlando, FL, USA (June-July 2004)
 16. Mugendi DN, **Mucheru-Muna M**, Kung'u JB, Mugwe J, and Bationo A (2004) Improved food security through agroforestry technologies in the central highlands of Kenya. Paper presented at the 1st World Agroforestry Congress, Orlando, FL, USA (June-July 2004)
 17. Mugendi DN, **Mucheru-Muna M**, Kangai R, Kung'u JB, Mugwe J, and S Otor (2004) Enhanced soil productivity by use of low input technologies in the smallholder farms of the Kenyan central highlands. Paper presented at the Rockefeller Foundation Grantees Workshop held at Safari Park Hotel, Nairobi, Kenya (20-23 Sept 2004)
 18. Mugendi DN, **Mucheru-Muna M**, Kung'u JB, Mugwe J, and Bationo A (2004). Improvement of

- food production using different sources of nitrogen in the central Kenyan highlands. Paper presented at the 3rd International Nitrogen Conference at Nanjing, China (12-16 Oct 2004)
19. Mugendi DN, Mugwe J, **Mucheru-Muna M**, and Kung'u J (2005) Adoption of Organic Resources for Soil Fertility Improvement in Meru South District, Kenya. Paper presented at the Africa Crop Science Conference, Kamplala, Kenya. (October 2005).
 20. Mutegi E, Mugendi DN, Kung'u JB and **Mucheru-Muna M** (2007) Integration of organic and inorganic soil fertility replenishment technologies in response to food insecurity in Meru South District. Paper presented during the RUFORUM Biennial Meeting in Malawi.
 21. Mugendi DN and **Mucheru-Muna M** (2007) Scaling out soil nutrient management technologies for improved crop production in the smallholder farms of Meru South District, Kenya. Paper presented during the RUFORUM Biennial Meeting in Malawi.
 22. **Mucheru-Muna M**, Mugendi DN, Pypers P, Mugwe J, Vanlauwe B, Merckx R, and Kung'u J (2007) Effect of organic inputs and mineral fertilizer on maize yield in a Ferrasol and a Nitisol soil in central Kenya. Paper presented in the TSBF-AfNet International Symposium at Arusha, Tanzania.
 23. **Mucheru-Muna M**, Mugendi DN, Pypers P, Mugwe J, Vanlauwe B, Merckx R, and Kung'u J (2007) Enhancing productivity through the integration of grain legumes in maize cropping systems in Central Kenya. Paper presented in the TSBF-AfNet International Symposium at Arusha, Tanzania.
 24. **Mucheru-Muna M**, Mugendi DN, Pypers P, Mugwe J, Vanlauwe B, Merckx R, and Kung'u J (2007) Organic inputs and mineral fertilizer for improving maize yield in a Ferrasol and a Nitisol soil in central Kenya. Paper presented in the 24th Soil Science Society of East Africa Conference, Embu.
 25. Mutegi E, Mugendi DN, Kung'u JB and **Mucheru-Muna M** (2007) Integration of organic and inorganic soil fertility replenishment technologies in response to food insecurity in Meru South District. Paper presented during the RUFORUM Biennial Meeting in Malawi.
 26. Mugendi DN and **Mucheru-Muna M** (2007) Scaling out soil nutrient management technologies for improved crop production in the smallholder farms of Meru South District, Kenya. Paper presented during the RUFORUM Biennial Meeting in Malawi.
 27. **Mucheru-Muna M**, Mugendi DN, Pypers P, Mugwe J, Vanlauwe B, Merckx R, and Kung'u J (2008) Enhancing crop productivity using tree biomass in the central highlands of Kenya. Paper presented in the 4th Kenya Forestry Research Institute (KEFRI) Scientific Conference
 28. Zundel C, Schneider M, Musyoka M, Muriuki A, Vanlauwe B, **Mucheru-Muna M**, Chabi-Olaye A and Niggli U (2009) Long term performance of organic crop rotations in the tropics: First results from a high and medium potential site in sub-humid Central Kenya. African Organic Conference, Kampala, Uganda, 19-22 May 2009.
 29. Ngetich KF, Mugwe JN, **Mucheru-Muna MW**, Shisanya CA, Diels J and Mugendi DN (2010) Evaluation of strategies that optimizes water productivity in maize; simulation and testing of crop field practices using AquaCrop model in the Central Highlands of Kenya. Conference paper presented during the First East African Regional Scientific Conference of Pure and Applied Science. 10-13th August 2010, Kenyatta University, Kenya.
 30. Musyoka M, Zundel C, Chabi-Olaye A, Muriuki A, **Mucheru-Muna MW** and Vanlauwe B (2010) Site-specific organic and conventional crop yields in a long-term farming systems comparison in sub-humid central Kenya. Paper presented during the Tropentag, Zurich, Switzerland, 14-16 September 2010
 31. Pieter P, Munyahali W, Mutegi E, Musyoki M, Mburu M, Okalebo R, **Mucheru-Muna M** and Lessueur D (2010) An evaluation of alternative methods of P application for increased maize production under smallholder farmers' conditions in Kenya. Paper presented during the 4th International symposium on phosphorus dynamics in the soil – plant continuum (ISPDSPC), Beijing, China, 19th to 23rd September 2010.

32. Ngetich KF, Mugwe JN, **Mucheru-Muna MW**, Shisanya CA, Diels J and Mugendi DN (2010) 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. Paper presented during the 6th Asian Regional Conference (ICID) Yogyakarta, Indonesia. 8-16th Oct 2010
33. Macharia JM, **Mucheru-Muna MW**, Mugwe JN, Mairura SF and Mugendi DN (2011) Knowledge levels and training needs of smallholder farmers in Meru south and Mbeere south districts, Kenya. Paper presented at Safaripark Kenya in Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop. 24th to 26th January, 2011. **(with student)**
34. Kimaru-Muchai SW, **Mucheru-Muna MW**, Mugwe JN, Mairura F, Kimemia J and Mugendi DN (2011) Gender disparities in uptake of information on soil fertility management in the Central Highlands of Kenya. Paper presented at Safaripark Kenya in Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop. 24th to 26th January, 2011. **(With student)**
35. Kimaru-Muchai SW, **Mucheru-Muna MW**, Mugwe JN, Mairura F, Kimemia J and Mugendi DN (2011) Extension system analysis in dissemination of soil fertility technologies in the Central Highlands of Kenya. Paper presented at Safaripark Kenya in Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop. 24th to 26th January, 2011. **(with student)**
36. Kimaru Muchai SW, **Mucheru-Muna MW**, Mugwe JN, Mairura F, Kimemia J and Mugendi DN (2011) Enhancing communication for effective up-scaling of soil fertility technologies in central Kenya. Paper presented at Safaripark Kenya in Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop. 24th to 26th January, 2011. **(with student)**
37. Ngetich KF, Shisanya CA, Mugwe J, **Mucheru-Muna MW**, Mugendi DN and Diels J (2011) Tillage and surface management effects on soil water content and maize productivity in the Central Highlands of Kenya. Conference paper presented during Lake and Catchment Research Symposium (LARS) 2011. 14-18 March 2011, Kenyatta University, Kenya.
38. Muriuki A W, Musyoka M W, Cobo J, Zundel C, Vanlauwe B, **Mucheru-Muna M**, Kamau J (2011) Organic versus conventional agriculture: Maize performance in a long-term farming systems comparisons trial. Paper presented at the 4th National Council for Science & Technology Conference held at Kenyatta International Conference Centre, May 3 – 6, Nairobi, Kenya.
39. Mugendi DN, **Mucheru-Muna MW**, Ngetich KF, Mugwe J, Vanlauwe B, Merckx R and Diels J (2011) Organic inputs and mineral fertilizer effects on soil water content and maize productivity in Mbeere District, Kenya. Paper presented during the International Symposium on Soil Organic Matter 11-14 July 2011, Leuven, Belgium.
40. Kimaru-Muchai SW, **Mucheru-Muna MW**, Mugwe JN, Kimemia J, Mugendi DN and Macharia JM (2011) The effect of education levels in dissemination of soil fertility management practices in the central highlands of Kenya. Paper presented during the Kenyatta University International Conference 20-22nd July **(with student)**
41. Mugendi DN, Ngetich KF, Mugwe J, **Mucheru-Muna M**, Shisanya CA and Diels J (2011). Effects of sub-soiling and soil surface management on maize productivity in the central highlands of Kenya. Conference paper presented during the ASA CSSA SSSA International Annual Meetings on 16-19th Oct 2011, San Antonio, TX USA.
42. Muriuki A W, Musyoka M W, Cobo J, Zundel C, Vanlauwe B, **Mucheru-Muna M**, Balozi F, Farray R N (2011) Organic versus conventional farming: First season maize performance in consecutive rotation cycles in Central Kenya. Paper presented at the 'CIALCA International Conference titled 'Challenges and Opportunities for Agricultural Intensification of the Humid

- Highland Systems of Sub-Saharan Africa' held at the Serena Hotel, October 24 – 27, Kigali, Rwanda.
43. Jefwa JM, Asrat A, Hermann L, Jemo M, Kavoo A, Lesueur D, Majengo C, **Mucheru M**, Mukhongo R, Mulet F, Munyahali W, Mutegi E, Mwangi E, Ncho C, Nwoke OC, Okalebo R, Pypers P, Were B and Yusuf A (2011) Do commercial biological and chemical products increase crop yields and economic returns under smallholder farmer conditions? CIALCA Conference on Agricultural Intensification of the African Humid Highlands held on 24th -27th October 2011 in Kigali, Rwanda.
 44. Kimaru-Muchai SW, **Mucheru-Muna M**, Mugwe JN, Mairura FS and Mugendi DN (2011) Communication channels used in dissemination of soil fertility management practices in the Central Highlands of Kenya. CIALCA Conference on Agricultural Intensification of the African Humid Highlands held on 24th -27th October 2011 in Kigali, Rwanda. *(with student)*
 45. Ngetich F, Mugwe JN, **Mucheru-Muna M**, Shisanya CA, Diels J and Mugendi DN (2011) Planting dates effect on maize yield performance under rainfed conditions in the Central Highlands of Kenya. CIALCA Conference on Agricultural Intensification of the African Humid Highlands held on 24th -27th October 2011 in Kigali, Rwanda.
 46. Munyahali W, Mutegi E, **Mucheru-Muna M**, Didier L and Pieter P (2011) Evaluation of commercial chemical products for increased maize production through the use efficiency of applied P under smallholder farmers' conditions in different agro-ecological zones of Kenya. CIALCA Conference on Agricultural Intensification of the African Humid Highlands held on 24th -27th October 2011 in Kigali, Rwanda. *(with student)*
 47. Mugwe J, Mugendi D, Mwebia FW, Kimaru S and **Mucheru-Muna M** (2011) Maize yield response to intercropping and application of manure, tithonia and fertilizer in the central highlands of Kenya. CIALCA Conference on Agricultural Intensification of the African Humid Highlands held on 24th -27th October 2011 in Kigali, Rwanda. *(with student)*
 48. Kimaru-Muchai S.W., **Mucheru-Muna M**, Mugwe J.M., Mairura F.S and Mugendi D.N. (2011) Factors that influence reliability of information sources on soil fertility management practices in the Central Highlands of Kenya. The sixth JKUAT scientific, technological and industrialization conference held on 16th -18th November 2011 in JKUAT Main Campus Juja Nairobi, Kenya. *(with student)*
 49. Sianje A, Mugwe J, **Mucheru-Muna MW** and Mugendi DN (2012) Effects of phosphorus sources and starter nitrogen on soybean yields and soil properties in the central highlands of Kenya. 25th – 28th July 2012 in Karatina University, Kenya. *(with student)*
 50. Matusso J, Mugwe JN and **Mucheru-Muna MW** (2012) Potential Role of Cereal-legume Intercropping Systems in Integrated Soil Fertility Management in Smallholder Farming Systems of Sub-Saharan Africa. 25th – 28th July 2012 in Karatina University, Kenya. *(With student)*
 51. Macharia JM, Mugwe JN, **Mucheru-Muna M**, Mang'uriu DN, and Mugendi DN (2012) Socioeconomic factors influencing levels of knowledge in soil fertility management in the central highlands of Kenya. 25th – 28th July 2012 in Karatina University, Kenya. *(with student)*
 52. Okeyo IA, **Mucheru-Muna MW**, Mugwe J, Ngetich FK, Mugendi DN and Shisanya CA (2012) Effects of selected SWC treatments on soil nutrient loss and maize yields in the central highlands of Kenya. 25th – 28th July 2012 in Karatina University, Kenya. *(with student)*
 53. Macharia JM, Mugwe JN, **Mucheru-Muna MW**, Mairura S, Kimani SK and Mugendi DN (2012) Training needs in soil fertility management for farmers and extension workers in central highlands of Kenya. KARI Conference, KARI Hqs, Nairobi, Kenya, 22 to 28th October 2012. *(with student)*
 54. **Mucheru-Muna MW**, Ngetich F, Mugendi DN, Mugwe JN, Pypers P, Vanlauwe B, Diels J and Merckx R (2012) Effect of inputs application on yields of soybean and climbing a maize-legume rotation in central Kenya. Presented in the Integrated Soil Fertility Management: From microbes

- to Markets. Safari Park hotel, Nairobi, Safari park hotel, Nairobi, Kenya, 22 to 26th October 2012. **(with student)**
55. Mugwe JN, **Mucheru-Muna MW**, Muthamia J and Mugendi DN (2012) Effect of inputs application on yields of soybean and climbing a maize-legume rotation in central Kenya. Presented in the Integrated Soil Fertility Management: From microbes to Markets. Safari Park hotel, Nairobi, Safari park hotel, Nairobi, Kenya, 22 to 26th October 2012.
 56. Mugwe JN, Mugendi DN and **Mucheru-Muna MW** (2012) Farm and socio-economic factors influencing farmers' decision to cultivate soybeans in the central highlands of Kenya (2012) Safari park hotel, Nairobi, Kenya. Presented in the Integrated Soil Fertility Management: From microbes to Markets. Safari Park hotel, Nairobi, Safari park hotel, Nairobi, Kenya, 22 to 26th October 2012.
 57. Okeyo I, **Mucheru-Muna MW**, Mugwe JN, Ngetich F, Mugendi DN, Diels J (2012) Effect of selected soil and water conservation techniques on rainfall use efficiency and maize productivity in central highlands of Kenya. Presented in the Integrated Soil Fertility Management: From microbes to Markets. Safari Park hotel, Nairobi, Safari park hotel, Nairobi, Kenya, 22 to 26th October 2012. **(with student)**
 58. Ngetich F, Diel J, Shisanya C, Mugwe JN, **Mucheru-Muna MW** and Mugendi DN (2012) Effects of soil and water conservation techniques on runoff, sediment yield and maize productivity. Presented in the Integrated Soil Fertility Management: From microbes to Markets. Safari Park hotel, Nairobi, Safari park hotel, Nairobi, Kenya, 22 to 26th October 2012
 59. **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. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013
 60. Mugendi DN, Ngetich KF, Mugwe JN, **Mucheru-Muna M**, Shisanya CA and Diels J (2013) Subsoiling and soil surface management effects on maize productivity in the central highlands of Kenya. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013
 61. Mugwe JN, **Mucheru-Muna M**, Muthamia J and Mugendi D (2013) Effect of inputs application on yields of soybean and climbing bean in a maize - legume rotation system in central Kenya. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013
 62. Kisaka O, **Mucheru-Muna M**, Ngetich FK, Mugwe J, Mugendi D, and Mairura F (2013) Characterization of seasonal rainfall variability and drought probability of the semi arid areas of Mbeere region in Embu County, Kenya. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013 **(with student)**
 63. Mugi EW, Ngetich FK, **Mucheru-Muna MW**, Mugwe JN, Mugendi DN and Mairura F (2013) Integrating indigenous and conventional knowledge-based seasonal climate forecasts for farmers enhanced adaptation to climate variability in Tharaka-Nithi and Kitui counties. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013 **(with student)**
 64. Kiboi MN, **Mucheru-Muna MW**, Ng'etich FK, Mugwe JN, Mugendi DN and Wambugu S (2013) Effects of selected soil water conservation strategies on maize yield through farmer managed trials in the central highlands of Kenya. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013 **(with student)**
 65. Ndung'u AM, Mugwe JN and **Mucheru-Muna M** (2013) Effect of Rhizobia inoculation and phosphorus on nodulation and yield of soybean (*Glycine max* L merrill) in central highlands of Kenya. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013 **(with student)**

66. Abuli JS, Mugwe JN, **Mucheru-Muna M** and Mugendi D N (2013) Economic suitability of selected phosphorus sources on soybean yield in central highlands of Kenya. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013 **(with student)**
67. Matusso JMM, Mugwe JN and **Mucheru-Muna M** (2013) Effects of different maize (*Zea mays* L.) – soybean (*Glycine max* (L.) Merrill) intercropping patterns on yields and growth parameters. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013 **(with student)**
68. Matusso JMM, Mugwe JN and **Mucheru-Muna M** (2013) Effects of different maize (*Zea mays* L.) – soybean (*Glycine max* (L.) Merrill) intercropping patterns on yields and its economics. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013 **(with student)**
69. Njeru PNM, Mugwe J, **Mucheru-Muna M**, Maina I, Mugendi D, Mwangi DM, Amboga JS, Lekasi JK, Kimani SK, Miriti JM, Gitari J, Mwangi H and Muriithi F (2013) Integrating scientific and farmers' evaluation of water harvesting and integrated soil fertility management technologies on sorghum productivity in central Kenya. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013 **(with student)**
70. Njeru PNM, Maina I, Mugwe J, **Mucheru-Muna M**, Mugendi D, Lekasi JK, Kimani SK, Miriti J, Mugo BJ, Mwangi H, Oeba VO, Esilaba AO and Muriithi F. Drought mitigating technologies: lessons learnt from sorghum and cowpea production in semi-arid areas of Embu County, Eastern Kenya. Presented in the 27th Soil Science Society of East Africa (SSSEA) & 6th African Soil Science Society Conference in Nakuru on 21st to 25th October 2013 **(with student)**
71. Adamtey, N., Cobo, J.G., Musyoka, M., Karanja, E., Fiaboe, K.M., Muriuki, A., **Mucheru-Muna, M.**, Berset, E., Fliessbach, A., Forster, D., (2014). Productivity of maize and baby corn in organic and conventional farming systems. Tropentag. "Bridging the gap between increasing knowledge and decreasing resources". 17-19 September, Prague, Czech Republic.
72. Muchai, S.W.K. Baaru, M., Ngetich, K. F. and **Mucheru-Muna, M.W.M.** (2014). Adoption and Utilization of Zai Pits for Improved Farm Productivity in Tharaka-Nithi County, Kenya presented during the conference entitled Enhancing Innovation for Sustainable Development in the 21st Century held on 29th – 31st October 2014 at Chuka University, Kenya
73. Mwebia F.W., **Mucheru-Muna M.W.**, Mugwe J.N. and Mugendi D.N. (2014). Farmer Groups' Characteristics Influencing Application of Soil fertility Technologies in the Central Highlands of Kenya. 1st International Research Conference of Chuka University (Kenya) held on 29th – 31st October 2014 **(with student)**
74. Mwebia F.W., **Mucheru-Muna M.W.**, Mugwe J.N. and Mugendi D.N. (2014). Farmer Groups' Members' Household Factors Influencing Selection of Soil fertility Technologies in the Central Highlands of Kenya. 1st International Research Conference of Chuka University (Kenya) held on 29th – 31st October 2014 **(with student)**
75. Mugendi DN, Ngetich FK, Mugwe JN, **Mucheru-Muna MW**, Shisanya AC and Diels J. (2014). Sowing Date and Timing of Nitrogen Fertilizer Application Effects on Soil Water Content and Maize Yield in the Central Highlands of Kenya. Paper presented during International Annual Meetings of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America held on November 2 to 5, 2014.
76. Kiboi MN, Ngetich FK, **Mucheru Muna M**, Diels M, Mugwe J and Mugendi DN (2014) Effects of soil water conservation strategies on maize yield stability in farmer managed trials at Embu and Tharaka-Nithi Counties, Embu International Conference on Building a new generation of Agricultural Scientists (**Pg 141-book of abstracts**) 1st to 5th December 2014**(with student)**
77. Sibomana JD, Mugwe JN, Ngetich FK, **Mucheru-Muna** and Mugendi DN (2014) Effect of integrated soil fertility management and tied-ridging on selected soil properties and crop yields in

- Meru County, Kenya International Conference on Building a new generation of Agricultural Scientists (**Pg 142-book of abstracts**) 1st to 5th December 2014(**with student**)
78. Njeru PNM, Mugwe JN, **Mucheru Muna M**, Maina I, Mugendi D, Esilbaba AO (2014) Rainfed agriculture adaptation to climate change variability for sorghum productivity in semi arid areas of Embu County International Conference on Building a new generation of Agricultural Scientists (**Pg 153-book of abstracts**) 1st to 5th December 2014(**with student**)
 79. Matusso J M, Mugwe JN and M **Mucheru-Muna** (2014) 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) 1st to 5th December 2014 (**with student**)
 80. Mugi EW, **Mucheru_Muna MW**, Mugwe JN, Ngetich FK, Mugendi DN and Mairura FS (2014) 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 (**with student**)
 81. Masika OK, **Mucheru-Muna**, Ngetich FK, Mugwe JN, Mugendi DN and Mairura F (2016). Spatial-temporal maize productivity and stability response to soil-water-use efficiency strategies under high rainfall variability agroecologies. Third International Conference, Chuka University 26th to 28th October 2016
 82. Masika O.K, Mugwe JN, Ngetich FK, **Mucheru-Muna M**, and Mugendi D (2016). Performance evaluation of the Apsim-model on maize productivity in integrated soil fertility management in Kenya's dryer agroecosystems. Third International Conference, Chuka University 26th to 28th October 2016
 83. Mugwe JN, Sibomana D., Ngetich FK, **Mucheru-Muna MM** and Mugendi DN (2017). Response of Maize and Soybean to Tied Ridging and Combined Application of Manure, Tithonia and Fertilizer in the Central Highlands of Kenya. 11th Egerton University International Conference and Innovation week (29th to 31st March 2017)
 84. Mate H., Mugwe JN, Wambugu SK, **Mucheru-Muna M** and Mugendi DN (2017). Factors affecting the participation of smallholder farmers in collective marketing initiatives in the f Eastern Highlands of Kenya. 11th Egerton University International Conference and Innovation week (29th to 31st March 2017)
 85. Njagi EW., **Mucheru-Muna, M.**, Mugwe, J., Ngetich, K F., and Mugendi, D N. (2017). Collective action in seed distribution; Case of soybean (Glycine max) in Mbeere South, Meru South and Imenti South sub counties of Eastern Kenya. 11th Egerton University International Conference and Innovation week (29th to 31st March 2017)
 86. Murage, F.M., Mugwe, J.N., Ngetich, K.F., **Mucheru-Muna, M.M.** and Mugendi, D.N (2017). Effect of phosphorus on growth and yields of soybean (*Glycine max* L) varieties in the central highlands of Kenya. 11th Egerton University International Conference and Innovation week (29th to 31st March 2017)
 87. Kibet P, NK Korir, Mugwe J N, **Mucheru-Muna M** and Mugendi D.N (2017). Effects of agricultural lime types on soil properties and maize (*Zea mays* L) performance in acidic soils of Tharaka Nithi County, Kenya. 11th Egerton University International Conference and Innovation week (29th to 31st March 2017)
 88. Njoroge GM, Mugwe,J, Ngetich K.F, **Mucheru-Muna. M**, Bett. E, and Mugendi.D (2017). Agroecological suitability screening of soybean (*Glycine max*) varieties in Meruu and Tharaka Nithi counties. 11th Egerton University International Conference and Innovation week (29th to 31st March 2017)
 89. Kimiti W, **Mucheru-Muna MW**, Mugwe JN, Ngetich F and Mugendi D (2018) Effect of lime, manure and fertilizer on soil acidity and maize performance at Tharaka Nithi County, Kenya. 12th Egerton University International Conference and Innovation week (27th to 29th March 2018) (**with student**)

90. Ngetich KF, Diels J, Mugwe JN, **Mucheru-Muna MW**, Shisanya CA and Mugendi DN (2018). Rainfall distribution, sowing date and timing of nitrogen fertilizer application effects on soil water content and maize productivity in Tharaka Nithi County, Kenya. 12th Egerton University International Conference and Innovation week (27th to 29th March 2018)
91. Kibet, P, Korir NK, Mugwe JN, **Mucheru-Muna MW**, Ngetich FK and Mugendi DN (2018). Granular and powdered limes effects on soil properties and maize performance in soils of Tharaka Nithi County, Kenya. 12th Egerton University International Conference and Innovation week (27th to 29th March 2018) (*with student*)
92. Mugwe JN, Mutesa F, Ngetich KF, **Mucheru-Muna MW** and Mugendi DN (2018). Mulch application increase maize and soyabean yields in central highlands of Kenya. 12th Egerton University International Conference and Innovation week (27th to 29th March 2018)
93. Ndungu M, **Mucheru-Muna MW**, Mugwe JN, Ngetich FK and Mugendi DN (2018). Effects of tied-ridging, manure and tithonia combined with mineral fertilizer on maize-soyabean yields and their profitability in Cental Highlands of Kenya (2018). 12th Egerton University International Conference and Innovation week (27th to 29th March 2018) (*with student*)
94. Omenda JA, Ngeich KF, **Mucheru-Muna MW**, Kiboi MN, Mugendi DN (2019). Response of soil organic carbon and acid phosphatase enzyme activity to phosphate rock and organic inputs on acidic soils of central highlands of Kenya. Kenyatta University Biennial Research and Innovation Conference (23rd to 25th October 2019) (*with student*)
95. Ndeleko-Barasa EM, **Mucheru-Muna MW**, Ngetich KF (2019). Response of phosphate rock fertilizer on maize yields in acidic soils of Tharaka-Nithi County. Kenyatta University Biennial Research and Innovation Conference (23rd to 25th October 2019) (*with student*)
96. Kinyua M., **Mucheru-Muna, M.**, Kihara, J (2019). Variations in plant nutrient allocation, physiological development patterns and soil structural characteristics as influenced by zero tillage systems: perspectives from short-term trials in sub-humid region in the central highlands of Kenya. 29th SSSEA Conference of the Soil Science Society of East Africa (SSSEA) held at the Lake Naivasha Lodge, Naivasha, Kenya, 18th -22nd November 2019 (*with student*)
97. Bolo, P.O., Kihara, J. **Mucheru-Muna, M.** and Mugendi, E. (2019). Tillage, residue management and cropping systems affect soil aggregation, organic carbon and microbial biomass in tropical Ferralsols of western Kenya. 29th SSSEA Conference of the Soil Science Society of East Africa (SSSEA) held at the Lake Naivasha Lodge, Naivasha, Kenya, 18th -22nd November 2019(*with student*)

2.8.3 CONVENING AND COORDINATING CONFERENCES

1. 3rd to 5th December 2018: Water security and climate change conference in Kenya School of Monetary Studies, Nairobi
2. 17th to 21 October 2016: Writeshop to develop training manuals for farmer groups at AICAD, JKUAT, JUJA
3. 2016: Farming systems comparison stakeholder's workshop held on 28th June 2016 at KARLO Kandara, Kenya, Funded by FiBL
4. 17th to 19th February 2016: Editing writeshop for documentation committee at Mountain Breeze Hotel, Embu
5. 16th to 20th November 2015; Writeshop to develop knowledge sharing products for integrated soil fertility management promotion; Sagana Getaway Resort; Murang'a
6. 19th – 20th February 2015: Training workshop for Field Extension Officers on ISFM, Group Dynamics and Leadership at Kaguru FTC
7. December 2014: International Conference on building a new generation of Agricultural Scientists at Kenyatta University, 1st to 5th December 2014
8. 8th to 10th August 2014: Experimentation and Economic data collection and analysis, Embu University College: Funded by AGRA

9. 13th and 17th May 2013: Value Chain stakeholder's analysis workshop, Kaguru Farmers Training Centre, Chogoria: Funded by ASARECA
10. April 2013: End of AGRA SoCo project workshop, Panesic Hotel, Embu
11. 30th April and 1st May 2012: Monitoring and Evaluation workshop, Panesic Hotel Embu: Facilitator, Dr. Vincent Oeba
12. January 2011: Three days Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop, Safari Park Hotel, Kenya.
13. January 2010: Three days Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) regional workshop, Safari Park Hotel, Kenya.
14. November 2007: One-week 24th Soil Science Society of East Africa conference, Embu, Kenya
15. May 5-6 2003: Two-day stakeholders workshop on integrated soil fertility management strategies at Salkon hotel, Embu, Kenya
16. December 2003: One-week 21st Soil Science Society of East Africa conference, Eldoret, Kenya

3.0 QUALITY LEARNING AND MENTORSHIP

3.1 TRAINING IN HIGHER EDUCATION TEACHING

1. 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)
2. May 2016: Two-day training on **statistical analysis software (SAS)** by AGRA funded project at Embu University College on May 5-6, 2016
3. 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
4. August 2013: Certificate in **Impact Assessment of Agricultural Technologies**: Training workshop from August 9th to 10th, 2013: Embu, Kenya
5. May 2013: Certificate in Analysis of Agricultural Value Chain: 3-day training workshop from May 2013 (15th to 17th): at Kaguru Training Centre, Maara, Kenya
6. May to Nov 2013: Training on **Teaching Methodology** by Centre for Teaching Excellence and Evaluation, Kenyatta University
7. 2011: E-Learning course at Kenyatta University
8. October 2006: Two-week Training Workshop on **Participatory Approaches, Gender Analysis and Participatory Monitoring and Evaluation** of the IDRC funded Project “Up Scaling Participatory Natural Resource Management Innovations in sub Saharan Africa” in Harare, Zimbabwe
9. September 29th-October 10th 2003: Two weeks African Biology and Fertility Network workshop on **Participatory Research Approaches and Scaling Up** Workshop. Arusha, Tanzania
10. May 2003: One-week International Foundation for Science (IFS) training course on Developing and Writing Competitive **Research Proposals** in East Africa at Kenya Forestry Research Institute (KEFRI)
11. April 2003: Two weeks training workshop on **Monitoring Nutrients Flows and Economic Performance in Tropical Farming Systems** (NUTMON) in ICRAF, Nairobi, Kenya.
12. November 2003: Two-week OSSREA training workshop on **Research Methods** in Nairobi, Kenya
13. December 2000: one-week Biometrics Workshop-**Data Analysis using GENSTAT** organized by the Rockefeller Foundation (FORUM) at Egerton University, Njoro, Kenya.

3.2 POSTGRADUATE SUPERVISION

3.2.1 PHD THESES SUPERVISION

3.2.1.1 COMPLETED

1. Thandar Nyi (N85F/24868/2011). Understanding and improving agronomic use efficiency in cassava based farming system in Central Africa. (PhD; 2012-2014). Department of Environmental Sciences. School of Environmental Studies, Kenyatta University (***Graduated in December 2014***)
2. Felista W. Muriu (N85/12014/2007). Opportunities and challenges of investing in agricultural water harvesting and saving technologies in Mbeere County, Kenya. (PhD; 2010-2016). Department of Environmental Sciences. School of Environmental Studies, Kenyatta University (***Graduated in December 2016***)
3. Serah Wairimu Kimaru (N85/24932/2012). Effects of Water Harvesting Techniques in Agricultural Production as a Strategy to Cope with Climate variability in Central highlands of Kenya. (PhD; 2013-2017). Department of Environmental studies community Development, School of Environmental Studies, Kenyatta University (***Graduated in August 2017***)
4. 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. (PhD; 2013-2018). Department of Agricultural Resource Management, School of Agriculture & Enterprise Development, Kenyatta University (***Graduated in December 2018***)

3.2.1.2 ON-GOING

5. Peterson Newton Muchiri Njeru (A99/14218/2009). Integrated soil fertility management technologies in sorghum and cowpea production systems in semi-arid areas of Kenya (PhD; 2011-current). Department of Agricultural Resource Management, School of Agriculture & Enterprise Development, Kenyatta University.
6. Njue Annette Mukami (N85/21929/2012). The effect of pesticide residues on soil microbial activity and nutrient availability in French beans (*Phaseolus vulgaris*) in Murang'a County, Kenya. (PhD; 2015-current). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University
7. Kebenei Mercy Cheruto (B502/MAI/30002/2018). Assessing effects of zai pit system and integrated soil fertility management on sorghum yields in selected parts of Kitui County. (PhD; 2019-current). Department of Environmental Science and Land Resource Management, South Eastern Kenya University
8. Nathan Okoth Oduor (A806/243/2018). Effects of Integrated Soil and Water Management Practices on Sorghum (*Sorghum Bicolor*) Productivity in the Drylands of Tharaka-Nithi County, Kenya. (PhD; 2019-current). Department of Land and Water Management, University of Embu
9. Peter Omondi Bolo (N85/28866/2019). Integrated Soil Fertility Management Practice Effects on Microbial Biomass, Enzyme Activities and Greenhouse Gas Emissions in Nyabeda, Siaya County, Kenya. (PhD; 2020-current). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University
10. Jane Akoth Omenda (A806/257/2019). Water Use Efficiency and Economic Performance of Sorghum under Selected Soil and Water Conservation Techniques in Tharaka-Nithi County, Kenya. (PhD; 2020-current). Department of Land and Water Management, University of Embu
11. Michael Wanjohi Kinyua. Plant spatial patterns' effects on crop yields, physiological characteristics, economic benefits and biological nitrogen fixation in Babati, Tanzania. (PhD; 2020-current). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University
12. Kennedy Wahome Muthee (N85/20540/2020). Building Ecosystem Services and Livelihood Resiliency Through Agroforestry in Central River Region of The Gambia. (PhD; 2021-current). Department of Environmental Planning and Management, School of Environmental Studies, Kenyatta University

3.2.2 MASTERS SUPERVISION

3.2.2.1 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; 2009-2011). Department of Environmental Studies and Community Development. School of Environmental Studies, Kenyatta University (***Graduated December 2011***)
2. 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; 2009-2012). Department of Environmental Studies and Community Development. School of Environmental Studies, Kenyatta University (***Graduated 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. (Masters; 2010-2012). Department of Environmental Education. School of Environmental Studies, Kenyatta University (***Graduated December 2012***)
4. Zirhahwakuhingwa Munyahali Wivine (N50F/13010/2009). Assessment of commercial chemical products on the improvement of maize yield in different agro-ecological zones in Kenya. (Masters; 2010-2012). Department of Environmental Sciences. School of Environmental Studies, Kenyatta University (***Graduated December 2012***)
5. Nancy Wanja Njenga (N50/CE/14486/2009). Climate change vulnerability and adaptation strategies for small scale farmers in north Kinangop Location, Nyandarua South District. (Masters; 2011-2012). Department of Environmental Education. School of Environmental Studies, Kenyatta University (***Graduated December 2012***)
6. Francis Njoroge Kabochi (N50/CE/11929/2007). Social, cultural and economic factors affecting indigenous food production in Narok South District. (Masters; 2009-2012). Department of Environmental Studies and Community Development. School of Environmental Studies, Kenyatta University (***Graduated July 2013***)
7. Ndayisaba Pierre Celestin (N50EA/12339/2009). Legumes and fertilizer interactions as key integrated soil fertility management components for maize based systems in Eastern Rwanda Province. (Masters; 2010-2013). Department of Environmental Sciences. School of Environmental Studies, Kenyatta University (***Graduated in December 2013***)
8. Sianje Abuli Jackson (A148/20170/2010). Effects of Phosphorus sources and starter Nitrogen on soybean yield and selected soil properties in Tharaka Nithi and Meru Counties of Kenya. (Masters; 2011-2013). Department of Agricultural Resource Management. School of Agriculture and Enterprise Development, Kenyatta University (***Graduated in December 2013***)
9. 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. (Masters; 2011-2013). Department of Environmental Education. School of Environmental Studies, Kenyatta University (***Graduated in December 2013***)
10. Esther Wangeci Mugi (N50/24880/2011). Integrating indigenous and conventional knowledge-based climate forecasts for farmers enhanced adaptation to climate variability in Tharaka-Nithi and Kitui counties. (Masters; 2013-2014). Department of Environmental Sciences. School of Environmental Studies, Kenyatta University (***Graduated in July 2014***)
11. Kisaka M Oscar (N50/25640/2011). Effects of Rainfall Variability and Integrated Soil Fertility Management in Embu County, Kenya. (Masters; 2013-2014). Department of Environmental Sciences. School of Environmental Studies, 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 (Masters; 2012-2015). Department of Agricultural Resource Management, Kenyatta University (***Graduate in July 2015***)
13. Sylvester Aura Nyongesa (N50/CTY/PT/20277/2010). Impact of integrated soil fertility management technologies on crop yield and income for smallholder farmers in Mbale Division, Kenya. (Masters; 2012-2015). Department of Environmental Sciences. School of Environmental Studies, Kenyatta University (***Graduate in July 2015***)

14. Mwebia Frashiah Wangeci (N50/10715/2008). Farmer groups approach in upscaling of soil fertility management technologies in the central highlands of Kenya. (Masters; 2010-current). Department of Environmental Sciences. School of Environmental Studies, Kenyatta University (***Graduate in July 2015***)
15. Kiboi Milka Ngonyo (N50/21201/2012). Effects of selected soil water conservation strategies on maize yield through farmer managed trials in the Central Highlands of Kenya. (Masters; 2013-2015). Department of Environmental Education. School of Environmental Studies, Kenyatta University (***Graduate in July 2015***)
16. Muthaura Chrispaul (N50/CE/23084/2010). Assessment of nutrients that limit growth and yield of maize in smallholder farms of Kandara, Murangá County. (Masters; 2012-2015). Department of Environmental Sciences. School of Environmental Studies, Kenyatta University (***Graduated in December 2015***)
17. 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***)
18. Njogu Evelyn Wambui (A500/1002/2013). Effects of tillage and mulching on maize yield, soil organic carbon and water retention in Kirege, Tharaka Nithi County. (Masters; 2014-2016). Department of Agricultural Resource Management, Embu University College (***Graduated in September 2016***)
19. Ada Mildred Achieng (N50/CTY/PT/26495/2013). Factors influencing adoption of integrated soil fertility management strategies for maize production intensification in Embu County, Kenya (Masters; 2015-2017). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University (***Graduate in August 2017***)
20. Njue D. Murimi (N50/27706/2013). Enhancing nutrient management options for sustainable maize production intensification in contrasting tillage systems under on-farm trials in Embu County, Kenya (Masters; 2015-2018). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University (***Graduated in August 2018***)
21. Njagi Emily Wanja (N50/CE/11925/2007). Integration of indigenous drought prediction and preparedness techniques with scientific methods in Mbeere North District, Kenya. (Masters; 2009-2018). Department of Environmental Studies and Community Development. School of Environmental Studies, Kenyatta University (***Graduated in December 2018***)
22. Albert Mwaniki (A148/22325/2011). Quantifying soil fertility gradients and effect of phosphorus and Inoculation on yields of soybean and soil properties (Masters; 2012-2018). Department of Agricultural Resource Management. Kenyatta University (***Graduated in December 2018***)
23. Vincent O. Rabach (N50/23665/2013). Carbon sequestration potential under conservation agriculture with trees systems in the dry land of Machakos County, Kenya. (Masters; 2015-2018). Department of Environmental Education, School of Environmental Studies, Kenyatta University (***Graduated in December 2018***)
24. 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 (Masters; 2016-2018). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University (***Graduated in December 2018***)
25. Methuselah Nyamwange Mang'erere (I56/32943/2015). Response of soil microbial communities to tillage, mulching and inorganic fertilization at kirege, Tharaka-Nithi County, Kenya (Masters; 2016-2018). Master of science (Microbiology) in the School of Pure and Applied Sciences of Kenyatta University (***Graduated in December 2018***)
26. Peter Omondi Bolo (N50/31707/2015). Effects of long-term use of organic and inorganic fertilizers on soil microbes and nutrient availability in Nyabeda, Siaya County (Masters; 2016-2019). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University (***Graduated in July 2019***)

27. Kinyua Michael Wanjohi (N50/31949/2015). Effects of tillage, crop residue and inorganic nitrogen on soil carbon and nitrogen dynamics in Embu County (Masters; 2016-2019). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University (***Graduated in July 2019***)
28. 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 (Masters; 2016-2019). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University (***Graduated in July 2019***)
29. Jane Akoth Omenda (A509/1150/2017). Effects of phosphate rock and organic residue on soil biochemical properties in acidic soils of Tharaka Nithi County. (Masters; 2018-2019). Department of Land and Water Management. University of Embu. (***Graduated in September 2019***)

3.2.2.2 ON-GOING

30. Kiptore Dominic Kiprotich (N50/CTY/PT/24877/2011). The effects of horticulture farming on the water and soil quality along river Chepsito-Tilatil, Koibatek District in Baringo County (Masters; 2013-current). Department of Environmental Sciences. School of Environmental Studies, Kenyatta University
31. 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 (Masters; 2016-current). Department of Agricultural Resource Management. School of Agriculture & Enterprise Development, Kenyatta University (***Submitted***)
32. Obadiah Mwangi Maina (N50/CTY/PT/33953/2015). Comparison of weed infestation in organic and conventional farming systems in long term trials in Murang'a and Tharaka Nithi Counties, Kenya. (Masters; 2017-current). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University
33. Henry Murithi Mugambi (AM15/06922/11). Spatial Variations in the Adoption of Agroforestry by Small Scale Farmers in Tharaka Nithi County, Kenya (Masters; 2017-current). Masters of Arts in Geography, Chuka University.
34. Joan Jemutai Kibet (N50/37543/2016). Organic and conventional farming systems effect on soil properties in Kigumo and Kirinyaga east Sub-Counties, Kenya. (Masters; 2017-current). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University
35. Ndeleko Emily Mwake (N50/CTY/PT/33086/2015). Response of acidic soils of Tharaka Nithi County to application of phosphate rock. (Masters; 2017-current). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University
36. Robin Odhiambo Chacha (N50\CTY\PT\33194\2015). Portable X-ray Fluorescence Technique as a tool for Selected Fertilizer Quality and Application Testing with respect to Phosphorus (Masters; 2018-current). Department of Environmental Sciences, School of Environmental Studies, Kenyatta University.
37. Getare Ednah Kerubo (N50/33084/2015). Enhancing sorghum productivity using zai pits and soil fertility management for improved food security in Kitui County. Master of Environmental Science in the School of Environmental Studies, Kenyatta University. (Masters; 2019-current).
38. Lydia Ayieta Tinega (N80/39738/2016). Predicting biomass and yield of maize and soya bean under rainfed farming conditions of Tharaka-Nithi County, Kenya. Master of Environmental Science in the School of Environmental Studies, Kenyatta University. (Masters; 2019-current).
39. Margaret Wangari Mwangi (A148/37112/2017). Long term effect of organic inputs and mineral fertilizer on soil microbial community, nodulation and nitrogen fixation on maize and soybean in Tharaka-Nithi County, Kenya. Master of Science (Integrated Soil Fertility Management) in the School of Agriculture and Enterprise Development of Kenyatta University. (Masters; 2019-current).

40. Charles Nyaga (N50/37643/2017). Cropping Systems and Phosphorus Application Effects on Soil Microbial Biomass and Abundance in Siaya County, Kenya. Master of Environmental Science in the School of Environmental Studies, Kenyatta University. (Masters; 2020-current).
41. Mutambu Mwanzia Dominic (N50/28795/2018). Microgranular sulphur and zinc effect on crop production and nutrient use efficiency in Siaya County. Master of Environmental Science in the School of Environmental Studies, Kenyatta University (Masters; 2021-current).
42. Jackline Kanana Ndegwa (A500/1340/2019). Integrated Soil and Water Management Practices for Enhanced Sorghum Yields in the Drylands of Tharaka-Nithi County, Kenya. Master of Science in Agricultural Resource Management, University of Embu (Masters; 2021-current).
43. 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. Master of Science in Agricultural Resource Management, University of Embu (Masters; 2021-current)

3.2.3 THESES EXAMINATION

1. PHD/018/2021, **PhD thesis (May 2021)** titled “An investigation of the poverty-environmental degradation (ped) nexus in Kitui county, Kenya
2. M/P/062/2021 **MSc Project (May 2021)** titled “Strategies for food production to climate variability by small scale farmers in Kajiado County, Kenya”
3. PHD/015/2021, **PhD thesis (April 2021)** titled “Climate variability risk perception on rainfed agricultural practices among scale farmers in Embu County, Kenya”
4. PHD/088/2020, **PhD thesis (March 2021)** titled “Effect of *Cuscuta species* (Dodder) on urban ornamental plants in Mombasa County, Kenya”
5. M/TH/073/2020 **MSc thesis (September 2020)** titled “Effect of combining in-situ rain water harvesting technologies and organic manure on soil moisture and maize performance in Morogoro, Tanzania”
6. Judy Mwendu Wambua (A99/30560/2015) **PhD thesis (2019)** titled “Waste-water utilization and its effect on growth and quality aspects of Kale and indigenous leafy vegetables and their distribution in Kitui County - Kenya”
7. M/P/136/2019 **MSc Project (2019)** titled “Potential of small scale irrigation in enhancing livelihoods in Kajiado County, Kenya”
8. M/TH/024/2019 **MSc thesis (2019)** titled “Physiological and morphological basis of yield difference in upland rice varieties in response to low nitrogen in Kirinyaga County, Kenya”
9. M/TH/045/2019 **MSc thesis (2019)** titled “Tree seed sources, diversity and distribution in selected sites within Central and Western Kenya”
10. Erick Otieno Wanjira (N50/CTY/PT/26809/2013) **MSc thesis (2018)** titled “Smallholder farmers’ perception and practices of on-farm tree species diversification in Siaya County”
11. Margaret Wairimu Maina (N50/CTY/PT/25421/2011) **MSc thesis (2018)** titled “The impacts of forestry clean development mechanism projects on community livelihood in Aberdare forest Nyandarua County”
12. Susan Wanjiru Mbuthia (C82/20950/2010) **PhD thesis (2018)** titled “Constraints and opportunities in banana value chain influencing farmers’ choice of methods of banana management and marketing in Meru County, Kenya”
13. Benjamin Munganga Mubembe (A148F/29060/2014) **MSc thesis (2018)** titled “Effects of selected integrated soil fertility management on soil chemical properties and cassava yield in South Kivu DR Congo”
14. Mutuerandu C Miriko (A144/OL/CTY/26102/2015) **MSc thesis (2018)** titled “Effects of phosphorus and rhizobia inoculation on growth and yield of desmodium and lucerne in Kiambu County, Kenya”

15. Susan G Openda (A148/21591/2010) **MSc thesis (2018)** titled “Improving maize-bean yields through improved soil moisture storage using trapezoidal bunds and manure in Machakos County-Eastern Kenya”
16. Peter Kirui Kibet (A144/31598/2015) **MSc thesis (2018)** titled “Effects of agricultural lime types on soil properties and maize (*Zea Mays L*) performance in soils of Tharaka Nithi County, Kenya
17. Stephen N Ogega (A147/30858/2015) **MSc thesis (2018)** titled “Effects of tillage methods and inorganic nutrients interactions on soil chemical properties, maize and beans performance in Embu County, Kenya”
18. Mr. Wafula Nelson Wekha (A144/CE/24621/2012) **MSc thesis (2017)** titled “Effects of phosphate rates on Nitrogen uptake, growth, yield and quality of Finger Millet in Busia, Kakamega and Makueni Counties”
19. Ms. Tabitha Kariithi (A144/CE/23291/2013) **MSc thesis (2017)** titled “Effect of organic and inorganic fertilizers on yield and quality of Amaranths in Kiambu County, Kenya
20. Ms. Charity N Njeru (A144/27631/2014) **MSc thesis (2017)** titled “Effects of selected leaf extracts on soil pH, macronutrients, performance and Beta-carotene levels of Amaranthus in Kiambu County”
21. Ms. Caroline Adema Vulimu Mmata (N50/CE/27862/2013) **MSc thesis (2017)** titled “Effects of indoor air pollution on maternal gestation and infant birth weight in Kilifi County, Kenya”
22. Mr. Noel Mulinganya (A148F/21207/2012) **MSc thesis (2016)** titled “Rhizobia inoculation combined with organic and inorganic fertilizer amendments effects on nitrogen fixation and yields of beans in south Kivu, Democratic Republic of Cong’o”
23. Mr. David Murithi Njiru (N50/CTY/PT/20701/2012) **MSc thesis (2016)** titled “Wind resource potential for electricity generation using hybrid micro-grid systems in Northern Kenya”
24. Ms. Lucy Wambui Ng’ang’a (N85/20710/2012) **PhD thesis (2016)** titled “Soil carbon sequestration potential in different land use types on smallholder farms of Murang’a County”
25. Mr. Filbert Leone Ahmat (A99F/24650/2011) **PhD thesis (2015)** titled “Use of rock phosphate with *Titbonia diversifolia* in maize-bean intercrop for improved maize yield under two contrasting agro-ecologies in Kenya”
26. Mr. Samuel Mwaura (N50/CE/11390/2008) **MSc thesis (2015)** titled “Challenges and Opportunities of participatory wetland management of uplands wetland, Kiambu County, Kenya
27. Ms. Liliane Shukuru Bahati (A148F/21206/2012) **MSc thesis (2015)** titled “Effect of *B. Japonium* strains on soybean nodulation and indigenous AMF colonization and their survival in Walungu peat under different storage conditions”
28. Mr. Pius Mwenda Borona (N50/25774/2011) **MSc thesis (2015)** titled “Assessing vulnerability to climate variability and change of small scale farmers in Wote Division Makueni County, Kenya”
29. Mr. Richard Oruko Osiyo (A99/24647/2011) **PhD thesis (2015)** titled “Effect of *Titbonia diversifolia* biomass and urea on nitrogen dynamics, and pruning regimes on carbon sequestration in an agroforestry farming system”
30. Mr. Lavender Ondere (N50/24879/2011) **MSc thesis (2015)** titled “Spatio-temporal changes of landcover types in response to anthropogenic dynamics in Yala swamp, Siaya County, Kenya”
31. Ms. Wachera Ruth Wanjiru (N50/12315/2009) **MSc thesis (2014)** titled “Potential of biogas technology in smallholder dairy farming in Nyeri County, Kenya”
32. Mr. Janvier Bashagaluke Bigabwa (A148F/20182/2010) **MSc thesis (2014)** titled “Validation of Infrared Scanning as a Novel Approach of Soil Characterization in the East of Democratic Republic of Congo”
33. Ms. Esther Kagure Munyiri (T130/21989/2010) **PhD thesis (2014)** titled “Vulnerability and Adaptations of the Tourism Sector to Climate Change in selected regions in Kenya”
34. Andrew Makonde Makoti (N50/10401/08) **MSc thesis (2013)** titled “Strategies of coping with drought-driven food insecurity in Kwale County, Kenya”

35. Musyoki Josephine Kamene (N50/CE/11900/07) **Masters of Environmental Studies and Community Development** thesis (2012) titled “The Role of community forest associations in participatory management of Ontulili and Ngare forests in North Central Kenya”
36. Felix Ngetich (I84/11873/08) **PhD thesis** (2012) titled “Enhancing farmers’ agricultural productivity through improved field management practices in the central highlands of Kenya”
37. Athanase Nduwumuremyi (A148EA/20180/10) **MSC thesis** (2012) titled Effects of different local lime sources on soil properties and yield of irish potatoes (*Solanum tuberosum. L*) in Burera District Rwanda
38. Samantha Mugechi Ngugi (N50/21550/10) **MSC thesis** (2012) titled “An evaluation of organic agriculture to improved rural livelihoods; a case study of Kandara Division, Murang’a County”
39. Scholastica Mwikali Wambua (A103/13245/09) **MSC thesis** (2012) titled “Analysis of seed loan approach and social networks in improved bean seed dissemination in Bunyala and Samia Districts of Busia County, Kenya”
40. Musyoki Mary Kamaa (N50/11298/04) **Master of Environmental Sciences** thesis (2011) titled “The effect of organic and mineral fertilizers on soil microbial communities in Kabete long-term experiment, Kenya”. Department of Environmental Sciences
41. Mary Nyambura Maingi (N50/10688/07) **Masters of Environmental Studies and Community Development** thesis (2011) titled “Status of urban agriculture and implication for enhanced socio-economic and ecological benefits in Nairobi, Kenya”. Department of Environmental Studies and Community Development
42. Odhiambo Ken K’Oyoo (N50/10907/07) **Masters of Environmental Studies and Community Development** thesis (2010) titled “Positive Deviance in Adoption of Agroforestry Technologies: A case of farmers in Kadibo, Lower Nyando River Basin, Kenya” Department of Environmental Studies and Community Development
43. Ochanda Khasenye Valentine (N50/10419/06) **Masters of Environment** thesis (2009) titled “Conservation and management of Sandalwood trees in Kibwezi, Chyullu hills, Kenya”. Department of Environmental Planning and Management, Kenyatta University

4.0 PROFESSIONAL/CONSULTING

4.1 NETWORKING AND COLLABORATION WITH EXTERNAL ORGANIZATIONS

1. African Network (AfNet) of Tropical Soil Biology and Fertility Institute of CIAT – 2000 to date (*Networking and collaboration in research and development projects, hosting students to do projects, students supervision*). Contact Person; Dr Job Kihara; j.kihara@cgiar.org
2. 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; Hotensia Wambui, wambuihm@yahoo.com; Dr Mary Kifuko-Koeh, wambuihm@yahoo.com ; kifukom@yahoo.com
3. 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
4. World Agroforestry Centre (WAC- ICRAF) – 2000 to date (Hosting students in research projects and students in Integrated Soil Fertility Management Visit their Laboratories for practicals and exposure); Contact person: Jonathan Muriuki; j.muriuki@cgiar.org
5. Kamurugu Agricultural Development Initiatives -2003 to 2017 (Community Empowerment) ; Contact person: Peter Mbogo; Director kadi@jambo.co.ke
6. Katholieke Universiteit Leuven (KU-Leuven) - 2004 to date (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
7. ASARECA - 2004 to 2014 (Research and students supervision) contact person: Dr Hezron Mogaka

- hmogaka@asareca.org
8. 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
 9. 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@icipe.org
 10. Kenya Organic Agriculture Network (KOAN) - 2006 to date (*collaboration in research and development projects*); Contact Person, Samuel Ndungu; ndungus@koan.co.ke
 11. Forschungsinstitut für Biologischen Landbau (FiBL – Organic Institute of Organic Agriculture), Switzerland - 2006 to date (*collaboration in research and development projects, students' supervision*). Contact person Dr. Noah Adamtey; noah.adamtey@fibl.org
 12. International Institute of Tropical Agriculture (IITA) 2006 to date (*collaboration in research projects*). Contact person: Dr. Bernard Vanlauwe (B.vanlauwe@cgiar.org)
 13. Embu University College – 2012 to date (Student supervision, Collaborative projects, Mobilizing stakeholders involved in research work); Contact Persons: Prof Daniel Mugendi dmugendi@yahoo.com; Dr Felix Ngetich, ngetich.felix@embuni.ac.ke
 14. 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
 15. African Plant Nutrition Institute (APNI) – 2019 to date (*collaboration in research and development projects, hosting students in projects, students' supervision*) Contact person: Dr James Mutegi; J.MUTEGI@apni.net

4.3 CONSULTING FOR EXTERNAL ACADEMIC/PROFESSIONAL ORGANIZATIONS

4.3.1 ENVIRONMENTAL IMPACT ASSESSMENT CONSULTANCIES

Consultancy EIA/ SEA Projects	Client
Proposed Auditorium Development Project In University of Embu (November 2018)	University of Embu
Proposed Tuition Block Development Project In University of Embu (October 2018)	University of Embu
Proposed Farm Machinery Shed Development Project In University of Embu (October 2018)	University of Embu
Carrying out Environmental and social safeguards compliance audit of Kenya Municipal Program (KMP) projects in: <i>Cluster (ii) Towns: Kakamega, Kericho, Eldoret and Nakuru</i> . Contract NO: MTH&UD/SDoH&UD/DoUMD/KMP/CONS-01/2016-2017. (CIVOTECH) (March 2017 to May 2017)	Directorate of Urban & Metropolitan Development, State Department of Housing and Urban Development (World Bank supported project)
Carrying out Environmental and social safeguards compliance audit of Kenya Municipal Program (KMP) projects in: <i>Cluster (i) Towns: Malindi, Mombasa, Machakos and Naivasha</i> . Contract NO: MTH&UD/SDoH&UD/DoUMD/KMP/CONS-01/2016-2017 (CIVOTECH) (March 2017 to May 2017)	Directorate of Urban & Metropolitan Development, State Department of Housing and Urban Development (World Bank supported project)
Carrying out consultancy services for Kenya Municipal Program (KMP) projects beneficiaries' assessment in: Cluster (i) Towns: Malindi, Mombasa, Machakos and Naivasha. Contract NO: MTH&UD/SDoH&UD/DoUMD/KMP/CONS-02/2016-2017. (CIVOTECH) (March 2017 to May 2017)	Directorate of Urban & Metropolitan Development, State Department of Housing and Urban Development (World Bank supported project)

Proposed animal house Development Project In University of Embu (January 2017)	University of Embu
Proposed sewer line Development Project In University of Embu (January 2017)	University of Embu
Proposed herbarium Development Project In University of Embu (January 2017)	University of Embu
Proposed lecture hall Development Project In University of Embu (January 2017)	University of Embu
Proposed car park Development Project In University of Embu (January 2017)	University of Embu
Supervision and Coordination of Construction of Storm Water Drainage Facilities in Embu County, Contract No. MLHUD/KMP/COMP3/EMBU-SWD PHASE 1 2014-2015 (CIVOTECH) (2015-2016)	Directorate of Urban & Metropolitan Development, State Department of Housing and Urban Development (World Bank supported project)
Proposed access road Development Project In Embu University College	Embu University College
Proposed Incinerator Development Project In Embu University College	Embu University College
Proposed Office Block Development Project In Embu University College	Embu University College
Proposed Residential House Development Project On Plot L.R. No. 21096/73 Juja, Thika	Mr. Peter Kinuthia Thuku
Proposed Student Hostel Housing Development Project On Plot L.R. No. 21096/8 Juja, Thika	Mr. Robert M Njoroge
Proposed Housing Development Project On Plot LR No. 16991, Juja, Thika	Mr. Joseph Njoroge Murigi
Proposed Classroom Development Project In Embu University College	Embu University College
Proposed Diagnostic Laboratory and Sick Bay Development Project In Embu University College	Embu University College
Proposed Housing Development Project On Plot LR No. 16989, Juja, Thika	Ms. Terry Wanjiku Njoroge
Proposed Hall Development Project In Embu University College	Embu University College
Proposed Sarai Children's Home development project on the site Plot LR No 1/4294, Ruiru Mugutha, Kiambu	Ms. Assumpta Wambui Gitau
Proposed Hostel Development Project In Embu University College	Embu University College
Proposed Housing Development Project In Juja, Plot No 21096/55	John Kamindo Njoroge
Proposed Students' shopping Centre Development Project In Embu University College	Embu University College
Proposed Library Block Development Project In Embu University College	Embu University College

4.3.1 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).

4.4 MEMBERSHIP TO ACADEMIC/PROFESSIONAL BODIES

1. Soil Science Society of East Africa – 2001 to date
2. African Crop Science Society – 2001 to date
3. Organization for Social Science Research in Eastern and Southern Africa (OSSREA) – 2003 to 2010
4. Environmental Institute of Kenya (EIK) – 2015 to date

4.5 NATIONAL AND INTERNATIONAL AWARDS AND RECOGNITIONS

4.5.1 EXTERNAL EXAMINER FOR POSTGRADUATE PROGRAMMES

1. Ms. Natasha Kurwakumire **MPhil thesis (January, 2015)** titled “Managing macro- and micronutrient interactions for improved agronomic efficiency under contrasting soil carbon levels in smallholder farms” *University of Zimbabwe*
2. Mr. Patrick Musinguzi **PhD thesis (September, 2016)** titled “Critical soil organic carbon ranges for optimal crop response to nitrogen in a Ferralsol” *Makerere University*
3. Victoria Mino Musyoka (I501/MTI/20617/2015) **MSc thesis (January 2019)** titled “An assessment of contribution of forest provisioning ecosystem services to small-holder farmers livelihoods in Chyulu hills forest”. *South Eastern Kenya University*
4. Shadrack Otieno Nyawade (A80/52236/2017) **PhD thesis (May 2020)** titled “Diversification of Potato Farming Systems through Legume Intercropping for Improved Resource Use Efficiency and Soil Fertility”. *University of Nairobi*
5. Ms. Mary Wangui Ngure (I85/93062/2013) **PhD thesis (September 2020)** titled “Enhancing Food Security through crop and livelihood diversification among Kimandi-Wanyaga Community in Murang’a County, Kenya”. *University of Nairobi*
6. Mr. Norbert Iraboneye (KM121/14577/18) **MSc thesis (September 2020)** titled “Effect of canola green manure and compound fertilizer on potato (*Solanum tuberosum*) growth, yield and bacterial wilt management”. *Egerton University*

4.5.2 EXTERNAL EXAMINER FOR EXTERNAL DEPARTMENTS

1. External examiner for the Department of Geosciences and the Environment, The Technical University of Kenya (February 2021 – Current)

4.5.3 REFEREE FOR PROFESSIONAL PERIODICALS

Review for the following Journals; *Field Crops Research Journal, Geoderma, Agricultural Systems, Archives of Agronomy and Soil Science, Experimental Agriculture, Journal of Soil Science and Plant Nutrition, Applied Geography, Journal of the Saudi Society of Agricultural Sciences, Journal of Integrative Agriculture, Journal of Soil Science and Environmental Management, Journal of Agricultural Extension and Rural Development, Journals of Agriculture and Biological Sciences, African Journal of Biotechnology*, and have reviewed the following papers:

1. Organic fertilizers mineralization and their effect on the potato "*Solanum tuberosum*" performance in organic farming (JSSAS-D-21-00447). *Journal of the Saudi Society of Agricultural Sciences, Elsevier publisher* (June 2021)
2. Yield response of three African indigenous leafy vegetables to integrated cattle manure and urea fertilizer microdosing and application timing in Benin, West Africa (GAGS-2021-0201) *Archives of Agronomy and Soil Science, Taylor and Francis publisher* (May 2021)

3. Intercropping of maize with soybean under integrated nutrient management showcases the role of biofertilizers in silage production and quality (GAGS-2021-0213) *Archives of Agronomy and Soil Science, Taylor and Francis publisher* (March 2021)
4. Productivity, profitability and nutrient use efficiency in cereal systems: Application of nutrient management decision support system and machine learning approaches (AGSY-D-20-00939R2). *Agricultural Systems, Elsevier publisher* (January 2021)
5. An Integrated Assessment of Vulnerability to Dry Spells and Agricultural Water Management Practices in Northern Ghana (JAPG_2020_1117). *Applied Geography, Elsevier publisher* (December 2020)
6. Dry spells in a semi-arid region of Brazil and their influence on maize productivity. (AGSY_2020_325) *Agricultural Systems, Elsevier publisher* (April 2020)
7. Effect of green garlic/tomato crop rotation for 3 years on the dynamics of tomato growth, yield and soil physiochemical properties(GAGS-2019-1410). *Archives of Agronomy and Soil Science, Taylor and Francis publisher* (March 2020)
8. Reducing production and financial risks in smallholder crop-livestock systems in northern Ghana: Maize-legume strip cropping effect on productivity and financial return (EAG-D-19-00300). *Experimental Agriculture, Springer Publishers* (September 2019)
9. Soil health and ecosystem services: lessons from sub-Sahara Africa (SSA). *Geoderma, Elsevier publisher* (September 2019)
10. Using N-enriched co-compost to enhance nutrient uptake, nitrogen use efficiency, and yield of maize. *Journal of Soil Science and Plant Nutrition, Springer Publishers* (May 2019)
11. Nutrition management and farm's age affect saffron daughter corms behavior, nutrients uptake and economic water and fertilizer use efficiency: a large scale on-farm experiment during the years 2011–2017" (GAGS-2018-1246). *Archives of Agronomy and Soil Science, Taylor and Francis publisher* (March 2019)
12. "Effect of lime water – manure organic fertilizers on the productivity, energy efficiency and profitability of rainfed maize production" (GAGS-2018-1147.R1). *Archives of Agronomy and Soil Science, Taylor and Francis publisher* (March 2019)
13. Impact of cotton + green gram intercropping (1:1) on yield and economics. (Ms_AJAEES_40563). *Asian Journal of Agricultural Extension, Economics & Sociology* (2018)
14. Effect of lime water - manure organic fertilizers on the productivity, energy efficiency and profitability of rainfed maize production (GAGS-2018-1147) *Archives of Agronomy and Soil Science, Taylor and Francis publisher* (December 2018)
15. Long-term sustaining crop productivity and soil health in maize-chickpea system through integrated nutrient management practices in Vertisols of central India (FIELD_2018_1316_R1) *Field Crops Research Journal, Elsevier publisher* (September 2018)
16. Tomato Yield and Economic Performance under Vermi-compost and Mineral Fertilizer Applications. (JMS 2018), (June 2018)
17. Effect of Co-inoculation of Rhizobia and Plant Growth Promoting Rhizobacteria on Common Bean Growth and Yields in Eastern Kenya. (Paper ID: 1660512) *Open Journal of Soil Science (OJSS)* (April 2018)
18. Can sustainability of maize-mustard cropping system be achieved through balanced nutrient management? (FIELD-2018-85) *Field Crops Research Journal, Elsevier publisher* (February 2018)
19. Effect of Nitrogen Sources on the Yield of Common Bean (*Phaseolus vulgaris*) in Western Kenya (AAFS-D-17-00015). *Agriculture & Food Security, Elsevier publisher* (April 2017)
20. The Role of Rain Water Harvesting for Food security in Ethiopia (A review) (AASCI-2016-23). *Annals of Agrarian Science, Elsevier publisher* (January 2017)
21. Maize-common bean intercrop planting arrangement integration with nutrient management to intensify maize-based cropping (AGS-2016-00292). *Journal of Agricultural Science* (September 2016)
22. Phosphorus and sulphur releasing pattern and their availability for maize cultivation (JCO-19.4.16-0152). *Journal of Cereals and Oilseeds* (July 2016)

23. Maize-common bean intercrop productivity as affected by planting arrangements and applied nutrients in northwestern Ethiopia (EAG-D-16-00088). *Experimental Agriculture*, Springer Publishers (April 2016)
24. Grain yield and yield component of maize, cowpea and lablab bean grown in intercrop system; *Journal of Integrative Agriculture*, Elsevier publisher (May 2014)
25. Response of maize growth and development to mineral fertilizer and soil characteristics in Northern Ghana (IJAAR-14-014). *International Journal of Advance Agricultural Research* (May 2014)
26. Combined use of Tithonia diversifolia and NPK fertilizer for improving soil fertility and Maize yield in on a humid Alfisol (JSSEM-11-130). *Journal of Soil Science and Environmental Management* (November 2012)
27. Comparative Effect of Organic, Organomineral and Mineral Fertilizers on Soil Properties, Nutrient Uptake, Growth and Yield of Maize (*Zea Mays*) IRJAS-12-174. *International Research Journal of Agricultural Science and Soil Science* (Formerly, International Research Journal of Agricultural Science) (November 2012)
28. Determination of some heavy metals in spinach and lettuce cultivated in Potiskum, Yobe state, Nigeria (JAED-12-050). *Journal of Agricultural Economics and Development* (October 2012)
29. STCR based fertilizer application for meeting nutrient requirement of Finger millet (*Eleusine coracana* (L.) Gaertn.) (IJAS-12-226). *International Journal of Agricultural Sciences* (October 2012)
30. Physicochemical properties of an ultisol and yield of maize as influenced by cassava peel amendment. *Journals of Agriculture and Biological Sciences* (July 2011)
31. Mineralization of animal manures and plant uptake of N in an ultisol. *Journals of Agriculture and Biological Sciences* (July 2011)
32. Macro-Mineral status at three Phenological stages of some Range shrubs of Gadoon Hills, District Swabi, Pakistan. *African Journal of Biotechnology (AJB)* (ISSN 1684-5315) (July 2011)
33. Effects of farm yard manure on cadmium and lead accumulation in *Amaranthus oleracea* L. *Journal of Soil Science and Environmental Management* (May 2011)
34. Perceptions of Maize Farmers on the Use of *Mucuna pruriens* as a Cover Crop in the Brong Ahafo Region of Ghana. *Journal of Agricultural Extension and Rural Development* (May 2011)
35. Comparative Effectiveness of Long Yam Bean (*Sphenostylis stenocarpa*) and Organic and Inorganic Fertilizers in Improving Soil Nutrient Status and Yield of Maize in Southwest Nigeria. *Journal of Soil Science and Environmental Management* (February 2011)
36. Identification and Documentation of Indigenous Knowledge of Beekeeping Practices in Selected Districts of Ethiopia. *Journal of Agricultural Extension and Rural Development* (February 2011)

5.0 ADMINISTRATION AND RESPONSIBILITIES

5.1 RECOGNIZED UNIVERSITY ADMINISTRATIVE POSITIONS

1. August 2011 to August 2013, Kenyatta University: Departmental Examinations Coordinator (1st 2 years term)
2. August 2013 to September 2015, Kenyatta University: Departmental Examinations Coordinator (Renewal - 2nd 2 years term)
3. June 2016 to August 2020, Kenyatta University: School Examinations Coordinator

5.2 OTHER RESPONSIBILITIES IN THE UNIVERSITY

1. 2008– 2011, Kenyatta University: In charge of the Departmental time table
2. Feb 2016-Dec 2016 - Academic Advisor for 4th year students Environmental Resource Conservation Programme
3. January 2017 to date - Academic Advisor for 4th year students Environmental Resource Conservation Programme

6.0 COMMUNITY ENGAGEMENT AND OTHER CONTRIBUTIONS

6.1 COMMUNITY SERVICE AND OUTREACH

6.1.1 SCHOOL BOARD OF MANAGEMENT MEMBER

1. Chairperson, Board of Management (BOM), Koimbi mixed Secondary School (March 2019 to date)
2. Member, Board of Management (BOM), Koimbi mixed Secondary School (March 2019 to date)
3. Member, Board of Management (BOM), Weithaga Boys Secondary School (March 2019 to date)
4. Chairperson, Board of Management (BOM), Koimbi mixed Secondary School (2015 to 2018)
5. Member, Board of Management (BOM), Koimbi mixed Secondary School (2015 to 2018)
6. Member, Board of Management (BOM), Weithaga Boys Secondary School (2015 to 2018)
7. Member, Board of Governor (BOG), Weithaga Boys Secondary School (2012 to 2015)
8. Member, Board of Governor (BOG), Weithaga Boys Secondary School (2009 to 2012)
9. Member, Board of Governor (BOG), Koimbi Boys Secondary School (2007 to 2010)

6.1.2 COMMUNITY BASED APPOINTMENTS

1. 2003 to date - Member of Commissioners for Christ Ministry which ministers to students in High Schools in Kenya (*Preaching, counseling, seminars on academic excellence, development of discipleship materials*)
2. 2004 to 2017 - Worked/working with over 150 farmer groups in central Kenya to promote the wellbeing of the farmers through the promotion of soil fertility enhancement technologies in these groups
3. 2008 to date - Working with Weithaga and Koimbi Primary Schools in Murang'a in enhancing education levels within the community (*visiting the schools, motivating the teachers and students, talking with parents, counseling the students*)
4. 2009 to date - Working with the local administration in Weithaga Location to enhance youth improvement in the community
5. 2008 to date - Member of Benevolence Ministry in Membley Baptist Church, Ruiru – *Reaching out to the needy members of the society in terms of feeding, education, providing clothing and counseling*
6. 2014 to date – Involved in the Mentorship Programme for Murang'a County in Koimbi Primary School
7. March 2019 to date – involved in Kahuro sub county DCC initiative for men and male youth behavior change programme (Secretariat)

6.2 PROFESSIONAL AFFILIATIONS

1. National Environmental Management Authority (NEMA) Associate Expert for Environmental Impact Assessment - 2007 - 2009
2. National Environmental Management Authority (NEMA) Lead Expert for Environmental Impact Assessment - 2009 to date

6.3 RECOGNIZITON AND AWARDS

1. Best poster presented at the 21st Soil Science Society of East Africa conference, Eldoret, Kenya in December 2003
2. Kenyatta University Vice Chancellors Award for Extra Hard work in December 2012

6.4 OTHERS

6.4.1 GUEST DISCUSSANT

1. Invited as a Discussant by the African Centre for Technology Studies (ACTS) and the STEPS Centre (Sussex, UK), on “Diverse pathways of agrarian transformation in East Africa: Exploring new

perspectives on the history and future of technological change within Green Revolutions”. One day workshop on 26th January 2017 at the Tara Suites Hotel, Gigiri.

6.4.2 INTITATING/LEADING RESEARCH PROJECT

1. 2011-2014; Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) on “Enhancing crop productivity through soil-water conservation and integrated drought prediction and preparedness techniques in the drier zones of Central Highlands of Kenya”
2. 2012-2016; International Atomic Energy Agency on “Unraveling beneficial impact of Nitrogen, carbon and water dynamics in mulch-based systems on crop productivity in heterogeneous biophysical environment of the Central Kenyan highlands”
3. 2017-2018; 2016 Vice-Chancellors Research on “Agronomic and Economic effects of Phosphate Rock on acidic soils in TharakaNithi County”

6.4.3 CAPACITY BUILDING

1. May 2016: Organised a two-day training on the use of SAS (18 participants)
2. March 2016: Organised a writeshop to develop knowledge sharing products on integrated soil fertility management
3. October 2015: Organized a two -dayAgro-dealer training workshop
4. August 2015: Organized a two-day training workshop for Local processors/enterpreneurs

6.4.4 CONTRIBUTION TO UNIVERSITY ADVANCEMENT

1. Member: Committee on development of proposals for African Union 2016

7.0 REFEREES

Prof. Daniel Mugendi Njiru
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P. O. Box 43844-00100, Nairobi. Kenya.

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Department of Agricultural Resource Management, Kenyatta University
P.O. Box 43844 - 00100, Nairobi, Kenya.