

CURRICULUM VITAE – PROF BENJAMIN O. DANGA.

Name: Benjamin Oginga Danga

Address : Department of Agricultural Science and Technology, Kenyatta University, P.O Box 43844-00100 Nairobi.

Designation: Associate Professor of Soil Science / Agronomy

Research Interests: Soil Fertility & Plant Nutrition, Agronomy, Climate change, CN dynamics & Modelling in Agroecosystems, Soil & Water management, Food security and nutrition, Soil health, biodiversity and land resource conservation, Soil carbon sequestration, reduction of N losses, Biochar for Improving Soil Physical Properties and plant growth, Application of GIS in land evaluation

Academic Qualifications

	Date Awarded	Specialization	Institution
PhD	2008	Soil Science (Soil Fertility, and Plant Nutrition)	Egerton University & the Institute of Soils and Water, Volcani Centre, Bet Dagan, Israel
MPhil	1996	Soil Science	Moi University
BSc	1990	Agricultural Education and Extension	Egerton University
KACE	1986	3 Principal passes	St. Paul's Amukura High School
KCE	1984	Division one (1)	St Mary's Ukwala Secondary School

EMPLOYMENT HISTORY AND WORK EXPERIENCE

Kenyatta University

- 2025 (June) to date – Associate Professor of Soil Science
- Deputy Executive Dean – School of Agriculture and Environmental Sciences – Kitui Campus - from Nov 2022 to Dec 2024.
- 2018 Oct— Feb 2020 Chairman, Department of Agricultural Science and Technology, Kenyatta University -
- 2017 Feb – Sep 2018: Chairman of Department of Agricultural Resource Management, Kenyatta University.
- 2023 – 2024: VC appointment - Chairman KSA -KU project at Kitui, on hosting of Observatory Telescope.
- 2023 – Chairman, Kitui Campus Students Disciplinary Committee
- 2023: VC appointment - appointed member of TVET programmes Board

- 2018 – VC appointment - appointed Committee Member on Spearhead the transfer of the School (SAED) to KITUI campus
- 2018: VC appointment - appointed as Sub-committee member to advise the VC on Construction of a Dam and other Agricultural Infrastructure at Kitui campus.
- 2018 December – VC appointment: Appointed member, University Advisory Committee on Maximum utilization of Space and Facilities at KITUI Campus
- 2016 – Appointed member of a technical committee for harmonization of University programs
- 2019: Appointed to a committee to Receive, Process & Rank Applications for EAC – KFW Scholarships
- 2010 to 2015: Deputy Coordinator, KU-AGRA ISFM MSc Training program (Regional Training program funded by AGRA, Kenyatta University,
- Staff Mentor - 2017-2021- KU staff mentor
- 2015 (March) to June 2025 - Senior Lecturer, Department of ARM /AST, KU.
- 2009 – 2012: Examination Coordinator, Department of Agricultural Resources Management, Kenyatta University
- March 2009 – March 2015 – Lecturer, Department of ARM, KU

Teachers Service Commission

- 2008 – Deputy Principal, Rosoga High School.
- 1996-2004 - Senior Lecturer at Bondo TTC
- 1990 to 1996 - Tutor / Lecturer at Asumbi TTC, Tambach TTC and Mosoriot TTC

Research Funds

- i. **VC Research and Innovation Grant – 2021** awarded **Ksh 700,000**. On-farm Rainwater harvesting and use of microorganisms to improve Water retention, and crop WUE for enhanced dryland crop production, food and nutritional security in Kitui County, Kenya.
- ii. **AFRICAN UNION (AU) Grant 2013-2016**. – EUR 65500 / 550,000. Developing decision support simulation tools based on scientifically validated indigenous/traditional and conventional knowledge for increasing agricultural production and food security in Africa in the context of a changing climate. Collaborative research with Durban University (Prof Kevin), University of Mauritius, and Botswana College of Agriculture, Botswana.
- iii. 2010-2014: **AGRA. USD 715,697**. KU Masters Training Programme in Integrated Soil Fertility Management (ISFM)
- iv. **2010-2013: RUFORUM USD 60,000**. Soil properties effects and management of organic residues to improve C sequestration, reduce N losses and improve crop yields.

- v. **2010-2013: RUFORUM USD 59,000.** Improving Soil nutrients and Water management to increase crop yields for enhanced livelihoods of small scale farmers in Semi-arid eastern Kenya.
- vi. MSc ISFM training of 16 MSc students from Rwanda, Mozambique, Kenya and Tanzania – funded by AGRA. (2010-2015);
 - a. 2 Grants from RUFORUM for capacity building in Agriculture (4 Msc students trained);
 - b. grant from African Union (2013-2016) – 1 PhD candidate trained.
 - c. VC Research Innovation grant 2021

PROJECTS, CONSULTANCY, COLLABORATION

I have offered professional consultancy services to international organization such

- World Vision International,
 - Childfund Kenya,
 - African Mental Health;
 - SHA – Self Help Africa = Strengthening the competitiveness of the cassava value chain in Kenya (KF1) Project kilifi; Dec 2017;
 - AVSI - Association of Volunteers in International Service Foundation – Maziwa Dairy value chain project – Meru Nov 2019.
1. 2023- July 10-14. Technology Transfer Benchmarking Visit within the DAAD Project “TT-CUIP” 10 to 14 July 2023 at HNU, Germany. Benchmarking Visit with Strategy Workshop within our joint project “Capacity Strengthening in Technology Transfer and Commercialization of University Intellectual Property” (TT-CUIP). Prof. Dr. Thomas Bayer, Director Africa Institute
 2. 2022: collaboration with EU partners in developing EU – HORIZON CL6 -2022 proposal – involves researchers from Nigeria, University of Birmingham, Ukraine and Israel.
 3. **2019.** Final Report Dairy Value Chain Analysis For Maziwa Project *Empowering Dairy Cooperatives In Meru County, Kenya*. 2019. Submitted to Association of Volunteers In International Service (Avsi) Foundation,**ITALY, Ruaraka – Kenya. By** DR Ambrose Jagongo and Dr Benjamin Danga (Consultant) - Permit Consultancy For Management.
 4. 2017. Baseline Survey Report. Strengthening the competitiveness of the cassava value chain in Kenya (KF1) Project – covering 7 counties of Kilifi, Kitui, Kisumu, Siaya, Busia, Homabay and Migori. Implemented by Self Help Africa (SHA) and partners by Great Leap Consult Ltd
 5. AU Project Reports 2015, 2016
 6. Ruforum Project Report, 2012, 2013.
 7. AGRA ISFM MSc training reports 2011, 2012, 2013, 2014

8. 2013. End of phase evaluation Report Chagamwe ADP (Mombasa county, Coast province, Kenya, World Vision-Korea
9. 2013. End of phase Evaluation Report - Katito ADP (Kisumu County, Kenya, World Vision-USA
10. 2012. End term evaluation Report. Dadaab emergency WASH Emergency Response intervention program, Northern Kenya, World Vision- Project Number: 196537 by Benjamin Danga and Afullo, A. (Final Report – submitted **January 2013**.
11. 2012. Baseline Survey Report. Rusinga Island and Kuria, Nyanza province, Kenya, Childfund international
12. 2012. Terminal / End of program evaluation, Voi ADP, Taita Taveta County. World Vision
13. 2011. End of program Evaluation Report. **Golbanti ADP** (Garsen, Tana Delta county, Coast province, Kenya, World Vision-USA
14. 2011. End of phase evaluation Report. Soweto ADP (Embakasi, Nairobi County, Kenya. World Vision-USA
15. 2011. Baseline Survey Report. Kenyenyia district, Rongo District and North Rachuonyo district, Nyanza province, Kenya, Childfund international
16. 2011. End of phase Report. Mutomo IPA (Kitui, Eastern Kenya. World Vision-USA
17. 2010. Baseline Survey Report. Integrated Baseline Survey For The World Visions' Matete IPA (Lugari / Webuye, Western Province)World Vision
18. 2009. Baseline Survey Report. Orwa IPA (West Pokot County. World Vision
19. 2009. Baseline Survey Report. Mogotio IPA, Baringo CountyWorld Vision-Finland
20. 2009. End of program (Terminal) evaluation Report. Makueni ADP, Kathonzweni, World Vision
21. Afullo, A., Danga, B., Oluoch, V. O., Otieno, E., & Onyango, P. O. (2011). Mutomo area development programme evaluation report for intergrated development projects, Kitui County, Kenya. World Vision International
22. 2017 – FAO collaboration on Agriculture and Nutrition curriculum development
23. 2013-2016: Collaborated with AU partners – **Prof. Kevin Duffy**, Durban University of Technology, Durban; **Prof. Sunita Facknath**, University of Mauritius, Mauritius; **Prof. Nnyaladzi Batisani** , Botswana College of Agriculture, Botswana, Associate Institution of the University of Botswana in te project – Developing decision support simulation tools based on scientifically validated indigenous/traditional and conventional knowledge for increasing agricultural production and food security in Africa in the context of changing climate.

24. Co-PI African Union Project on Developing Decision support simulation tools for improving African agricultural production and food security.

RESEARCH PUBLICATIONS IN REFEREED JOURNALS

1. Mburu L, Langat A and Danga B (2026). Pastoralists' perceptions of forage value and productivity of pasture grasses under different reseeding technologies in upper Ewaso-Nyiro Basin rangelands, Kenya. *Front Environ Sci* 13: 1725057. Doi 10.3389/fenvs.2025.1725057
2. Nyokabi Miriam, Mugwe Jayne, Danga Benjamin and Micheni Alfred. 2025. Improving soil fertility, sorghum productivity and economic returns through organic and inorganic inputs in semiarid Kenya. *Discover Soil* (2025) 2:44 | <https://doi.org/10.1007/s44378-025-00068-x>
3. Nyongesa, J.M., Mugwe, J. and Danga, B. 2023. Enhancing Maize and Beans Productivity Through Tithonia Biomass And Phosphorus Fertilizer In Smallholder Farms Of Mumias, Kenya. *E. Afri. Agri. For. J* (2023) 88(1), (Pg. 21-36)
4. Alkharabsheh, H.M.; Mwalu, R.; Mochoge, B.; **Danga, B.**; Raza, M.A.; Seleiman, M.F.; Khan, N.; Gitari, H. Revitalizing the Biochemical Soil Properties of Degraded Coastal Soil Using Prosopis juliflora Biochar. *Life* 2023, 13, 2098. <https://doi.org/10.3390/life13102098>
5. Ndungu J., Danga, B., Henga, S., and Makumbi, D. (2023). Estimation of combining ability of maize inbred lines for high plant density tolerance in medium altitudes of Kenya. *International Journal of Agriculture* Vol 8 Issue No. 4 pp 54-79.
6. Wamalwa, S. W., **Danga, B.** and Kweni, K. (2022). Integrated Soil Fertility Management Prospects For Soil Productivity and Food Security in Machakos County, Kenya. *E. Afri. Agri. For. J* (2022, Volume 87 (1), Pg 54-61)
7. Uwimana J., Sakha, M., **Danga, B.**, Gitari, H., and Gweyi, J.O. (2022). Involvement of Plant Growth Regulators and Varieties in the Multiplication of Cassava Planting Materials: A case study of Rwanda. *Intern. J. Bioresource Sci. (IJBS)*: 09(02): 163-172, December 2022
8. Onderi J.N and **Danga B. O.** (2022). Recycling Mwea Irrigation Water For Sustainable Agriculture. *African Journal of Environmental Science and Technology*. Vol.16(6), Pp. 225-237, June 2022.
9. Otieno MA, Gitari HI, **Danga B.**, Karuma AN (2022). Soil properties and fertility management with respect to Capsicum (Capsicum annum L.) production in Nairobi Peri-urban Counties. *Journal of Soil Science and Plant Nutrition* (2022) 22:374–392. <https://doi.org/10.1007/s42729-021-00655-1>.
10. Mwalu, R.U., Mochoge, B., and **Danga, B.** 2021. Assessing the Potential of Biochar for Improving Soil Physical Properties and Tree Growth. *International Journal of Agronomy*. Volume 2021, Article ID 6000184, 12 pages . Hindawi <https://doi.org/10.1155/2021/6000184>

11. Michelle AO, Gitari HI, **Danga B.O**, Raza MA, Kisaka OM, Elbeltagi A, Singh RJ, Soratto RP. (2021). Application of GIS in land evaluation and development of Suitability Map for capsicum production in Nairobi Peri-Urban Counties. *Journal of Remote Sensing & GIS* 10(6): 290. <https://doi.org/10.35248/2469-4134.21.10.290>.
12. Wamalwa, S.W., **Danga, B.O**, and Kweni, K. 2021. Effects of Integrated Soil Fertility Management Practices on Soil Micronutrients and Maize (*Zea Mays* L.) Yields in Semi-Arid, Kenya. *African Journal of Education, Science and Technology* Vol 6 (4): 164-176 - 2021/10/24
13. Gitore, S.A, **Danga, B.**, Henga S, and Gurmu, F. (2021a). Phenotypic characterization of sweet potato (*Ipomoea batatas* L.) genotypes in Ethiopia for selection of those possessing optimal dual-purpose. *J Agric Sc Food Technol* 7(1): 099-107. DOI: <https://dx.doi.org/10.17352/2455-815X.000095>
14. Gitore, S.A, **Danga, B.**, Henga S, and Gurmu, F. (2021b). Evaluating drought tolerance indices for selection of drought tolerant orange fleshed sweet potato (OFSP) genotypes in Ethiopia. *J Agric Sc Food Technol* 7 (2):249-254.
15. Mwalulu, R.U., Mochoge, B., and **B. Danga**. 2020. Effects of biochar and manure on soil properties and growth of *Casuarina equisetifolia* seedlings at the coastal region of Kenya. *Scientific Research and Essays* Vol. 15(3), pp. 52-63, July-September, 2020 . DOI: 10.5897/SRE2020.6684 . Article Number: 843FA8864469. ISSN 1992-2248
16. Nduwimana, D., B. Mochoge, **B. Danga**, C. Masso, S. Maitra and H. Gitari. 2020. Optimizing Nitrogen Use Efficiency and Maize Yield under Varying Fertilizer Rates in Kenya . *International Journal of Bioresource Science IJBS*: 7(2): 63-73, December 2020 DOI: 10.30954/2347-9655.02.2020.4
17. Kaburu, F., **Danga, B. O.**, and Waswa, F. 2019. Optimal interactions of nitrogen fertilizer rates and water levels for highest performance of greenhouse lettuce in KALRO Kabete, Nairobi . GSJ: Vol 7, Issue 9, September 2019, Online: ISSN 2320-9186 www.globalscientificjournal.com. GSJ: Vol 7 (9) . ISSN 2320-9186
18. Mwende, N., **Danga, B. O.**, Mugwe, J.; Kweni, K. 2019. Effect of Integrating Tied ridging, Fertilizers and Cropping Systems on Maize Performance' in Arid and Semi-Arid Lands of Eastern Kenya. *African Journal of Education, Science and Technology (AJEST)*, Vol 5(2) 87-91.
19. Onyango A.M., **Danga B.O**. and Odendo M. 2018. Agronomic and economic Performance of Maize-Soybean Intercrop under Rhizobia and Soil Amendments in Western Kenya. *Journal of Experimental Agric international*. 27(6): 1-9.
20. Verde, B. S. **Danga, B. O.**, Mugwe, J.N. 2018. Interactive effect of goat manure, phosphate fertilizer and lime on soil fertility in Embu County, Kenya. *Discovery Agriculture*, 2018, 4, 1-8.
21. Gitari, H.I., Mochoge, B.E. and **B. O. Danga**. 2015 (Oct). Effect of lime and goat manure on soil acidity and maize (*Zea mays*) growth parameters at Kavutiri, Embu

- County- Central Kenya. *J. Soil Sci. Environ. Manage.* Vol.6 (10), pp. 275-283, October 2015.
22. Verde, B. S., **Danga, B.O.**, Mugwe, J. N. 2014. Soil microbial biomass changes with application of organic and inorganic in acid soil in Embu County, Kenya. *Scholarly Journal of Agricultural Science* Vol. 4(1), pp. 27-31 January, 2014.
 23. Afullo, A.O., **Danga, B.O.** and Odhiambo, F. (2014) 'Implications of time to water source on water use in the arid and semi-arid land counties of Kenya', *Int. J. Water*, Vol. 8, No. 4, pp.381–400
 24. **Danga, B.O.**, Aviva Hadas; Wakindiki, I.I.C., Ouma, J.P. and Bar-Tal, A. 2013. Chickpea residue properties controlling decomposition dynamics and nitrogen availability in some tropical acid soils. *South African Journal of Plant and Soil*. Vol30 (4): 203-212
 25. Benvindo S.V., **B.O. Danga** and J. N. Mugwe. 2013. The Effects of Manure, Lime and P Fertilizer on N Uptake and Yields of Soybean (*Glycine max* (L.) Merrill) in the Central Highlands of Kenya. *Journal of Environmental Science and Engineering B* 2, 111-116.
 26. Afullo, A.O., and **Danga, B.O.** 2013 (July 2013). The Mythical nature of MDGs to Kenya's Arid and semi-arid lands. 36th International WEDC conference proceedings, Loughborough University, July 2013. Full refereed paper 1621. Also Abstract refereed paper 1621, page 4.
 27. Afullo, A.O., and **Danga, B.O.** 2013 (June, 2013). Are The Water Trips In The Dryland Kenya For Sustainable Development, Journeys In Vain Or TRIPS TO OBLIVION. *Ethiopian Journal of Environmental Studies and Management* Vol. 6 (3):232-241.
 28. Afullo, AO and **Danga, B.O.** 2013. Sanitation Access and Progress towards Achieving MDG7 by Kenya's Arid and Semi-Arid Land Households. *Journal of Applied Sciences in Environmental Sanitation (JASES)*. - Volume 8 Number 2 Page: 113-118.
 29. Afullo, A.O., and **Danga, B.O.** 2013. The Applicability of NIMBY and NIMTO Syndromes, and willingness and ability to pay for Improved Solid Waste services among Nairobi Households. *International Journal of solid waste management and technology*, Widener University, PA, USA, March 2013. IJSWMT: March Issue, 2013:1329-1345.
 30. Verde, Benvindo S., **Danga, B. O.**, and Mugwe, J. N. 2013. Effects of manure, lime and mineral P fertilizer on soybean yields and soil fertility in a humicnitisol in the Central Highlands of Kenya. *International Journal of Agricultural Science Research* Vol. 2(9), pp. 283-291.
 31. Afullo, A.O., **Danga, B.O.**, and Odhiambo, F., 2014. Implications of time to water source on water use in the Arid and semi-arid land counties of Kenya. *Int. J. Water*, Vol.8, No. 4, 2014: 381-400. DOI: 10.1504/IJW.2014.065794 9.

32. Wakindiki, I.I.C. and **Danga, B.O.** (2011). Effect of straw mulch application on nutrient concentration in runoff and sediment in a humid region in Kenya. *African Journal of Agricultural Research* 6: 725-731
33. **Danga, B.O.**, Ouma, J.P., Wakindiki, I.I.C. and Bar-Tal, A. (2010). Chickpea - Wheat Rotation for Higher Production in a Humid Tropical Region. *Agron J.* 102:363-371.
34. **Danga, B.O.**, and Wakindiki, I.C. 2009b (Dec 2009). Effect of placement of straw mulch on soil conservation, nutrient accumulation, and wheat yield in a humid Kenyan highland. *Journal of Tropical Agriculture* 47 (1-2): 30-36
35. **Danga, B.O.**, J.P. Ouma, I.I.C. Wakindiki and A. Bar-Tal. 2009a (June, 2009). Legume-Wheat Rotation Effects on Residual Soil Moisture, Nitrogen and Wheat Yield in Tropical Regions. *Advances in Agronomy J.* 101: 315-349.
36. Athanase N., **B. O.Danga**, Vicky Ruganzu, Muasya Rueben. 2011. Evaluation of different local lime sources on soil properties and yield of Irish potatoes (*Solanumtuberosum* L.) in Burera District, Rwanda. Abstract ID: IeCAB011_426. 4th International e-Conference on Agricultural Biosciences 2011. Proceedings published at <http://www.m.elewa.org/econferenceIeCAB.php>

TERTIARY LEVEL SCHOLARLY BOOKS

Augustine Otieno Afullo and **Benjamin Oginga Danga** (2014). Comprehensive Agriculture Resource Book (Full colour version). Amazon (USA) and Wamra Technoprises (Nairobi). Number of pages: 500|Publication Date: 2014-5-01|ISBN-13: 9789966720566; ISBN 10: 9966720561. 30.

Augustine Afullo and **Benjamin Danga** (2014). Comprehensive Agriculture Resource Book. <https://wwwcreatespace.com>. Wamra Technoprises, Nairobi. ISBN/EAN13: 9966 – 7205- 0-2. 499 pgs. <https://wwwcreatespace.com/>

Danga. B. and Afullo, A. 2015. Comprehensive Agriculture Resource Book. Kindle edition. <https://wwwcreatespace.com/>. WAMRA TECHNOPRISES. ISBN/EAN13: 499 pgs.

REVIEWED CONFERENCE PAPERS

1. Wamalwa, S. W., **Danga, B.** and Kwena, K. 2019. Prospects of using Integrated Soil Fertility Management practices for improved soil productivity and food security in Machakos County. 29th SSSEA Conference of the Soil Science Society of East Africa (SSSEA) held at the Lake Naivasha Lodge, Naivasha, Kenya 18th - 22nd November 2019.
2. Wamalwa, S. W., Osiyo, R., **Danga, B.**, Kwena, K. 2018. Is there potential for integrated soil fertility management use in Machakos County, Kenya?. RUFORUM Working Document Series (ISSN 1607-9345), 2018, No. 17 (1): 689-696. Available from <http://repository.ruforum.org>.

3. Mwende N, **Danga B.O**, Mugwe J. & Kwena K. 2018. Profit margin in maize production under tied- ridges, fertilizers and cropping systems in semi- arid areas of Machakos County, Kenya. In the proceedings of the 12th Egerton University International Conference, Njoro, Kenya 27th to 29th March 2018. Theme: Knowledge Solutions for The Society, The Economy and The Environment: Faculty of Education Complex, Egerton University, Njoro, Kenya.
4. Mwende, N., **Danga B.O**, Mugwe J. and Kwena K. 2016. Response of yield and yield components of maize as affected by tied ridges, fertilizers and cropping system in the semi-arid areas of Machakos County, Kenya. In Proceedings of the 2nd International conference on Enhancing Sustainable Agricultural Production and marketing systems 29th November to 2nd December, 2016, SAED, Kenyatta university Eds Waceke et al., 2016, Pgs 409-415.
5. Mwende N and **Danga B.O**. 2017. Effect of tied ridges, fertilizers and seed priming on soil moisture content and maize yield in semi-arid areas of Machakos County, Kenya. *A paper presented at the February 2017 Egerton University Annual Agricultural Conference.*
6. Josephine Onderi and Danga, B 2016. Assessment of Effluents from Mwea Irrigation scheme for reuse I Irrigation for rice production , Kirinyaga County, Kenya. In Proceedings of the 2nd International conference on Enhancing Sustainable Agricultural Production and marketing systems 29th November to 2nd December, 2016, SAED, Kenyatta university Eds Waceke et al., 2016, Pgs .
7. Benvindo S. V., **B.O. Danga**, and J. N. Mugwe. 2014. Interactive Effect of Goat Manure, Phosphate Fertilizer And Lime On Soil Fertility In Embu County, Kenya. International Conference On “Building A New Generation Of Agricultural Scientists”, SAED biennial international conference, Kenyatta University, Kenya. 1st to 5th December, 2014.
8. Benvindo S. V., **B.O.Danga**, and J.N. Mugwe. 2014. Influence of Manure, Phosphate Fertilizer and Lime on Soil Available phosphorus. International Conference On “Building A New Generation Of Agricultural Scientists”, SAED biennial international conference, Kenyatta University, Kenya. 1st to 5th December, 2014
9. **B.O. Danga**., J.P. Ouma, and I.I.C. Wakindiki. 2014. Fallow Management in Wheat Monoculture Cropping System: Effects on Residual Soil Moisture, Wheat Nutrition and Yield. In proceedings of International Conference on “Bridging the Gap Between Society, Science And Industry” Kenyatta University, Nairobi- Kenya 1st to 5th December, 2014. 1st Kenyatta University School of Agriculture Biennial International Conference
10. Musyoka, D., **Danga, B.**, Muasya, R. 2014. Effects of Rhizobial Inoculation and Phosphatic Fertilizer on BNF, Nitrogen and Phosphorus Uptake, Growth and Yield of Sorghum-Cowpea Intercrop in Eastern Kenya. In proceedings of International Conference on “Bridging The Gap Between Society, Science And Industry” Kenyatta University,

Nairobi- Kenya 1st to 5th December, 2014. 1st Kenyatta University School of Agriculture Biennial International Conference.

11. Afullo, A., and **Danga, B.O.** 2013. The mythical nature of MDG7 to Kenya's arid and semi-arid lands. *Paper presented at the 36th WEDC International Conference* proceedings, Loughborough University. July 2013. Abstract Refereed paper 1621, page 4.

12. Afullo, A.O., and Danga, B.O. 2013. The Applicability of NIMBY and NIMTO Syndromes, and willingness and ability to pay for Improved Solid Waste services among Nairobi Households. *A paper presented at the 28th International conference on Solid waste technology and management. Radison Plaza Hotel, Downtown Philadelphia. 9th – 13th March, 2013.*

13. Afullo, A., and B. Danga. 2013. Improved Solid Waste Management among Nairobi Households. *Paper presented in the 28th International Conference on Solid Waste Technology and Management, Philadelphia, PA, USA. March 10-13, 2013*

14. Tuyishime, O., **B.O. Danga**, Karemangingo, C., Jean de Dieu Habimfura and G. Uwayo. 2012. Bio-slurry and inorganic fertilizers effects on soil properties and maize yield in Rwanda . In Woomer, P.L. (Editor). 2012. Integrated Soil Fertility Management in Africa: from Microbes to Markets: Conference Information, Program and Abstracts. An international conference held in Nairobi, Kenya, 22-26 October 2012. CIAT. 122 pp.

15. Afullo, A., and Danga, B. (2009). Water Use Efficiency in West Kenya Irrigation Schemes. Programs and Abstracts. Theme: Climate Change, Environment and Health. 25th to 27th March 2009, KICC, Nairobi, Kenya. Article No.108, Page 72. 3rd East African Health and Scientific Conference Proceedings. Programs and Abstracts.

16. Nduwumuremyi, A., **B.O. Danga**, Vicky Ruganzu, Muasya Rueben. 2011. Evaluation of different local lime sources on soil properties and yield of Irish potatoes (*Solanum tuberosum* L.) in Burera District, Rwanda. Abstract ID: IeCAB011_426. 4th International e-Conference on Agricultural Biosciences 2011. Proceedings published at <http://www.m.elewa.org/econferenceIeCAB.php>

17. Danga B.O. April, 2011. Methods of extension education. A paper presented at the Farmer Voice Radio sponsored workshop for Kenyatta University extension interns at the Business and Students Centre, Kenyatta University.

18. Wakindiki I.I.C and Danga, B.O. 2009. Nutrient loss and accumulation following straw mulch application using different methods in a humid region in Kenya. Paper presented at the 5th Conference of the Africa Soil Science Society, ASSS, 22 - 28 November 2009, Yaoundé – Cameroon

19. Afullo, A. O., and **B.O. Danga**. 2009. Water use efficiency in the West Kenya irrigation schemes. Programs and Abstracts. Theme: *Climate change, Environment and health. In Transactions of 3rd East African Health and Scientific Conference at the KICC, Nairobi, 25th to 27th March, 2009.*

20. Bar-Tal, A., **Danga, B.O.**, Minz, D., Wakindiki, I.I.C., Ouma, J.P., Kautsky, L., Suryano, S., and A. Hadas. 2006. The effects of soil pH and microorganisms source on N

mineralization and nitrification. Soil science abstract 16647. In Transactions of the 18th World Congress of Soil Science 9th – 15th July 2006, Philadelphia, Pennsylvania, USA. 138-81.

21. **Danga, B. O.**, Bar-Tal, A., Minz D., Wakindiki, I.I.C., and Ouma, J.P., 2007. Does the microorganism source affect the N mineralization and nitrification rates under different soil pH.? *In Proceedings of the 24th SSSEA on Improved Livelihood through Applied Soil Science and Land Management. Izaac Walton Inn, EMBU 26-30 NOV 2007. Abstract No. 26*

SECONDARY SCHOOL LEVEL TEXTBOOKS

Danga. B. and Afullo, A. 2015. Comprehensive Agriculture Resource Book. Kindle edition. <https://www.createspace.com/>. WAMRA TECHNOPRISES. ISBN/EAN13: 499 pgs. (For college and High schools in Eastern and Southern Africa – Revised 2016)

SCHOLARLY PRESENTATIONS AT CONFERENCES / WORKSHOPS/SEMINARS.

S/No	Presenter	Date of Conference / Workshop / seminar	Title of Paper presented	Where presented City/ County	Sponsor
1	Mwende N, Danga B.O, Mugwe J. & Kwena K. 2018.	27 th to 29 th March 2018	Profit margin in maize production under tied-ridges, fertilizers and cropping systems in semi- arid areas of Machakos County, Kenya	12 th Egerton University International Conference, Njoro, Kenya.	Self
2	Wamalwa, S. W., Osiyo, R., <u>Danga, B.</u> , Kwena, K.	2018	Is there potential for integrated soil fertility management use in Machakos County, Kenya?.	RUFORUM Working Document Series (ISSN 1607-9345), 2018, No. 17 (1): 689-696	Self
3	Mwende, N. and Danga BO.	February 2017.	Effect of tied ridges, fertilizers and seed priming on soil moisture content and maize yield in semi-arid areas of	Egerton University Annual Agric Conference	Self

			Machakos county, Kenya.		
4	Mwende, N., <u>Danga B.O.</u> , Mugwe J. and Kwena K. 2016	29 th Nov - 2 nd Dec, 2016.	Response of yield and yield components of maize as affected by tied ridges, fertilizers and cropping system in the semi-arid areas of Machakos County, Kenya.	2 nd biennial International conference on Enhancing Sustainable Agricultural Production and marketing systems SAED, Kenyatta university	KU BSSC
5	Benvindo, VS., Danga BO., and Mugwe JN	1 st to 5 th Dec 2014	Effects of manure, phosphate fertilizer and lime and on soil available phosphorus	International conference on building new generation of agricultural scientists – AGRA.	
6	Onyango M.A., Danga B.O., and M. Odendo	June 4 – 8 th , 2012	Effect of Inoculation, Lime and Inorganic Fertilizer on Soil Properties, Soybean and Maize Yields in Western Kenya.	AGRA <i>Workshop at Windsor Hotel, Nairobi</i>	AGRA
7	Afullo A and B Danga	9-13 th March, 2013	The Applicability of NIMBY And NIMTO Syndromes, Willingness And Ability To Pay For Improved Solid Waste Management Among Nairobi Households'	The 28th International Conference on Solid Waste Technology & Management Radisson Plaza Hotel, Downtown Philadelphia	Self
8	Afullo Ao And Danga B	25 th -27 th March 2009	Water Use Efficiency In West Kenya Irrigation Schemes	3 rd East African Health And Scientific	Self sponsored

				Conference, Theme: Climate Change, Environment And Health. At KICC, Nairobi, Kenya	
9	Afullo, A and Danga, B	2009	Baseline Survey Feedback Workshop For The Orwa Integrated Program Area (IPA), Turkwel Marich Pass, Pokot World Vision, Orwa IPA.	Turkwel WVK IPA Office	WVK
10	Danga B and Afullo A	2010	Baseline Survey Feedback Workshop/Seminar For The Matete Integrated Program Area (IPA), Webuye	Matete Urafiki CBO Centre World Vision, Matete	WVK
11	Danga B and Afullo A	2012	End-Term Evaluation Feedback Workshop/Seminar For The Makueni Area Development Program (ADP),	Acacia Hotel, Wote Town World Vision, Wote	Wvk
12	Danga BO	2012	End-Term Evaluation Feedback Workshop/Seminar For The Voi Area Development Program (ADP), World Vision	Voi Hall	WVK

1. 21-24th May 2013. Training of Trainers (TOT) workshop on HIV Mainstreaming and integration into curriculum, at the Business and Students Services Centre, Kenyatta University (see attached certificate of participation).
2. 3rdRUFORUM Biennial Conference. 24 – 28 September 2012. *Entebbe, Uganda*.
3. 22 - 26th October 2012 ISFMin Africa conference, Safari park Hotel, Nairobi – 22 to

26th October 2012.

4. 1-3 August 2011 – AGRA's Soil Health Grantees Curriculum Review Workshop – held at the Southern Sun Hotel, Nairobi.
5. 20th-22nd July 2011: RUFORUM M&E Regional Scoping Workshop. THEME: Strengthening Capacity for Monitoring and Evaluation of Agricultural Training and Research in Eastern, Central and Southern Africa. Silver Springs Hotel Kampala, Uganda 20th-22nd July 2011.
6. April (11-25), 2011 – Farmer Voice Radio sponsored workshop for extension interns at the Business Centre KU.
7. Mentors workshop, KU - August, 2010 –at the Business and Students Centre.
8. 2NDRUFORUM Biennial Regional Capacity Building Conference, 20-24 SEPTEMBER, 2010, Entebbe Uganda
9. 2-6th November 2009 – module writing training workshop. Institute of Open, Distance and E-learning, Kenyatta University. Students Computer center, KU.

On-going PhD Supervision

1. Benvindo Serafim Manuel Mário Verde. Reg. No. A99F/21632/2022. Carbon Dynamics, Nutrient Availability and Performance of Maize as Influenced by Crop Residue, Manure and Inorganic Fertilizer in Manica Province, Mozambique.
2. Joyce Makasi Nzevu A99/20018/2022. Use of fish pond effluent for irrigation on nutrient dynamics, growth and yields of selected vegetables Kitui county, Kenya

On-going Masters Supervision

1. Albert Aduma Reg. A149/OL/CTY/27517/2019. Trapezoidal Bunds and Cropping System Effect on Soil Moisture Content and Sorghum Yield in Kitui County, Kenya
2. Ouma Felix Odongo. Reg. 14-7/OL/KSU/25742/2014. Effects of Biochar, Urea and Water Management on Soil Nitrogen Levels and Rice Yields in Ahero, Kisumu County, Kenya
3. Jackson Muganda Nyongesa. A148/OL/KKA/26579/2014. Effect of *Tithonia* biomass and phosphorus on soil properties and maize-beans intercrop yield in smallholder farms in Mumias, Kakamega County.
4. Jared Odoyo Malela. A147/CE/23458/2010. Effects of tied ridging and micro-dosing on maize and cowpeas yield in smallholder farms of semi arid eastern Kenya- a case study of Machakos and Makindu districts
5. Miriam Nyokabi. A148/ 39531/2016. Response of sorghum yields and soil properties to integration of manure and inorganic fertilizers and crop residue in Tharaka-Nithi county, Kenya
6. Mach Michael Deng. A149EA/OL/CTY/26518/2015. Adaptation of introduced sorghum varieties from ICRISAT to TONJ North County, south Sudan
7. Silas Otieno Asaka. A147/OL/21649/2012. The effects of Prosopis Biochar on Soil

Properties and Tomato Yield in Dadaab, Garissa County

8. Nyabuti K. Claire A147/OL/KER/32715/2016. Effects of Reducing Land Sizes and Consequent Management Regimes on Land Quality and Food Security in Nyamira County, Kenya
9. Catherine Chepngetich Langat. A149/OL/NYI/27164/2015. Rangeland grass establishment and yield under different grass Reseeding technologies in denuded areas in Laikipia County, Kenya.
10. Ndungu Nginya John. A143/OL/CTY/26157/15. Genetic analysis of Plant Density Tolerance in Mid- Altitude Tropical Maize (*Zea mays*) in Makueni, Embu and Kakamega Counties in Kenya.

Completed Masters Supervision

1. Stephen Wanjala Wamalwa. A148/OL/CTY/26884/2014. Assessing the effects of integrated soil fertility management practices on soil nutrients and maize yields using a land scape approach
2. 2023. Josette Uwimana. A144EA/25152/2018. Evaluation of rapid propagation schemes and spacing for Optimization of cassava pre -basic seeds production in Rwanda.
3. 2021. Michelle Awuor Otieno -A144/OL/CTY/31241/2015. Assessing the suitability of selected areas in Kiambu, Kajiado and Machakos counties for the production of capsicum (*Capsicum annum* l.)- 2021
4. 2021. Kaburu Fabian A 147/OL/CTY/26924/2014. Effect of irrigation management and nitrogen levels on water use efficiency, quality and yield of green house lettuce (*Lactuca sativa* L.) in peri-urban, Nairobi. 2021
5. 2021. Gabriel Nyagah Njiru A147/OL/22344/2011. Modelling soil erosion in un-gauged Golole catchment in Marsabit county, Kenya. 2021.
6. 2020. Namunyu Jeremiah Okello. A144/OL/20293 /2012. Evaluation of Selected Fertilizer Formulations on Soil Chemical Properties, Growth, Yield and Quality of Sugarcane Variety Ken 83- 737 In Kakamega County, Kenya. 2020.
7. 2020. Leonard Leakey Ritei. A147/OL/CTY/24854/2014. Effect of conservation agriculture on water retention and maize yields in semi-arid, Kajiado county, Kenya. 2020.
8. 2020. Kinuthia Ruth Wanjiku. A147/23533/2013. Farmers Perceptions and Factors Influencing Uptake Of Micro Basins And Trenches In Agroforestry Trees Establishment in East Shewa Zone, Ethiopia. 2020.
9. 2019. Bernard Omayio. A147/21073/2010. Effect of seed priming on maize yields, nutrient and water use efficiencies in semi –arid Machakos and Makueni Counties, Kenya 2019.
10. 2019. Desire Nduwimana. A148EA/OL/CTY/33422/15. Effect of Nitrogen Fertilizer on Maize Performance Soil N transformation and Use efficiency in smallholder farms in Rongo Lake Victoria catchment – 2019.

11. 2019. Benjamin Munganga Mubembe. A148F/29060/2014. Effect of selected integrated soil fertility management on soil chemical properties and cassava yield in south-Kivu, DR Congo. 2019.
12. 2016. Onderi Josephine Nyabonyi. A147/OL/25246/2011. Suitability Assessment of effluents from Mwea Irrigation Scheme for Reuse in irrigation for rice production, Kirinyaga County, Kenya. 2016.
13. Dec 2015. Liliane SHUKURU BAHATI. A148F/21206/2012. Effects of Mycorrhizae and Rhizobia Inoculation on Phosphorus and Nitrogen Availability and Soybean Performance (Glycine Max, Var Sb24) in Walungu District, DR. Congo.
14. 2014. Damaris Kambua Musyoka. A148/22339/2011. Effects of *rhizobial* inoculation and inorganic phosphorus on soil chemical properties and yield of sorghum - cowpea intercropping in Eastern Kenya.
15. 2014. Titus Mbaluka. A148/22275/2010. Effects of organic residues type and placement on carbon sequestration, nutrient availability in soil and maize yields in Machakos county, Kenya.
16. 2014. Lucy Wangui Ngugi. A148/20169/2010. The risks and the benefits of investments in soil and water conservation technologies with changing and varying climate in Eastern Kenya.
17. 2013. Maurine Akinyi Onyango. A148/20171/2010. Effect of inoculation, lime and inorganic fertilizer on soil properties, soybean and maize yields on acidic soils of western Kenya.
18. 2013. Gitari Harun Ireri. A148/13220/2009. Lime and manure application to acid soils and their effects on bio-chemical soil properties and maize performance at Kavutiri – Embu County.
19. 2013. Olive Tuyisheme. A148EA/20181/2010. Effect of bio-Slurry and Urea Fertilizer on Soil Properties and Maize yield in Musanze District, Rwanda.
20. 2013. Arlindo Muambole, A103F/21175/2010. Effect of combining cattle manure and Inorganic P- fertilizer on soil properties and Maize yield in acidic Soils in Biera Corridor, Mozambique.
21. 2013. Benvindo Serafim M. M. Verde, A148F/25514/2011. Effects of manure, lime and phosphate fertilizer on soil properties and soybean (*Glycine max* L.) yields in Embu county, Kenya 2013

Completed PhD supervision

1. July 2023. Riziki Umazi (A99/38062/17). Improving soil properties and growth of *Casuarina equisetifolia* through use of *Prosopis juliflora* biochar, manure and inorganic fertilizer in Kilifi county, Kenya
2. July 2023. Gitore Selamawit Abebe (A99F/26501/2018). Phenotypic characterization and evaluating the response of sweetpotato genotypes for drought tolerance as an Adaptation to climate change in Ethiopia.

3. 2019. Mwende Ngie. A99/29362/2014. Enhancing dry land farming through integrated management practices for water conservation in semi- arid areas of Machakos County, Kenya
4. Dec 2015. Richard J. Osiyo. A99/24647/2011. Effects of *Tithonia diversifolia* biomass, and urea on soil N dynamics and maize yields, and pruning regimes on carbon sequestration in Kisumu county.

University Administrative positions

- Deputy Executive Dean – School of Agriculture and Environmental Sciences – Kitui Campus - from Nov 2022 to Dec 2024.
- Chairman of Department of Agricultural Resource Management, Kenyatta University February 2017 - September 2018.
- Renewal of appointment – October 2018:
- Chairperson of Department of Agricultural Science and Technology, Kenyatta University - 2018 October — February, 2020
- 2023 – VC appointment – Appointed chairman, KSA -KU project at Kitui, on Observatory Telescope.
- 2023 – DVC (Acad) appointment – Appointed Chairman, Campus Disciplinary Committee
- VC Appointment - member of TVET programmes Board
- VC Appointment - June 29, 2023 - Chairman, Hosting Optical Observatory Telescope at Kitui
- 2009 to 2013: Examinations coordinator – Dept ARM .

Other Responsibilities in the University

- Staff Mentor – 2018 – allocated 12 BSc students for mentorship
- Academic Advisor - 1st years ARM department
- Initiating /Development of New Academic Programmes
 1. Bachelor of Science – Agricultural Education and Extension & BSc APHM
 2. Master of Science – Dryland Agriculture
 3. Master of Science – Land and Water Management
- Acting Dean, School of Agriculture and Enterprise Development
- Review of Academic Programs – As chairman, I initiated comprehensive review of all the programs in the AST department after the merger with the department of Agricultural Resource management
- 2021 – Appointed member, University proposal writing committee for IDRC call – on Managing Hub for Responsible Artificial Intelligence on Gender & Equity
- From 2009 - appointed member of the following departmental committees:
 - head of academic program- ISFM, Soil Science
 - member of school and departmenta postgraduate committee;

- research and extension, community outreach and linkages committee
- ISO certification and quality assurance

Editorial Boards / Referee for Professional Periodicals

3. 2021 July: Peer Reviewer – for International Journal of Research and Scientific Innovation (IJRSI).
4. 2021 November, Peer Reviewer - International Journal of Research and Scientific Innovation (IJRSI).
5. Reviewer for African Journal of environmental science (AJEST)

External Examiner:

2024- Jan – External Examiner – university of Embu -

2022- External Examiner – Maseno University –

2016 – 2019. Masinde Muliro University of Science & technology – Department of Sugar technology/ Department of Agribusiness and Extension management (ABE) – SAVET. Moderated all semester examinations and exam results 2016-2019

2016: MSc thesis examination – Masinde Muliro University of Science & Technology – Ms Julia Wamalwa Title – Adoption of ICT in AI for Dairy Farming.

2021 July: Peer Reviewer - International Journal of Research and Scientific Innovation (IJRSI).

2021 November, Peer Reviewer - International Journal of Research and Scientific Innovation (IJRSI).

Consulting for organizations / institutions

2022: External Examiner – Maseno University

2017: Part time lecturer - Machakos University – Introduction to soil science -

2016 – External examiner for MC thesis for Julita Wamalwa of MMUST. Title of thesis “Adoption of ICT in AI for Dairy Farming in Greater Lugari subcounty, Kakamega county.

2010 - 2015: Part-time Lecturer: Great Lakes University of Kisumu (GLUK) – Nairobi Campus - taught MSc Level courses: Food & nutritional security; Water supply and sanitation (WATSAN) 2009-2015

2011-2015: Part-time Lecturer: JKUAT - soil chemistry and plant nutrition

Membership to Academic/professional bodies

2015 to date – member SSSEA.

2022-2023 – Renewal of membership **Soil Science Society of East Africa**

Community Outreach

1. Patron, Kogaja Welfare Group
2. Chairman, ECCA church fundraising committee

3. Patron, Ramoya Primary School committee

Professional Affiliation & Portfolios

Member Ruforum Universities Deans Committee

Member SSSEA

2022-2023 – Renewal of membership **Soil Science Society of East Africa**

REFEREES

Prof George Oduho Oliech

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University of Eldoret

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Prof Isaiah IC Wakindiki

VC KCA University

P. O. Box 56808 – 00200 Nairobi, Kenya