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Brief Bio

Prof. Daniel Mugendi Njiru is a renowned scholar, researcher, consultant and higher education administrator. He has made significant contributions in the area of agro-ecosystems research and management as well as the development of University education in Kenya.

Currently, Prof. Mugendi is the Vice Chancellor of University of Embu. In addition he also holds the following positions; Chairman of the Board of Trustees of the Kenya Forestry Research Institute (KEFRI); the Chairman, Board of Governors, Kirege Secondary School, Chuka, Tharaka Nithi County and the Lead Expert for Environmental Impact Assessment/Audit.

He began his professional career as a researcher with the <u>Kenya Forestry Research Institute (KEFRI)</u> before moving to Kenyatta University where he rose through the ranks of academic and professional leadership. He has previously served as the Chairman of the Department of Environmental Foundations - KU, Dean of the School of Environmental Studies and Human Sciences- KU and Deputy Vice-Chancellor (Finance, Planning and Development) at <u>Kenyatta University</u>.

He has conducted groundbreaking research focusing on agriculture, forestry and environmental policy and sustainability. In addition, he has worked extensively with communities, colleagues and partners, representing a diversity of forestry and environment sector interests both internationally and nationally.

As a scholar of international repute, Professor Mugendi has authored many chapters in books and published many scholarly articles in his field in both national and international journals and continues to lecture, supervise postgraduate students and conduct research in International Forestry Policies, Agriculture and Natural Resource Management.

PUBLICATIONS

Papers/Publications in Refereed Journals

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- 44. Baaru M.W., Mugendi D.N Bationo A., Verchot L., Waceke W., 2007. Soil microbial biomass carbon and nitrogen as innfuenced by organic and inorganic inputs at Kabete,

- Kenya. In Bationo et al. (eds.), Advances in Integrated Soil Fertility Management in Sub-Saharan Africa: Challenges and Opportunities, pp 827–832, Springer NL.
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- 1. Gichuru MP, Bationo A, Bekunda MA, Goma HC, Mafongoya PL, Mugendi DN, Murwira HM, Nandwa SM, Nyathi PN and Swift MJ (eds.) 2003. Soil Fertility Management in Africa: A Regional Perspective. Academic Science Publishers, Nairobi, Kenya.
- 2 Mureithi JG, Macharia PN, Gichuru M, Mburu MWK, Mugendi DN and Gachene CKK (eds.), 2003. Proceedings of the 18th Soil Science Society of East Africa (SSSEA) Conference held in Mombasa on 4th –8th Dec 2000. Mombasa, Kenya.

- 3. 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.
- 4. Waswa F, Otor S and Mugendi DN (eds) 2006. Environment and Sustainable Development: A Guide for Tertiary Education in Kenya, Vol 1. Kenyatta University, Downtown Printing Works, Nairobi, Kenya.
- 5. Mugenda O, Mugendi D, Waudo J, Gravenir F, Akuno E, Mutundu K, Otolo M and Ndiritu J (eds.) 2006. The Role of African Universities in the Attainment of the Millennium Development Goals. A publication of selected papers presented at the MDG Conference held on November 14-18, 2005, Kenyatta University, Nairobi, Kenya
- 6. Mugendi DN, Mucheru-Muna MW and Mugwe JN (Eds) 2006. Soil Fertility: Enhancing Community Extension. Manilla Publishers, Nairobi, Kenya
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- 8. Kirumba EG, Mugendi DN, Karega R, Mugwe JN, 2011. Gender differentials in adoption of soil replenishment technologies in Meru South District, Kenya. Springer.
- 9. Mugendi DN, Mucheru-Muna MW and Mugwe JN (Eds) 2012. Soil Fertility: Enhancing Community Extension. Manilla Publishers, Nairobi, Kenya (2nd Revised Edition)

Other Publications Related Works

- 1. Reviewed journal articles for Agroforestry Systems and Plant and Soil Journals between 1993 and 1997.
- 2. Served as invited Editor to Agriculture, Environment and Ecosystem Journal, 2003-2008

Papers Presented in Conferences

- 1. Coulson CL, Mungai DN, Stighter CJ, Mwangi PW, and Mugendi DN. Studies of sustainable crop yield improvement through agroforestry interventions involving postgraduate training. Paper presented at the Commonwealth Science Review workshop at ICRAF Headquarters Nairobi, Kenya (Nov. 1989).
- 2. Mugendi DN. Effects of mulch application on maize yield in the semi-arid areas of Kenya. Paper presented at the KEFRI's 1st Annual conference/open day (Oct. 17-18, 1990) at KEFRI Headquarters, Muguga, Kenya.
- 3. Mugendi DN. Sustainable food production by use of agroforestry technology in the semi-arid areas. Paper presented in the "Environment 2000" Conference (Oct. 23-26, 1990) organized by KENGO & NES at the United Nations Accommodation Centre, Gigiri, Nairobi, Kenya.
- 4. Mugendi DN. The concepts and applicability of agroforestry. Paper presented at the JICA/KEFRI Social Forestry training seminar (Oct. 22 to Nov. 2, 1990) at KEFRI Headquarters, Muguga, Kenya.
- 5. Mugendi DN. Alley farming in the semi-arid tropics: DARP experience. Paper presented at the AFNETA training course (Sept. 2-11, 1991) at KEFRI Headquarters, Kenya.

- 6. Mugendi DN. Effect of green manure and hedgerow intercropping on crop production: The DARP on-station experience. Paper presented at DARP workshop, Five Hills Hotel, Machakos, Kenya (Sept. 18-20 1991).
- 7. Mugendi DN, O'Neill M, and Seward P. Evaluation of potential of leaves of multipurpose tree species as source of nitrogen for maize. Paper presented at the TSBF Workshop in Harare, Zimbabwe (July 1993).
- 8. Mafongoya PL, Mugendi DN, and Pedereira C. Evaluation of Leucaena leucocephala as a source of N for maize. Paper presented at TSBF Workshop in Harare, Zimbabwe (July 1993).
- 9. Mugendi DN. Decomposition patterns of Leucaena leucocephala and Calliandra calothyrsus prunings and maize roots in the subhumid Kenyan highlands. Paper presented at TSBF Workshop, Entebbe, Uganda (May 1995).
- 10. Mugendi DN. Influence of chemical composition of Leucaena leucocephala and Calliandra calothyrsus prunings and maize roots on decomposition in the subhumid highlands of Kenya. Poster presented at decomposition symposium at Wye College, London, UK (Sept. 1995).
- 11. Mugendi DN and Nair PKR. Predicting decomposition patterns of tree biomass in tropical highland microregions of Kenya. Paper presented at the ASA/SSSA/CSSA annual conference at Indianapolis, IN, USA (Nov. 1996).
- 12. Mugendi DN and Nair PKR. Trees in support of maize production in subhumid highlands of Kenya: Maize yield and nitrogen recovery with calliandra and leucaena. Poster presented at the All Africa Crop Science Congress, Pretoria, SA (Jan. 1997).
- 13. Mugendi DN and Popenoe H. The Maasai of East Africa: Land alienation, sedentaryzation and changing socio-natural system. Paper presented at the Building Bridges with Traditional Knowledge conference held at the University of Florida, Gainesville, FL USA.
- 14. Mugendi DN, Nair PKR, and Graetz DA. Nitrogen Recovery by Alley-Cropped Maize and Trees from 15N Labeled Tree Biomass. Paper presented at the ASA/SSSA/CSSA Annual Conference at Anaheim, Ca, USA (Oct. 1997).
- 15. Mugendi DN. Use of models in predicting crop performance. Paper presented at the Managing soil Fertility workshop held at Wida Hotel, Nairobi (March 1999).
- 16. Mugendi DN, Kanyi MK, and O'Neill MK. Mineral-N movement and management in an Ultisol in the central highlands of Kenya. Paper presented at the 10th ISCO Conference at Purdue University, IN, USA (May 1999).
- 17. Mucheru MW, Mugendi DN, Kung'u JB, Mugwe J and Micheni A. Improved food production by use of soil fertility amendment strategies in the central highlands of Kenya. Paper presented at the 8th African Network workshop in Arusha (May 2001)
- 18. Mugendi DN, Mucheru MW, Micheni A, Mugwe JN, Kung'u JB and Otor S. Soil fertility strategies for improved food production in the central highlands of Kenya. Paper presented at the Africa Crop Science Conference, Lagos, Nigeria. (Nov 2001)
- 19. Mucheru MW, Mugendi DN, Micheni A, Mugwe JN, Kung'u JB and Otor S. Enhancement of food productivity using locally available soil replenishment inputs in the central highlands of Kenya. Paper presented at the 19th SSSEA conference at Moshi, Tanzania 2nd-7th Dec 2001

- 20. Kibunja C, Mydausa TB and Mugendi DN. Nitrogen dynamics in response to long-term application of organic/inorganic sources in maize-bean rotation. Paper presented at the 19th SSSEA Conference held in Moshi Tanzania, 2nd-7th December 2001
- 21. Waswa BSN, Mugendi DN, Kung'u J, Vanlauwe B and Nandwa S. Soil organic matter status as influenced by organic resource quality in a nitisol of central highlands, Kenya. Paper presented at the 19th SSSEA Conference held in Moshi Tanzania, 2nd-7th Dec 2001
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- 24. Mwangi M, Smithson PC, Albrecht A, Swift MJ and Mugendi DN. Role of soil invertebrate microfauna in litter decomposition within a hedgerow agroecosystem in Embu Kenya. Paper presented at the 19th SSSEA Conference held in Moshi Tanzania, 2nd-7th December 2001
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- 26. Mugwe J, Mugendi DN, Micheni A, Mucheru MW, Kung'u J, and Gitari J. Promotion of leguminous plants and organic inputs for improving soil productivity in farms of Central Kenya. Paper presented at the 8th biennial Sci. Conf. at KARI, Nbi, Kenya (Nov, 2002)
- 27. Mucheru M, Mugendi DN, Kung'u JB, Kangai AR, Mugwe J and Micheni A. Improved food production using local technologies in Meru South District, Kenya. Paper presented in the 20th SSSEA conference at Mbare, Uganda 1st 6th December 2002
- 28. Kangai RA, Mucheru MW, Mugendi DN, Otor SCJ, Waswa BS. Pre-survey of the Adoption Potential of Soil Fertility Improvement Strategies in Chuka, Eastern Kenya. Paper presented in the 20th SSSEA conference at Mbare, Uganda 1st 6th Dec 2002
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- 31. Mucheru-Muna M, Mugendi DN, Kangai AR, Kung'u JB, Mugwe J and Otor S. Farmer participation in enhancing food productivity through agroforestry. Paper presented in the ANAFE symposium on building agricultural and natural resources education in Africa: quality and relevance of tertiary education, KU, Nbi, Kenya (April 14-16th, 2003).
- 32. Mucheru-Muna M, Mugendi DN, Kangai AR, Kung'u JB, and Mugwe J. 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)
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- 35. Karunditu M, Mugendi DN, Kungu JB, & Vanlauwe B. 2003 Nitrogen uptake and use efficiency as affected by soil organic matter status in Embu, Kabete and Maseno, Kenya. Paper presented at the Africa Crop Science Conference, Nairobi, Kenya. (October 2003)
- 36. Mugwe J, Mugendi D, Mucheru M & Kung'u J 2003. Adoption Potential of Soil Replenishment Resources: Feasibility and Acceptability of Leguminous Plants and other Organic Resources for Soil Fertility Improvement in Meru South District, Kenya. Paper presented at the Africa Crop Science Conference, Nairobi, Kenya. (October 2003)
- 37. Waswa B, Mugendi D, Vanlauwe B, Nandwa S & Kung'u J 2003. Soil properties as Influenced by Different Organic Residue Amendments in Selected Experiments in Kenya. Paper presented at the Africa Crop Science Conference, Nairobi, Kenya. (October 2003)
- 38. Kangai A, Mugendi DN, Mucheru MW, Otor SCJ, Waswa B & Kung'u J. 2003 Trends in Adoption of Soil Fertility Improvement Strategies in Chuka, Eastern Kenya. Paper presented at the Africa Crop Science Conference, Nairobi, Kenya. (October 2003)
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- 44. Karunditu MW, Mugendi DN, Kung?u JB, and Vanlauwe B. Inorganic nitrogen in the soil profile and fertilizer nitrogen recovery in both plant and soil as affected by soil organic matter status in two sites in Kenya. Paper presented at the AfNet TSBF-CIAT Symposium, Yaounde, Cameroon (May 2004)

- 45. Baaru MW, Mugendi DN, Waceke W, Bationo A, and Louis V. Soil microbial biomass carbon and nitrogen as influenced by organic and inorganic fertilization in Kenya. Paper presented at the AfNet TSBF-CIAT Symposium, Yaounde, Cameroon (May 2004)
- 46. Mugwe J, Mugendi DN, and Odee D. Evaluation of the potential of using nitrogen fixing legumes in smallholder farms of Meru South district, Kenya. Paper presented at the AfNet TSBF-CIAT Symposium, Yaounde, Cameroon (May 2004)
- 47. Mairura FS, Mugendi DN, Mwanje JI, Ramisch JJ and Mbugua PK. Scientific assessment of farmers' perceptions of soil quality indicators within smallholder farmers in the central highlands of Kenya. Paper presented at the AfNet TSBF-CIAT Symposium, Yaounde, Cameroon (May 2004)
- 48. Cadisch G, Poulton C, Mugendi DN, and Jama B. Replenishing soil fertility in Africa: Remaining Challenges. Paper presented at the 1st World Agroforestry Congress, Orlando, FL, USA (June July 2004)
- 49. Mugwe J, Mugendi DN, Mucheru-Muna M, and Kung'u J. 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).
- 50. Mugendi DN, Mucheru-Muna, Kung'u JB, Mugwe J, and Bationo A. 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).
- 51. Mugendi DN, Mucheru-Muna M, Kangai R, Kung'u JB, Mugwe J, and S Otor. 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)
- 52. Mugendi DN, Mucheru-Muna M, Kung'u JB, Mugwe J, and Bationo A. 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)
- 53. Mugendi DN, Mugwe J, Mucheru-Muna M, and Kung'u J. 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).
- 54. Mugwe J, Mugendi D, Kungu J and Oeba V 2006. Adoption of Organic and Inorganic Resources for Soil Fertility replenishment by Smallholder Farmers in the Central Highlands of Kenya. Paper presented at the 3rd KEFRI Sci. Conf, KEFRI Hqs, Muguga. (6-9, Nov 2006)
- 55. Mugwe J, Mugendi D, Kungu J and Oeba V. Household and Farm Characteristics Influencing Adoption of Soil Fertility Management Technologies in Meru South District, Kenya. Paper presented during the 10th KARI Biennial Scientific conference at KARI Hqs, Nairobi. (13th to 17th November 2006)
- 56. Mugwe J, Mugendi D, and Kungu J 2006. Soil changes following application of legumes, tithonia and cattle manual in the central highlands of Kenya. Paper presented at the 23rd Soil Science Society of East Africa at Masaka, Uganda. (19th to 25th November 2006)
- 57. Mutegi E, Mugendi DN, Kung'u JB and Mucheru-Muna M. Integration of organic and inorganic soil fertility replenishment technologies in response to food insecurity in Meru South. Paper presented during the RUFORUM Biennial Meeting in Malawi (April 2007).

- 58. Gathoni E, Karega R, Mugendi D and Mugwe J. Gender differentials in adoption of soil nutrient replenishment technologies in Meru South District, Kenya. Paper presented during the RUFORUM Biennial Meeting in Malawi (April 2007).
- 59. Mugendi DN and Mucheru-Muna M. 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 (April 2007).
- 60. Mugendi DN and Koala S. Role of networking in increasing agricultural productivity: experience of the African Network for Tropical Soil Biology and Fertility (AfNet-TSBF). Paper presented during the Side Event on Networking in the African Crop Science Conference in Cape Town, South Africa (Sept 28 to October 1, 2009).
- 61. Mugendi D, Mucheru-Muna M, Mugwe J, Pypers P, Vanlauwe B and Merckx R. Nitrogen fertilizer equivalency of selected organic materials in the central highlands of Kenya. Poster presented in a workshop on nitrogen deposition, critical loads and biodiversity, Edinburgh, UK (16th to 18th Nov, 2009).
- 62. Mugendi D, Mucheru-Muna M, Mugwe J, Kungu J, Pypers P, Vanlauwe B and Merckx R. Maize productivity as influenced by organic inputs and mineral fertilizer in a Nitisol soil in Meru South District. Poster presented in the 19th World Congress of Soil Science, Brisbane, Australia (1st to 6th Aug, 2010).
- 63. Mugendi, D., Mucheru-Muna, M., Ngetich, K. F., 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. Conference paper presented during the International Symposium on Soil Organic Matter 11-14 July 2011, Leuven, Belgium.
- 64. Mugendi DN, Ngetich KF, Mugwe JN, Mucheru-Muna M, Shisanya CA, and Diels J (2011). Subsoiling and soil surface management effects on maize productivity in the central highlands of Kenya. Paper presented at the ASA, CSSA, SSSA Annual conference at San Antonio Texas, USA (16th to 19th October 2011).
- 65. Kimaru-Muchai SW, Mucheru-Muna MW, Mugwe JN, Mugendi DN, Mairura FS. (2011). Communication channels used in dissemination of soil fertility management (SFM) practices in the central highlands of Kenya. Poster presented in the 1st ASARECA General Assembly, Entebbe, Uganda (14th to 16th Dec 2011).
- 66. Mugendi DN, Mucheru-Muna MW, Mugwe JN, Ngetich KF, Vanlauwe, B., Merckx. R. (2012). 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. Proposal presented at the Coordinated Research Project (CRP) workshop organized by IAEA, Vienna, Austria (30/1-3/2/2012)

AWARDS

- 1. Best poster presented at the All Africa Crop Science Congress in Pretoria, South Africa in January 1997.
- 2. Poster awarded 1st place in the "Environmental and Biological Sciences Poster Section" at the University of Florida Graduate Student Forum in March 1997 Celebrating the diversity of graduate students.
- 3. Finest overall poster presented at the University of Florida Graduate Student Forum in March 1997 Celebrating the diversity of graduate students.

- 4. Paper awarded 3rd place in the "Biological Sciences Paper Session" UF Graduate Student Forum in March 1997 Celebrating the diversity of graduate students.
- 5. Ph.D. Dissertation awarded 'The 1997 Outstanding Dissertation Award' of the School of Forest Resources and Conservation, University of Florida, USA.

MEMBERSHIP TO PROFESSIONAL ASSOCIATIONS

- 1. Member of the African Network (AfNet) of Tropical Soil Biology and Fertility Institute
- 2. Member of <u>Soil Science Society of America</u>
- 3. Member of Agronomy Society of America
- 4. Member of <u>Crop Science Society of America</u>
- 5. Member of Soil Science Society of Africa
- 6. Member of the Soil Science Society of East Africa
- 7. Member of the <u>African Crop Science Society</u>
- 8. Member of Nature Kenya