

DR. MWENDE NGIE CV



ACADEMIC STAFF

1.1 Personal Profile

1.1.1 Personal Details

Name: Mwendé Ngie

PF. No.: 9700

Department: Agriculture Science and Technology

Designation: Lecturer

Email: ngie.mwende@ku.ac.ke

Area of Specialization: Dryland Agriculture and Agricultural Rural Development

Professional Summary

A Dryland Agriculture and Agricultural Rural Development expert, Lecturer, researcher and consultant with extensive expertise in Climate-Resilient Food Systems, food security, Integrated Soil and Water Conservation Innovations and Technologies, Agronomy, Resilient Dryland Livelihoods and Agricultural Education and Extension. Passionate about advancing sustainable and resilient agricultural practices in the drylands through innovative research, teaching and consultancy. Experienced in valuing Environmental variability in the drylands as well as developing, delivering and evaluating a comprehensive curricula that equip students with hands- on skills and knowledge in dryland agriculture and agricultural rural development. Possesses a strong research background in dryland agriculture and agricultural rural development, with a special focus on integrated soil and water management innovations and technologies and cropping systems aimed at enhancing livelihood resilience for the rural communities. One unique goal being to embrace the environmental variability in the drylands through exploiting the existing dryland opportunities. Actively engaged in University-industry collaborations to strengthen climate resilient food systems and promote agricultural entrepreneurship for improved agricultural productivity.

A self-driven and dedicated mentor to the upcoming generation of researchers and scientists in agriculture to achieve sustainable agricultural production and improved food security. .

Research Interests:

Dryland Agriculture/Agricultural Rural Development/Integrated Soil and Water Conservation/Food Systems/Dryland Livelihoods/Climate Change/Integrated Soil Fertility/Ecology/Cropping Systems/ Curriculum Development /Food Security/ Research & Innovation/ Mentorship & Student Support/ Postgraduate Supervision/ Climate Smart Agriculture/ Climate Change /Ecology | Partnerships and collaborations/ Stakeholder Engagement | Sustainable Agricultural Practices

ORCID ID: <https://orcid.org/0000-0002-4970-6472>

1.1.2 Academic & Professional Qualifications

Academic Qualifications Postgraduate

Highest Academic qualification: PhD

Year: 2019

Awarding Institution: Kenyatta University

Area of specialization: Dryland Agriculture and Agricultural Rural Development

Thesis Title: “Soil Moisture Conservation, Cropping Systems and Soil Fertility Effects on Soil and Maize Performance in Machakos County, Kenya”

Academic Qualifications Postgraduate

Year: 2013

Award: Msc. in Agriculture and Rural Development

Awarding Institution: Kenya Methodist University

Area of Specialization: Developing Rural areas through sustainable agricultural practices

Thesis Title: “Effects of Leaf plucking Frequency and Spacing on Small Sugar Pumpkin Production”.

Academic Qualifications Undergraduate

Year: 1995

Award: Bachelor of Science in Agricultural Education and Extension

Awarding Institution: Egerton University

Area of specialization: Training and equipping agricultural skills and knowledge through teaching and extension services

Year: 1989

**Academic
Qualifications**

Award: Kenya Certificate of Secondary Education (KCSE)

Institution: Muthale Girls' High School

Secondary School

1.1.3 Employment History

**Employment
experience**

Employer: Kenyatta University

Year: 2019 up to date

Position /Designation : Lecturer

Responsibility: Chairperson, Department of Agricultural Science and Technology (AST)

**Employment
experience**

Employer: Kenyatta University

Year: 2014 to 2019

Position Designation: Tutorial Fellow

Responsibility: Departmental exam coordinator, Staff-Student Mentor

Employer: Teachers Service Commission

Year: 1995 to 2014

Position /Designation : Deputy Principal

Responsibility: Supervision of Staff, students and Curriculum

1.1.3 Achievements

- a. Currently, chairperson of Agricultural Science and Technology Department (AST)
- b. Kenyatta University TVET board Member
- c. Served as the departmental Research and Innovation coordinator until appointment as a departmental chairperson
- d. Successfully Served as the departmental exam coordinator for 4 years
- e. Served as a member of departmental postgraduate board as well as a member of school postgraduate board until appointment as a departmental chairperson
- f. Served as the coordinator of Bachelor of Science in Agricultural Education and Extension (Bsc. AGED)
- g. Participated in developing a curriculum for a 5-day short course in Kenyatta University on valuing variability (VV) in the dryland Environment
- h. Participated as a trainer in launching the VV course for 5 days in Kitui County and 5 days in Kajiado county

- i. Trained the teaching staff from the former school of Agriculture in developing a curriculum on valuing variability in the dryland environment
- j. Trained the teaching staff from the school of Agriculture and Environmental Sciences on developing a diploma TVET curriculum
- k. Successfully served as the coordinator of Kenyatta university BED students taking agriculture as a minor subject
- l. Successfully Coordinated career days for the School of Agriculture and carried out exhibitions as well as sensitizing High schoolers and the Community on why Kenyatta University is the best.
- m. Kenyatta University staff-student mentor since 2016 up to date
- n. Successfully represented the University at local and international conferences and seminars in research dissemination.
- o. Served as a moderator in Gobeshona Global Conference 2 on “ Exploring Locally-led Adaptation and Resilience for COP27: Organized by African Development Bank as a facilitator/team member on a presentation session on: Capacity Building, Food Security and Agriculture in the Drylands on work done by Kenyatta University and other organizations in Africa and Europe including International Institute for Environment and Development
- p. Peer reviewer of the following journal: International Journal of Environment and Climate Change, International Journal of Plant and Soil Science, Asian Research Journal of Agriculture, Journal of Experimental Agriculture International, Asian Journal of Soil Science and Plant Nutrition
- q. .

1.2 Conference Papers

Mwende N, Danga B.O, Mugwe J, Kwena K. 2018. Effect of Tied Ridges, Fertilizers and Cropping Systems on Maize Profit margin in the Semi – arid Areas of Machakos County, Kenya: 12th Egerton University International Conference.

2. **Mwende N**, Danga B.O, Mugwe J, Kwena K. 2018. Effect of Tied Ridges, Fertilizers and Cropping Systems on Soil Moisture Content and Maize Yield in Semi – arid Areas of Machakos, County, Kenya: 11th Egerton University International Conference 29th - 31st March, 2017, Page 38.

3. **Mwende N**, Danga B.O, Mugwe J, Kwena K. 2018. Response of Yield and Yield Components of Maize as affected by Tied Ridges, fertilizers and cropping systems in the Semi – arid Areas of Machakos County, Kenya: 2nd School of Agriculture and Enterprise Development, Kenyatta University, 29th – November – 2nd December, 2016, Page 84.

1.2.2 Journal papers

1. **Mwende N**, Danga B.O, Mugwe J, Kwena K 2019. Effect of Integrating Tied Ridges, Fertilizers and Cropping Systems on Maize Performance in Arid and Semi-arid Lands of Eastern Kenya: African Journal of Education, Science and Technology Pg. 87-104

2. **Mwende N**, Danga B.O, Mugwe J, Kwena K 2019. Soil properties and maize yields under tied ridging, fertilizer micro-dosing and cropping Systems in Semi-arid regions of Kenya: African Journal of Rural Development. Vol 5. No. 2

3..Alhammad, B.A.; Mohamed, A.; Raza, M.A.; **Ngie, M.**;

Maitra, S.; Seleiman, M.F.; Wasonga, D.; Gitari, H.I. “Optimizing Productivity of Buffel and Sudan Grasses Using Optimal Nitrogen Fertilizer Application under Arid Conditions. Agronomy 2023, 13, 2146.

<https://doi.org/10.3390/agronomy13082146>

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1.2.6 Developed Learning Modules

KRM 208: Principles of Dryland Crop Production

KRM 102: Farming Systems

KRM 413: Management of Rangeland Enterprises

KRM 106: Dryland Ecology

1.2.7 QUALITY TEACHING, LEARNING AND MENTORSHIP

Student Evaluations

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1.2.8 Training in Higher Education

- Writing Data Collection and Analysis Methods, 6th December, 2024
- Training on skills and approaches to strengthen University - Industry Linkages, 28th November, 2024
- Climate Entrepreneurship Training from 12th to 14th November 2024
- Climate Change Conference on 24th October, 2024, organized by American Institute of Research and Kenyatta University, Theme; **Climate Change Resilience, Adaptation, and Its Impacts on Food Systems and Health.**
- Bio-Kenya Project Inception and Planning Workshop: Funded by French Embassy from 23rd to 27th September
- TT-CUIP : Benchmarking Visit: Technology Transfer And University-Industry Relations June 10th to, June 16th, 2024, Neu-Ulm University of Applied Sciences (Hnu), Germany: Universities promoting Linkages for Impactful Training, Innovation and Technology Transfer in Agriculture (UPLIFT-AG): workshop from: 20st – 23rd March, 2024

.Digital Services for Agriculture Policy Briefing Workshop - 6th and 7th February 2025

1.2.9 Ongoing Supervisions

Nyandwi Simon (Msc.)

Title: Antibacterial Potential of Copper and Zinc Oxides Nanoparticles on *Ralstonia Solanacearum* Infecting Tomato in Kiambu County, Kenya

Violet Barasa (Msc)

Title: Organic Soil Amendment for Amelioration of Salinity in Selected Vegetables in Kajiado County, Kenya.

Ingabire Vestine (Msc.)

Title: Chia Production, Selected Soil Properties, Nutrient Content, and Economic Returns under Farm Yard Manure and Inorganic Fertilizer in Rwanda

John Maina Gitonga (Msc.)

Title: Soil Limiting Water Status, Soil Physicochemical Properties and Species Defense Indicators on Wild Grass Diversity in Laikipia County, Kenya

Mohamed Aden: (Msc.)

Title: 'Buffel (*Cenchrus ciliaris*) and Sudan (*Sorghum sudanense*) grasses' growth, yield and quality responses to nitrogen application in Mandera County, Kenya'

Nirere Claudia Axelle: (Msc.)

Title: Lime and Soil Fertility Inputs Influence on Soil Chemical Properties, Maize Yields and Economic Returns in Gisozi, Burundi

Patrick Lesharana (Msc.)

Title: Assessing the Impact of Different Manure Management Practices on Carbon and Soil Nutrient Availability in Samburu County, Kenya

Berhane Teklit (Msc.)

Title: Evaluating the Effect of In-situ Soil Moisture Conservation Techniques on Growth and Yield of Sorghum in Gash-Barka, South Western Lowlands of Eritrea

Hussein Ahmed (Msc.)

Title: Sorghum Growth, Yield and Nutrient Content under Seed Priming and Harvesting Stages in Kitui County, Kenya

Albert Aduma (Msc.)

Title: Trapezoidal Bands and Cropping System Effect on Soil Moisture Content and Sorghum Yield in Kitui County Kenya

Kemboi Kenneth (Msc.)

Title: Productivity and Behavioral Responses of Stingless Bees under Varied Environmental and Resource Availability in Semi-Arid Ecosystem of Taita Taveta County, Kenya

Victor Lochee Virgillano (Msc.)

Title: Sorghum-Cowpea Yield and Moisture Content under Subsurface Water Retention Technologies Membrane in Turkana County, Kenya

Joyce Makasi (PhD)

Title: Fish Pond Effluent Irrigation Effects on Farmer's Level of Adoption and Perception, Soil

Properties, Growth and Yield and Nutrient Content of Amaranths (*Amaranthus* Species) and Cowpea (*Vigna Unguiculata*) in Kitui County, Kenya.

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1.3 PROFESSIONAL/CONSULTANCY

Consultancy with **BRECCIA and Institute for Environment and Development (IIED)**; Implementation of a 4-year (2018-2022) consultancy on "Working with Environmental Variability for Enhanced Water and Food Security in the Kenyan Dryland"

KALRO: Kenya Agricultural and livestock Research Organization

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1.3.1 Awards and Grants

1. 1890 CEGFSD (Universities Center of Excellence for Global Food Security and Defense) 2024 (Round Four): New Research Grant as a Principal Investigator: ***Strengthening Productivity of Dairy Animals, African Indigenous Cereals and Pulses through Upscaling Climate-Smart Technologies, and Value Addition for Improved Resilience and Food Security in Murangá County, Kenya***. As a ***Principal investigator***

2. Kenyatta University PhD Scholarship

3. NACOSTI grant award in 2016 towards my PhD research proposal titled, "*Management of soil and water for enhanced maize production in semi-arid areas of Machakos County, Kenya*" as the principal investigator worth Ksh. 900,000.

4. ASARECA research grant 2011 – 2016 on "*Integrated management of water for productivity and livelihood security under variable and changing climatic conditions in ECA*" as a co-investigator worth US\$: 1,699,905.

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1.3.2 Membership to academic/professional bodies

- Member Women Educationists and Researcher of Kenya(WERK)
- Member of Kenyatta University TVET board
- Member, African women in science and Engineering (AWSE)

- Member of Soil Science Society of East Africa, Kenyan Chapter
- Member Kenyatta University mentorship Programme

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1.4 Administrative and Responsibilities

1.4.1 Recognized university administrative positions

Chairperson, department of Agricultural Science and Technology

1.4.2 Other responsibilities in the University

- Member of Kenyatta University TVET board
- Kenyatta University staff-student mentor

1.4.3 Professional Affiliation & portfolios

- Kenyatta University
- Kenya Methodist University
- Egerton University
- KALRO, Katumani

1.5 Referees

Prof. Maina Mwangi

Executive Dean.

School of Agriculture and Environmental Sciences

Email: maina.mwangi@ku.ac.ke

Prof. Joseph Gweyi,

Deputy Executive Dean, School of Agriculture and Environmental Sciences

Kenyatta University,

P.O. Box 43844-00100

Nairobi, Kenya

Email address: gweyi.joseph@ku.ac.ke

Prof Jayne Mugwe,

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