

## **Prof. David Mutisya Musyimi, B.Sc., M.Sc., Ph.D.**

Department of Botany

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### **EDUCATION**

1983-1989: Kanyaa Primary School, Kenya: KCPE certificate

1990 - 1993: Mwingi Secondary School, Kenya: KCSE certificate

1995 - 2000: Maseno University, Kenya. B.Sc. (Botany and Zoology), Degree conferred in March 2001.

2002 – 2005: Maseno University, Kenya. (M.Sc) Botany (Agroforestry)

2006 – 2011: Maseno University, Kenya. PhD. Botany

### **RESEARCH EXPERIENCE**

1. My earlier work focused on the effects of salinity on growth, physiology, and biochemistry of passion fruits, avocado and Bambara groundnut landraces with the aim of establishing traits, which can provide a basis for breeding for salt tolerance. Knowledge of salinity tolerances is important for coastal communities and those dependent on alternative water sources to improve food security. Project funded by NACOSTI, Kenya at 56,449 USD.
2. My work in the area of adapting environments for agriculture continued with the exploration of how plant physiological stresses such as soil quality, nutritional additives, acidity, salinity and aluminum chloride stress impact on crop production. General effects of salinity and Al toxicity in plants include plant growth alterations, reduction of photochemical efficiency of photosystem II (PS II), reduced photosynthesis and inhibition of synthesis of photosynthetic pigments. There is a need to improve food security in Kenya by encouraging the growing of crops such as soybean and Bambara groundnuts, however there is lack of information on physiological response of varieties grown in Kenya to salinity and aluminum toxicity, hence the need to identify the tolerant varieties to be able to provide recommendations for growing in areas prone to aluminum toxicity and drought. A total of 13,764 USD was availed for this project by the NRF, Kenya.
3. The interaction of microorganisms in crops can both facilitate and hamper productive yield. One problematic fungal microorganism has resulted in yield loss to the crop Napier grass, a dairy-industry dependent crop. This disease has spread to multiple counties in Kenya, thus work to determine the molecular differences of isolates from affected counties suggested the existence of possible genetic divergence of the isolates which might be reflected in their pathogenic potential too. Microorganisms associated with the sugarcane rhizosphere have potential antagonistic activity against other pathogenic microorganisms in sugar cane. This work enumerated fungi and bacteria in the rhizosphere of sugarcane variety CO 421 and identified the fungi and bacteria within rhizosphere of sugarcane variety CO 421 in Kibos, Kenya. A total of 17,000 USD was availed for the project by NRF, Kenya.
4. Bacterial antagonists can be detrimental to crop yield. In research investigating the effects of bacterial strains on tomatoes and two varieties of the leafy green African nightshades, I led research identifying appropriate measures to increase crop yield. In this work we investigated the cause of a bacterial wilt of tomato and a bacterial leaf spot disease of African nightshades and both has been classified through this work. The biological control of plant diseases and pests is critical to ensure crop production security. This project attracted 1,599 USD from National Research Fund- Kenya.
5. My current research is on the mitigation of climate change and greenhouse gas emissions through sustainable integration of Maize based agroforestry systems for food Security and poverty reduction.

In this work we are investigating the microbial diversity, nutrient dynamics and greenhouse gas emissions in Maize-Banana Based Agroforestry Systems in Kisii and Vihiga County in Kenya, and evaluating the effects of intercropping on ecophysiology and yield of maize and banana. This project attracted 100,000 USD from National Research Fund- Kenya.

## **TEACHING EXPERIENCE**

I have taught the following courses since the year 2006 up to date to both Post-graduate and undergraduate students in the department:

- Dryland ecology and land use
- Introduction to Agroforestry
- Plant biotechnology
- Cytogenetics and plant breeding
- Biological control of plant diseases,
- Plant pathology
- Plant Mineral nutrition
- Plant ecophysiology
- Environmental microbiology,
- Soil microbiology
- General Microbiology
- Plant ecology & environmental Science.

I have also been actively involved in supervision and mentorship of undergraduate and postgraduate students in their research work.

## **HONORS AND AWARDS**

- March 2003: University graduate assistantship by Maseno University, Kenya.
- July 2008: research grant for Ph.D research by Maseno University, Kenya.
- 2013-2015: African Women in Agricultural Research and Development mentorship (AWARD) fellowship
- 8<sup>th</sup> September 2017. Recipient of the innovator award of the year by Kenyan innovations on 8<sup>th</sup> September 2017, held at Strathmore University Kenya, Title of innovation won position one: Bio Alkanol Gel. (team represented Kenya in international grand finals in Cyprus in October 17<sup>th</sup>-18<sup>th</sup>, 2017)

## **PROFESSIONAL MEMBERSHIP**

1. Member of Editorial board, Journal of Asian Scientific Research March 2017 to date
2. African Women in Agricultural Research and Development-Kenya Chapter (KeAWARD)
3. Horticultural Association of Kenya (HAK)

## **SKILLS AND TRAINING**

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- 9<sup>th</sup> November 2018. Quality assurance and university examination processes held at Maseno University

- 26th and 27th July 2017, attended training on summa cum climate from climatelaunchpad start up to tackle climate change by Kenya Climate innovations center, at the Strathmore Business School, Kenya.
- Month of December 2017, Leadership course-making human strength productive by development Associates International
- Job evaluation Training at Maseno University Boardroom, 24-30<sup>th</sup> March 2017 by pricewater house Coopers (PWC).
- June 15-21, 2014. Attended AWARD Science Skills writing skills Course held at Jacaranda Hotel: Nairobi, Kenya
- March 17-21, 2014- Attended AWARD Mentoring Orientation training, held at Eka hotel- South C, Nairobi, Kenya
- 17<sup>th</sup> February 2006- 18<sup>th</sup> July 2006: Certificate: Microsoft office word, Microsoft excels. Microsoft office Power Point, Microsoft office publisher, internet and email
- 31<sup>st</sup> May 2013. HIV and AIDS mainstreaming for university staff at the work place held at Maseno University Boardroom.
- 4<sup>th</sup> to 12<sup>th</sup> February 2013 – Attended IEBC training on election and voting process at Garden Hotel, Machakos
- 22<sup>nd</sup>-25<sup>th</sup> January 2013 – attended IEBC voter education training for county returning officers (CRO) at Kenyatta university

## LEADERSHIP EXPERIENCE

- Acted as **Dean of School of Physical and biological sciences** from 3<sup>rd</sup> August to 22<sup>nd</sup> September 2015, while the substantive dean was on leave.
- 2014 - October 2024, Chairman, Department of Botany
- 2014- Chief Examination Officer, Department of Botany, Maseno University, Kenya
- Acted as Dean of School of Physical and biological sciences on various occasions.
- **Deans committee Board:** Attended various deans committee meetings on behalf of the dean, school of physical and biological sciences
- **Year 2021:** served in the Senate Ad hoc committee on online teaching and Learning.
- **Chaired thesis examination committee boards on various occasions on behalf of the dean SGS, Maseno University.**
- October 2014 to Date, Member of University Senate.
- 2013- Between January to March 2013 served as the IEBC county returning officer, Machakos County
- 2011- June 2019 Senior Lecturer, Department of Botany, Maseno University, Kenya
- 2009-October 2014. Examination coordinator, department of Botany Responsibility: To oversee processing of exams in the department, time-tabling and coordination of teaching. Supervising M.Sc. and Undergraduate students in research activities.
- 2012 to September 2014- Chairman of course restructuring committee department of Botany: Spearheaded the review of BSc. botany programs. Initiated drafting of four other new programs two of which have been discussed and approved in the School of Physical and Biological sciences.
- Member of Editorial board, The American Journal of Applied Sciences
- Member of Editorial board, Journal of Asian Scientific Research
- Member of Editorial board, Current Research In Agricultural Sciences
- Member of Editorial board, International Journal of Pure Agricultural Advances (IJPAA)
- Member of Editorial board. IJRDO - Journal of Applied Science

## CONFERENCES AND WORKSHOPS

- 14TH February 2023, attended workshop on international day for women and girls as relates to the sustainable development goals: theme:” Breaking Barriers in Science”, Topics covered: gender inclusivity in science, building professional networks, mentor - mentee relation and transitional career development of women, at Maseno university Amphitheatre.
- 21st -22nd March, 2022, attended a conference organized by county government of Vihiga, KAFUKO and Amatsi water company conference and exhibitions on water, sanitation and hygiene (WASH) at Sosa Hotel, Vihiga, county, Kenya.
- **Year October 2022 to date** - *Member of Environmental sustainability Committee, Maseno University, Kenya*
- **Year 2022, January up to date:** served in the elections committee as the returning officer for SOMU elections.
- 25 - 26th Feb. 2021, Attended a workshop on training of teaching staff on quality management systems, ISO 17025 overview & laboratoy safety at Kisumu hotel, Kisumu, Kenya
- Attended a workshop on Maseno university institutional ethics review committee training, 4th - 5 th August 2020,online, organized by **Bioethics Society of Kenya**
- Attended a workshop on quality assurance and university examination processes on Friday 9th November 2018, at Maseno university, boardroom, Organised by directorate of quality assurance and performance management, Maseno University.
- Attended Kenya DAAD Scholars (KDSA) Maseno chapter workshop on 26th - 27th April 2018 at Kisumu hotel, kisumu, Kenya: Theme “strengthening systems and capacity graduate supervision, examination and research publication in universities”.
- Attended national competition for Kenyan innovations on 8th September 2017, held at Strathmore University Kenya, Title of innovation won position one: Bio Alkanol Gel.(team **won** to represent Kenya in international grand finals in Cyprus in October 17th -18th, 2017
- Attended training workshop for Kenya Climate innovations center, KCIC boot camp on the 26th and 27th July 2017 at the Strathmore Business School, Kenya.
- Job evaluation Training at Maseno University Boardroom, 24-30<sup>th</sup> March 2017.
- Attended an international conference (CREATE): From science to integrated socio-economic development - understanding ecosystem degradation, restoration ecology and water management in the Lake Basin Region of Kenya, held from 3<sup>rd</sup>-6<sup>th</sup> February 2015, at Port Florence Hall, Kisumu Hotel (Maseno University), Kenya.
- Rapporteur- 3 rd – 6 th February 2015 international conference (CREATE): From science to integrated socio-economic development - understanding ecosystem degradation, restoration ecology and water management in the Lake Basin Region of Kenya, held from 3rd -6 th February 2015, at Port Florence Hall, Kisumu Hotel (Maseno University), Kenya.
- Attended training workshop for maseno university staff on effective complaints management on 30<sup>th</sup>- 31<sup>st</sup> October 2014 at the university boardroom, Siriba, campus.
- Attended AWARD Science Skills Course in Jacaranda Hotel: June 15-21, 2014, Nairobi, Kenya

- 2014- Attended AWARD Mentoring Orientation Workshop, held at Eka hotel- South C, Nairobi, Kenya from March 17-21, 2014
- 2013- Attended HIV/AIDS mainstreaming workshop, held at Maseno University Boardroom on 31<sup>st</sup> May 2013.
- 2013-Humboldt Kolleg Development and environmental conference, linking environmental research to Kenya's Development Agenda and vision 2030, Held at Red Court Hotel, Nairobi, Kenya on 9<sup>th</sup> April-12<sup>th</sup> April, 2013.
- Orientation to elearning for Lecturers. June 2012.
- 2007-Seventh workshop on sustainable horticultural production in the Tropics, held at University of Nairobi, Kabete campus, from 28<sup>th</sup>-1<sup>st</sup> December 2007.
- 2006- Sixth workshop on sustainable horticultural production in the Tropics, held at Kenya Agricultural Research Institute (KARI), Coast regional research centre, Mtwapa from 6<sup>th</sup>-9<sup>th</sup> December 2006.
- 2004 – National Environment Management Authority Conference (NEMA), Maseno University.
- 2003– DAAD Seminar for scholarship holders in public universities 24<sup>th</sup>-25<sup>th</sup> April 2003. "Theme' Towards harmonization of postgraduate training through improved student-supervisor relationship. Held at Maseno University

## PUBLICATIONS

### 2024

1. Dorah Auma Oula, Emitaro William and **David Musyimi**, 2024. *In vitro* and *In-vivo* antimicrobial activities of endophytic fungi from *Carissa edulis*, *Microglossa pyrifolia* and *Steganotaenia araliacea* against *Cercosporae zae maydis* and *Fusarium verticillioides*. *World Journal of Advanced Research and Reviews (WJARR)*. 23(01), 2836–2844.: <https://doi.org/10.30574/wjarr.2024.23.1.2279>
2. William Omuketi Emitaro, Fanuel Kawaka, **David Musyimi**, Asenath Adienge, (2024). Diversity of Culture dependent endophytic bacteria isolated from leguminous agroforestry trees in western Kenya. DOI: <https://doi.org/10.21203/rs.3.rs-2300842/v1>.

### 2023

3. **Musyimi, D. M.** (2023). Effect of Aluminium Stress on Germination, Growth, and Photosynthetic Pigments of *Amaranthus hybridus*. *Journal of Biodiversity and Biotechnology*. 3(1), 44–50. doi: <http://dx.doi.org/10.20961/jbb.v3i1.75211>
4. Buyela Daniel Khasabulli , **Musyimi Mutisya David** , Sikuku Anyango Phoebe and Bonface Ombasa Manono, (2023). Soil carbon and nutrient dynamics in a maize-banana based agroforestry system in Kisii County, Kenya. *IAR Journal of Agriculture Research and Life Sciences* .ISSN Print: 2708-5090 | ISSN Online: 2708-5104.
5. Buyela Daniel Khasabulli , **Musyimi Mutisya David** , Sikuku Anyango Phoebe and Bonface Ombasa Manono, Duncan George Odhiambo (2023). Soil Microbial Biomass, Microbial Population and Diversity in Maize-Banana Based Agroforestry System in Kisii County, Kenya. *Asian Journal of Research in Crop Science* 8 (4): 230-239. <https://doi.org/10.9734/ajrcs/2023/v8i4203>.

### 2022

6. Nganga EM, Kyallo M, Orwa P, Rotich F, Gichuhi E, Kimani JM, Mwongera D, Waweru B, Sikuku P, **Musyimi DM**, Mutiga SK, Ziyomo C, Murori R, Wasilwa L, Correll JC, Talbot NJ. (2022); Foliar Diseases and the Associated Fungi in Rice Cultivated in Kenya. *Plants*. 11(9):1264. <https://doi.org/10.3390/plants11091264>.
7. **David Mutisya Musyimi**, Francis Mbilu Kiema and Gerald Muinde, (2022). Phytochemical Compounds and Antimicrobial Activity of Extracts of *Indigoferas Spicata* (Creeping indigo) Against *Candida albicans*, *Streptococcus mutans* and *E. coli*. *Bacterial Empire*. 5 (3): 1-5, e332. <https://doi.org/10.36547/be.332>.

8. George Ombati Mochoge, **David Mutisya Musyimi** and Phoebe Anyango Sikuku, (2022). **Effect of inoculating *Bradyrhizobium liaoningense* on growth, chlorophyll concentration, nodulation and yield of soya beans.** Bacterial Empire. 5 (3): 1-6, e380 . <https://doi.org/10.36547/be.380>.

9. **David Mutisya Musyimi**, David Mutisya Kathembwa, Francis Kiema, Daniel Khasabulli Buyela, (2022). Antimicrobial Compounds and Antimicrobial Activity of Extracts of *Thespesia garckeana* F. Hoffm. on *Candida albicans*, *Staphylococcus aureus* and *Escherichia coli*. Archives of Ecotoxicology, 4 ( 2): 41-50.

10. George T. Opande, Buyela D. Khasabulli and **David M. Musyimi**, (2022). Effect of Methanolic Extracts of *Senna didymobotrya* and *Moringa oleifera* on Growth of *Ralstonia solanacearum*. Asian Journal of Research in Crop Science 7(4): 1-13.

## 2021

11. Masinde Wafula Collins, **David Mutisya Musyimi** and Itambo Malombe, (2021). Taxonomic Studies of *Lippia javanica* (Burm F.) Spreng. Complex (*Verbenaceae*) in East African Flora. *Asian Journal of Research in Botany* 5(1): 1-8.

12. Korir VJ, Sikuku PA and **Musyimi DM**, (2021). Phytochemical Analysis of Pyrethrum Plant Extract and its Anti-Aphid Effect On African Nightshades (*Solanum Scabrum* Mill). EAS EAS J Biotechnol Genet, 3(1), 21-29. DOI: 10.36349/easjbg.2021.v03i01.002.

13. Jane Gayalwa Ambede, Godfrey Wafula Netondo and **David Mutisya Musyimi**, (2021). Effect of Sodium Chloride Salinity on Gas Exchange and Yield Parameters of Bambara Groundnut Landraces under Rhizobium Inoculation. Scientific Research Journal of Multidisciplinary, 1: 19-28. DOI: 10.47310/srjmd.2021.v01i01.004 URL: <https://isrpgroup.org/srjmd/>.

14. Wamalwa Dennis Simiyu , **David Mutisya Musyimi**, Phoebe Anyango Sikuku, Duncan George Odhiambo (2021). Growth and Gas Exchange Responses of Maize and Banana Plants in an Intercrop with Agroforestry Tree Species in Vihiga County, Kenya .*Asian Journal of Research in Crop Science*, Page 33-51 DOI: 10.9734/ajrcs/2021/v6i330119.

15. **David Mutisya Musyimi** , Ashioya Tracy Ann and George Opande, William Omuketi Emitaro, (2021). Antibacterial activity of crude extracts of *solanum incanum* against *Escherichia coli* and *Staphylococcus aureus*. 4 (2), e183.

16. Ambede Jane Gayalwa, Netondo Godfrey Wafula and **Musyimi David Mutisya**, (2021). Influence of sodium chloride salinity on proline and leaf pigment content of Bambara groundnut (*Vigna subterranea* (L.) Verdc) under Rhizobium inoculation. JECET; 10 (3): 301-115. DOI:10.24214/jecet.A.10.3.30115.

17. Simiyu Dennis Wamalwa, Sikuku Anyango Phoebe and **Musyimi Mutisya David**. (2021). Mineral nutrient uptake of maize and banana in an intercrop with agroforestry tree species in Vihiga County, Kenya. IAR J Agri Res Life Sci, 2(3), 1-13.

18. Ambede Jane Gayalwa, Netondo Godfrey Wafula & **Musyimi David Mutisya**, (2021). Effect of Sodium Chloride Salinity on Growth, Mineral Nutrient Accumulation and Nodulation of Bambara Groundnuts under Rhizobium Inoculation. *Sci Res J Agr Lfe Sci*. 1(1):-1-18. DOI: 10.47310/srjals.2021.v01i01.001.

19. **David Mutisya Musyimi** and Marble Namarobe Namnabah. (2021). Comparative Phytochemical and Antimicrobial Properties of Two Cultivars of *Catharanthus roseus* L. {G.} Don on *Escherichia coli* and *Candida albicans*. Archives of Ecotoxicology. 3(2): 44-48.

20. Shiranda M. A., **Musyimi D. M.**, Mmayi M. P. (2021). Effect of *Phytophthora cinnamomi* inoculation on chlorophyll concentration and chlorophyll fluorescence parameters of four avocado (*Persea americana* Mill.) rootstocks seedlings grown under water logging conditions. **International Journal of Life Sciences Research**, 9 ( 2): 55-70.



21. Chrispo M. Mutebi, George T. Opande and **David M. Musyimi**. (2021). Effect of *Cercospora piaropi* Tharp and *Myrothecium roridum* Tode Fries Formulated as Corn Oil Emulsion on Water Hyacinth Shoot Growth under Greenhouse Conditions . Archives of Ecotoxicology, 3: 9-12.

22. Mutebi C.M., **Musyimi D.M.**, Opande G.T. (2021). Biocontrol of water hyacinth with *Cercospora piaropi* and *Myrothecium roridum* corn oil formulations in the greenhouse for enhanced water resources management and conservation. *East African Journal of Science, Technology and Innovation*, 2: 1-15. EISSN: 2707-0425.

### **2020**

23. Wekulo John K., **Musyimi David. M.** & Netondo Godfrey.W, (2020). Physicochemical Characteristics of River Kuywa Water, Bungoma, Kenya. *Journal of Environmental Science, Computer Science and Engineering & Technology*, 9 (2): 342-351. doi: 10.24214/jecet.A.9.2.34251.

24. William Omuketi Emitaro, **David Mutisya Musyimi**, George Timothy Opande, (2020). Bioactivity of Endophytes from *Calliandra calothyrsus*, *Leucaena diversifolia* and *Sesbania sesban* Against *Cercospora zae-maydis*. *International Journal of Research and Scientific Innovation (IJRSI) | Volume VII, Issue VI, June | ISSN 2321–27*.

25. K John Wekulo, **M David Musyimi**, W Godfrey Netondo, (2020). Microbial characterisation and identification, and potability of River Kuywa Water, Bungoma, Kenya. *Int. J. Biomol. & Biomed.* 11(2), 1-11.

26. Arum S. Filet, George T. Opande, **David M. Musyimi**, (2020). Comparative Studies of Phytochemical and Antimicrobial Activity of *Carica papaya* L. Extracts against *Escherichia coli*, *Staphylococcus aureus* and *Candida albicans*. *Archives of Ecotoxicology*, 2 (3): 35-42.

27. Obila, S.M, **Musyimi, D.M.** and Sikuku, P.A. (2020). Phytochemical and fungicidal activity of selected plant extracts against *Phaeoisariopsis griseola* of common bean. *International Journal of Microbiology and Mycology*, 11(5): 1-11.

28. William Omuketi Emitaro, **David Mutisya Musyimi**, George Timothy Opande, George Odhiambo. (2020). Phytochemical and antimicrobial properties of leaf extracts of *Calliandra calothyrsus*, *Leucaena diversifolia* and *Sesbania sesban*. *Bacterial Empire*, 3,(3), 20-24. <https://doi.org/10.36547/be.2020.3.3.20-24>.

### **2019**

29. **David M. Musyimi** and Pascalia Neema, (2019). Phytochemicals and Antibacterial Activities of Leaf Extract of *Tridax procumbens* Linn on *Staphylococcus aureus* and *Escherichia coli*. *East African Scholars Journal of Biotechnology and Genetics* ISSN: 2663-189X (Print) & ISSN: 2663-7286 (Online) 1,(6): 158-163. [Nov-Dec-2019]

30. Masinde Collins Wafula, Musyimi David Mutisya and Itambo Malombe, (2019). Non-volatile Chemical Composition and Botanical Extracts from *Lippia javanica* (Burm. F) Spreng. in Control of Cowpea Aphids. **Journal of Applied Sciences**, 19(4): 325-330.

### **2018**

31. Juma E. O. A., **Musyimi D. M** and Opande George, (2018). Antagonistic Potential of Selected Fungal And Bacterial Isolates from rhizosphere of Sugarcane Variety Co 421 Against *Sporisorium scitamineum* in Kibos, Kisumu County, Kenya. *App. Sci. Report.* 23 (1), 2018: 7-15 DOI: 10.15192/PSCP.ASR.2018.23.1.715

32. Sikuku PA, **Musyimi DM**, Amusolo M. (2018). Effect of seed depth on germination, growth and chlorophyll contents of *Senna spectabilis*. *Discovery Science*, 14: 84-92.

33. Buyela D. Khasabulli, **David M. Musyimi**, Opande George and Margaret N. Gichuhi, (2018). Allelopathic Effect of *Bidens pilosa* On Seed Germination and Growth of *Amaranthus Dubius*. *Journal of Asian Scientific Research*, 8(3), 103-112.

34. Dennis O. Omayio, **David M. Musyimi**, Francis N. Muyekho, Samuel I. Ajanga, Charles A. O. Midega, Clabe S. Wekesa, Patrick Okoth, Innocent W. Kariuki (2018). Molecular Diversity of a Seemingly Altitude Restricted *Ustilago kamerunensis* Isolates in Kenya: A Pathogen of Napier Grass. *American Journal of Molecular Biology*, 8: 119-143.
35. Dennis O. Omayio, **David M. Musyimi**, Francis N. Muyekho, Samuel I. Ajanga, Charles A. O. Midega, Zeyaur R. Khan, Innocent W. Kariuki (2018). Introducing a novel natural logarithmic indices and their corresponding percentages table towards quantitative estimation of plant tolerance levels to stressors. *International Journal of Biosciences*, 12(4): 78-98.
36. William Omuketi Emitaro, **David Mutisya Musyimi**, Darius Andika Otiato, and Buyela Daniel Khasabuli. (2018). Antibacterial effect of *Euphorbia hirta* and *Bidens pilosa* extracts against *Xanthomonas campestris* P.v. *vesicatoria* isolated from diseased African nightshade (*Solanum scabrum*). *International Journal of Microbiology and Mycology*, 7(5): 1-6.
37. Ouma George, Odhiambo G. Duncan, **Musyimi David**, and Kwach Johnson (2018). Livelihood Assessment of Avocado Growing in Western Kenya and Its Socioeconomic Implications Using Agricultural Extension Services. *International Journal of Agricultural Extension*, 06 (02): 71-79
38. Juma, E.O.A; **Musyimi, D.M** and Opande G, (2018). Enumeration and Identification of Rhizospheric Microorganisms of Sugarcane Variety CO 421 in Kibos, Kisumu County, Kenya *Journal of Asian Scientific Research*, 8 (3): 113 -127.

## **2017**

39. **Musyimi M. David**, Wekulo K. John and Jiveri Bonface, (2017). Bacteriological and Physicochemical Characterisation of Aora Loko Stream Water, Maseno, Kenya. *Journal of Asian Scientific Research*, 7(4): 119-128.
40. **David M. Musyimi**, George T. Opande, Jane Chesire, Phoebe A. Sikuku and Daniel K. Buyela (2017). Antimicrobial potential and screening of phytochemical compounds of *Lantana camara* Linn. *Journal of Biological Science*, 3 (6): 18-35.
41. George T. Opande, **David M. Musyimi**, Mutembei J. Kaberia. (2017). Phytochemical Screening and Antimicrobial Effects of Leaf and Root Extracts of *Crotalaria brevidens* on *Candida albicans*, *Staphylococcus aureus* and *Escherichia coli* in Maseno (Kenya). *International Journal of Pharmaceutical Science Invention*, 6 (4): 38-43.
42. George T. Opande, **David M. Musyimi** and Kiogora C. Muthoni., (2017). Effects of Planting Depth on Seed Germination and Emergence of *Crotalaria Brevidens* on Maseno Soils Maseno (Kenya). *Journal of Agriculture and Veterinary Science*. 10(8): 30-34.
43. George T. Opande, **David M. Musyimi**, and Hillary T Nyang,anga., (2017). Isolation and Identification *Rhizoctonia Solani* on the Water Hyacinth (*Eichhornia crassipes* [Mart] Solms. Laubach) in the Winam Gulf (Lake Victoria, Kenya). *Journal of Agriculture and Veterinary Science*, 10 (8): 39-43.
44. William Omuketi Emitaro, **David Mutisya Musyimi**, Darius Andika Otiato, Benson Onyango, (2017). Morphological, biochemical and molecular characterization of *Xanthomonas campestris* p.v. *vesicatoria* of African nightshades (*Solanum scabrum* Mill.) *International Journal of Biosciences*, 11 (1): 190-197.
45. George T. Opande, **David M. Musyimi**, Kipruto L. Cherono, Bonface K. Jiveri, Daniel K. Buyela., (2017). Antimicrobial Activities of Crude Leaf Extract of *Solanum nigrum* on *Fusarium oxysporum* and *Pseudomonas syringae* cultures in Maseno (Kenya). *Journal of Asian Scientific Research*. 7 (7): 271-278.



46. George T. Opande, Wagai S. Otieno, Onyango J. Charles and **David M. Musyimi.**, (2017). Carpet characteristics of *Eichhornia crassipes* [Mart.] Solms (Water hyacinth) in the Winam Gulf (Lake Victoria, Kenya). *Journal of Asian Scientific Research*, 7 (7): 279-287.
47. **Musyimi D.M.**, Sikuku P.A., Opande G. and Korir Vicky J. (2017). Allelopathic effects of *Eucalyptus camaldulensis* and *Eucalyptus globules* leaf extracts mixture on Germination and Growth of Sorghum, *Journal of Biological Science*, 3 (7): 58-78.
48. George T. Opande, **David M. Musyimi**, Daniel K. Buyela and Osunga J. Ouko., (2017). Some Pathogenic Bacteria Associated With Fresh and Smoked Nile Perch (*Lates Niloticus*) In Luanda Market, Vihiga County (Kenya). *International Journal of Pharmaceutical Science Invention*, 6 (7): 13-17.
49. Buyela D. Khasabulli' **David M. Musyimi**' David M. Miruka, George T. Opande and Pascaline Jeruto. (2017). Isolation and characterization of *Ralstonia solanacearum* strains of tomato wilt disease from Maseno Kenya. *Journal of Asian Scientific Research*, 7 (9): 404-420.

## 2016

50. Jomo, M. G.W. Netondo, and **D. M. Musyimi**, (2016). Drought inhibition of chlorophyll content among seven *Amaranthus* species. *International Journal of Advanced Research in Science, Engineering and Technology*, 3 (2): 1362-1371. ISSN: 2350-0328.

## 2015

51. Mmayi M.P, **Musyimi D.M**, Netondo G.W, Sikuku P. A. (2015). Chlorophyll fluorescence parameters and photosynthetic pigments of four *Glycine max* varieties under Aluminium chloride stress. *Sci. Agri*. 10 (2), 2015: 84-94.
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