

DR. OMWOYO OMBORI

PART 1. PERSONAL INFORMATION

CITIZEN : Kenyan
GENDER : Male
CURRENT ADDRESS : Kenyatta University, Plant Sciences,
P.O Box 43844 (00100) NAIROBI
EMAIL ADDRESS : omwoyo.ombori@ku.ac.ke; : ombori@yahoo.com;
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PART 2. EDUCATIONAL BACKGROUND

2003- 2009 : Ph.D Kenyatta University, Doctor of Philosophy (Plant Biotechnology)
1995-1999 : Kenyatta University, M.Sc. Research Project
1994-1995 : Kenyatta University M.Sc. course work
1990-1994 : Kenyatta University, B.ED (Science), Second Class (Hons) Upper
1988-1989 : Chianda Boys High School, KACE
1984-1987 : Gesusu High School, KCE
1977-1983 : Kahawa Primary school, CPE

PART 3. EMPLOYMENT HISTORY

March 2015 – Present : Senior Lecturer, Kenyatta University
2006- March 2015 : Lecturer, Kenyatta University
2002-2006 : Tutorial Fellow, Kenyatta University
1999-2002 : Biology and Chemistry Teacher, Nyansabakwa High School
1995-1998 : Part-timer A-Level Biology Teacher, CGCU Girls School Biology
Jan-May 1991-1993 : Biology and Chemistry Teacher, Nyanturago High School
1994 : Biology and Chemistry Teacher, Chibwobi Secondary School

PART 4. ADMINISTRATIVE RESPONSIBILITIES

14th Aug. 2015 - Present : Chairman, Department of Plant Sciences
28th Feb. - 4th Mar. 2014 : Acting Chairman, Department of Plant Sciences
Sept. 2013- 14th Aug. 2015 : Exam Coordinator, Department of Plant Sciences
: Student Academic advisor
Aug. 2011- Sept. 2013 : Chairman Board of Undergraduate studies, Department of Plant and
Microbial Sciences, Kenyatta University
Sept. 2008- Sept 2013 : Departmental timetabler, Department of Plant and Microbial Sciences,
Kenyatta University
9th Aug. 2007 – Sept. 2008 : Assistant Examination Co-ordinator, Department of Plant and
Microbial Sciences
Nov. 2009 – 2015 : Departmental website contact person, Department of Plant and
Microbial Sciences, Kenyatta University
: Student academic advisor, Department of Plant and Microbial
Sciences, Kenyatta University.
1th Nov. 2007 – 2015 : E-learning Co-ordinator, Department of Plant and Microbial
Sciences
2002 – 8th Aug. 2007 : Departmental Assistant timetabler, Kenyatta University.

31st May 2002 – Sept. 2002 : HOD Examinations, Curriculum Co-ordinator, Nyansabakwa High School

Jan. 2000 –Sept. 2002 : Timetabler, Boarding Master, Preps Master, Library Master
Nyabasabakwa High School, Nyamira County

PART 5. PARTICIPATION IN LOCAL / REGIONAL/ INTERNATIONAL WORKSHOPS/ SEMINARS/CONFERENCES/ EXHIBITIONS/TRAINING

1. Training on entrepreneurship held at Chandaria BIIC Center, Kenyatta University from 6th to 10nd May 2019.
2. Training on Patent drafting held at Chandaria BIIC Center, Kenyatta University from 18th to 22nd March 2019.
3. Molecular Characterization of Root-Knot Nematodes Obtained from African Nightshades in Western Kenya. In: Proceedings of Tropentag 2015, Management of land use systems for enhanced food security—conflicts, controversies and resolutions“, 16th -18th September 2015 at Humboldt-Universität zu Berlin, Germany.
4. International Conference on ``Building a new generation of Agricultural Scientists``. Bridging the gap between the society, science and industry, held at Kenyatta University, Kenya from 1st to 5th December 2014.
5. Participation in a VicRes research team stakeholders' workshop held from 17th to 21st February 2012 in Kigali, Rwanda.
6. Participation in a VicRes research team workshop and establishment of a decomposition pilot facility and water hyacinth harvesting activity from 13th January to 2nd February 2012, at Kisumu, Kenya.
7. Participation in a VicRes research team workshop and reconnaissance study between 13th - 18th November 2011 at Kabanyolo, Uganda.
8. Participation in the VicRes biennial forum 9-13 October 2011 at Munyonyo, Uganda
9. Research Methodology e-course Workshop held at Kenyatta University, Kenya between 14th – 15th July 2011.
10. Lake Victoria Research Initiative (VicRes) workshop held at Imperial Beach Hotel, Entebbe, Uganda between 19th – 22nd April 2011.
11. 10th workshop on sustainable Horticultural Production in the Tropics. Value chains of ornamentals for local and export market 8th – 11th December 2010.
12. Proceedings of Multi-stakeholders workshop on Strengthening University Capacity for Promoting, facilitating and teaching Rural Innovation processes (SUCCAPRI) held at Egerton University between 3rd-8th October 2010. Sponsored by European Development Fund.
13. Proceedings of the 1st East African Regional Scientific Conference of Pure and Applied Sciences between 10th-14th August, 2010 held at Kenyatta University, Nairobi, Kenya. Sponsored by Kenyatta University.
14. Workshops for Strengthening University Capacity for Promoting, facilitating and teaching Rural Innovation processes ENDULINK project Sponsored by European Union, Nairobi Kenya, 28-29th Jun 2010. Sponsored by European Development Fund.
15. Workshops for Strengthening University Capacity for Promoting, facilitating and teaching Rural Innovation processes ENDULINK project Sponsored by European Union, Nairobi Kenya, Kenyatta University, 28th Jun 2010. Sponsored by Sponsored by European Development Fund.
16. Proceedings of the third workshop of the University Based Learning cycle of the EDULINK SUCAPRI (Strengthening University Capacity for Promoting, facilitating and teaching Rural Innovation processes) held at Jomo Kenyatta University between 14th-20th March 2010. Sponsored

- by European Development Fund.
17. Training of Trainers workshop on Content development Open Distance e-learning held at Kenyatta University, Kenya November 2009. Sponsored by Kenyatta University.
 18. Implementation of an Environmental Management System Awareness & Implementation according to ISO 14001:2004; Kenyatta University, Kenya, 2nd – 6th Jun 2009. Sponsored by Kenyatta University.
 19. Proceedings of the fourth workshop of the University Based Learning cycle of the EDULINK SUCAPRI (Strengthening University Capacity for Promoting, facilitating and teaching Rural Innovation processes) workshop at Egerton University between 25th - 31st January 2009. Sponsored by European Development Fund.
 20. Proceedings of the 1st Ever all Africa congress on Biotechnology, between 22nd – 26th September 2008, Nairobi, Kenya). Sponsored by Kenyatta University.
 21. Implementation of an Environmental Management System Awareness & Implementation according to ISO 14001:2004; Kenyatta university, Kenya, 30th Jun – 1st July 2008. Sponsored by Kenyatta University.
 22. 25th FAO Regional Conference for Africa, between 16-20th June 2008, Gigiri, Nairobi Kenya, Sponsored by Kenyatta University.
 23. Training on genetic transformation and low cost Tissue Culturing technique in the International Centre for Tropical Agriculture (CIAT) Colombia between 5th-12th March 2008 Sponsored by Rockfellow Foundation. Sponsored by Rockfellow Foundation.
 24. SUCAPRI (Strengthening University Capacity for Promoting, facilitating and teaching Rural Innovation processes) workshop on Moodle and wiki held at Avu, Kenyatta University, Kenya June 2008. Sponsored by European Development Fund.
 25. ARESA Redscreen/Red-detect Technology, a new tool in agro-biotechnology at Kenyatta University, Biochemistry Lab 3rd June 2008.
 26. Training of Trainers on Content development workshop for ODeL held at Kenyatta University, Kenya between 5th – 16 Nov. 2007. Sponsored by Kenyatta University.
 27. Training on Molecular analysis of transgenic maize plants in Institute of Plant and Crop Research (IPK), Gatersleben, Germany Sept 2006-Feb 2007 Sponsored by German Exchange Programme (DAAD). Sponsored by German Exchange Programme (DAAD).
 28. Training by Kenya Examination Council as an examiner for KCSE Biology Practical between 13th -17th August 2002 at Moi Forces Academy, Nairobi. Sponsored by Kenya National Examination Council.

PART 6. PAPERS AND EXHIBITIONS PRESENTED IN LOCAL/REGIONAL/INTERNATIONAL WORKSHOPS/SEMINARS/CONFERENCES

1. The Sixth African Higher Education Week and RUFORUM Biennial Conference, 22-26 October, 2018.
2. Symbiotic effectiveness of indigenous bradyrhizobia nodulating soybean varieties grown in Eastern Kenya. The 5th African Higher Education Week and RUFORUM Biennial Conference 2016 from 17th to 21st October 2016 held at. Century City Conference Centre, Cape Town, South Africa.
3. Unlocking climbing bean (*Phaseolus vulgaris* L.) yield potential using elite native rhizobia in Eastern Kenya. The 5th African Higher Education Week and RUFORUM Biennial Conference 2016 from 17th to 21st October 2016 held at. Century City Conference Centre, Cape Town, South Africa.

4. Increasing Soybeans and Climbing Beans Production in Smallholders' Farms in Eastern Kenya. The 5th African Higher Education Week and RUFORUM Biennial Conference 2016 from 17th to 21st October 2016 held at Century City Conference Centre, Cape Town, South Africa.
5. Kimani J.W., Ombori O., Njoka F.M. and Maina M. (2014). Increasing regeneration rate of two sweet potato (*Ipomoea batatas* L.) cultivars on low cost tissue culture media. International conference on "Building a new generation of agricultural scientists". "Bridging the gap between society, science and industry" Kenyatta University, Nairobi-Kenya. 1st - 5th December, 2014.
6. Muthini, M., Maingi J.M., Muoma, J.O., Amoding, A.M., Mukaminega, D., Newton Osoro, N. and Ombori, O. (2013). Morphological assessment and effectiveness of indigenous rhizobia isolates that nodulate *P. vulgaris* in water hyacinth compost testing field in Lake Victoria basin. *Proceedings of the Natural Resource Management and Ethnobotany and Health Cluster Workshop held from 7th – 12th April 2013, at Mukono, Uganda.*
7. Osoro, N., Ombori, O., Muoma, J.O., Amoding, A.M., Mukaminega, D., Muthini, M. and Maingi, J.M. (2013). Effects of water hyacinth (*Eichhorniacrassipes* [Mart.] solms) compost on growth and yield of common beans (*Phaseolus vulgaris*) in Lake Victoria Basin. *Proceedings of the Natural Resource Management and Ethnobotany and Health Cluster Workshop held from 7th – 12th April 2013, at Mukono, Uganda.*
8. Muoma, J.O., Ombori, O., Amoding, A.M., Mukaminega, D., Muthini, M., Maingi, J.M. and Osoro, N. (2013). Production of organic fertilizer from water hyacinth (*Eichhorniacrassipes* [Mart.] Solms) for sustainable organic farming and conservation of ecosystem in Lake Victoria basin. *Proceedings of the Natural Resource Management and Ethnobotany and Health Cluster Workshop held from 7th – 12th April 2013, at Mukono, Uganda.*
9. Kimani, J.W., Mwangi, M., Ombori, O. and Njoka, F.M. (2012). Increasing the regeneration rate in the three sweet potatoes (*Ipomea batatas* L.) cultivars under low cost tissue culture conditions. *Proceedings of the 12th Workshop on Sustainable Horticultural Production in the Tropics held at Bondo University College, Bondo, Kenya from 4th to 7th December 2012.*
10. Ogero, K.O., Gitonga, N.M., Ombori, O. and Mwangi, M. (2012). Micropropagation of Cassava (*Manihot esculenta* Crantz) and Sweet Potato (*Ipomea batatas* (L.) Lam) through Low Cost Tissue Culture. *13th Biannual Scientific Conference held at KARI Headquarters Kiptagat Road, Nairobi Kenya 21st – 28th October 2012.*
11. Muoma, J.V.O., Maingi, J., Ombori, O., Amoding, A. and Mukaminega, D. (2012). Production of organic fertilizer from water hyacinth (*Eichhornia crassipes* [Mart.] Solms) for organic farming and conservation of ecosystem in Lake Victoria basin. *Proceeding of the Workshop for the VicRes projects held in Kigali-Rwanda between 14th–16th June 2012.*
12. Ogero, K.O; Gitonga, N.M. Mwangi, M., Ombori, O. and Ngugi, M. (2011). Evaluating the feasibility of using locally available fertilizers as low cost nutrients in Sweet potato (*Ipomoea batatas* (L.) Lam) tissue culture. *10th African Crop Science Society Conference —From Soil to Soul: Crop Production for Improved African Livelihoods and a Better Environment for Future Generations.* Centro Internacional de Conferências Joaquim Chissano Maputo – Mozambique, 10th – 13th October 2011.
13. Ogero, K.O; Gitonga, N. M. Mwangi, M. Ombori O. and Ngugi, M. (2011). Response of two Sweet potato (*Ipomoea batatas* (l) lam) varieties regenerated on low cost tissue culture medium. *10th African Crop Science Society Conference —From Soil to Soul:*

Crop Production for Improved African Livelihoods and a Better Environment for Future Generations. Centro Internacional de Conferências Joaquim Chissano Maputo – Mozambique, 10th – 13th October 2011.

14. Ogero K.O., Gitonga N.M. and Ombori O. (2010). Micropropagation of Cassava (*Manihot esculenta* Crantz) and Sweet Potato (*Ipomea batatas* (L.) Lam) through Low Cost Tissue Culture. 10th workshop on sustainable Horticultural Production in the Tropics. Value chains of ornamentals for local and export market 8th – 11th December 2010.
15. Ombori O. (2010). Networking, Partnerships & Trust Building Proceedings of Multi-stakeholders workshop on Strengthening University Capacity for Promoting, facilitating and teaching Rural Innovation processes held at Egerton University 3rd-8th October 2010. Sponsored by European Development Fund.
16. Ombori, O., Gitonga N.M., Muoma, O. Kiogora, D. and Ngugi, M. (2010). Cost effective approaches for *in vitro* mass production of banana (*Musa sapientum* L.) plantlets in Kenya. Proceedings of the 1st East African regional scientific conference of Pure and Applied Sciences held at Kenyatta University, Nairobi, Kenya between 10th -14th August, 2010. Sponsored by School of Pure and Applied Sciences, Kenyatta University.
17. Gitonga N. M., Ombori, O., Kiogora S.D.M. and Ngugi, M. (2008). Use of Low Cost Tissue Culture Materials for the Initiation and multiplication of Bananas. The Bio-ARN/VICRES Scientific conference, Kampala, Uganda, 24th – 26th November 2008.
18. Ombori, O. Gitonga.N. M., Murithi, K.S.D (2008) Comparison of the *in vitro* culture conditions of banana genotypes in Kenya. Conference on Banana and plantain in Africa: Harnessing international partnerships to increase research impact at Leisure Lodge Resort Mombasa, Kenya, 5–9 October 2008.
19. Ombori, O., Gitonga, N.M. and Machuka, J. (2008). *Agrobacterium*-mediated transient gene expression of tropical maize (*Zea may* L.) genotypes in Kenya. Proceedings of the 1st Ever all Africa congress on Biotechnology, between 2nd – 6th September 2008, Nairobi, Kenya. Sponsored by Rockefeller Foundation.
20. Ombori, O. (2008). Biotechnological techniques in enhancing food security. 25th FAO Regional Conference for Africa, between 16-20th June 2008, Gigiri, Nairobi Kenya. Sponsored by Kenyatta University.
21. Ombori, O. (2008). Somatic embryogenesis and *Agrobacterium*-mediated transformation of some maize (*Zea mays* L.) genotypes in Kenya. Ph.D thesis end of the research presentation, 26th March 2008.
22. Ombori O., Gitonga N.M. and Machuka J. (2006). *In vitro* regeneration of some Kenyan highland maize hybrids and open pollinated variety from immature embryos by somatic embryogenesis. Proceedings of National Biological Conference held on 25th August 2005. Sponsored by German Exchange service (DAAD).
23. Ombori O. (1999). Plant regeneration and selection for salt and drought tolerance on the Africa finger millet (*Eleusine coracana* (L) Gaertn.). MSc. Kenyatta University, Kenya.

PART 7. RESEARCH GRANT AWARD

YEAR	SOURCE	COLLABOLATORS	STUDY TOPIC/ PURPOSE
2018-2021	National Research Fund (NRF)	Dr. John Maingi, Kenyatta University Dr. Ezekiel Mugendi Njeru, Kenyatta University Dr. Jacinta Kimiti, South Eastern Kenya University Bosibori Bwari Bett, KALRO	Participatory approach in the production and acclimatization of planting materials and management of postharvest losses of bananas in Kisii, Nyamira and Embu Counties, Kenya
2016-18	Kenyatta University, Vic Chancellor (VC) Research grant	Dr. Ezekiel Mugendi Njeru, Kenyatta University Dr. Shem B, Nchore, Kenyatta University	Exploiting arbuscular mycorrhizal fungi-rhizobia-legume tripartite symbiosis to increase crop production and resilience in semi-arid tropics of Kenya
2014-2016	RUFORUM	Dr. John Maingi, Kenyatta University Dr. Ezekiel Mugendi Njeru, Kenyatta University Dr. Jacinta Kimiti, South Eastern Kenya University	Increasing Soybeans and Climbing Beans production in smallholders` farms in Eastern Kenya
2014-2016	VICRES Grant NO: 7/NR-3-2010/2	Dr. Alice Amoding, Makerere University Dr. John Muoma, Masinde Muliro University Dr. John Maingi, Kenyatta University Ms. Dative Mukaminega, Kigali Institute of Science & Technology	Production of organic fertilizer from water hyacinth (<i>Eichhornia crassipes</i> [Mart.] Solms) for organic farming and conservation of ecosystem in Lake Victoria basin
2012-2013	VICRES Grant NO: 7/NR-3-2010/015	Dr. Alice Amoding, Makerere University Dr. John Muoma, Masinde Muliro University Dr. John Maingi, Kenyatta University Ms. Dative Mukaminega, Kigali Institute of Science & Technology	Production of organic fertilizer from water hyacinth (<i>Eichhornia crassipes</i> [Mart.] Solms) for organic farming and conservation of ecosystem in Lake Victoria basin
2010-2012	The Lake Victoria Research Initiative (VICRES) Grant NO: 7/NR-3-2010/015	Dr. Alice Amoding, Makerere University Dr. John Muoma, Masinde Muliro University Dr. John Maingi, Kenyatta University Ms. Dative Mukaminega Kigali Institute of Science & Technology	Production of organic fertilizer from water hyacinth (<i>Eichhornia crassipes</i> [Mart.] Solms) for organic farming and conservation of ecosystem in Lake Victoria basin
2010	ASERECA Grant NO: AB/2009/05	Prof. Gitonga N. Mburugu,	Applying Tissue culture to improve access to cassava and sweet potatoes clean planting materials for farmers in Eastern and Central Africa.
2006-2009	Rockefeller Grant No: FS 048	Prof. Gitonga N. Mburugu,	Use of low cost tissue culture techniques to boost preservation and production of cassava and bananas in Kenya
2006-2007	German exchange Service (DAAD) Lab bench fee + for substance allowance	None Page 6 of 19	Molecular Analysis of Transgenic Maize Plants in the Institute of Plant and Crop Research (IPK), Gatersleben,
2003-2006:	German exchange Service (DAAD) & Rockefeller Foundation	None	Somatic Embryogenesis and <i>Agrobacterium</i> -mediated Transformation of selected Maize (<i>Zea mays</i> L.) genotypes in Kenya

PART 8. PAPERS AWARDED KENYATTA UNIVERSITY VICE-CHANCELOR RESEARCH INCENTIVE FOR PUBLISHING IN INTERNATIONAL REPUTABLE SCIENTIFIC JOURNALS

1. Kawaka, F, Dida, M., Opala, P., Ombori, O., Maingi, J., Amoding, A. and Muoma, J. (2018). Effect of nitrogen sources on the yield of common bean (*Phaseolus vulgaris*) in Western Kenya. *Journal of Plant Nutrition*, 41(13): 1652–1661. <https://doi.org/10.1080/01904167.2018.1458870>
2. Koskey G., Mburu, SW, Kimiti, J.M., Ombori, O., Maingi, J.M. and Njeru, E.M. (2018) Genetic characterization and diversity of Rhizobium isolated from root nodules of Mid-Altitude climbing bean (*Phaseolus vulgaris* L.) varieties. *Frontiers in Microbiology*, 9:968. doi: 10.3389/fmicb.2018.00968
3. Mbinda, W., Ombori, O., Dixelius, C. and Oduor, R. (2018). *Xerophyta viscosa* Aldose Reductase, *XvAld1*, enhances drought tolerance in transgenic sweetpotato. *Molecular Biotechnology*, 60(3): 203-214. DOI <https://doi.org/10.1007/s12033-018-0063-x>
4. Koskey,G; Mburu, S.W.; Njeru, E.M.; Malia, J.K.; Ombori,O. and Maingi, J.M. (2017). Potential of native rhizobia in enhancing nitrogen fixation and yields of climbing beans (*Phaseolus vulgaris* L.) in contrasting environments of Eastern Kenya. *Frontiers in Plant Science*, 8:443. doi: 10.3389/fpls.2017.00443
5. Mburu, S.W., Koskey, G., Kimiti, J.M., Ombori, O., Maingi, J.M. and Njeru, E.M. (2016). Agrobiodiversity conservation enhances food security in subsistence-based farming systems of Eastern Kenya. *Agriculture & Food Security*, 5(19). DOI 10.1186/s40066-016-0068-2

PART 9. RESEARCH GRANTS AND AWARD GIVEN TO STUDENTS` SUPERVISED IN RESEARCH PROJECTS

1. *Ann Mwaura: PhD student*
2017: National Research Fund on ``Identification of commonly used medicinal plant species in Kenya using DNA barcoding``
2. *Lydia K. Asande PhD student*
2017: National Research Fund on `` Genetic improvement of Kenyan passion fruit (*Passiflora edulis* sims) for resistance to woodiness virus disease through *Agrobacterium*-mediated transformation``
3. *Morris Muthini M.Sc. student*
❖ 2014: Council of Science and technology grant on ``Genetic and morphological assessment of rhizobia that nodulate *Phaseolus vulgaris* in water hyacinth compost testing fields in Lake Victoria Basin`` (Kshs 200,000).
4. *Ogero Kwame Okinyi M.Sc student*
❖ 2012: First prize award in the TEEAL graduate student research paper competition 2011 (US \$ 500) for the paper entitled “*In vitro* micropropagation of cassava through low cost tissue culture.” <http://www.teeal.org>
❖ ASERECA research grant on ``Low Cost Tissue Culture of Cassava and Sweet Potatoes`` (US \$ 24000).
❖ 2011: National Council of Science and technology grant on`` Low Cost Tissue Culture of Cassava and Sweet Potatoes`` (Kshs 200,000).

5. *Boniface Muli M.Sc Student*

- ❖ 2012: National Council of Science and technology grant on `` Socio-economic and Ecological impacts of Parthenium weed (*Parthenium hysterophorus* L.) on local livelihoods in Kisumu County, Kenya (Kshs 200,000).

PART 10. PUBLICATIONS

a) **Publications after being promoted to a Senior Lecturer**

1. Kawaka, F, Ombori, O., Maingi, J., Amoding, A., Mukaminega, D. and Muoma, J. (2018). Response of Common Bean (*Phaseolus vulgaris* L.) Cultivars to Water Hyacinth (*Eichhornia crassipes* [Mart.] Solms) Compost in Kisumu, Kenya along the Lake Victoria Basin. *Journal of Experimental Agriculture International* 28(1): 1-9, 2018; Article no.JEAI.8260. ISSN: 2457-0591.
2. Kawaka, F. Makonde, H., Dida, M., Opala, P., Ombori, O., Maingi, J. and Muoma, J. (2018). Genetic diversity of symbiotic bacteria nodulating common bean (*Phaseolus vulgaris*) in Western Kenya. *PLoS One* 13 (11), e0207403.
3. Beesigamukama, D., Tumuhairwe, J.B., Muoma, J., Maingi, J.M., Ombori, O, Mukaminega, D., Nakanwagi, J. and Amoding, A. (2018). Agronomic effectiveness of water hyacinth-based composts. *African Journal of Agricultural Research*, 13(39): 2055-2062. DOI: 10.5897/AJAR2018.13440. ISSN: 1991-637X. <http://www.academicjournals.org/AJAR>
4. Beesigamukama, D., Tumuhairwe, J.B., Muoma, J., Maingi, J.M., Ombori, O, Mukaminega, D., Nakanwagi, J. and Amoding, A. (2018). Improving Water Hyacinth-Based Compost for Crop Production. *Journal of Agricultural Science and Food Technology*, 4 (3): 52-63. ISSN: 2465-7522. <http://pearlresearchjournals.org/journals/jasft/index.html>
5. Koskey G., Mburu, SW, Kimiti, J.M., Ombori, O., Maingi, J.M. and Njeru, E.M. (2018) Genetic characterization and diversity of Rhizobium isolated from root nodules of Mid-Altitude climbing bean (*Phaseolus vulgaris* L.) varieties. *Frontiers in Microbiology*, 9:968. doi: 10.3389/fmicb.2018.00968
6. Mose, DN., Ombori. O. Allan, M.J. and Okemo, P. (2018). Sources of microbial contaminants in biosafety laboratories in Kenya. *Journal of Advances in Biology & Biotechnology* 17(2): 1-11. Article no.JABB.38583. ISSN: 2394-1081.
7. Kawaka, F, Dida, M., Opala, P., Ombori, O., Maingi, J., Amoding, A. and Muoma, J. (2018). Effect of nitrogen sources on the yield of common bean (*Phaseolus vulgaris*) in Western Kenya. *Journal of Plant Nutrition*, 41(13): 1652–1661. <https://doi.org/10.1080/01904167.2018.1458870>
8. Jackline, T.E., Njoka, F.M., Ombori, O. and Peter N. Njau, P.N. (2018). Introgression of stem rust resistance into popular Kenyan wheat varieties to improve production. *Journal of Advances in Biology & Biotechnology*, 17(1): 1-11. Article no.JABB.38609. ISSN: 2394-1081. DOI : [10.9734/JABB/2018/38609](https://doi.org/10.9734/JABB/2018/38609)
9. Mbinda, W., Ombori, O., Dixelius, C. and Oduor, R. (2018). *Xerophyta viscosa* Aldose Reductase, *XvAld1*, enhances drought tolerance in transgenic sweetpotato. *Molecular Biotechnology*, 60(3): 203-214. DOI <https://doi.org/10.1007/s12033-018-0063-x>
10. Jackline, T.E., Ombori, O., Njau, P.N. and Njoka, F.M. (2017). Determination of Stem Rust Ug99Disease Severity in Selected Wheat Backcrosses in Kenya. *IOSR Journal of Agriculture and Veterinary Science (IOSR JAVS)*, 10(5): 66-71. e-ISSN: 2319-2380, p-

11. Koskey, G.; Mburu, S.W.; Njeru, E.M.; Malia, J.K.; Ombori, O. and Maingi, J.M. (2017). Potential of native rhizobia in enhancing nitrogen fixation and yields of climbing beans (*Phaseolus vulgaris* L.) in contrasting environments of Eastern Kenya. *Frontiers in Plant Science*, 8:443. doi: 10.3389/fpls.2017.00443
12. Wekesa, C.S.; Muoma, J.; Ombori, O., Maingi, J.; Okun, D., Juma, K.; Okoth, P.; Wamalwa, E.; Kollenberg, M. and Mauti, E. (2017). Genetic Characterization of Rhizosphere Bacteria that inhabit common bean nodules in Western Kenya soils. *Applied Microbiology*, 3(1): 128. DOI: 10.4172/2471-9315.100012. ISSN:2471-9315
13. Mbinda, W., Anami, S., Ombori, O., Dixelius, C. and Oduor, O. (2016). Efficient Plant Regeneration of Selected Kenyan Sweetpotato (*Ipomoea batatas* (L.) Lam.) Cultivars through Somatic Embryogenesis. *Journal of Tissue Science & Engineering*, 7(2). DOI: 10.4172/2157-7552.1000176
14. Mburu, S.W., Koskey, G., Kimiti, J.M., Ombori, O., Maingi, J.M. and Njeru, E.M. (2016). Agrobiodiversity conservation enhances food security in subsistence-based farming systems of Eastern Kenya. *Agriculture & Food Security*, 5(19). DOI 10.1186/s40066-016-0068-2
15. Naluyange, V., Ochieno, D.M.W., Wandahwa, P., Odendo, M., Maingi, J.M., Amoding, A., Ombori, O., Dative Mukaminega, D. and Muoma, J. (2016). Belowground influence of *Rhizobium* inoculant and water hyacinth composts on yellow bean infested by *Aphis fabae* and *Colletotrichum lindemuthianum* under field conditions. *Journal of Plant Studies*, 5(2): 32-36. ISSN 1927-0461 E-ISSN 1927-047X
16. Piero, N.M., Murugi N.J., Okoth, O.R., Ombori, O.R., Jalemba, M.A. and Chelule, C.R. (2015). RNAi-mediated down regulation of cyano-Glycoside biosynthesis in Kenyan cassava (*Manihot esculenta* Crantz) genotypes. *Plant Biochemistry and Physiology*, 3 (3):148-153. doi:10.4172/2329-9029.1000148
17. Ngugi, M.P., Murugi, N.J., Oduor, O.R., Mgtutu, A.J., Ombori, R.O. and Cheruiyot, R.C. (2015). Determination of cyanogenic compounds content in transgenic acyanogenic Kenyan cassava (*Manihot esculenta* Crantz) genotypes: Linking molecular analysis to biochemical analysis. *Analytical and Bioanalytical Techniques*, 6(5):264-271.
18. Ngugi M.P., Oduor, R.O. Omwoyo, R.O., Njagi, J.M., Mgtutu, A.J. and Cheruiyot R.C. (2015). Regeneration of Kenyan cassava (*Manihot Esculenta* Crantz) genotypes. *Plant Biochemistry and Physiology*, 3: 147. doi:10.4172/2329-9029.1000147.
19. Gacheri, P., Machuka, J., Ombori, O. and Bukachi, B. (2015). *Agrobacterium* Mediated Transformation of selected maize inbred lines with pPZP200 towards enhancement of lysine and methionine content. *Journal of Biology, Agriculture and Healthcare*, 5(2): www.iiste.org. ISSN 2224-3208 (Paper) ISSN 2225-093X (Online)
20. Ngetich, A., Runo, Ombori, O, Ngugi, M, Kawaka, F., Perpetua, A. and Nkanata, G. (2015). Low cost micropropagation of local varieties of Taro (*Colocasia esculenta* spp.). *British Biotechnology Journal* 6(4): 136-145, Article no.BBJ.2015.036. ISSN: 2231-2927. www.sciencedomain.org

b) Publications as a lecturer

1. Ombori, O., Muoma, J.O. and Machuka, J. (2014). Effect of the medium used in the growth of *Agrobacterium* strain on subsequent *gus* expression of the infected immature zygotic embryos of the tropical maize line. *Maize Genetics Cooperation Newsletter* 87: 17-18. ISSN 1090-4573.

2. Ombori, O., Muoma, J.O. and Machuka, J. (2014). *Agrobacterium* mediated Transformation of leaf derived callus of tropical maize (*Zea mays* L.) inbred lines. *Maize Genetics Cooperation Newsletter* 87: 18-19. ISSN 1090-4573.
3. Kawaka, F., Dida, M.M., Opala, P.A., Ombori, O., Maingi, J., Osoro, N., Muthini, M., Amoding, A., Mukaminega, D. and Muoma, J. (2014). Symbiotic Efficiency of Native Rhizobia Nodulating Common Bean (*Phaseolus vulgaris* L.) in Soils of Western Kenya. *International Scholarly Research Notices*, Vol. 2014, Article ID 258497. <http://dx.doi.org/10.1155/2014/258497>
4. Osoro, N.O., Kawaka, F., Naluyange, V., Ombori, O., Muoma, J.O., Amoding, A., Mukaminega, D., Muthini, M. and Maingi, J.M. (2014). Effects of water hyacinth (*Eichhornia crassipes* 1 [Mart.] solms) compost on growth and yield of common beans (*Phaseolus vulgaris*) in Lake Victoria Basin. *European International Journal of Science and Technology*, 3 (7): ISSN: 2304-9693. www.eijst.org.uk
5. Mvuria, J.M. and Ombori, O. (2014). Low Cost Macronutrients in the Micropropagation of Selected Sweet Potato [*Ipomoea batatas* (L.) Lam] Varieties. *Journal of Agriculture and Environmental Sciences*, 3(1): 89-101. ISSN: 2334-2404. www.aripd.org/jaes
6. Muoma, J.V.O. and Ombori, O. (2014). *Agrobacterium*-mediated transformation of selected Kenyan maize (*Zea mays* L.) genotypes by introgression of *Nicotiana* Protein Kinase (*npk1*) to enhance drought tolerance. *American Journal of Plant Sciences*, 5: 863-883 <http://www.scirp.org/journal/ajps>
7. Mutua B.M., Muriithi J.K. and Ombori, O. (2014). Farmers' awareness level on the effect of partheniumweed (*Parthenium hysterophorus* L.) on agricultural production and its control in Nyando division, Kenya. *International Journal of Agriculture. Photon* 125: 305-310.
8. Naluyangea, V., Ochieno, D.M.W., Maingi, J.M., Ombori, O., Mukaminega, D., Amoding, A., Odendo, M., Okoth, S.A., Shivoga, W.A. and Muoma, J.V.O. (2014). Compatibility of *Rhizobium* inoculants and water hyacinth compost formulations in rosecoco bean and consequences on *Aphis fabae* and *Colletotrichum lindemuthianum* infestations. *Applied Soil Ecology* 76(2014): 68– 77. www.elsevier.com/locate/apsoil
9. Muthini, M., Maingi, J.M., Muoma, J.O., Amoding, A., Mukaminega, D., Osoro, N., Mgutu, A and Ombori, O. (2014). Morphological assessment and effectiveness of indigenous rhizobia isolates that nodulate *P. vulgaris* in water hyacinth compost testing field in Lake Victoria Basin. *British Journal of Applied Science & Technology*, 4(5): 718-738. www.sciencedomain.org.
10. Osoro, N., Ombori, O., M., Muoma, J.O., Amoding, A., Mukaminega, D., Muthini, M. and Maingi, J.M. (2014). Effects of water hyacinth (*Eichhornia crassipes* [mart.] solms) compost on growth and yield parameters of maize (*Zea mays*). *British Journal of Applied Science & Technology*, 4(4): 616-633. www.sciencedomain.org.
11. Piero, M.N., Cheruiyot, R.C., Omwoyo, R.O., Mgutu, A.J. and Machuka, J.S. (2013). Plant Regeneration of Kenyan Cassava (*Manihot esculenta*, Crantz) Genotypes. *American Journal of Biotechnology and Molecular Sciences*, 3(1): 1-7.
12. Atieno, R.N., Owour, O.P. and Omwoyo, O. (2013). Antibiotic Resistance of Fecal Bacteria indicators and Pathogens Isolated from Sludge and Wastewaters of Abattoirs in Nairobi, Kenya. *Journal of Biology*, 1(5): 106-11. ISSN 2052-0751.
13. Atieno, N. A., Owour, O.P. and Omwoyo, O. (2013). Isolation of high antibiotic resistant fecal bacteria indicators, *Salmonella* and *Vibrio* species from raw abattoirs sewage in Peri-Urban locations of Nairobi, Kenya. *Greener Journal of Biological Sciences* 3(5): 172-178. ISSN: 2276-7762.

14. Atieno, N. A., Owour, O.P. and Omwoyo, O. (2013). Heavy metal and associated antibiotic resistance of fecal coliforms, fecal streptococci and pathogens isolated from wastewaters of abattoirs in Nairobi, Kenya. *Journal of Applied Biosciences* 64:4858 – 4866. ISSN 1997–5902.
15. Ombori, O., Muoma, J.V.O. and Machuka, J. (2013). *Agrobacterium*-mediated genetic transformation of selected tropical inbred and hybrid maize (*Zea mays* L.) lines. *Plant Cell, Tissue and Organ Culture* 113(1): 11-23.
16. Osoro, N., Maingi, J.M., Ombori, O., Muoma, J.O., Amoding, A., Mukaminega, D. and Muthini, M. (2013). Effects of water hyacinth (*Eichhornia crassipes* [Mart.] solms) compost on growth and yield parameters of maize (*Zea mays*). In C. Onyango, G. Unbehend and M. Lindhauer (eds.), Trends and opportunities in the production, processing and consumption of staple food crops in Kenya. TUD press, Verlag der Wissenschaften GmbH, pp 130-138.
17. Ogero, K., Gitonga N.M, Maina, M., Ombori, O. and Ngugi, M. (2012). Cost-effective nutrient sources for tissue culture of Cassava (*Manihot esculenta* Crantz). *African Journal of Biotechnology* 11(66): 12964-12973.
18. Ogero, K., Gitonga N.M., Maina, M., Ngugi, M. and Ombori, O (2012). Low Cost Tissue Culture Technology in the Regeneration of Sweet Potato (*Ipomoea batatas* (L.) Lam). *Research Journal of Biology* 2(2): 71-78.
19. Ogero, K., Gitonga N.M, Maina, M., Ombori, O. and Ngugi, M. (2012). Response of two sweet potatoes (*Ipomoea batatas* (L.) Lam) varieties regenerated on low cost tissue culture medium. *Journal of Agricultural Science and Technology A & Journal of Agricultural Science and Technology B* 2(5B): 534-1250.
20. Muoma, J.; Ombori, O. and Machuka, J. (2012). Improvement in Inheritance of somatic embryogenesis and plantlet regeneration in tropical maize lines from friable callus. *Maize Genetics Cooperation Newsletter* 85: 60-61.
21. Ogero, K., Gitonga N.M, Maina, M., Ombori, O. and Ngugi, M. (2012). *In vitro* micropropagation of cassava through low cost tissue culture. *Asian Journal of Agricultural Sciences* 4(3): 205-209.
22. Ogero, K., Gitonga N.M, Maina, M., Ombori, O. and Ngugi, M. (2011). Response of two sweet potato varieties regenerated on low cost tissue. *African Crop Science Conference Proceedings* 10: 411 – 415.
23. Ogero, K., Gitonga N.M, Ombori, O. and Ngugi, M (2010) Cassava production and limitation of propagation through tissue culture In: Mwangi, M. (Ed.). Contributions of agricultural sciences towards achieving the Millennium Development Goals. Pp 148 – 155. FaCT Publishing, Nairobi, Kenya. ISSN: 978 9966 7415 2 6. FaCT: Publishing online at <http://www.m.elewa.org>
24. Gitonga, N.M.; Ombori, O.; Murithi, K.S.D. & Ngugi, M. (2010). Low cost technology tissue culture materials for initiation and multiplication of banana plants. *African Crop Science Journal*, 18(4): 243 – 251.
25. Muoma, J., Ombori, O. and Jesse, M. (2010). Signal transduction one of the current molecular approaches in the management of drought stress in the sub-Saharan region. *Biotechnology* 9(4): 469-476.
26. Ombori O. (2010). Networking, Partnerships & Trust Building *Proceedings of Mult-stakeholders workshop on Strengthening University Capacity for Promoting, facilitating and teaching Rural Innovation processes held at Egerton University 3rd-8th October 2010.*

27. Ombori O., Gitonga M.N., Muoma J., Kiogora D. and Ngugi M. (2010). Cost effective approaches for *in vitro* mass production of banana (*Musa sapientum* L.) plantlets in Kenya. *Proceedings of East African Regional Scientific Conference of Pure and Applied Sciences held at Kenyatta University, Kenya, between 10th-14th august 2010.*
28. Ombori, O. and Maingi J. M. (2010). Integration of the elements of IAR4D in low cost tissue culture technology for the micropropagation of bananas. *Proceedings of the workshop on Strengthening University Capacity for Promoting, facilitating and teaching Rural Innovation processes held at Jomo Kenyatta University of Agriculture & Technology, Kenya from 14th -20th March 2010.*
29. Ombori O. (2009). Somatic embryogenesis and *Agrobacterium*-mediated transformation of selected maize (*Zea mays* L.) genotypes in Kenya. Ph.D thesis, Kenyatta University, Nairobi, Kenya.
30. Omwoyo, O.; Gitonga, N.M. and Machuka, J. (2008). Plant regeneration via somatic embryogenesis of commercial maize (*Zea mays* L.) hybrid lines. *Journal of Microbiology and Biotechnology* 4(1): 24-31.
31. Ombori O., Gitonga N.M. and Machuka J. (2008). Somatic embryogenesis and plant regeneration of some maize (*Zea mays* L.) inbred lines. *Biotechnology* 7(2): 232-242.
32. Ombori, O, Gitonga, N.M. and Machuka, J. (2008) *Agrobacterium*-mediated transient gene expression of tropical maize (*Zea may* L.) genotypes in Kenya. *Proceedings of the 1St Ever all Africa congress on Biotechnology, between 22nd – 26th September 2008, Nairobi, Kenya.*
33. Ombori O., Gitonga N.M. and Machuka J. (2006). *In vitro* regeneration of some Kenyan highland maize hybrids and open pollinated variety from immature embryos by somatic embryogenesis. *Proceedings of National Biological Conference held on 25th August 2005, Kenyatta University, Kenya.*

PART 11. RESEARCH REPORT

1. Nchore, S.B., Waceke, J.W., Buttner, C., Omwoyo, O. and Ulrichs, C. (2016). Efficacy of soil solarization and selected organic amendments for the control of root-knot nematodes in African nightshades. RUFORUM Working Document Series (ISSN 1607-9345) No. 14 (1): 771-777. <http://repository.ruforum.org>
2. Participatory Approach in the Production and Acclimatization of Planting Materials and Management of Postharvest Losses of Bananas in Kisii, Nyamira and Embu Counties, Kenya. Report on the Research Project inception workshop held on 2nd and 3rd August 2018 at the Rainbow Ruiru Resort, Kenya.

PART 12. SUPERVISION

Post graduate students

1) PhD thesis completed as a Senior Lecturer

S.NO.	Student	Degree	Research Title
1	Shem Bonuke Nchore A99/23682/2013	Ph.D. (Plant Pathology)	Characterization and non-chemical management of root-knot nematodes (<i>Meloidogyne</i> spp.) on African nightshades in selected parts of Kenya

2) *PhD thesis on going as a Senior Lecturer*

S.NO.	Student	Degree	Research Title	From	Status
1	Mwaura Ann I84/31985/2015	Ph.D. (Genetics)	Identification Of Commonly Used Medicinal Plant Species In Kenya Using Dna Barcoding	2016	Data collection
2	Lydia Kwamboka Asande I84/31985/2015	Ph.D. (Genetics)	Genetic improvement of Kenyan passion fruit (<i>Passiflora edulis</i> Sims) for resistance to woodiness virus disease through <i>Agrobacterium</i> -mediated transformation	2016	Data collection
3	Charles Langat I84/27538/2013	Ph.D. (Plant Physiology & Biochemistry)	Evaluation of quantitative traits and associated phenological response to perturbation in local common beans (<i>Phaseolus vulgaris</i> L) under drought stress"	2016	Data collection
4	Morris Muthini Reg No: I84/39041/2016	Ph.D. (Biotechnology)	Biodiversity, effectiveness and anastomotic interactions of indigenous arbuscula mycorrhizal fungi associated with maize genotypes grown in Eastern Kenya	2018	Data collection

3) *Msc. thesis completed as a Senior Lecturer*

S.N O.	Student	Degree	Research Title
1.	Dennis Nyachae Mose I56/ 11628/ 08	MSc.(Biotechnology)	Risk assessment and management of microbial contamination in biosafety & conventional laboratories
2.	Kimeu J. Mbaluka I56/24409/2011	MSc. (Plant Ecology)	Ecological factors influencing the distribution patterns of annual and perennial species in the Genus <i>Aristida</i> L., at Kifuku Ranch, Lakipia County, Kenya
3.	Towett Kiprono Gideon I56/25490/2011	MSc. (Microbiology)	Assessment of contaminants in water hyacinth's compost and in the waters of Lake Victoria, Kisumu, Kenya
4.	Morisi Muthini I56/24336/2011	MSc.(Biotechnology)	Genetic and morphological assessment of rhizobia that nodulate <i>Phaseolus vulgaris</i> in water hyacinth compost testing fields in Lake Victoria Basin
5.	Koskey Gilbert I56/26830/2013	MSc. (Microbiology)	Symbiotic efficiency and diversity of native rhizobia isolated from climbing beans (<i>Phaseolus vulgaris</i> L.) in Eastern Kenya
6.	Tubei Jackline I56/CE/14597/2009	MSc. (Genetics)	Improving wheat production in Kenya through introgression of stem rust resistance into popular

			Kenyan varieties
7.	Makatiani Emmanuel Tendwa I56/CE/22389/2012	MSc. (Microbiology)	Nodulation and nitrogen fixation efficiency of <i>Sesbania</i> ssp rhizobia on <i>Sesbania sesban</i> (L.) Merr. and common bean (<i>Phaseolus Vulgaris</i> L.)
8.	Lydia Kanyange	MSc. Genetics	Screening of Supa aromatic rice (<i>Oryza sativa</i> L.) Population For Blast (<i>Magnaporthe Oryzae</i>) Resistance At Irri-Esa Burundi
9.	Wasonga Michael Opere I56/15083/2008	MSc. (Microbiology)	Detection of pathogenic human and animal viruses in lake Victoria waters around Homa Bay town Homa-Bay County of Kenya

3) Msc. thesis ongoing as a Senior Lecturer

1.	Jane W. Kimani I56/CE/44324 /2008	MSc. (Genetics)	Increasing the production of sweet potato (<i>Ipomea batatas</i> L.) under low cost tissue culture conditions	2013	Data collection
2.	Okumu Fredrick Oduor I56/CE/15087/2008	MSc. (Microbiology)	Study of nosocomial infections among the patients in paediatric ward at Siaya district hospital in Siaya County, Kenya	2014	Data collection
3.	Gregory Juma Wanjala I56/CE/14157/2009	MSc. (Genetics)	Occurance, Distribution and Severity of maize Necrotic disease in Bungoma County, Kenya	2015	Data collection
4.	Mwalimu John Ithau I56/CE/25295/2014	MSc. (Genetics)	Morphological and molecular characterization of <i>Graviola</i> in selected agro-ecological regions in Kenya	2016	Data collection
5.	Omondi David Odhiambo I56/13041/2005	MSc. (Genetics)	Morphological and genetic characterisation of <i>Dolichos (Labiab purpureus</i> (L.) Sweet) diversity in Kenya	2018	Data collection
6.	Allan Ochola Onyango I56/CTY/PT/33083 / 2014	MSc. (Microbiology)	Seroprevalence of hepatitis B and genotypes among HIV infected individuals visiting Homabay hospital comprehensive clinic, Kenya	2018	Data collection

5) Msc. thesis completed as a Lecturer

S.N O.	Student	Degree	Research Title
1	Purity Limbua Mukami	MSc. (Biotechnology)	Enhancement of nutritional content in selected maize (<i>Zea mays</i> L.) inbred lines using lysine gene
2	Ogero Kwame Okinyi A103/13872/2009	MSc. (Agronomy)	Micropropagation of cassava (<i>Manihot esculenta</i> Crantz) and sweet potato (<i>Ipomoea batatas</i> (L) Lam) through low cost and conventional tissue culture.
3	Rosemary Nyamboya I56/21428/2010	MSc. (Microbiology)	Prevalence of Fecal bacteria contamination and antimicrobial resistance of bacterial isolates from waste waters of slaughterhouse in Nairobi Country, Kenya.
4	Osoro Newton Ombese, I56/20575/2010	MSc. (Microbiology)	Composting and effects of water hyacinth (<i>Eichhornia crassipes</i> [Mart] solms) compost on growth and yield parameters of <i>Phaseolus vulgaris</i> and <i>Zea mays</i>
5	Mutua Boniface Muli	Master of Environmental Studies (Community Development)	Socio-economic and Ecological impacts of Parthenium weed (<i>Parthenium hysterophorus</i> L.) on local livelihoods in Kisumu County, Kenya

6) Completed Undergraduate projects

S.NO.	Student	Degree	Research Title	From	Status
1	Irene O. Odera	BSc.	Establishment of low cost tissue culture technology for micropropagation of selected local Banana landraces in Kenya	2011	Completed
2	Mvura J. Mugendi I90/2160/07	BSc. (Biology)	Low cost macronutrients in the micropropagation of selected sweet potato (<i>Ipomoea batatas</i> (L.) Lam) varieties	2011	Completed

PART 13. THESIS EXAMINED

PHD THESIS

- 2019: Kyule Muendo Domitila entitled ``profiles, diversity and antibiotic response patterns of bacterial isolates from fish and fish products, Kenyatta University.
- 2018: Anncarol W. Karanja Entitled ``rapid bioconversion of rice straw using cellulolytic cultures for improved and sustainable crop productivity and soil fertility in Mwea, Kenya``. Kenyatta University.
- 2016: Onyambu Meshack Ondora entitled ``Development of chromatographic fingerprinting and other quality evaluation methods for *Warbiurgia ugandensis* herbal materials``, Kenyatta University.

4. 2015: Mburu Kenneth Njuguna entitled “An integrated approach for the control and management of banana *Xanthomonas* wilt disease”, Kenyatta University.
5. 2013: Rasha Adam Omer Abdalla entitled “Cloning drought associated genes and *Agrobacterium mediated* transformation of tropical maize”, Kenyatta University.

MSC THESIS

1. 2019: Munyao Joseph Kyalo entitled “effects of conservation tillage practices on soil moisture and chemical properties, maize and bean physiological parameters and yields”, Kenyatta University.
2. 2018: Langat L. Mali entitled “Prevalence of antimicrobial resistant genes in salmonella and E. Coli Isolates from chicken droppings in selected areas in Nairobi County, Kenya”, Kenyatta University.
3. 2018: Muturi Stephen Njagi Entitled “Influence of physico-chemical pollutants on antibiotics resistance of water borne diarrhea associated bacteria and prevalence rate of diarrhoea in Thiba River Basin Embu/Kirinyaga Counties Kenya”, Kenyatta University.
4. 2018: Methuselah N. Mang'ere entitled “Response of soil microbial communities to Tillage, Mulching and inorganic fertilization at Kirege, Tharaka,-Nithi County, Kenya”, Kenyatta University.
5. 2018: Abasi E. Andeyo entitled “Effect of vine length on growth, yield and Nutrient concentration of sweet yellow passion fruits (*Passiflora edulis* var *flavicarpa*) in Embu County, Kenya”, Kenyatta University.
6. 2017: Daniel Mumo Musyioka entitled “Effect Arbuscular myorrhizal fungi and bradyrhizobium co-inoculation on nitrogen fixation and growth green grams under water stress”. Kenyatta University.
7. 2016: Chemweno Jacob Kiprop entitled “Evaluation of chickpea *Cicer arietinum* L. genotype of host plant resistance to ascochyta bright (*Ascochyta rabiei*) in Elgeyo-Marakwet, Uasin-Gishu and Baringo Counties of Kenya” Kenyatta University.
8. 2016: Kinankau Virginiah Kiunga entitled “Genotypic and phenotypic characterization of diarrhoeagenic *Escherichia coli* isolated from children below five years in Mukuru informal settlement, Nairobi County, Kenya”, Kenyatta University.
9. 2015: Emmah N. Marigi entitled “Regenerability and transformability of selected Kenyan farmer preferred cassava (*Manihot esculenta* Crantz) ecotypes”. Kenyatta University.
10. 2015: Jane Chemeli entitled “Heterotic groupings of twelve inbred lines of maize (*Zea mays* L.) Using line tester in Kiambu and Embu Counties, Kenya”. Kenyatta University.
11. 2015: Macharia Sarah Wanjiku entitled “Genetic transformation of banana with extracellular secreted plant ferredoxin-like protein (es-pflp) gene”.
12. 2014: Mutinda Joshat entitled “Prevalence and antimicrobial susceptibility profiles of bacterial pathogens isolated from outpatients with upper respiratory tract infections in Kitui district hospital, Kenya, Kenyatta University.
13. 2014: Diana Wanjala N. Manene entitled “Screening selected sorghum (*Sorghum bicolor* (L.) Moench) lines for post attachment resistance levels against ecotypes of witch weed (*Striga hermonthica* (Del.) Benth)”. Kenyatta University.
14. 2014. Ithinji Jane Kithira. Entitled “effect of soil amendment with manure on nodulation and nitrogen fixation in soybeans and climbing beans in Meru County, Kenya”. Kenyatta University.
15. 2014: Gachara Grace Wanjiku entitled “Post-harvest fungi diversity and level of aflatoxin contamination in stored maize: Cases of Kitui and Nakuru Counties and Kitale Districts in Trans-Nzoia County, Kenya”. Kenyatta University, Kenya.

16. 2014: Joel Atanda Kataka entitled “Genetic diversity and Virulence study of *Striga hermonthica* Ecotypes from Kenya and Uganda on selected sorghum varieties”. Kenyatta University, Kenya.
17. 2014: Esther Waithaka entitled “Effects of the use of *Trichoderma asperellum* as control agent of root knot nematodes on nodulation of French beans in Kenya”. Kenyatta University, Kenya.
18. 2014: Mr. Peter Kabiro Laibu entitled “Determination of microbial composition, heavy metal contamination and physico-chemical parameters of fish pond water in Central Imenti, Meru, Kenya”. Kenyatta University, Kenya.
19. 2014: Dikko Jeff Gafna entitled “an investigation of medicinal plants species diversity and access to traditional herbal medicine among the Samburu people, Samburu County, Kenya. Kenyatta University, Kenya.
20. 2014: Nyamwaka Irene Seila entitled “Determination of fungi associated with deterioration of sun-dried *Rastrineobola argentea* sold in Gucha South District, Kisii County, Kenya”. Kenyatta University, Kenya.
21. 2013: Waithaka Paul Njenga entitled “Isolation, sensitivity to antibiotics and control methods of salmonellosis in Nakuru North Sub-County, Kenya, Kenyatta University, Kenya. Kenyatta University, Kenya.
22. 2013: Anthony Njagi Kiranga entitled “Morpho-Physio-Karyotypic Characterization of Wild Cotton (*Gossypium* spp.) Germplasm in Kenya. Kenyatta University.
23. 2013: Kithure Robert Kariba entitled “Genetic diversity of *Faidherbia albida* (Del.) A. Chev Kenyatta University, Kenya. collections held at the world Agroforestry Centre (ICRAF) as revealed by AFLP markers. Kenyatta University, Kenya.
24. 2013: Sande Frida Olive entitled “Screening for water deficit tolerance and *Agrobacterium*-infectivity among tropical maize (*Zea mays* L.) lines in Kenya, Kenyatta University, Kenya. 2012: Jacinta Karambu Muthuri entitled “Effect of different soil fertility amendments on the nodulation and yield of soyabean”. Kenyatta University, Kenya.
25. 2012: Ms Owaka Margaret entitled “Characterization of the genetic diversity and pathogenicity of *Colletotrichum kahwae*, using Random Amplified Polymorphic DNA (RAPD) analysis”. Kenyatta University, Kenya.
26. 2011: Mr. Melil Charles Kiplagat entitled “Agronomic performance of maize (*Zea mays* L.) top cross and double cross hybrids in varying environments of Western Kenya”. Kenyatta University, Kenya.
27. 2010: Ms Maina Susan Muthoni entitled “Evaluation of regeneration response in tissue culture of Groundnut (*Arachis hyogaea* L.) varieties adapted to Eastern and Southern Africa”. Kenyatta University, Kenya.

PART 13. EXTERNAL LINK IN SCIENTIFIC RESEARCH

Kigali Institute of Science and Technology

Makerere University

Masinde Muliro University

Smallholder farmers in Lake Victoria Basin

University of Oslo, Norway

Smallholder farmers Embu and Tharaka-Nithi Counties

Smallholder farmers in Kisii and Nyamira Counties

PART 14. MEMBER OF EXTERNAL EXAMINING BOARD

Member of examiners of Kenya National Examination Council for the KCSE Biology Practical paper.

PART 15. MEMBER OF UNIVERSITY TASKFORCE COMMITTEES

- 2018 : Committee member on a special school committee on training and Research programs appointed by the Dean School of Pure and Applied Sciences.
- 2017 : Committee member appointed by the Deputy Vice Chancellor (Research, Innovation and Outreach) for writing a proposal on **``Establishment of UniTwin/UNESCO chairs in Universities in Kenya``** following the call by National Research Fund.
- 2017 : Committee member appointed by the Deputy Vice Chancellor (Research, Innovation and Outreach) for writing a proposal on **``Graduate Employability through Higher Education Reform (GETHER).**
- 2016 : Committee member appointed by the Deputy Vice Chancellor (Research, Innovation and Outreach) for writing a proposal on **``Biophysical Research Laboratory``** following the call by National Research Fund.
- 2016 : Committee member appointed by the Deputy Vice Chancellor (Research, Innovation and Outreach) for writing a proposal following the call by AFRICAN UNION.
- 2015 : A proposal writing subcommittee Committee member appointed by the Deputy Vice Chancellor (Research, Innovation and Outreach) for writing a proposal on the proposed Centre of Excellence for Sustainable Agricultural Biotechnology and Agribusiness following the call by The World Bank.
- Nov. – Dec. 2014 : Steering committee for International Conference on **``Building a New generation of Agricultural Scientists``**. Bridging the gap between the society, science and industry, held at Kenyatta University, Kenya from 1st to 5th December 2014.
- Jan 2014 : School Research Committee
- Nov 2009 – Jan 2014 : Departmental Board of Undergraduate students, Kenyatta University.
- 2010 : Proceedings of the 1st East African Regional Scientific Conference of Pure and Applied Sciences from 10th to 14th August, 2010 held at Kenyatta University, Nairobi Kenya.
- 2008 : Committee for the preparation of a proposal for the establishment of a genomics Centre, Kenyatta University.
- 2007 : Technical Team on the establishment of Centre of Excellence in Biotechnology, Kenyatta University

PART 16. MEMBER OF REVIEWER OF JOURNALS

Manuscript reviewer for African Journal of Biotechnology.

PART 17. SERVICE TO THE COMMUNITY

1. 2019/2020: Elder, Kenyatta University Seventy Day Adventist (KUSDA) church, Kenyatta University.
2. 2018/2019: Director, Community Services, Kenyatta University Seventy Day Adventist (KUSDA) church, Kenyatta University.

PART 18: ESTABLISHMENT OF MEMORANDUM OF UNDERSTANDING & MEMORANDUM OF AGREEMENT

- Kenyatta University and University of Oslo, Norway

PART 19. PERSONAL INTERESTS

SPORTS : Cross-country, Athletics, Volley ball

PART 19. SPECIAL INTERESTS

Interested in reading scientific articles, magazines, journals and conducting research in biotechnology and the use of molecular markers in genomic characterization. This is more especially in the improvement of crop production, food production, induction of stress tolerant crops against drought, salinity, diseases and pests, increase of crop production using organic fertilizer. I am also interested in the micropropagation of indigenous crops, ornamentals, medicinal plants and indigenous trees using low cost technology and their conservation through the application of biotechnological techniques.

PART 20. REFEREES

Dr. Moses P.H. Gathaara
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