

PERSONAL INFORMATION



Dr. Erick Oduor Otieno, Ph.D

Sex: Male | **Date of birth:** 30/03/1987 | **Nationality:** Kenyan

Qualifications: BSc. ARM (KU); MSc. Soil Science (Embu); Ph.D Land Resource Planning and Management (JKUAT)

(Specializations- Soil Science, Integrated soil fertility management; agricultural production modelling (APSIM), agricultural resource management).

Official address:

Kenyatta University, School of Agriculture & Enterprise Development,
Department of Agricultural Science and Technology
P. O. Box 43844, 00100-Nairobi, Kenya.

Email: oduor.erick@ku.ac.ke; erickoduor87@gmail.com

Designation: Lecturer

Research interests:

- Climate change
- Agricultural application of GIS and remote sensing
- Soil phosphorus dynamics
- Soil nitrogen cycling
- Natural resource management
- Greenhouse gases
- Soil carbon sequestration
- Soil nutrient fingerprinting
- Big data science

Key skills and competences

- ✓ Experience in climate data analysis and crop modeling
- ✓ Soil sampling, analysis and nutrient tracing/fingerprinting
- ✓ Good understanding of carbon and nitrogen cycles
- ✓ Experience working in multidisciplinary research teams
- ✓ Excellent communication, writing, and presentation skills.
- ✓ Ability to work independently and as part of a team.
- ✓ Fluency in English; fluency in an African language.
- ✓ Proficient in data management, statistical analysis, and visualization using R software.

ORCID ID: <http://orcid.org/0000-0002-3832-0494>

Google Scholar:

scholar.google.com/citations?user=WvybS4UAAAJ&hl=en&oi=a
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WORK EXPERIENCE

May. 2019- To date:	Lecturer Kenyatta University (Department of Agricultural Science and Technology)
Oct. 2018- Apr. 2019:	Part-time tutor at Kenyatta University Courses taught: 1) Principles of Soil Science and 2) Soil fertility and plant nutrition
Sept 2016-April 2018:	As mentorship, I lectured at University of Embu Courses taught: 1) Principles of Soil Science, 2) Introduction to Soil Physics and 3) Introduction to Soil Chemistry.

Duties and responsibilities:

- Teaching.
 - Research
 - Community outreach
 - Supervision of MSc and PhD students
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EDUCATION AND PROFESSIONAL TRAINING

May 2019- June 2024:	PhD. in Land Resource Planning and Management
Institution:	Jomo Kenyatta University of Agriculture and Technology
Sept. 2015-Sept. 2018	Masters of Science (Soil Science)
Institution:	University of Embu
Sept. 2010- April 2014:	Bachelor of Science in Agricultural Resources Management
Institution:	Kenyatta University (First Class Honours)
June 2009- Aug. 2010:	Certified Public Accountant
Institution:	Kenya College of Accountancy (Section 5)
Jan. 2004- Nov. 2008:	Kenya Certificate of Secondary Education (KCSE)
School:	Agoro Sare Secondary School (B+, 69 points)
Jan. 1996- Dec. 2003:	Kenya Certificate of Primary Education (KCPE)
School:	B1 Primary School (368/500 points)

TRAINING AND WORKSHOPS

1. The Book Publishing Process: An Elsevier Author Workshop held on Wednesday 03 June 2020.
2. Virtual Training on Data Management, Analysis and Scientific Writing held from 5th to 15th September 2020.
3. A 5-day virtual training on Econometrics modeling using STATA from 28th June - 2nd July 2021.
4. Training on Statistical Data Analysis for Post Graduate Students and Staff using R Programming Language held between 7th - 19th February 2022.
5. Summer School in Sustainable Natural Resources Management (NRM), held from 12-26th June 2022 at the Makerere University, School of Agricultural Sciences in partnership with Leibniz Universität Hannover, Germany, and funded by the Volkswagen Foundation.

6. Programme for the LCEFoNs Workshop on Experimental Design and Modelling held from 20th to 22nd June 2023 at Jomo Kenyatta University of Agriculture and Technology.
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AWARDS

1. Masters scholarship funded by Research on Global Issues for Development (r4d programme); Swiss Agency for Development and Cooperation (SDC) and Swiss National Science Foundation (SNSF) for providing financial support (Grant No. 400540_152224) through the Organic Resource Management for Soil Fertility project headed by Research Institute of Organic Agriculture (FiBL)
 2. Awarded RUFORUM Graduate Teaching Assistantship (GTA) Scholarship
 3. Kenyatta University vice-chancellor's award 2024: for being ranked among top five Kenyatta University early career Researchers publishing in SCOPUS indexed journals.
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PROJECTS AND COLLABORATIONS

1. ORM4Soil funded by Research on Global Issues for Development (r4d programme); Swiss Agency for Development and Cooperation (SDC) and Swiss National Science Foundation (SNSF) for providing financial support (Grant No. 400540_152224) through the Organic Resource Management for Soil Fertility.
 2. Balanced Nutrition for Management of Soil Acidity and Nutrients Deficiency for Sustained Agricultural Productivity funded by Kenya Climate Smart Agriculture (KCSAP), Applied Research.
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Appointments

1. Member of University Ranking Committee
2. Member of Research, Innovation, and Community Outreach Committee, School of Agriculture and Environmental Sciences.
3. Member of Quality Management Systems Committee, School of Agriculture and Environmental Sciences.
4. Departmental Research, Innovation, and Community Outreach Coordinator, Department of Agricultural Science and Technology.
5. Departmental Quality Management Systems Chairman, Department of Agricultural Science and Technology.
6. Member of Curriculum Development and Delivery Committee, Department of Agricultural Science and Technology.
7. Member of Departmental Board of Postgraduate Studies Committee, Department of Agricultural Science and Technology.

CONFERENCES

1. **RUFORUM 19th Annual General Meeting (AGM) held from October 28th – November 2nd, 2023 in Yaoundé, Cameroon (Hybrid).**

Theme: Transforming Higher Education to Sustainably Feed and Create Prosperity for Africa.

Otieno, E. O., Lenga, F. K., Mburu, D. M., Kiboi, M. N., Fliessbach, A., & Ngetich, F. K. Influence of soil fertility management technologies on phosphorus fractions, sorption characteristics, and use efficiency in humic Nitisols of Upper Eastern Kenya. Poster presentation.

2. **The 17th JKUAT Scientific, Technological and Industrialization Conference held from 23-24 March 2023 held in Kenya**

Theme: Leveraging Higher Education Research and Innovation for Sustainable Development;

Otieno EO., Mburu DM., Ngetich FK., Kiboi MN., Fliessbach A., & Lenga FK.: Effects of different soil management strategies on fertility and crop productivity in acidic nitisols of central highlands of Kenya.

3. **South Eastern Kenya University: 1st Research and Innovation Week held from November 14th -18th 2022**

Theme: Transformational Research in the ASALs;

- i. Mugwe JN., Kamau, CN., **Otieno EO.,** Kifuko-Koech MN., Ndung'u-Magiroyi KW. & Mucheru-Muna, MW.: Determinants of Intensity of Use of Integrated Soil Fertility Management Practices in Semi-Arid Areas of Tharaka Nithi County, Kenya.
- ii. Nkatha F., Mucheru-Muna MN, Kamau CN., **Otieno EO.** & Mugwe JN.: Influence of household socio-economic factors on the magnitude of soil fertility gradients in Tharaka-Nithi county, Kenya.

4. **The 4th MWECAU International Conference held in Tanzania held from 25 to 29 July 2022**

Theme: Climate-Smart Solutions for Tropical Mountain Environments: Research, Innovation and Policy for Building Inclusive and Resilient Societies;

- i. Mugwe JN., **Otieno EO.,** Mucheru-Muna MW., Kamau CN., Kifuko-Koech MN., Ndung'u-Magiroyi KW. & Mogaka, H.: Soil fertility inputs improve yields of sorghum and green grams in arid and semi-arid agroecological zone of Tharaka-Nithi County, Kenya.
- ii. **Otieno EO.,** Mucheru-Muna MW., Kifuko-Koech MN., Kamau CN., Ndung'u-Magiroyi KW., Mugwe JN., & Mogaka H.: State-of-the-art of strategic research in the domain of secondary nutrients, micronutrients, liming and 4R in sub-Saharan Africa: A review.
- iii. Kifuko-Koech MN., Ndung'u-Magiroyi KW., Chepngetich JW., Kemboi E., Boiwa M., Njoroge R., Mucheru-Muna MW., Kamau, CN., **Otieno EO,** Mugwe JN.: balanced nutrition and liming for enhanced growth and yield of irish potatoes (*Solanum tuberosum* L.) in acidic soils of North Rift Kenya.

5. **The 4th International Conference on Global Food Security held from 7-9th December 2020**

Otieno EO., Ngetich FK., Milka MN., Muriuki A., Mugendi DN. & Adamtey N.: Determinants of integrated soil fertility management practices uptake in heterogeneous smallholder farms in upper Eastern Kenya.

6. The 4th Dedan Kimathi University of Technology International Conference on Science, Technology, Innovation and Entrepreneurship held from 7th–9th November, 2018

Theme: ‘Leveraging Science, Technology, Innovation and Entrepreneurship for Sustainable Development.’

Otieno EO., Ngetich FK., Milka MN., Muriuki A., Mugendi DN. & Adamtey N.: Short-Term Assessment of Potential of Integrated Soil Fertility Management Technologies to Improve Soil Fertility in Tharaka-Nithi and Murang’a Counties, Kenya

7. Second Annual University of Kabianga International Conference held on 9th and 10th May, 2018

Theme: ‘Ethical Sustainable Development for the Betterment of Humanity’

Otieno EO., Ngetich FK., Milka MN., Muriuki A., Mugendi DN. & Adamtey N.: Integrated soil nutrient management technologies for improved maize (*Zea mays* L.) productivity in Murang’a and Tharaka-Nithi counties, Kenya.

8. The 12th Egerton University International Conference held from 27th – 29th March, 2018

Theme: ‘Knowledge Solutions for the Society, the Economy and the Environment;

Otieno EO., Ngetich FK., Milka MN., Muriuki A., Mugendi DN. & Adamtey N.: Characterizing decomposability of organic inputs under farmer-managed conditions in the Central Highlands of Kenya.

DISSERTATIONS

- PhD.: Effects of Integrated Soil Fertility Management on Soil Microbial Biomass, Nitrogen Mineralization, Phosphorus Dynamics, and Maize Productivity in Humic Nitisols of Kenya.
 - MSc.: Integrated Soil Nutrient Management Technologies for Improved Maize (*Zea mays* L.) Productivity in Murang’a and Tharaka-Nithi counties, Kenya.
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PUBLICATIONS

1. **Otieno, E.**, Mucheru-muna, M., Kifuko-koech, M., Kamau, C. N., Magiroi, K. W. N., Mogaka, H., & Mugwe, J. N. (2024). Strategic research in the domain of secondary nutrients, micronutrients, liming and 4R stewardship in sub-Saharan Africa: Review. *Environmental Challenges*, 16, 100960. <https://doi.org/10.1016/j.envc.2024.100960>
2. **Otieno, E. O.**, Lenga, F. K., Mburu, D. M., Kiboi, M. N., Fliessbach, A., & Ngetich, F. K. (2023). Influence of soil fertility management technologies on phosphorus fractions , sorption characteristics , and use efficiency in humic Nitisols of Upper Eastern Kenya. *Heliyon*, 9, e22859. <https://doi.org/10.1016/j.heliyon.2023.e22859>
3. **Otieno, E. O.**, Mburu, D. M., Ngetich, F. K., Kiboi, M. N., Fliessbach, A., & Lenga, F. K. (2023). Effects of different soil management strategies on fertility and crop productivity in acidic nitisols of Central Highlands of Kenya. *Environmental Challenges*, 11, 100683 Contents. <https://doi.org/10.1016/j.envc.2023.100683>

4. **Otieno, E. O.**, Gweyi, J. O., & Oduor, N. O. (2022). Revolutionizing Crops and Soil Resources' Resilience to Climate Change: A Case for Best-Fit Agronomic Practices in Low and High Input Systems. *Agriculture, Livestock Production and Aquaculture*, 15–31. https://doi.org/10.1007/978-3-030-93262-6_2
 5. Cheptoeck, R. P., Gitari, H. I., Mochoge, B., Kisaka, O. M., **Otieno, E.**, Maitra, S., Nasar, J., & Seleiman, M. F. (2021). Maize productivity, economic returns and phosphorus use efficiency as influenced by lime, minjingu rock phosphate and NPK inorganic fertilizer. *International Journal of Bioresource Science*, 08, 47–60. <https://doi.org/10.30954/2347-9655.01.2021.7>
 6. **Otieno, E.**, Kipchirchir, F., Kiboi, M. N., & Muriuki, A. (2021). Tillage system and integrated soil fertility inputs improve smallholder farmers' soil fertility and maize productivity in the Central Highlands of Kenya. *Journal of Agriculture and Rural Development in the Tropics and Subtropics*, 122(2), 159–171. <https://doi.org/10.17170/kobra-202107134319>
 7. **Otieno, E. O.**, Kiboi, M. N., Gian, N., Muriuki, A., Musafiri, C. M., & Ngetich, F. K. (2021). Uptake of integrated soil fertility management technologies in heterogeneous smallholder farms in sub-humid tropics. *Environmental Challenges*, 5(November). <https://doi.org/10.1016/j.envc.2021.100394>
 8. Mugwe, J., & **Otieno, E. O.** (2021). Integrated Soil Fertility Management Approaches for Climate Change Adaptation, Mitigation, and Enhanced Crop Productivity BT - Handbook of Climate Change Management: Research, Leadership, Transformation. In W. Leal Filho, J. Luetz, & D. Ayala (Eds.), *Handbook of Climate Change Management* (pp. 1–22). Springer International Publishing. https://doi.org/10.1007/978-3-030-22759-3_325-1
 9. Mugwe, J., Ngetich, F., & **Otieno, E. O.** (2019). Integrated Soil Fertility Management in Sub-Saharan Africa: Evolving Paradigms Toward Integration. In F. ALeal (Ed.), *Encyclopedia of the UN Sustainable Development Goals. Zero Hunger* (eds, pp. 28–50). Springer Nature Switzerland.
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Referees

1. **Prof. Felix Ng'etich**,
Professor of Soil Science,
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