



RESEARCHER ID:

SCOPUS ID:

ORCHID:

Position: Research Scientist (Hydrology)

PERSONAL INFORMATION

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| 1.1. NAME | - Ernest Kiplangat Ronoh |
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| 1.3. PHONE | - +254722970472 |
| 1.4. EMAIL ADDRESS | - nestarono@gmail.com ; erono@kefri.org |
| 1.5. NATIONALITY | - Kenyan |
| 1.6. GENDER | - Male |

2. QUALIFICATIONS

2.1. Academic Qualifications

- Sept. 2020: University of Eldoret. PhD. (Environmental Soil Science) (Ongoing).
- 2014 to 2018: University of Eldoret, Eldoret. Master of Science (Soil Science). Thesis title: 'Selected Rehabilitative Measures Increases Maize and Soybean Yields in Poorly Responsive Soils of Western Kenya.'
- Aug 2008 to April 2012: Moi University, Eldoret. Bachelor of Science in Agricultural Biosystems and management. Attained 2nd Class (Honours), Upper Division.
- Jan 2003 to Nov 2006: Kericho High School, Kericho County. Kenya Certificate of Secondary Education (KCSE). Attained A- (77 points).
- Jan 1994 to Nov 2002: Seretut Primary School, Kericho County. Kenya Certificate of Primary Education (KCPE).

2.2. Key Competencies

- Research interests are in soils, hydrology, landscape processes and nutrient dynamics on multi-scale environmental, hydro-pedology, spatiotemporal variations of land degradation, agronomic, ecological, and agroecosystem sciences. My research activities employ biometrics, GIS & remote sensing, modelling, and spatial statistical applications to mitigate land degradation, judicious resource use and efficiency, enhanced natural resource conservation and sustainability, and global food security.

2.3. Other Courses

- 2020: Fundamentals of Ecosystem Ecology: Biogeochemistry, Energy Flow, and Nutrient Cycling. CARY Institute of Ecosystem Studies, Millbrook, New York, USA.

- 2019: Google Digital Skills for Africa, Centum Learning.
- 2018: Principles of ICT for Agriculture.
- 2018: Enterprise Resource Planning (ERP): ABN Unisol.
- 2016, 2017, 2018: Geographical Information Systems (GIS) in QGIS, ArcGIS, and GeoMedia.
- 2017: Research methods and scientific writing.
- 2014, 2015, and 2017: Hands-on training in soil and plant tissue analysis in the lab and also in situ using two field test kits.
- 2016, 2017 & 2018: Data management, spatial and statistical analysis using ODK, R, QGIS, ArcGIS, and Geomedia.
- 2016: “Integrated Project Tropical Agro- and Ecosystems Engineering”, an intense academic field course offered by the University of Eldoret (Kenya), KU-Leuven (Belgium), and ETH-Zurich (Switzerland) and Arba Mich University (Ethiopia).
- 2015: Master class of introduction to the integration of scientific research approaches.
- 2013: Mushroom Cultivation and Spawn Production.
- 2011: Health awareness on cancer and HIV & Aids.
- 2010: Installation and operating computer software.

3. EMPLOYMENT HISTORY

- December, 2020 to Date: Research Scientist - Hydrology. Kenya Forestry Research Institute (KEFRI).
- October 2017 to June 2020: Graduate Research Assistant. Outreach and International Students’ Centre (OISC), University of Eldoret.
- Jan 2017 to Sept. 2017: Research Assistant. Collaborative Crop Research Program (CCRP) Project - McKnight Foundation.
- May to Dec 2016: Intern. Collaborative Crop Research Program (CCRP) Project - McKnight Foundation.
- Jan 2016 to April 2016: Research Assistant. Purdue University - International Livestock Research Institute (ILRI) project.
- Aug 2013 to Dec. 2015: Graduate Research Assistant. NSF_BREAD Project -International Institute for Tropical Agriculture (IITA).
- Jan 2013 to Aug 2013: Graduate Research Assistant. Agricultural Development Corporation (ADC).
- May to August 2011: Undergraduate Student Attaché. Ministry of Agriculture, Eldoret West District (Wareng).
- May 2007- July 2008: High School Teacher. Seretut Secondary School in Kericho County, Belgut Subcounty.

4. ADMINSTRATIVE RESPONSIBILITY

5. PUBLICATIONS

5.1. Journal papers

- Njogo S M., Otinga A, N., Njoroge, R. and **Ronoh E, K.** Farmyard manure, Lime and Zn application for optimized maize response to NPK fertilizer in smallholder farming systems. Nutrient Cycling in Agroecosystems. In press.
- **Ronoh E. K.**, Njoroge R, Njogo S. M & Otinga A. N (In Press). Poorly Responsive Soils Cause Maize Yield Gaps in Smallholder Cropping Systems of Western. Geoderma: The Global Journal of Soil Science. In Press.
- **E. K. RONOH**, A. N. OTINGA, R. NJOROGI, D. ROOBROECK, S. NJOGO and G. NZIGUHEBA (2019). Poorly responsive soils reduce soybean yields in smallholder farming systems of western Kenya. African Journal of Rural Development, Vol. 4 (3). pp.
- S. M. Njogo, A. Otinga, R. Njoroge, and **E. K. Ronoh.** (2018). Effect of soil amendments on availability of soil phosphorus and uptake by maize in Vihiga County, western Kenya. African Journal of Rural Development. Vol 3(4). pp 1013-1023.
- **Ronoh, E. K.** Otinga, A. N., Nziguheba, G., Roobroeck, D. & Okalebo, J. R. (2016). The occurrence of non-responsive soils in smallholder cereal-legume based cropping systems of western Kenya. Published in the Proceedings of the 3rd International Interdisciplinary Conference (IIC3), 7-9th September, 2016, University of Eldoret, Eldoret, Kenya.
- Njogo, S., Otinga, A., Njoroge, R., Kitilit, J., Chemutai, M., Pepela, M., **Ronoh, E.**, Munini, B. and Okalebo, J. R. (2016). Evaluation of Fertilizer Types Used for Maize Production in Integrated Crop-Livestock Systems of Vihiga County in Western Kenya. Proceedings of the 3rd International Interdisciplinary Conference (IIC3), 7-9 September 2016, University of Eldoret, Eldoret, Kenya. Pp. 77-85.
- **R. E. Kiplangat**, V. S. Omenyo, R. Njoroge, J. R. Okalebo, and O. N. Ahoya. (2013). Efficacies of liming and phosphorus fertilizer materials on maize growth in Siaya and Kakamega counties' soils in Kenya. Proceedings of the 11th African Crop Science Society Conference 14-17th October, 2013, Entebbe, Uganda. Pp. 217-218.

5.2. Books

5.3. Book Chapter

5.4. Technical Notes /Protocols/Guidelines

5.5. Policy Briefs

6. RESEARCH

6.1. Completed

- 2018-2020: Field course, 'Integrated Project Agro- and Ecosystems Engineering' funded by VLIR under the Project 'Research-based education for sustainable rural development.' In collaboration with ETH Zurich, Arba Minch University and KU Leuven. Research assistant.
- 2017 to 2019: SWA Project 2017-2019: Promoting smart water solutions uptake by small and medium scale farmers of Uasin Gishu County, Kenya. Funded by SNV. Facilitator.

- 2017-2018: Farmer-led assessment of the best basal fertilizers and top dressing for maize, sorghum, and millet in soils previously under long-term sugarcane in Mumias, western Kenya. Funded by McKnight Foundation, CCRP. Research assistant.
- 2014-2017: Assessing, understanding, and targeting non-responsive soils for improved crop production in smallholder farms in sub-Saharan Africa. BREAD Project. PI: Generose Nziguheba (Columbia University); Co-PIs: Cheryl Palm (Columbia University), Bernard Vanlauwe (TSBF-CIAT, Nairobi). Funded by the NSF, USA, through IITA. MSc Thesis and three manuscripts produced. Graduate research assistant.
- 2011-2012: Effectiveness of liming and phosphorus fertilizers on maize production in western Kenya's acidic soils. PI: Prof. Okalebo J. R. Funded by AGRA. Findings presented at the 11th ACSS Conference in Entebbe, Uganda (October, 2013), and in the University of Eldoret-Anambra State Universities' 1st IIR Conference in Eldoret, Kenya (November, 2013). Greenhouse experiment technician.

6.2. Ongoing research

- Effect of growing bamboo on hydrological behavior (run-off, soil loss, and soil moisture), biodiversity and its potential for rehabilitation of degraded lands

6.3. Mentorship and supervision

7. INNOVATIONS AND PATENTS (Intellectual Property)

8. CONFERENCES/SEMINARS/WORKSHOPS

8.1. Presentation of Papers at Academic and Professional Conferences

- Ronoh, E. K., Otinga, A. N., Njoroge, R., Roobroeck, D., Njogo, S., and Nziguheba, G (2018). Poorly responsive soils decline soybean yields in smallholder farming systems of western Kenya. Presented at the Sixth African Higher Education Week and RUFORUM Biennial Conference, 22-26th October, 2018.
- S. M. Njogo, A. Otinga, R. Njoroge, and E. K. Ronoh. (2018). Effect of soil amendments on availability of soil phosphorus and uptake by maize in Vihiga County, western Kenya. Presented at the Sixth African Higher Education Week and RUFORUM Biennial Conference, 22-26 October, 2018.
- Ronoh, E. K., Otinga, A. O., Njoroge, R., Njogo, S. and Omenyo, V. S (2018). Synergism of lime and phosphorus fertilizers promote maize growth in degraded soils of western Kenya. Presented at the 5th International and Interdisciplinary Research Conference (IIRC5), 17th to 19th October, 2018, Mount Kenya University Thika, Kenya.
- Rotich, V. K., Ngetich, W. K., Ronoh, E. K & Serem, C. effects of grain amaranth (*Amaranthus* spp) and nitrogen fertilizer rates on Striga (*Striga hermontica*) infestation, yield and yield components in maize as compared to soybean in western Kenya. Presented at the 5th International and Interdisciplinary Research Conference (IIRC5), 17th to 19th October, 2018, Mount Kenya University Thika, Kenya.

- Ronoh, E. K. Otinga, A. N., Nziguheba, G., Roobroeck, D. & Okalebo, J. R. (2016). The occurrence of non-responsive soils in smallholder cereal-legume based cropping systems of western Kenya. Presented at the 3rd International Interdisciplinary Conference (IIC3), 7-9th September, 2016, University of Eldoret, Eldoret, Kenya.
- Njogo, S., Otinga, A., Njoroge, R., Kitilit, J., Chemutai, M., Pepela, M., Ronoh, E., Munini, B. and Okalebo, J. R (2016). Evaluation of Fertilizer Types Used for Maize Production in Integrated Crop-Livestock Systems of Vihiga County in Western Kenya. Presented at the 3rd International Interdisciplinary Conference (IIC3), 7-9th September, 2016, University of Eldoret, Eldoret, Kenya.
- R. E. Kiplangat, V. S. Omenyo, R. Njoroge, J. R. Okalebo, and O. N. Ahoya. (2013) Efficacies of liming and phosphorus fertilizer materials on maize growth in Siaya and Kakamega counties' soils in Kenya. Presented at the 11th African Crop Science Society Conference 14-17th October, 2013, Entebbe, Uganda.

8.2. Participation in Workshops/Conferences

- 23rd November, 2019. SNV's Smart Water for Agriculture and HortImpact projects' closure workshop at Villa Rosa Kempinsky Hotel, Nairobi.
- 25th–27th September, 2019: Learning visit and workshop on 'Farmer-led Irrigation Development' at Naivasha, Nakuru County, Kenya. Facilitated by the SNV's -SWA project.
- 6th–10th May, 2019: 'Aquaculture in Lake Victoria: Intensification and potential risks for its sustainability.' A workshop sponsored by a research project jointly being implemented by UoE, University of Nottingham, British Geological Survey, and the University of Birmingham, UK. Eldoret.
- 7th–8th February, 2019: Fundable proposal development workshop sponsored by the Directorate of Research and Innovation, UoE. Eldoret.
- 12th December, 2018: Google digital skills for farmer' training workshop sponsored by google digital skills for Africa program. Eldoret.
- 20th November, 2018: Uasin Gishu County SME Cooperatives for farmers seminar funded by SNV's -SWA project. Eldoret.
- 24-26th October, 2018: SWS refresher training workshop funded by the SNV's SWA project. Machakos County. Machakos.
- 28th August, 2018: Business to business (B2B) linkages training workshop funded by SNV's SWA- county IAP SWS project. Eldoret.
- 10th – 13th July, 2018: Needs assessment workshop for the ENABLE Project sponsored by the Ministry of Agriculture, Livestock and Fisheries Development. Eldoret.
- 9th – 13th April, 2018: Scientific write shop sponsored VLIR project. Kakamega.
- 8th-12th January, 2018: PhD Soil Science Program curriculum review workshop organized by the Department of Soil Science, UoE. Eldoret.
- 27th November – 1st December, 2017: Scientific write shop sponsored by the VLIR project. Kakamega.

- 13th – 17th November, 2017: Soil health management workshop, sponsored by CCRP project, Kenya. Eldoret.
- 9th – 11th October, 2017: Refresher training workshop for SWS sponsored by SNV's - SWA project. Naivasha.
- January to August 2017: Series of farmer training workshops on soil health management organized by CCRP projects in western Kenya, eastern Kenya, and Arusha and central Tanzania (Singida).
- 15th – 20th August 2016: Math camp -African Maths Initiative–promoting mathematics, statistics, and research for high school pupils sponsored by the SAMI, University of Reading, UK.
- June to August, 2015. Series of soil analysis training workshops for farmers and extension agents using SoilDOC in Kaduna, Abuja, and Ibadan States in Nigeria.
- February, 2015: ConneSSA -Connecting knowledge, scales, and actors; an integrated framework for adaptive organic resource management, targeting soil aggradation and agroecosystems' resilience in the SSA project inception workshop.
- July 2014. SoilDOC soil analysis workshop organized by the Agriculture and Food Security Center, Earth Institute, Columbia University, in collaboration with the Pioneer DuPont Zambia and the Zambian Government. Chipata.
- June, 2013. 11th Kenyan Inter-Universities Exhibition hosted by the Commission for Higher Education at KICC grounds, Nairobi. Represented UoE, School of Agriculture.
- June, 2011: Greenhouse enterprises development for smallholder farmers seminar. Sponsored by Amiran Kenya LTD. Eldoret.
- May, 2011: Safe handling and use of agrochemicals training workshop. Sponsored by Agro-Solutions Company. Eldoret.
- February, 2011: Kenya Red Cross Uasin Gishu Branch hunger walk in Eldoret town to raise funds to feed and treat street families. Eldoret.

8.3. Convening/Coordinating Conferences

9. PROFESSIONAL ENGAGEMENT

- 9.1. Training
- 9.2. Consultancies
- 9.3. Collaboration with external organizations

10. EXTERNAL AND INTERNAL RESEARCH GRANTS

Include research grants won

11. LOCAL, REGIONAL & INTERNATIONAL APPOINTMENTS

- 11.1. Local
- 11.2. Regional
- 11.3. International

12. AWARDS AND RECOGNITION

- January, 2020: Sponsored by CARY Institute of Ecosystem Studies to attend the Jan 2-17, 2020 Fundamentals of Ecosystem Ecology Short Course in Millbrook, NY.
- April, 2018: Sponsored by the ConneSSA and VLIR projects to undergo an ArcGIS training at the University of Eldoret's Department of Environmental Monitoring and Planning.
- March, 2018: Sponsored by the NICHE project participated in an ICT4agriculture training workshop at Sirikwa Hotel, Eldoret
- January, 2018: Sponsored by the NICHE project to undergo training on the fundamentals of GeoMedia in a GIS training workshop conducted by Oakar services: Geospatial Solutions, Training, and Services LTD. <https://osl.co.ke/>.
- June, 2017: Sponsored by CCRP-McKnight Foundation to train farmers on soil health management and demonstrate the importance of soil testing in Singida, Central Tanzania.
- February 2017: Sponsored by CCRP-McKnight Foundation to undergo a biometrics training workshop in Machakos County, eastern Kenya.
- 2014-2018: Awarded an MSc Scholarship by the International Institute for Tropical Agriculture (IITA) under the NSF-BREAD project.
- 2014-2015: Sponsored by the Bill and Melinda Gates Foundation to participate in SoilDOC field toolkit activities and smallholder farmer training on soil health management Nigeria and Zambia.
- November, 2016: Sponsored KU-Leuven to undertake a field course on integrated project tropical Agro- and Ecosystems" organized by the University of Eldoret (Kenya), KU-Leuven (Belgium) and ETH-Zurich (Switzerland) in western Kenya.
- September 2016: Sponsored by the ConneSSA project to make a presentation at the 3rd IIR3 Conference at the University of Eldoret.
- October 2013: Sponsored by the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) to present at the 11th African Crop Science Society Conference in Entebbe, Uganda.
- May 2013 to Dec 2013: Funded by the world bank through the Agricultural Development Corporation (ADC) to manage the productivity of field crops in ADC farms, Kitale.
- Sept 2011 to April 2012: Funded by the Alliance for a Green Revolution in Africa (AGRA) to undertake the 4th-year special project research titled 'Effects of Liming and Phosphorus Fertilizer Materials on Maize Growth in the Acidic Western Kenya Soils.' Field and Greenhouse Experiments.
- 2008 to 2012: Funded by the Higher Education Loans Board (HELB) to undertake BSc in Agricultural and Biosystems Management at Moi University, Kenya.

13. CONTRIBUTION TO KEFRI's ADVANCEMENT

14. MEMBERSHIP TO PROFESSIONAL BODIES

- Member, -Soil Science Society of East Africa (SSSEA)
- Member, -African Crop Science Society (ACSS)
- Member, - University of Eldoret Soil Science Association (UoESSA)

15. REFEREES

- Dr. Nadir Stanley Waluchio,
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