

CURRICULUM VITAE



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WORK EXPERIENCE

Currently a **lecturer** and a researcher of Plant breeding at the Department of Plant Science and Crop Protection, University of Nairobi. I teach and conduct research and outreach programs in Plant breeding and Agriculture related Courses. I also supervise students both at undergraduate and post graduate levels on plant breeding and other agricultural related courses. I am a member of legume breeding community of practice and the current vice chair of Plant Breeding Association Kenya (PBAK). I have won several fellowships; Food Systems Research Network for Africa (FSNET), African Plant Breeding Academy, the Agriculture for Food Security-AgriFoSe and African Bioscience Challenge Fellowship (ABCF). I have interest in breeding for biotic and abiotic stresses to enhance food and nutritional security. I am very keen on working with drought resilient crops with great potential to alleviate malnutrition and food security among the rural and urban poor in Kenya and in the Sub-Saharan Africa where drought and climate change effects are huge. I have worked closely with small holder farmers in outreach programs to disseminate knowledge on technologies, innovations and management practices that can be utilized to improve production and livelihoods

Previously served as a **Tutorial Fellow** (2016-2019) at the same University and as an **intern** (2015) at ICRISAT, Kenya

ACADEMIC QUALIFICATIONS

I hold a **PhD** in Plant Breeding and Biotechnology from University of Eldoret (2015-2018), **MSc** in Plant Breeding and Biotechnology (2013-2015) and **BSc.** in Agricultural Biotechnology (2009-2013) from the same University

SELECTED GRANTS

I have bid and collaborated in over five winning grants;

1. Food Systems Research Network for Africa (FSNet-Africa) Grant (**2021-2024**): Adoption of climate smart crop-dairy goat integrated farming system and promotion of value addition techniques among small holder farmers of dry areas of Kenya (Ksh. 3,648,000)
2. World bank-KCSAP-KALRO (**2021-2023**): Adaptive research on Gender mainstreaming and social inclusion of technologies, innovations and management practices of selected value chains (Ksh. 17,671,500)
3. World bank-KCSAP-KALRO (**2021-2023**): Validating Integrated Soil Fertility Management Technologies (Ksh. 21,980,868)
4. World bank-KCSAP-KALRO (**2021-2023**): Promotion of Pigeonpea Technology, Innovations, Management Practices(TIMPs) to enhance productivity, food and nutrition security among small holder communities in Kenya (Ksh.22, 000,000)

5. National Research Fund, Kenya (2017-2019): Promoting pigeonpea production in Kerio Valley to enhance food and nutritional security (Ksh. 1,500,000)
6. University of Eldoret (2016). Biochemical and nutritional quality analysis among pigeonpea genotypes for enhanced nutritional security (Ksh. 500,000)

SELECTED SCIENTIFIC PUBLICATIONS

I have authored and co-authored more than 10 peer reviewed journal articles

1. **Juliana J. Cheboi**, Paul K. Kimurto, George N. Chemining'wa, Enock Mosenda and N.V.P.R Gangarao. **2024**. Influence of water stress on growth and yield components of selected pigeonpea genotypes. Australian Journal of Crop Science. 18(10):700-706. <https://doi.org/10.21475/ajcs.24.18.10.p90>
2. Karanja K. Stephen, **Cheboi J. Juliana**, Kinama M. Josiah. **2024**. Effect of water conservation technologies on growth and yield of pearl millet with green gram intercrop in semi-arid Kenya. International Journal of Plant & Soil Science. 36(8):970-984. <https://doi.org/10.9734/ijpss/2024/v36i84928>
3. **Cheboi J. J**, Abong G. Greathead H, Keyster M, Nkukwana T. **2024**. Consumer Awareness, Utilization, and Acceptance of Orange-fleshed Sweet Potato (*Ipomoea batatas* (L.) Lam) Value-added Food Products in Elgeyo Marakwet County, Kenya. Nutri Food Science 12(1).
4. Karanja K. Stephen, Kinama M. Josiah and **Cheboi J. Juliana**, 2024. Effect of water conservation technologies on Water Use Efficiency of Pearl Millet Green Gram Intercropping System in Semi-Arid Kenya. International Journal of Plant & Soil Science. 36(8):1044-1057. <https://doi.org/10.9734/ijpss/2024/v36i84937>
5. Jepkosgei. S, Charimbu. M, Kimurto. P, **Cheboi. J.J** and Rao N.G. **2024**. Management of pigeon pea pod borer (*Helicoverpa armigera*) using biopesticides and yield performance in arid and semi-arid areas of Kenya. African Journal of Agricultural Research.20(3):226-234. doi: 10.5897/AJAR2023.16477
6. **Cheboi. J**, Greathead. H, Nkukwana. T, Keyster. M. **2024**. Farmers' Knowledge, Perceptions and Attitudes on Crop-Dairy Goat Integration Farming System in Elgeyo Marakwet County. Sustainability.16(1):164. doi:10.3390/su16010164
7. Siele, S. C., Nzuve, F. M., **Cheboi, J. J.**, Kirwa, E. C., Mwangi, D. M., & Wanjala, B. **2023**. Effects of drought on morpho-physiological and biomass yield of guinea grass accessions. East African Agricultural and Forest, 87(3), 103–117.
8. Kipsang. F, **Cheboi. J.J** and Nzuve. F.M. **2023**. Identification of sorghum genotypes tolerant to aluminium toxicity using morphological markers. East African Agricultural and Forestry Journal. 87(3):30- 40
9. Simiyu. E, **Cheboi. J**, Miano. D and Kuria.P. **2022**. Evaluation of selected cassava germplasm for tolerance to cassava bacterial blight disease in Kenya. East African Agricultural and Forestry Journal. 85(4):81- 87
10. Kipsang. F, **Cheboi. J**, Nzuve. F and Muasya. N. **2022**. Molecular identification of sorghum (*Sorghum bicolor* L. Moench) genotypes tolerant to aluminium toxicity. East African Agricultural and Forestry Journal. 88(1):16- 23
11. Kiruki. G, Kuria. P, Nzuve. F and **Cheboi. J**. **2022**. Evaluation of maize germplasm for resistance to maize chlorotic mottle virus and sugarcane mosaic virus: The casual agents of maize lethal necrosis disease. African Journal of Plant Science. 16(8): 201-209
12. **Juliana J. Cheboi.**, Miriam G. Kinyua., Paul K. Kimurto., Oliver K. Kiplagat and N.V.P.R Gangarao. **2019**. Assessment of phenotypic and genetic variation against pod borer among a subset of elite pigeonpea (*Cajanus cajan*) genotypes in Kenya. Australian Journal of Crop Science. 13(02): 221-227

13. **Cheboi, J.J.**, Kinyua, M. G and Kimurto, P.K. **2019**. Variability in morpho-biochemical traits associated with pod borer (*Helicoverpa armigera*) resistance in pigeonpea pods. American Journal of Experimental Agriculture. 31 (13): 1–7
14. **Cheboi, J. J** and Mungabe G. **2019**. Effects of different pretreatment methods on germination of Wheat (*Triticum aestivum*, Poaceae). Asian Journal of Research in Crop Science. 3(4): 1-5.
15. **Juliana J. Cheboi.**, Oliver K. Kiplagat and Everlyne N. Sikuku. **2018**. Variability in proximate analysis of twelve selected elite pigeonpea genotypes across varied agro-ecological zones in Kenya. Journal of food Science and Quality management. 76:85-91.
16. **Juliana J. Cheboi.**, Miriam G. Kinyua., Paul K. Kimurto., Oliver K. Kiplagat., Bernard K. Towett., Stella C. Kirui., Gaudencia J. Kiptoo and N.V.P.R Gangarao. **2016**. Yield potential and adaptability of medium duration pigeonpea [*Cajanus cajan* (L.) Millsp.] genotypes in dry Areas of North Rift valley, Kenya. International Journal of Agronomy and Agricultural Research. 9(2): 47-56.
17. Kiptoo, G.J. Kinyua, M.G., Kiplagat.O., Wanjala, F.M.E., Kiptoo, J.J., **Cheboi, J.J.**, Kimno, S.K., Rotich, G, and Ngurwe, J.K. **2016**. Evaluation of Common Bean (*Phaseolus vulgaris* L.). Varieties for Resistance to Bean Stem Maggot (*Ophiomyia* Spp.) in Kenya. American Journal of Experimental Agriculture. 12 (3): 1–7.

SELECTED CONFERENCES/SEMINARS

1. Karanja Stephen., Kinama Josiah and **Cheboi J. Juliana.2023**. Effect of Water conservation technologies and cropping systems on the growth and yield of selected pearl millet and green-grams varieties. Agro 2023 biennial conference and exhibition, 25-26th October 2023, Faculty of Agriculture, University of Nairobi, Kenya
2. Cheboi, J., Hutchinson, M.J., Ouko, J.R., Ndubi, J and Kagunyu, A. **2023**. Gender Mainstreaming and Social Inclusion along the Green Gram Value Chain. KALRO Scientific Conference, 27th-31st March, 2023, KALRO Kabete-Nairobi, Kenya.
3. Kagunyu. A, Ndubi. J, Hutchinson. M, Thurania. E and **Cheboi. J. 2023**. Commercialization of Banana products, entry of Men, loss of women access and control of benefits in Tharaka Nithi County, Kenya. KALRO Scientific Conference, 27th-31st March, 2023, KALRO Kabete-Nairobi, Kenya
4. Oyando. H, Nzuve. F, **Cheboi. J** and Panchbhai. A. **2023**. Assessment of the factors influencing the implementation of existing seed policies in the rice seed value chain. **2023**. KALRO Scientific Conference, 27th-31st March, 2023, KALRO Kabete-Nairobi, Kenya
5. Stella Jepkosgei, Paul Kimurto Miriam Cherambu, Juliana J. Cheboi and Ganga Rao R.N **2022**. Validation of selected bio-pesticides for pod borer management in pigeonpea. International Association of Science Parks and areas of Innovation Africa division Conference 30th-31st May, 2022, Konza, Kenya.
6. Kipsang F., **Cheboi J. J.**, and Nzuve, F. M. **2021**. Characterization of Selected Sorghum (*Sorghum bicolor* L. Moench) Genotypes for Tolerance to Aluminium Toxicity. KCSAP Scientific Conference, 22-26th November, 2021, Naivasha, Kenya.
7. Siele Sheila Chepkirui, Nzuve, F., and **Cheboi, J.J.2021**. Genetic Diversity in Guinea grass (*Panicum maximum*) Accessions. KCSAP Scientific Conference, 22-26th November, 2021, Naivasha, Kenya
8. Simiyu Elphas Sambu., **Cheboi J.J.**, Miano D. and Kuria, P. **2021**. Genetic Diversity and Resistance of Kenyan Cassava Genotypes to Bacterial Blight. KCSAP Scientific Conference, 22-26th November, 2021, Naivasha, Kenya
9. Jepkosgei Stella, Kimurto P.K. Karwitha M.C, **Cheboi J.J.** and Gangarao Rao. **2021**. Efficacy of selected biopesticides on pod borer management and yield performance of

pigeon pea (*Cajanus cajan Millsp.*) in arid and semi-arid areas of Kenya. Egerton University 14th biennial international conference, 22-26th November, 2021
Nakuru, Kenya

SUPERVISION

MSc Supervision

a) MSc to completion

1. Ricky Otieno Ouma (2022). Assessing Genetic diversity of *Eucalyptus grandis* and *Eucalyptus urophylla* using microsatellites under natural and controlled pollination methods. Co- Supervisors: Dr. Lydia Wamalwa and Dr. S.O Omondi
2. Elphas Simiyu (2023). Genetic diversity and resistance to bacterial blight among Kenyan cassava genotypes. Co- Supervisors: Prof. Douglas Miano and Dr. Paul Kuria
3. Fredrick Kipsang (2023). Characterization of selected sorghum genotypes for tolerance to Aluminium toxicity. Co- Supervisor: Dr. Felister Nzuve
4. Stephen Karanja (2024). Effects of water use efficiency on performance of selected pearl millet varieties integrated with green gram in semi- Arid regions of Kenya. Co- Supervisor: Prof. Josiah Kinama
5. Sheila Siele (2024): Characterization of guinea grass accessions (*Megathyrsus maximus*) for drought tolerance. Co- Supervisors: Dr. Felister Nzuve and Dr. Everlyne Kirwa

b) MSc- on going

1. Kennedy Kiptoo. Screening and genotyping finger millet for nitrogen use efficiency. Co- Supervisors: Dr. Onesmus Kitonyo and Dr. Paul Kuria
2. Stellah Jepkosgei. Efficacy of selected biopesticides and host plant resistance in management of pod borer (*helicoverpa armigera hubner*) in Pigeonpeas (*cajanus cajanmillsp.*) in semi-arid areas of Kenya. Co- Supervisor: Dr. Miriam Karwitha
3. Humphrey Oyando: Assessment of implementation of seed policies in the rice seed value chain in Kenya. Co- Supervisors: Prof. Cecelia Onyango and Dr. Ajay Panchbhai
4. Maurine Cheptum. Effect of intercropping sorghum varieties with common beans on performance and water use efficiency in Kenya. Co- Supervisor: Prof. Josiah Kinama

COMMUNITY ENGAGEMENTS/ OUTREACH SERVICES/CONSULTANCY

I have worked closely with diverse small holder farmers in outreach programs to disseminate knowledge on technologies, innovations and management practices that can be utilized to improve production and livelihoods

1. Training farmers on agricultural best practices, innovations and technologies for women and youth in Kenya, Uganda and Tanzania in 2024: Funded by **ALIN**
2. Training agricultural key stakeholders on climate smart Agriculture for agricultural resilience. 2024. Funded by **GIZ**.
3. Promotion of Irish potato production among small holder farmers of Nyeri County. 2023. Funded by **world bank** through Kenya Climate Smart Agriculture Project (KCSAP)
4. Promotion of banana production among small holder farmers of Tharaka Nithi. 2023. Funded by **world bank** through Kenya Climate Smart Agriculture Project (KCSAP).
5. Promotion of indigenous poultry chicken among small holder farmers of Nyandarua County. 2023. Funded by **world bank** through Kenya Climate Smart Agriculture Project (KCSAP)

6. Promotion of green gram production among small holder farmers of Machakos County. **2023**. Funded by **world bank** through Kenya Climate Smart Agriculture Project (KCSAP)
7. Training stakeholders on gender mainstreaming and social inclusion in validation, dissemination and adoption of Climate Smart Agriculture. **2023**. Funded by **world bank** through Kenya Climate Smart Agriculture Project (KCSAP)
8. Promotion of water management and integrated soil fertility management technologies in West Pokot. **2023**. Funded by **world bank** through Kenya Climate Smart Agriculture Project (KCSAP)
9. Food and Agriculture Organization of the United Nations (**FAO**) **2023**. Article write up titled “*Climate Change and the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture*”
10. Food and Agriculture Organization of the United Nations (**FAO**) **2023**. Article write up titled “*Plant Genetic Resources for Food and Agriculture for Enhanced Nutrition*”
- 11.

FELLOWSHIPS

I have won four fellowships;

- a) Food Systems Research Network for Africa (FSNET) Africa (2021-2024)
- b) African Plant Breeding Academy (2022-2023)
- c) The Agriculture for Food Security-AgriFoSe 2030 (2021-2022)
- d) African Bioscience Challenge Fellowship (ABCF)-2017

LEADERSHIP

I hold several leadership positions such as;

- a) Vice chairman of Plant Breeding Association Kenya (PBAK)
- b) Chairman Faculty of Agriculture Nairobi innovation week & exhibitions
- c) Chairman Faculty of Agriculture University open day.
- d) Coordinator PhD seminars.

REFEREES

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3. Prof. Henry Greathead

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