



# UNIVERSITY OF EMBU

## STAFF PROFILE

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### **Short Biography**

- Born in 1956 at Embu, Kenya. Attended University of Nairobi for BSc in 1977-1980; MSc at University of Manitoba (Canada) 1982-1986 and PhD at Kenyatta University in 2002-2007.

**Research Interests:** Agronomy and soil fertility

## **Publications in Journals:**

1. Mwithiga, G., Maina, S., Muturi, P., & **Gitari, J.** (2024). Lemongrass (*Cymbopogon flexuosus*) growth rate, essential oil yield and composition as influenced by different soil conditioners under two watering regimes. *Heliyon*.
2. Njiru, L., Yegon, R., Mwithiga, G., Micheni, A., **Gitari, J.**, & Mairura, F. (2023) Restoring Soil Nutrient Stocks Using Local Inputs, Tillage and Sorghum-Green Gram Intercropping Strategies for

Drylands in Eastern Kenya. *Tillage and Sorghum-Green Gram Intercropping Strategies for Drylands in Eastern Kenya*.

3. Chelangat, M., Muturi, P., Gichimu, B., **Gitari, J.**, & Mukono, S. (2023). Nutritional and Phytochemical Composition of Bambara Groundnut (*Vigna subterranea* [L.] Verdc) Landraces in Kenya. *International Journal of Agronomy*, 2023.
4. Mwithiga, G., Maina, S., Muturi, P., & **Gitari, J.** (2022). Lemongrass (*Cymbopogon flexuosus*) agronomic traits, oil yield and oil quality under different agro-ecological zones. *Journal of Agriculture and Food Research*, 100422.
5. Cecilia Shinda, Paul N. Nthakanio, **Josiah N. Gitari**, Steve Rono, Simon Mukono and Samuel Maina. 2022. Nutrient content of sorghum hybrid lines between Gadam and hard coat tannin sorghum cultivars. *Food Science & Nutrition* 2022; 00; 1-11. DOI: 10.1002/FSN3.2830
6. Mwithiga, G., Maina, S., **Gitari, J.**, Muturi, P., 2022. Rosemary (*Rosmarinus officinalis* L.) growth rate, oil yield and oil quality under differing soil amendments, HELIYON, <https://doi.org/10.1016/j.heliyon.2022.e09277>
7. Kuria, P., **Gitari, J.**, Mkomwa, S. and Waweru, P. 2022. Effect of Conservation Agriculture on Soil Properties and Maize Grain Yield in the Semi-arid Laikipia County, Kenya. In: Saidi Mkomwa and Amir Kassam (Eds) *Conservation Agriculture in Africa*. Pp 256-269. CAB International, Nosworthy Way, Oxfordshire OX8DE, UK. ISBN-13:9781789245745
8. Shinda, C. A., **Gitari, J. N.**, Nthakanio, P. N., Runo, S., Gichimu, B., & Maina, S. (2021). Performance Assessment of Crosses between Gadam and Hardcore Tannin Sorghum in Hybrid Lines Production. *Journal of Experimental Biology and Agricultural Sciences*, 9(2320), 417–431. [https://doi.org/10.18006/2021.9\(4\).417.431](https://doi.org/10.18006/2021.9(4).417.431)
9. **Josiah N. Gitari**, Seth Amboga, James Ouma, Antony M. Gitunu, Catherine Muriithi, Linus Kanga, David Kinga, Lutta W. Muhammad, Esther Njuguna, F. Murithi, M. Gichangi and Bernard Pelletier. 2012. Spatial Variation of Soil Nutrient Stocks in Semi- Arid Tharaka Districts of Eastern Kenya. *E. Afr. agric. For. J.* (2012) 78(1),113-118
10. **J.N. Gitari**, J. G. Mureithi, C.K.K. Gachene, D.N. Mugendi and J.B. Kung'u. 2011. The Performance of Maize (*Zea mays*) and *Lablab purpureus* under Different Intercropping Densities

and Sowing Intervals in the Central Highlands of Kenya. *International Journal of Professional Practice* 2011: 2(3) 247 - 255.

11. **Gitari, J.N.**, Mureithi, J. G., Mugend D.N., Kung'u, J.B. and Gachene, C.K.K. 2009. Indigenous Farmers' Knowledge in Soil Fertility Indicators and its Scientific Verification in Embu District, Kenya. *East African Agricultural and forestry Journal*, Volume 75 (No. 1).
12. **Gitari, J.N.** and J.G. Mureithi. 2004. Effect of phosphorus fertilizer on legume nodule formation Mount Kenya region. *East African Agricultural and forestry Journal* 69: 183-187.
13. P.N.M. Njeru , J. Mugwe, M. Mucheru-Muna, I. Maina, D.M. Mwangi, S. Amboga, M. Miruka, J.K. Lekasi, S.K. Kimani, J. Miriti, **J. Gitari**, M. Mahasi, K. Mutea and F. Muriithi. 2013. Integrating Scientific and Farmers' Evaluation Of Water Harvesting And Soil Fertility Technologies on Sorghum Productivity in Eastern Kenya. *E. Afr. agric. For. J.* (2013) 78(3), 143-150.
14. I. Maina, M. Miruka, B. Rono, PNM Njeru , S. Amboga, **J. Gitari**, M. Mahasi, and F. Murithi. 2012. Adaptive strategies and local innovations of smallholder farmers in selected Agri-food systems of central Kenya. *African Crop Science Society*, Volume 20 No. 1 Pp 77-84.
15. B. Rono, I. Maina, M. Miruka, PNM Njeru, S. Amboga, **J. Gitari** and F. Murithi. 2011. Current Status of Seed Systems in Eastern Lowlands of Kenya. *African Crop Science Society*, Volume 10. Pp 1-4.

### **Presentation of Papers at Academic and Professional Conferences**

1. Kuria P., **Gitari J.**, Mkomwa S. and Waweru P. 2018. Impact of conservation agriculture practices on maize yield and soil properties in the semi-arid Laikipia County, Kenya. *Proceeding of the 2nd Africa congress on conservation agriculture, held on 9-12 October 2018 in Johannesburg, South Africa.* Pp 85-87.
2. **Josiah Gitari**, Rael Karimi, Lutta Muhammad, Seth Amboga, Antony Gitunu Catherine Muriithi, Esther Njuguna, Jim Fyles and Festus Murithi. 2013. Contrasting Bean Crop (*Phaseolus vulgaris*) Performance Under Ferralsol and Cambisol Soils of Semi-Arid Eastern Kenya. Paper presented at the 11th Crop Science Society held on 14-17 October 2013 in Entebbe, Uganda. (In Press).

3. **J. N. Gitari**, S. Amboga, A. M. Gitunu, C. Muriithi, L. Kanga, L. W. Muhammad, G. Kamau, F. Murithi, M. Gichangi and B. Pelletier. 2013. Performance of Cowpea and Sorghum Under Different Moisture Conservation and Nutrient Management Techniques in the Drought-Prone Tharaka Districts of Eastern Kenya. Poster presented at the 27th Soil Science Society of East Africa (EASSS) held on 20-25 October 2013 in Nakuru, Kenya. (In Press).
4. **Gitari, J.N.** Mugendi D.N., Kung'u, J.B. Mureithi, J.G..Gachene and Muna, M.M. 2009. The role of agroforestry trees in soil productivity: verification of farmers' knowledge and perceptions in central Kenya highlands. Paper presented at the 25th Soil Science Society of East Africa (SSSEA) held on 7 -11 November 2009 at Kilimanjaro Crane Hotel, Moshi, Tanzania. (In press).
5. **Gitari, J.N.**, D.N. Mugendi, J. G. Mureithi, J.B. Kung'u and S.C. Amboga. 2007. Green Manuring With Herbaceous Legumes for Maize Production in the Central Highlands of Kenya. Paper presented at the 24th Soil Science Society of East Africa (SSSEA) held on 26-30 November 2007 at Izaack Walton, Embu, Kenya. (In press).
6. **Gitari, J.N.**, D.N. Mugendi, J. G. Mureithi, and J.B. Kung'u. 2006. Light Use in Maize Crotalaria Intercrop System in sub-Humid Kenya. Paper presented at the 10th KARI biennial conference, held on 13-17 November 2006 at KARI HQ. (In press).
7. **J.N. Gitari**, D.N. Mugendi, J. G. Mureithi, J.B. Kung'u and C.K.K. Gachene. 2003. The Role of Plant Residues in Soil Productivity: Farmers' Knowledge and Practices in Embu District, Kenya. In: Proceedings of the 21st Soil Science Society of East Africa (SSSEA) held on 1-5 December 2003 at Eldoret, Kenya. pp 479-490.
8. **Gitari J.N.** J.G. Mureithi, S. K. Karumba and K. Mwaniki. 2000. Green Manuring for Maize Production in Smallholder Farms in the Eastern and Central Kenya Region. 2000. In: Mureithi et al. (eds) Proceedings of the 2nd Soil and Water Management and Legume Research Network Project. Mombasa. Kenya. June 2000. pp 121-128.
9. **Gitari J.N.** J.G. Mureithi, S. K. Karumba and K. Mwaniki. 2000. Integrated Use of Green Manure, Cattle Manure And Inorganic Fertilizer for Increased Maize Production In Mid Altitude Areas Of Central Kenya. In: Mureithi et al. (eds) Proceedings 2nd Soil and Water Management and Legume Research Network Project. Mombasa. Kenya. June 2000. pp 115-120.

10. **Gitari J.N.**, D. K. Friesen and J. K. Ransom. 2000. Farmer Perceptions On The Use Of Various Soil Ameliorants For Maize Production In Mbeere District, Eastern Province, Kenya: With Emphasis On the Potential Role of Rock Phosphate. Paper Presented at the 7th Kari Biennial Scientific Conference In Nairobi, Kenya On 13-17 November 2000.
11. **Gitari J.N.** and J.G. Mureithi. 2000. Legume response to phosphorus application in Mount Kenya region. In: Proceedings of the 18th Soil Science Society of East Africa (SSSEA) held on 4-8 December 2000 at Mombasa, Kenya. pp 155-159.  
Micheni, A., D. Mugendi, M. Mucheru, J. Mugwe, J. Kung'u, S. Oto, F. Murithi, and J.
12. **Gitari.** 2000. Low-cost soil fertility management strategies for improving maize production in the central highlands of Kenya. In: Proceedings of the 18th Soil Science Society of East Africa (SSSEA) held on 4-8 December 2000 at Mombasa, Kenya. Pp 11-118.
13. **Gitari, J.N.**, E.A. Dyck and P Maina. 1997. Legume screening for soil fertility improvement, food and fodder utilization in medium altitude areas of Mount Kenya region. In: J.N.Mureithi C.W.Mwendia, F.N.Muyekho, M.A.Anyango and S.N.Maobe (eds) Participatory Technology Development for Soil Management by Smallholders in Kenya. A compilation of selected papers presented at the 1st Soil Management and Legume Research Network Project Conference: Kanamai, Kenya on March 24-26,1997. pp 121-131.
14. **Gitari, J.N.**, F.K. Kanampiu and F.M. Matiri. 1996. Maize yield gap analysis for mid altitude areas of eastern and central Kenya region. In: Proceedings of the 5th KARI scientific conference held in Nairobi, Kenya. October, 1996 . pp 215-225.

### **Books/Book Chapters Published**

1. Kuria, P., **Gitari, J.**, Mkomwa, S. and Waweru, P. **2022**. Effect of Conservation Agriculture on Soil Properties and Maize Grain Yield in the Semi-arid Laikipia County, Kenya. In: Saidi Mkomwa and Amir Kassam (Eds) Conservation Agriculture in Africa. Pp 256-269. CAB International, Nosworthy Way, Oxfordshire OX8DE, UK. ISBN-13:9781789245745

2. Mburu, M. W. K. and **J. N. Gitari**. 2006. Maize-Mucuna Intercropping System in Kenya. In: Mureithi, J.G. et.al. (eds) Enhancing Agricultural Productivity in East Africa: Development and up-scaling of green manure legume technologies in Kenya. Epite Press Ltd. Nairobi. Pp 97-123.
3. Mureithi, J.G., **J.N. Gitari**, E.A. Okwuosa, D.K. Bunyatta, G.O. Mwangi, W. Akuno. 2006. Farmer Field School (FFS) approach for scaling-up soil management technologies. In: Mureithi, J.G. et.al. (eds) Enhancing Agricultural Productivity in East Africa: Development and up-scaling of green manure legume technologies in Kenya. Epite Press Ltd. Nairobi. Pp 347-361.
4. Chemining'wa, G.N., M.D.G. Njarui, **J.N. Gitari** and S.N. Maobe. 2006. Response of green manure legumes to phosphorus application and rhizobia inoculation. In: Mureithi et.al. (eds) Enhancing Agricultural Productivity in East Africa: Development and up-scaling of green manure legume technologies in Kenya. Epite Press Ltd. Nairobi. Pp 45-60.
5. Nyambati, E.M., J.G. Mureithi, c.k.k. Gachene and **J.N. Gitari**. 2006. Managing green manure legumes for improved maize production in Kenyan highlands. In: Mureithi, J.G. et.al. (eds) Enhancing Agricultural Productivity in East Africa: Development and up-scaling of green manure legume technologies in Kenya. Epite Press Ltd. Nairobi. Pp 61-81.
6. Mucheru, M., D. Mugendi, A. Micheni, J. Mugwe, J. Kung'u, S. Otor and **J. Gitari**. 2005. Improved food production by use of soil fertility amendment strategies in the central highlands of Kenya. In: Andre Bationo (eds) Managing nutrient cycles to sustain soil fertility in sub-Saharan Africa. Pp 584-992.