

Waceke Wanjohi Profile – Dean, SAED

A university Professor with immense knowledge in plant nematology and extensive experience in research, teaching, networking and graduate training. Highly dedicated to improving crop production in smallholder farming systems in sub-Saharan Africa and increasing Africa's competitiveness in the global arena.

University Education

Ph D (Plant Nematology) 1999; MSc (Plant Pathology) (1992); B.Ed (Science) Upper 2nd Class Honors (1987) Kenyatta University

Key Professional recognitions

1. Fellow Society of Biology, UK
2. A Senior Fulbright Research Fellow
3. Kenya National Academy of Sciences - elected and admitted as a member in May 2007 thus joining the 117 distinguished scholars in the Kenya
4. Distinguished Researcher - Listed among the top 50 distinguished researchers at Kenyatta University in September 2007
5. Member Governing Council Academic affairs committee African International University Kenya May 2010
6. Invited reviewer
 - o Journal paper for the Australian Journal of Agricultural Research
 - o MSc. Horticulture programs, University of Hanover, Germany
7. Invited author to write a review on *Intensive Subsistence Agriculture: Impacts, Challenges and Possible Interventions* for Dynamic Soil, Dynamic Plants Journal in Japan
8. Member of Editorial Board-Journal of Tropical Microbiology and Biotechnology
9. External Examiner-Jomo Kenyatta University of Agriculture
10. Invited discussant
 - o Round table discussion with State Secretary of the Federal Republic of Germany on potential of S&T in addressing global challenges Berlin, Germany.
 - o 5th Global Consortium of Higher Education and Research for Agriculture (GCHERA) conference on "Innovation and Leadership for relevant change in Agriculture" Barcelo, Costa Rica
 - o Round table discussion with Jamille Bigio –Policy Advisor for Africa US Secretary of State office on Global Women's issues hosted by AWARD, Nairobi Kenya
 - o 12th Conference of Parties (COP 12) to the United Nations on "Strengthening African Leadership on climate change adaptation" hosted by IDRC Nairobi, Kenya
 - o The Forum for Agricultural Research in Africa (FARA) in Sandton City, South Africa as a Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) delegate
11. Invited key note speaker
 - o Panaac/UniBrain Agribusiness Fair on Fast tracking the careers of African women in entrepreneurship and agricultural research and development
 - o Nematology training workshop – university of Nairobi
12. Invited Guest speaker

- oFalling Walls Conference – The International Conference on Future Breakthroughs in Science and Society, Berlin, Germany
 - oJoint USAID Regional Interagency Planning workshop for the Global Hunger & Food Initiative in Nairobi, Kenya
13. Negotiator, Evaluator and Moderator of Performance management in Government of Kenya (GoK) Ministries, State corporations, Technical institutions and Local authorities coordinated by Office of the Prime Minister in Kenya

Selected Professional Training

1. Negotiation skills in Performance management by the Public Sector reforms and performance contracting (PSRPC) unit in the Office of the Prime Minister
2. Performance management by the Public Sector reforms and performance contracting (PSRPC) unit in the Office of the Prime Minister
3. Leadership and Management by The Training Resource Group (TRG), USA
4. Mentoring and Coaching by Global Leadership Academy Pte Ltd, Singapore
5. Leadership and Entrepreneurship by International Network of women in Engineering and Science (INWISE)
6. Molecular Characterization of fungi and bacteria by Dr. Marie – Claude Bon- USDA at ICIPE
7. Intellectual Property Right workshop by Experts from World Intellectual Property Organization (WIPO)

Work Experience

1. Kenyatta University: Associate Professor (Sept. 09-to date); Senior Lecturer (2002-Aug. 09); Lecturer (1992-2002); Tutorial Fellow (1990-1992) and Graduate Assistant (1989-1990)
2. Dean, School of Agriculture and Enterprise Development. In charge of all the academic programs, student admissions, staff recruitments and administrative duties of the School
3. Chairperson, Department of Agricultural Sciences and Technology (Dec. 09-Dec 2010).
4. Founding Director, Regional Center for Capacity Development (May 2007-Dec. 2009).

Research Grants

1. African Women in Agricultural Research and Development (AWARD) fellowship (2008-2010) by Bill and Melinda Gates and Rockefeller through the CGIAR Gender and Diversity Program – USD 140,000
2. Gatsby Charitable Foundation Research Grant (2005-2010) for support of a regional capacity building project in plant nematology involving institutions in five African countries (Kenya, Uganda, Tanzania, Malawi and Zimbabwe) and three UK Institutions (Rothamsted International, Reading University and CABI)- GBP 800,000
3. Fulbright Senior Research Fellowship Award (2004-2005). A highly competitive and prestigious fellowship that enabled me to conduct research at the University of California-Riverside, USA that culminated in the description of a new nematode species- USD 70,000

4. Rockefeller Foundation Research Fellowship (2000-2002). This supported a project on integrated management of lesion and root-knot nematodes in maize based cropping systems in Central Kenya- USD 60,000
5. World Federation of Science – for the molecular characterization of root-knot nematodes on tomatoes in Kenya- Swiss Franc 5000
6. RUFORUM Nurturing Grant- fifteen Msc. Students were trained under this grants- USD 66,000
7. German Academic Exchange program (DAAD) scholarship (1994-1998) for PhD studies. This enabled me to undertake part of my research at the University of Bonn, Germany for one year and learn the German Language- Deutsch Mark 30,000

Major Achievements in Science

1. New nematode species- Described a new nematode species; *Zeldia spannata* – an important indicator of soil health
2. Plant Nematology lab – Established and fully equipped the first ever Plant Nematology Laboratory at Kenyatta University worth 5m to support postgraduate training with funding from the Gatsby Charitable Foundation; UK and the Rockefeller Foundation, USA. The lab is also used to provide nematode diagnostic services to farmers and NARS
3. Nematology Initiative for Eastern and Southern Africa (NIESA). Co- founded NIESA in 2005, comprising of scientists from 5 countries (Uganda, Tanzania, Malawi, Zimbabwe and Kenya who are involved in nematology research and training, together with 3 partners from similar organizations in the UK.
4. Training manual – co-authored a 200 page comprehensive plant nematology training manual which is used in the training workshops, research institutes and in teaching at the University. It provides a comprehensive synthesis of nematode diagnostics, biology, taxonomy and management practices pertinent to East and Southern Africa.
5. Kenya Society of Microbiology (KSM). I co- founded KSM in 1996, a vibrant professional organization of Scientists in microbiology, agriculture, medicine and environment. I served as the chairperson of the Society for six years (2003- 2009)
6. Journal of Tropical Microbiology and Biotechnology (JTMB). I co-founded JTMB (ISSN 1607 – 4106) in 2002 which publishes two issues per year. As the chairperson of the society, I successfully secured the incorporation of this Journal in the Africa Journal Online (AJOL) website courtesy of the International Network for the availability of Scientific Publications (<http://www.ajol.info/>)
7. University Research Policy- instrumental in the development of the first ever Kenyatta University Research Policy which has changed the way research is done at Kenyatta University

Publications- Journal Articles

1. Muturi, J., Gichuki C., **Waceke J. W.**, Runo S.M.2010 Use of Isoenzyme phenotypes to characterize the major root – knot nematodes (*Meloidogyne* spp.) parasitizing indigenous leafy vegetables in Kisii Kenya. In “*Transforming Agriculture for improved livelihoods through Agricultural Product Value Chains: The Proceedings of the 12th KARI Biennial Scientific Conference*”8- 12th Nov 2010 Nairobi Kenya Pg. 605-612
2. Kavuluko J. M., C. Gichuki, **J.W. Waceke** and S.M. Runo 2010. Characterization of root-knot nematodes (*Meloidogyne* spp.) from selected legumes in Mbeere District Kenya using isoenzyme phenotypes. In “*Transforming Agriculture for improved livelihoods*

through Agricultural Product Value Chains: The Proceedings of the 12th KARI Biennial Scientific Conference 8- 12th Nov 2010 Nairobi Kenya Pg. 92- 97

3. Luambano, N., B.R. Kerry, J.W. Kimenju, R.D. Narla and **Waceke J.W.** 2009. Screening of locally available organic materials for the mass production of a biological agent, *Pochonia chlamydosporia*, used against root-knot nematodes in the 5th International Congress of Nematology proceedings
4. **Waceke J. W.** and J. W. Kimenju 2007. Intensive Subsistence Agriculture: Impacts, Challenges and Possible Interventions. *Dynamic Soil, Dynamic Plant* 1(1): 43-53
5. **Waceke J. W.** 2007. Plant parasitic nematodes associated with cabbages in Kenya. *In The African Crop Science Conference Proceedings Vol. 8 (2), 27-31st October 2007*, El- Minia- Egypt. Pg. 1071-1074
6. **Waceke, J. W.**, Arim, J. O., Waudu, S. W. and Kimenju, J. W. 2007. Impact of some soil fertility management practices on lesion nematodes of maize in Kenya. First Biennial Meeting of the Regional Universities Forum for Capacity Building In Agriculture, 23 – 27 April 2007, Mangochi, Malawi. Pp 179 – 186
7. H.A.L.Talwana, J.W. Kimenju , Z. Sibanda, **Waceke .J. W**, S.R. Gowen, D.J. Hunt and B.R.Kerry. 2006. Sustainable management of nematodes in east and southern Africa requires capacity building in the region. XXVIII International Symposium of the European Society of Nematologists
8. Arim, J. O., **Waceke, J.W.**, Waudu, S. W. and Kimenju, J. W. 2006. Effects of *Canavalia ensiformis* and *Mucuna pruriens* intercrops on *Pratylenchus zaeae* damage and yield of maize in subsistence agriculture. *Plant and Soil* 284(1-2), 243 – 251
9. **Waceke, J.W.** 2006. A Review –Arbuscular Mycorrhizal Fungi (AMF) inoculum production for use in horticulture .*Journal of Tropical Microbiology and Biotechnology Vol. 2(1) 2006: 45-51*. <http://www.ajol.info/viewarticle.php?jid=259&id=27921>
10. **Waceke, J. W.**, Bumbarger D. J., Mundo-Ocampo, M., Subbotin, S. A. and Baldwin, J.G. 2005. *Zeldia spannata* sp. n. (Nematoda: Cephalobidae) from the Mojave Desert, California. *Journal of Nematode Morphology and Systematics* 8 (1), 57 – 67.
11. **Waceke, J.W.** 2004. Mycorrhizal dependency of soybeans (*Glycine max*) in Kenya. *In*. Boga H.I., Waceke J. W., Okemo, P. O., Machuka, J., Muli, F. W., Monda, E. & Siboe, G. (Eds) Proceedings of the 2nd Regional Microbiology Conference on Recent advances in microbial research and their implication to health, agriculture and environment 16 – 19th March 2004, Nairobi – Kenya. Pp. 139-145
12. Arim, J. O., **Waceke, J.W.**, Waudu, S. W. and Kimenju, J. W. 2004. The potential use of *Canavalia ensiformis* and *Mucuna pruriens* intercrops in minimizing lesion nematodes (*Pratylenchus* spp.) damage on maize (*Zea mays*). *In*. Boga H.I., Waceke J. W., Okemo, P. O., Machuka, J., Muli, F. W., Monda, E. & Siboe, G. (Eds) Proceedings of the 2nd Regional Microbiology Conference on Recent advances in microbial research and their implication to health, agriculture and environment 16 – 19th March 2004, Nairobi – Kenya. Pp. 118-131
13. **Waceke, J.W.**, Mugendi, D. N. Mbaru, N. J. 2004. Impact of soil nutrient management practices on plant parasitic nematodes of maize in Central Kenya. *In*. Temu, A. B., Chakeredza S., Mogotsi K., Munthali, D. and Mulinge, R. (eds), *Rebuilding Africa's capacity for agricultural development: the role of tertiary Education. Reviewed papers presented at the ANAFE Symposium on Tertiary Agricultural Education*, 14 – 16th April 2003, ICRAF, Nairobi, Kenya. Pp. 183 – 191

14. **Waceke, J.W.**, Waudu, S. W. Sikora, R. A. and Jefwa, J. 2003. Diversity of arbuscular mycorrhiza fungi associated with pyrethrum (*Chrysanthemum cinerariaefolium* Vis) in Kenya. *East African Journal of Science* 4 (2), 53 - 64
15. Arim, J. O., **Waceke, J.W.**, Waudu, S. W. and Kimenju, J. W. 2003. Management of Lesion and Root- knot nematodes in maize- based cropping systems in Central Kenya. The sixth Biennial conference of the African Crop Science Society, 12-17th October 2003, Nairobi-Kenya. Pp. 97
16. Arim, J. O., **Waceke, J.W.**, Waudu, S. W. and Kimenju, J. W. 2003. The potential use of *Canavalia ensiformis* and *Mucuna pruriens* intercrops in minimizing lesion nematodes (*Pratylenchus* spp) on Maize (*Zea mays*). The sixth Biennial conference of the African Crop Science Society, 12-17th October 2003, Nairobi-Kenya. Pp. 97
17. Nguhiu, F., **Waceke, J.W.**, Waudu, S. W. and Kimenju, J. W. 2003. Effects of rotating selected cover crops with beans on root-knot nematode damage. The sixth Biennial conference of the African Crop Science Society, 12-17th October 2003, Nairobi-Kenya. Pp. 98
18. **Waceke, J.W.**, Waudu, S. W. and Sikora R. A. 2002. Effect of inorganic phosphatic fertilizers on efficacy of an arbuscular mycorrhiza fungus against *Meloidogyne hapla* on pyrethrum. *International Journal of Pest Management* 48 (2), 307 – 313.
19. **Waceke, J.W.**, Waudu, S. W. and Sikora R. A. 2002. Suppression of root-knot nematodes using mycosymbionts on pyrethrum (*Chrysanthemum cinerariaefolium* Vis.). *Journal of Tropical Microbiology* 1, 64 – 73.
20. **Waceke, J. W.** 2002. Organic soil amendments: An integrated approach to root knot nematode management on okra. Integrated Pest Management conference for sub-Saharan Africa, 8-12 September 2002, Kampala, Uganda. Pp. 104
21. **Waceke, J.W.** 2002. Use of arbuscular mycorrhiza fungi for improved crop production in sub-Saharan Africa. *Journal of Tropical Microbiology* 1, 14 – 21.
22. **Waceke J. W.** 2002. Impact of root-knot nematode on efficient water and nutrient use in vegetable production systems in the tropics. In. Wesonga J.M., Losenge T., Ndun'gu C. K., Ngamau K., Njoroge J.B.M., Ombwara .K., Agong S. G., Fricke A., Hau B. and Stutzel H. (eds), *Proceedings of the second Horticulture seminar on sustainable production systems in the tropics*. 6- 9th August 2002, JKUAT Juja Kenya. Pp. 120 – 124
23. **Waceke, J.W.**, Arim, J. O., Waudu, S. W. and Kimenju, J. W. 2002. Diversity of plant parasitic nematodes associated with maize (*Zea mays* L.) in small- scale farms in Central Highlands of Kenya. Fifth Regional Forum on Agricultural Husbandry, 12-16th August 2002, Entebbe, Uganda. Pp. 333-334.
24. Arim, J. O., **Waceke, J.W.**, Waudu, S. W. and Kimenju, J. W. 2002. Responses of cover crops and commercial maize varieties cultivated in Central Highlands of Kenya to *Pratylenchus* spp. (lesion nematodes). Fifth Regional Forum on Agricultural Husbandry, 12-16th August 2002, Entebbe, Uganda. Pp. 275 – 276.
25. Nguhiu, F., **Waceke, J.W.**, Waudu, S. W. and Kimenju, J. W. 2002. Integrated control of root – knot nematodes (*Meloidogyne* spp.) in beans.. Fifth Regional Forum on Agricultural Husbandry 12-16th August 2002, Entebbe, Uganda. Pp. 314 – 317
26. **Waceke, J.W.**, Arim, J. O., Waudu, S. W. and Kimenju, J. W. 2002. Plant parasitic nematodes of Maize (*Zea mays* L.) in low input agriculture in Kenya. Fourth International Congress of Nematology, 8 – 13th June 2002, Arona Tenerife Spain. Poster

27. **Waceke, J.W.**, Waudo, S. W. and Sikora R. A. Effects of inorganic phosphatic fertilizers on efficacy of an arbuscular mycorrhiza fungus against a root knot nematode on pyrethrum. Fourth International Congress of Nematology, 8 – 13th June 2002, Arona Tenerife Spain. Poster
28. **Waceke, J.W.**, Waudo, S. W. and Sikora R. A. 2001. Suppression of *Meloidogyne hapla* by Arbuscular mycorrhiza fungi (AMF) on pyrethrum. *International Journal for Pest Management* 47 (2) 135 – 140
29. **Waceke, J.W. and Waudo, S. W.** 2001. Effect of time on efficacy of organic soil amendments against *Meloidogyne incognita* on okra. *East Africa Agriculture and Forestry Journal* 67 (1), 19 - 29
30. **Waceke J. W.** Role of organic amendments in the management of root-knot nematodes on Okra. 2001. In. Wesonga J.M., Losenge T., Ndun’gu C. K., Ngamau K., Ombwara .K., Agong S. G., Fricke A., Hau B. and Stutzel H. (eds), *Proceedings of the Horticulture seminar on sustainable horticultural production in the tropics*. 3- 6th Oct. 2001, JKUAT Juja Kenya. Pp. 113 - 117
31. **Waceke, J.W.**, Waudo, S. W. and Sikora R. A. 2000. Arbuscular Mycorrhiza fungi associated with pyrethrum in Kenya. In. Mukisira E.A., Kiriro F.H., Wamuongo J. W., Wamae L. W., Muriithi F.M. & Wasike W (eds). *Proceedings of the 7th KARI Biennial Scientific Conference on Collaborative and Participatory Research for sustainably improved livelihoods*. 13th–17th Nov. 2000, KARI HQ Nairobi, Kenya. Pp305 - 314.
32. **Waudo, S. W. and Waceke (ne’Mbugua), J. W.** 1989. Responses of spinach (*Spinacea oleracea* L.) to *Meloidogyne incognita*. *East Africa Agriculture and Forestry Journal* 52, 250 – 266.

Conferences attended

1. 1st PACN Congress on Agricultural Productivity, 20 – 23 Nov. 2011; Accra, Ghana
2. Falling Walls Conference – The International Conference on Future Breakthroughs in Science and Society, 8- 9 Nov. 2011; Berlin, Germany
3. 10th African Crop Science Society conference, 10- 13 Oct 2011; Maputo, Mozambique
4. Agro-2011 Inaugural Biennial Conference; 26- 28 Sept 2011 Nairobi Kenya
5. 4th Commonwealth Association for Public Administration and Management (CAPAM) 24 – 26: May 2011. Nairobi, Kenya
6. 20th Symposium Nematology Society of Southern Africa; 16-18 May 2011, Stellenbosch South Africa
7. UniBRAIN in Agribusiness and Innovation Fair; 26-27 Nov 2010; Nairobi Kenya
8. 12th KARI Biennial Conference; 8- 12 Nov 2010; Nairobi Kenya
9. 49th Annual Meeting of the Society of Nematologists; 11- 14 July 2010; Idaho, USA
10. University management Working Retreat; 2- 6th Dec 2009; Mombasa, Kenya
11. Sixth Global Consortium of Higher Education and Research for Agriculture (GCHERA) on Food, Health and Energy: Challenges of sustainable agriculture, 23- 27 Nov 2009; Nairobi Kenya
12. Kenya National Academy of Sciences Regional conference on “Evidence Based Advice to Policy” 27 – 28th June 2008 Nairobi Kenya
13. 19th symposium of the Nematological Society of Southern Africa 17 – 21 May 2009; Hazy view, South Africa
14. Commission for Higher Education workshop on “Credit accumulation and transfer

system for East Africa 13- 14th October 2008 Nairobi Kenya

15. 5th International Congress of Nematology; 13- 18 July 2008; Brisbane, Queensland, Australia

16. 8th African Crop Science Conference; 27 – 31 Oct 2007; El- Minia, Egypt

17. 18th Nematology Society of Southern Africa; 6- 9 May 2007; Port Elizabeth; South Africa

18. First RUFORUM Biennial Conference; 23- 27 April 2007; Mangochi, Malawi.

19. 44th Annual meeting of the Society of Nematologists, 9- 13 July 2005; Florida, USA

20. University of California Riverside Seminar; 18 May 2005; University of California Riverside USA

21. Second Regional Microbiology Conference; 16- 19 March 2004; Nairobi, Kenya

22. 6th Biennial conference of the African Crop Science Society; 12- 17 Oct. 2003, Nairobi Kenya

23. International symposium on “Building agricultural and natural resources education in Africa; 14- 16 April 2003, Nairobi Kenya

24. Integrated Pest Management conference for sub-Saharan; 8 – 12 Sept 2002; Kampala Uganda

25. 5th Regional Forum on Agricultural Husbandry; 12- 16 Aug 2002; Entebbe Uganda

26. 4th International Congress of Nematology; 8 – 13 June 2002; Arona Tenerife Spain.

Research Interest

1. Sustainable Management of plant nematode pests (root knot and lesion nematodes) in subsistence farming systems

2. Characterization of nematodes pests of vegetables.

3. Capacity building in plant nematology in the regions Both human and infrastructural at all levels