

CURRICULUM VITAE

DR. JOYCE G. MAINA

CONTACT:

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CAREER GOAL

To build capacity, provide leadership and mentorship to students in the Faculties of Agriculture and Veterinary Services and contribute to the attainment of Vision 2030 in Kenya through generation, transmission and dissemination of relevant knowledge, skills and technologies in Agricultural Sciences.

ACADEMIC QUALIFICATIONS

- 2012 Master of Arts in Project Planning and Management. (University of Nairobi), Kenya.
- 2001 Doctor of Philosophy in Animal Nutrition (University of British Columbia) in Vancouver, British Columbia, Canada.
- 1990 Master of Science in Animal Production (Nutrition) (University of Nairobi), Kenya.
- 1981 Bachelor of Science in Agriculture (Upper Second Class Honours) (University of Nairobi).

EMPLOYMENT HISTORY

October 2001 To Date:

Lecturer: Department of Animal Production, College of Agriculture and Veterinary Sciences, University of Nairobi.

Responsibilities:

- Training and providing mentorship to students in the Faculties of Agriculture and Veterinary Sciences,
- Supervision of Graduate and Undergraduate Students and other Faculty and Departmental duties.

- Effectively represented the Department of Animal Production in the Faculty of Agriculture and Faculty of Veterinary Medicine Timetabling Committees (2002 – 2009), Faculty of Veterinary Medicine Projects and Attachment Committee (2001 – 2009), and recently appointed to the Faculty of Agriculture Curriculum Committee.

1993 – 2001:

Assistant Lecturer: Department of Animal Production, College of Agriculture and Veterinary Sciences, University of Nairobi.

Responsibilities:

- Taught courses in Animal Nutrition, Livestock Production Systems, Feed Resources, Aquaculture and Aquatic Production Systems.
- Supervised Undergraduate and Graduate Students.

1991 – 1992:

Head of Poultry Section: Ministry of Livestock Development (Kenya).

Responsibilities:

- Formulation and implementation of policies which stimulated poultry production in Kenya.
- Provided guidance on technical issues relating to the Sector
- Represented the Ministry of Livestock Development at the Kenya Bureau of Standards.
- Co-ordinated Poultry Projects and Programs in Kenya.

1985 – 1990:

Lecturer: Animal Health and Industry Training Institute (AHITI

Kabete)

Animal Health and Industry Training Institutes are Certificate Awarding Post-Secondary School institutions which train students on various aspects of Animal Production and Health and Leather Technologies.

Responsibilities:

- Trained students on various aspects of Animal Production and Agricultural Extension.
- Acted as the Head of the Animal Production Department between 1987 and 1988.
- Provided Mentorship, Guidance and Counseling to students.

1981 – 1984:

Agricultural Extension Co-coordinator: Ministry of Agriculture and Livestock Development- Nyandarua district.

Responsibilities:

- Provided leadership in the implementation of Extension Programs and Projects, particularly the Training and Visit (T & V) Extension Program which was funded by World Bank.
- Coordinated Staff and Farmers Trainings in the District.
- Acted as the Extension/Research Liaison person.

PUBLICATIONS

Maina, J.G., Beames, R.M., Higgs, D., Iwama G., Mbugua, P.N. and Kisia S. (2002) Digestibility and feeding value of some feed ingredients fed to tilapia *Oreochromis niloticus* (Linn). *Aquaculture Research* **33** (11), 853-862.

Maina, J.G., Beames, R.M., Higgs D., Iwama, G., Mbugua, P.N., and Kisia S. (2003). Partial replacement of fishmeal with sunflower cake and corn oil in diets for tilapia *Oreochromis niloticus* (Linn): Effect on whole body fatty acids. *Aquaculture Research* **34**, 601 – 608.

Maina, J.G., Beames, R.M., Higgs, D., Iwama, G., Mbugua, P.N. and Kisia S. (2005). A Comparison of the Nutritional Quality of Kenya's omena fishmeal and LT. Anchovy fishmeal fed to tilapia *Oreochromis niloticus* (Linn). *Veterinary Journal* Vol. **29** (2005) 1-6.

Maina, J.G., Beames, R.M., Higgs, D., Mbugua, P.N., Iwama, G., and Kisia, S.M., (2007). The feeding value and protein quality in high-fibre and fibre-reduced sunflower cakes and Kenya's "omena" fishmeal for tilapia (*Oreochromis niloticus*) *Journal of Livestock Research for Rural Development* **19** (11) (Electronic journal).

Maina, J.G., Beames, R.M., Higgs, D., Iwama G., Mbugua, P.N. and Kisia S. (2007). Evaluation limiting amino acids in tilapia diets based on sunflower cake. Bulletin of Animal Health and Production. Vol **55** (3) 187-194.

PAPER ACCEPTED FOR PUBLICATION

Maina, J.G., Kamau, W.N., Kabuage, L.W. (2013). Evaluation of high levels of rice milling byproducts in chicken layer diets: effects on layer performance, egg quality and economic returns. Accepted by the Livestock Research for Rural Development journal – manuscript no. 30223main 27 (1)

PAPERS SUBMITTED AND PENDING PUBLICATION

Maina, J.G., Mbuthia, P.G., Ngugi, J., Omolo, B., Orina, P., Wangia, S.M., Karuri, E.G., Maitho, T., and Owiti, G. O. (2013). Effects of the Fish Farming Enterprise and Productivity Program on fish farming practices in mwea division, kirinyaga county, Kenya. Submitted to Veterinary journal.

Maina, J.G. (2013)
Fish Production: Current Status and Future trends in a changing climate
Submitted to Veterinary journal.

PAPERS PRESENTED IN CONFERENCES

Maina, J.G., Mbuthia, P.G., Ngugi, J., Omolo, B., Orina, P., Wangia, S. M., Karuri, E.G., Maitho, T., and Owiti, G. O. (2012). Effects of the fish farming enterprise and productivity program on fish farming practices in Mwea Division, Kirinyaga County, Kenya. In Proceedings of the Southern and Eastern African Association for Farming Systems Research-Extension (SEAAFSRE) in Pretoria, South Africa (19th – 21st November 2012).

Maina, J.G., Mbuthia, P.G., Karuri, E.G., Wangia, S.M and Ngugi, J. (2012). Effects of Economic stimulus program on fish production in Mwea Division of Kirinyaga County. Proceedings of the Joint Faculty of Veterinary Medicine 8th Biennial conference and 46th Kenya Veterinary Annual Scientific Conference at Safari Park on 25th – 27th April 2012.

Maina, J.G., Ambuko, J. L., Lopokoyit, M. and Cheminingwa, G.N. Teaching and learning approaches that promote the achievement of Vision 2030 for the Agriculture sector. Proceedings of the Joint Faculty of Veterinary Medicine 8th Biennial conference and 46th Kenya Veterinary Annual Scientific Conference at Safari Park on 25th - 27th April 2012.

Ambuko, J., Maina, J.G., Chemining'wa, G.N. , and Lopokoityit M. (2011). A Paradigm shift in Curricula Development Processes in Public Universities – Towards a responsive and participatory multi-stakeholder approach.

Proceedings of Agro-2011 Biennial Conference, Faculty of Agriculture, University of Nairobi, Kenya (26th – 28th September, 2011).

Cheminingw'a, G. N., Ambuko, J., Maina, J.G., Muiru, M.W. and Magomere, T. (2011). Strengthening Capacity of Local Universities to Promote and Teach Rural Innovation Processes. Proceedings of Agro-2011 Biennial Conference, Faculty of Agriculture, University of Nairobi, Nairobi, Kenya (26th – 28th September, 2011).

Waititu, S.M., Nyachoti, M., Maina, J.G., Slominski, B. A and Ochada J.O. (2011). Application of enzyme technology to improve the nutritive value of High-fibre feedstuffs for Non Ruminants. Proceedings of Agro-2011 Biennial Conference, Faculty of Agriculture, University of Nairobi, Nairobi, Kenya (26th – 28th September, 2011).

Njuguna, K.W., Kabuage, L.W., and Maina, J.G. (2011). Effects of substituting maize with rice-milling by-products in commercial layer chicken diets. Proceedings of Agro-2011 Biennial Conference, Faculty of Agriculture, University of Nairobi, Nairobi, Kenya (26th – 28th September, 2011).

Karimi, N., Wahome, R., and Maina, J., and Kuria P. (2011). Effects of Enzymes and Probiotics on growth performance and gastro-intestinal morphology in broiler chicken. Proceedings of the Agro-2011 Biennial Conference, Faculty of Agriculture, University of Nairobi, Kenya (26th – 28th September 2012).

Maina, J.G., and Ambuko, J.L. (2011) – Curriculum Development process at the University of Nairobi - Strengths and weaknesses. Proceedings of the International workshop on Interactive Learning Competency for Rural Innovation in Higher Education, Wageningen, Netherlands (7th – 25th February 2011).

Maina, J.G. (2010). Fish production, current status and future trends in a changing Climate. 7th Biennial Scientific Conference, Faculty of Veterinary medicine, University of Nairobi, Kabete, Nairobi, Kenya, 8th - 10th September 2010.

Maina, J. G., Gitonga and Justus (2010) – Visioning and strategic planning in Value Chains Development. A paper presented in the Multi stakeholder workshop held at Egerton University.

Maina, J.G., Kabuage, L.W. Owiti, C. (2007). The Challenges and Possibilities of integrating fish culture into rice and livestock farming at the Mwea Irrigation scheme in Kenya – Paper presented at the Annual Symposium of the Animal Production Society of Kenya, held in Mombasa on 13 – 15th March 2007.

Maina, J.G., Kabuage, L.W and Owiti C (2005). Integrating Fish Culture into rice farming at Mwea Irrigation Scheme in Kirinyaga District Phase 2: Choice of species,

stocking density and potential of local fish species to be used in the control of mosquito larvae – In Proceedings of the AICAD Final Reports Presentation Workshop at the Jomo Kenyatta University of Agriculture and Technology (12th – 14th September 2005).

Kabuage, L.W. and Maina, J.G. (2005). Assessment of Rice Based Feedstuffs for Poultry Production at Mwea Irrigation Scheme. In Proceedings of the African Institute for Capacity Development (AICAD) conference (12th – 14th September 2005) at Jomo Kenyatta Institute of Agriculture and Technology, Nairobi.

Maina, J.G., Beames, R.M., Higgs, D., Mbugua, P.N., Iwama, G., and Kisia S. (2002). The nutritional quality and feeding value of Kenya's omena fishmeal fed to tilapia *Oreochromis niloticus* (L). Paper presented at the Biennial Scientific Conference of the Faculty of Veterinary Medicine, College of Agriculture and Veterinary Sciences, University of Nairobi, 7th – 9th August 2002.

Maina, J.G., and Mwangi T.K. (2002). Current land tenure system and the feminization of poverty – the case of the Central Kenya highlands. Paper presented at the Biennial Scientific Conference of the Faculty of Veterinary Medicine, College of Agriculture and Veterinary Sciences, University of Nairobi, 7th – 9th August 2002.

Maina, J.G. (2002). Aquaculture in Kenya – Past Constraints and Future Prospects. Proceedings of the 2nd Scientific Conference of the Kenya Livestock Technologists Association (KELITA). 10th to 13th September 2002. Nairobi, Kenya.

Maina, J.G., Beames, R.M., Higgs, D., Iwama, G., Mbugua, P.N. and Kisia A. (2000). Digestibility, feeding value and limiting amino acids in high-fibre and fibre-reduced sunflower cake fed to tilapia *O. niloticus*. Proceedings of the Canadian Association of African Studies. Edmonton, Alberta, Canada (April 30th – May 4th 2000).

Maina, J.G., Mbugua P.N. and Mitaru B. (1992). Effect of Biotin supplementation in broiler chicken: Effect on growth, Feed Conversion Ratio, Hepatic lipid content and plasma biotin levels. In Proceedings of the Animal Production Society of Kenya, Egerton, Njoro. July 1992.

Maina, J.G. and Gichohi C.M. (1992). Poultry Production and Marketing in Kenya. In Proceedings of the All Africa Conference on Animal Agriculture. Nairobi, Kenya. November 1992.

Maina J.G. (1996). Fish Production Trends in Kenya. Proceedings of the Intensive Aquaculture Workshop. Shefayim, Israel, 9th March – 16th April 1996.

STUDENT SUPERVISION

Students who have completed

Njuguna Kamau (2008) (Msc, Animal Production)

Evaluation of rice milling by-products from Mwea Irrigation scheme in layer chicken diets.

Samuel Mwangi (2011) (Msc in Agricultural Biotechnology). Centre for Biotechnology and Bioinformatics, College of Biological and Physical Sciences, University of Nairobi.

Application of Enzyme Technology to Improve the Nutritive Value of High-Fibre feedstuffs for Non-Ruminants.

Lonita Manoa (2012) (Msc Animal Nutrition and Feed Science). College of Agriculture and Veterinary Sciences, University of Nairobi.

Evaluation of dry matter yields and silage quality of six sweet potato varieties

Students who have submitted thesis (Awaiting defence)

Dorcas Lusweti (Ph.D. Animal Genetics and Breeding)

Morphological and genetic variability of different stocks of Nile Perch (*Lates sp.*) of Lake Victoria in East Africa.

Harriet Karimi Njeru (Msc, Animal Nutrition and Feed Science)

Comparison of the effects of enzymes complex (alloenzymes) and Diamond V XPC on performance of broiler and layer chickens.

Ongoing students

Nicholas Ngwili (Msc. Livestock Production Systems)

Characterization of fish farming systems in Kiambu and Machakos counties, Kenya.

Amos Kiragu (Msc. Animal Nutrition and Feed Science)

Evaluation of Sweet Potato Silage in Pig Rations.

Evans Khatete (Msc, School of Biological sciences)

Evaluation of Protozoa and Helminth Parasites and Pathology in fish in aquaculture farms, Kisii County, Kenya.

Winnie Okumu (Msc, Center of Biotechnology and Bioformatics)

Nutrient Digestibility and Growth Performance of pigs fed diets containing steeped canola meal with or without enzyme supplementation.

Maureen Kubo Kipchirchir (Center of Biotechnology and Bioinformatics, School of Physical and Biological Sciences)

Effects of β -Mannanase On nutrient utilization and Performance of laying chicken.

Rezin Odede (Msc, Animal Nutrition and Feed Science)

Assessing the use of non-antibiotic growth promoters in chicken broiler production in Kenya.

Antonny Njiiru (Ph.D, Animal Nutrition)

Assessing the use of non-antibiotic growth promoters in chicken broiler production in Kenya

Evaluation of cereals and legumes forages for dry season feeding of ruminants animals in semi- arid areas of Kenya

RESEARCH PROJECTS

Completed Projects

- 1. Evaluating the Digestibility, Feeding Value and Limiting amino acids in High- fibre and Fibre-reduced Sunflower Cake fed to tilapia *O. niloticus*.**
Funded by Rockefeller Foundation through a competitive grant – The Sub-Saharan African Internship Dissertations Awards. (US \$ 29,000)
- 2. Integrating Fish culture into Rice and Livestock farming at Mwea Irrigation Scheme in Kirinyaga district (Contract number AICAD/RD-01).**
Funded by the Japanese International Co-operation Agency (JICA) through the African Institute for Capacity Development (AICAD). Approximate funding was One Million and Eight Hundred Thousand Kenya Shillings (1.8 Million).
- 3. Assessment of Rice Based Feedstuffs for Poultry Production in Mwea Division, Kirinyaga District –** Also funded by JICA through the African Institute for Capacity Development (AICAD). Approximate level of funding: (KSH.1.8 Million).

Ongoing Projects

- 1. Enhancement of a Sustainable Aquaculture Industry (UON – Grants (500-653-284).** Funded by the National Council of Science & Technology. Total funding is seven million Kenya Shillings for a period of three years (Ksh. 7 Million)
- 2. Participatory Development and Validation of Culture Models of Integrating Fish Polyculture and Livestock into Irrigated Ricefields to Enhance**

Competitiveness of Rice farming in Mwea, Kenya (RU/GRG/10/10-019) (US\$ 60,000)

Dr. Francis Kariuki of Kenyatta University is the Principle Investigator in this project while I am a collaborating researcher.

PARTICIPATION IN RECENT WORKSHOPS AND TRAININGS.

- International workshop on Sustainable Aquaculture in Southern and Eastern Africa at Aquaculture Research and Development Center, Kajjansi, Kampala, 5th – 8th February 2013.
- Southern and Eastern African Association for Farming Systems Research-Extension (SEAAFSRE) - Eleventh Regional Conference in Pretoria, South Africa, (19 – 21st November 2012)
- Policy Dialogue to Identify Areas of EU-AU Cooperation under *“Improved Technologies for Increasing Production in Crops, Livestock, Fisheries”* Workshop, 25th – 26th October 2012, Kibo Palace Hotel, Arusha, Tanzania.
- Outreach project planning and Review meeting organized by the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) in Entebbe, Uganda (19th – 21st March 2012).
- Developing Interactive Learning Competency for Rural Innovation in Higher Education in Wageningen, the Netherlands (7th – 25th February 2011).
- Academic Integrity and Excellence Training Workshop (5th – 6th May, 2011) at the Kenya Institute of Education, Nairobi, Kenya.
- Five workshops organized through the Edulink funded project on ‘Strengthening of university capacity for promoting, facilitating and teaching rural innovation processes’ between September 2008 and May 2009.
- NEPAD Universities Dialogue Meeting 28th – 31st July 2009, Accra, Ghana.
- Value Links, Introductory Training Seminar in Naivasha (Organized by GTZ, Kenya) 26th – 30th July 2010.
- Kenya Agricultural Productivity and Agri-business Project (KAPAP) Workshop to formulate Agricultural Products Value chain based Framework for Research Call. 15th – 19th September 2010 in Embu, Kenya.

- Gender Mainstreaming in Agricultural Research. (Asareca gender mainstreaming project of policy analysis and advocacy programme) Laico Regency, Nairobi. 23rd to 26th November 2010.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Animal Production Society of Kenya

- Was a Member of the Executive Committee between 1991 and 1993.
- Member of the organizing committee for the “All Africa Conference on Animal Agriculture”, held in Nairobi, Kenya, in 1993.

Kenya Professional Association of Women in Agriculture and Environment (KEPAWAE) – Ordinary member.

COMMUNITY SERVICE

- Member of the Board of Governors at **Mugoiri Girls High School** in Muranga district and previously served in the Board at **Moi Forces Academy**, Nairobi.
- Active member of “The Friends of Catholic University” (FOCUEA) organization. The Organization works under the University’s Development office to raise funds for the various development projects at the University, and raise bursary funds for needy students.
- Founder member of the Non-governmental Organization “Rural Pamoja Integrated Development Program”.

REFERENCES

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 & Veterinary Sciences,
 University of Nairobi.
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