

## CURRICULUM VITAE: DONALD RUGIRA KUGONZA

### BIO SKETCH

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Donald Rugira Kugonza is an Animal Scientist and Associate Professor; he holds a B.Sc. in Agriculture, M.Sc. in Agriculture (Animal Science), a first class MBA from Amity Business School (India) and a PhD from Makerere University in Uganda where he now lectures on Livestock and Poultry breeding; Animal Agriculture; Apiculture; Genetics (to undergraduates); Advances in Molecular genetics; and Advanced Animal breeding (to post-graduates).

Kugonza is the Chairman of the Advisory Committee of NARO's National Livestock Resources Research Institute (NaLIRRI); he is a Sub-editor of the South African Journal of Animal Science (SAJAS); a member of the Taxonomy Advisory Group (TAG) of the African Union-InterAfrican Bureau for Animal Resources (AU-IBAR); a member of the Governing Council of the Fisheries Training Institute (FTI), Entebbe; the Secretary of the Uganda Society of Animal Science (USAS), a Fellow of the Australia Awards Programme; and is a former vice-president of the World Youth Forum (WYF), then, a group of **130** member countries; as well as a former Fellow of the International Atomic Energy Agency (IAEA).

Since 2010 he has been an International Consultant on Animal Breeding. He recently won an award from the highly competitive "Africa-wide Young Professionals in Science" competition organized by CTA, FARA, IFS, RUFORUM, ANAFE, NEPAD, & AGRA for research on enhancing pig productivity in the Lake Victoria crescent zone. He is a seasoned researcher, having won **25** grants as lead scientist or collaborator, and is an acclaimed author with **4** professional books, **8** book chapters, **48** original peer-reviewed journal papers, and **54** peer-reviewed conference proceedings.

He has presented papers at **25** scientific conferences and been a Uganda delegate at other world events. His peer-reviewed publications have over **9643** reads, as well as having over **985** profile views from his Research Gate portal ([https://www.researchgate.net/profile/Donald\\_Kugonza/stats](https://www.researchgate.net/profile/Donald_Kugonza/stats)), making him "**the most read author**" in his department during the past year and accumulating **297** citations in Google Scholar (<https://scholar.google.com/citations?user=8yxmUV4AAAAJ&hl=en>). He is a scientific journal sub-editor and peer reviewer of journal papers, degree theses & grant research proposals. He has academically mentored scores of Ugandans and other world citizens, including supervision of **20** post-graduate students.

He has climbed Kigulya Hill, Uganda (**1988**), Mt. Kenya, Kenya (**1997**), Mt. Zion, Israel (**1998**), Uluguru Mountains, Tanzania (**1999**), Muhito Hill, Uganda (**2000**) Mt. Mgahinga, Uganda (**2013**), Mt. Kilimanjaro, Tanzania (**2014**) and Aberdare Ranges, Kenya (**2017**). His bucket still has Elgon, Kenya, Rwenzori and Everest. Since **1998**, is authorised to bear the title '*Jerusalem Pilgrim*'.

He continually helps farmer groups acquire skills in improved agricultural productivity and has worked with farmers in more than **40** Ugandan districts. Major research interests are in conservation and performance improvement of African Animal Genetic Resources, specifically he has worked with cattle, goats, pigs, cavies, honeybees and various poultry species. Quality evaluation of animal and bee products is also of much interest. He is married, has five children and can be contacted at the Department of Agricultural Production, School of Agricultural Sciences, College of Agricultural & Environmental Sciences, Makerere University, P.O. Box 7062, Kampala, Uganda. His Work Profile is at <http://goo.gl/IQXd3i>

**DONALD RUGIRA KUGONZA**

## PERSONAL DATA

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**Name:** KUGONZA Donald Rugira

**Sex:** Male; **Date of Birth:** 31<sup>st</sup> July 1973; **Nationality:** Ugandan

**Home:** Southern Ward, Kiryandongo Town Council, Kibanda County, Kiryandongo District.

**Work:** Department of Agricultural Production, School of Agricultural Sciences, College of Agricultural & Environmental Sciences, Makerere University, P .O. Box 7062, Kampala, Phone: +256-414-532269; Mobile: 256-782874551 E-mail:donkugonza@caes.mak.ac.ug

**Marital State:** Married, 4 children - Ashley (b. '02), Angel (b. '04), Alex (b. '08), Alvin (b. '16).

## ACADEMIC QUALIFICATIONS

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2003-08 Makerere University: PhD (Agriculture - Animal breeding & molecular genetics)

Thesis title: “*Genetic diversity, husbandry, selection criteria and verification of kinship assignment of Ankole cattle populations in Uganda*”

1997-01 Makerere University: M.Sc. Agriculture (Animal Science) (by Coursework and thesis)

Dissertation title: “*Studies on phenotypic response to population screening criteria of indigenous meat goats in the field in Uganda and their genetic implication*”

2014-16 Amity Business School – Amity University (India): Master of Business Administration – International Business (First Class) (by Tele-conference, Coursework and Dissertation)

Dissertation title: “*Enhancing performance appraisal and feedback in tertiary education institutions: The case of two colleges at Makerere University*”

1992-96 Makerere University: B.Sc. Agriculture (Honours) Second Upper Division.

Dissertation title: “*The effects of pregnancy concurrent with lactation on performance of sows and their progeny*”

1990-92 St. Mary’s College Kisubi: Uganda Advanced Certificate of Education - Three Principals.

1986-89 Kabalega Secondary School: Uganda Certificate of Education - First Division.

## AWARDS & FELLOWSHIPS

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2015 2<sup>nd</sup> International Congress Hidden Hunger Scholarship.

2014 6<sup>th</sup> All Africa Conference on Animal Agriculture Scholarship by AASAP

2013 3rd Africa-wide Young Professionals in Science Award (by a Consortium).

2013 Visiting Scientist Fellowship, Iowa State University, College of Agric. & Life Sciences.

2012 TWAS (Academy of Sciences for the Developing World) Young Affiliate Nominee.

2010 Best Exhibitor Award (Institutions Category), The National Agricultural Show, Uganda.

2004 International Atomic Energy Agency (IAEA) Fellowship (UGA/03020).

2003-08: PhD Tuition and Research Scholarship (by NORAD).

1997-00: M.Sc. Scholarship (by DANIDA ENRECA).

1992-96: B.Sc. Agriculture Scholarship (by Government of Uganda).

## **MEMBERSHIP TO STATUTORY BOARDS & COMMITTEES**

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1. **2014-Todate:** Chairman, Advisory Committee of the National Livestock Resources Research Institute (NaLIRRI) – National Agricultural Research Organisation (NARO)
2. **2015–Todate:** Member, Advisory Group Network of the African Youth Movement – Committee on Agriculture, Technology and Economy
3. **2015-Todate:** Member, Taxonomy Advisory Group for AnGR of the African Union -InterAfrica Bureau for Animal Resources (AU-IBAR)
4. **2015-Todate:** Governing Council Member, Fisheries Training Institute, Entebbe, Uganda
5. **2012-Todate:** Secretary, Uganda Society of Animal Science (USAS), Uganda
6. **2014-Todate:** Member, Makerere University Agricultural Research Institute Kabanyolo (MUARIK) Policy Committee, Makerere University
7. **2009-2012:** Member, Anti-sexual Harassment Committee, Makerere University

## **MEMBERSHIP TO PROFESSIONAL BODIES**

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- i) Association of Uganda Professional Agriculturalists (ASUPA) – Member
- ii) Africa Society of Animal Production (AASAP) – Member
- iii) Domestic Animal Diversity Network (DAD-Net (hosted by FAO) – Member
- iv) Forum for Agricultural Research in Africa (FARA) – Member
- v) International Society of Animal Genetics (ISAG) – Member
- vi) Makerere University Convocation (MUC) – Member
- vii) The Uganda National Apiary Development Organisation (TUNADO) – Member
- viii) The Uganda Society – Member
- ix) Uganda Goat Network (UGONET – Founder Member) – Member
- x) Uganda National Academy of Sciences (UNAS) – Young Member
- xi) Uganda Society of Animal Science (USAS) – Secretary (Ag.)
- xii) World Association of Animal Production (WAAP) – Member
- xiii) South Africa Society of Animal Science (SASAS) – Journal Sub-Editor

## **TEACHING ABILITY AND EXPERIENCE**

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2015-To date: Associate Professor, Department of Agricultural Production (formerly Animal Science), Makerere University. Conduct lectures and research: ANS1101 Introduction to Animal Agriculture, ANX1101 Introduction to Animal Agriculture (for External students),

CC1201 Animal Science Skills, ANS3201 Apiculture, ANS4108 Livestock & Poultry Breeding, DAG 1205 Livestock Breeding, DAG1204 Beekeeping and Fish Farming, ANS7207 Advances in Molecular Genetics, ANS7201 Advanced Animal Breeding.

2010–Sept 2015: Senior Lecturer, Department of Agricultural Production (formerly Animal Science), Makerere University. Conduct lectures and research: ANS1101 Introduction to Animal Agriculture, CC1201 Animal Science Skills, ANS3201 Apiculture, ANS4108 Livestock & Poultry Breeding, DAG 1205 Livestock Breeding, DAG1204 Beekeeping and Fish Farming, ANS7207 Advances in Molecular Genetics, ANS7201 Advanced Animal Breeding.

2004–Sept 2010: Assistant Lecturer, Animal Science Department, Makerere University

Duties: Conduct lectures and research: ANS1101 Introduction to Animal Agriculture, CC1201 Animal Science Practical Skills, ANS3201 Apiculture, ANS4101 Livestock & Poultry Breeding Methods, BLT 215 Breeding & Gene Bank Technology, DAG 2104 Beekeeping, ANS7201 Advanced Animal Breeding

2000–Sept 2004: Temporary Assistant Lecturer, Animal Science Dept. Makerere University, ANS 101 Molecular Biology, CC1201 Animal Science Practical Skills, ANS3201 Apiculture, ANS4101 Animal Breeding.

1997–Sept 2000: Assistant Lecturer, Animal Science Department, Makerere University: Animal Science for Year 1 Recess term; Cyto-molecular Biology, Animal Feeds and Feeding, Animal Nutrition, Apiculture

## ORIGINAL JOURNAL ARTICLES

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### 2017

1. Hirwa, C.D., **Kugonza, D.R.**, Amahoro, E., Ingabire, C., Niyiragira, V., Myambi, C., Manzi, M., Murekezi, T., Nyabinwa, P., Nshimiyimana, A.M., Kanyandekwe, C. & Gahakwa, D. Influence of Breed, Season and Age on Bovine Semen quality. *International Journal of Livestock Production*, 8(6): 72–78.
2. Ojango, J.M.K., Mrode, R., Okeyo, A.M., Rege, J.E.O., Chagunda, M.G.G. and **Kugonza, D.R.** **2017**. Improving Smallholder Dairy Farming in Africa. (Chapter 38). In: Belzen, N. van. (Ed.). Achieving Sustainable Production of Milk Vol. 2: Safety, Quality and Sustainability. Cambridge, UK: Burleigh Dodds Science Publishing Limited.
3. Philipsson, J., Zonabend, E.K., Strandberg, E., Albiñ, A., Atkisson, A., Chagunda, M., Frid, G., **Kugonza, D.R.**, Okeyo, M., Ojango, J. and Peters, K.J. **2017**. Sustainable Agricultural Production & Food Security: Use of Livestock Resources for Food Security in the Light of Climate Change. Swedish International Agricultural Network Initiative (Siani) & Slu Global. Uppsala, Sweden. 4 pp.
4. **Kugonza, D.R.**, Lubandi, C., Kirembe, G., Taabu, H.L., Mugala, L.K. and Lusembo, P. Enhancing pig productivity in Lake Victoria crescent zone through genotype and post-weaning diet interventions (*CABI Book - in Press*).
5. **Kugonza, D.R.**, Hirwa, C.A., Rwemalika, D., Mayigane, L.N., Safari, S., Kayitesi, A. & Gahakwa, D. Kuroiler chickens: A New chicken ecotype for Rwanda, its growth and Survival performance under Restricted Range Conditions (*CABI Book - in Press*).
6. Hirwa, C.D., **Kugonza, D.R.**, Manzi, M., Murekezi, T., Nyabinwa, P., Semahoro, F., Rwemalika, D., Nshimiyimana, A.M. & Gahakwa, D. Efficacy of Progesterone Releasing Intra-vaginal Device (PRID) in pure Ankole cattle and crossbreds with three exotic breeds (*CABI Book - in Press*).
7. Mwiza, W.K., **Kugonza, D.R.** & Mutimura, M. Growth performance of *Cavia porcellus* (Guinea pig) under Intensive feeding Regime (*CABI Book - in Press*).

8. Ntirugulirwa, B., Gakwerere, E., Mwiza, W.K. & **Kugonza, D.R.** Comparative yield of Honey for Two locations in Ruhande Arboretum Across Twelve months (*CABI Book - in Press*).

## **2016**

9. Nabiky, J.R. and **Kugonza, D.R.** 2016. Profitability analysis of selected piggery businesses in peri-urban communities of Kampala Uganda. *Livestock Research for Rural Development*, 28(5): 1–10.
10. Kayitesi, A., Nakkazi, C., **Kugonza, D.R.**, Okot, M.W. and Mulindwa, H. 2016. Local chicken production in northern Uganda: Breeding practices and flock productivity. In: *Research Application Summary* pp. 291–292.

## **2015**

11. **Kugonza, D.R.**, Lubandi, C., Kirembe, G., Taabu, H.L. and Lusembo, P. 2015. Effect of genotype and post-weaning diet in enhancing pig production within Lake Victoria crescent in Uganda. *Agricultural Innovations for Sustainable Development*, 4(3): 296–304.
12. Nakkazi, C., **Kugonza, D.R.**, Kayitesi, A., Mulindwa, H. and Okot M.W. 2015. The effect of diet and feeding system on the on-farm performance of local chickens during the early growth phase. *Livestock Research for Rural Development*, 27(10): 1–11.
13. Semakula, J., Lusembo, P., Mwesigwa, M., Ssenyonjo, J., Lumu, R., **Kugonza, D.R.** and Mutetikka, D. 2015. Infectious causes of mortality in smallholder mature scavenging chicken in central Uganda. *Livestock Research for Rural Development*, 27(4): 1–8.

## **2014**

14. **Kugonza, D.R.**, Stalder, K. and Rothschild, M.F. 2014. Effect of buck and doe size on the growth performance and survival of their progeny. *Livestock Research for Rural Development*, 26(3):1–8.
15. Nakkazi, C., Kayitesi, A., Mulindwa, H., **Kugonza, D.R.** and Okot, M.W. 2014. The status of local chicken (*Gallus domesticus*) production in Northern Uganda. *Livestock Research for Rural Development*, 26(11): 1–9.
16. Kabugo, S., Mutetikka, D., Mwesigwa, R., Beyihayo, G.A. & **Kugonza, D.R.** 2014. Utilisation of brewers' yeast as a substitute for fish meal in diets of growing pigs. *African Journal of Agricultural Science and Technology*, 2(5): 116–121.

## **2013**

17. **Kugonza, D.R.**, Kayitesi, A., Semahoro, F., Ingabire, D., Manzi, M., Hirwa, C.A. and Gahakwa, D. 2013. Factors affecting suitability of surrogate dams for embryo transfer in cattle. *Journal of Animal Science Advances*, 3(4):203–210.
18. Musoni, A., **Kugonza, D.R.** and Gahakwa, D. 2013. Do neighbours of agricultural research stations learn anything from them: the case of Rubona station, Rwanda. *Livestock Research for Rural Development*, 25(11): 1–9.
19. Mwesigwa, R., Mutetikka, D. and **Kugonza, D.R.** 2013. Performance of growing pigs fed diets based on by-products of maize and wheat processing. *Tropical Animal Health and Production*, 45(2): 441–446.
20. Kagoya, T., Natukunda, K. and **Kugonza, D.R.** 2013. Profitability of smallholder dairy cattle farming in, the Kamuli plains of Eastern Uganda. *Agricultural Journal*, 8(5): 248–255.

21. Mwesigwa, R., Mutetikka, D., Kabugo, S., and **Kugonza, D.R.** 2013. Varying levels of wheat processing by-products in diets for growing pigs: effect on growth and carcass traits. *Tropical Animal Health and Production*, 45(8): 1745–1749.
22. Manzi, M., Mutabazi, J., Hirwa, C.D. and **Kugonza, D.R.** 2013. Socio-economic assessment of indigenous goat production systems in rural areas of Bugesera district in Rwanda. *Livestock Research for Rural Development*, 25(11): 1–8.
23. Bett, R.C., Okeyo, A.M., Malmfors, B., Johansson, K., Agaba, M., **Kugonza, D.R.**, Bhuiyan, A.F.K., Filho, E.V., Mariante, A., Mujibi, D. and Philipsson, J. 2013. Cattle breeds: Extinction or Quasi-extant? *Resources*, 2: 335–357.

## **2012**

24. **Kugonza, D.R.**, Kiwuwa, G.H., Mpairwe, D., Jianlin, H., Nabasirye, M., Okeyo, A.M. and Hanotte, O. 2012. Accuracy of pastoralists' memory based kinship assignment of Ankole cattle: a microsatellite DNA analysis. *Journal of Animal Breeding and Genetics*, 129: 30–40.
25. **Kugonza, D.R.**, Nabasirye, M., Hanotte, O., Mpairwe, D. and Okeyo, A.M. 2012. Pastoralists' indigenous selection criteria and other breeding practices of the long-horned Ankole cattle in Uganda. *Tropical Animal Health and Production*, 44(3): 557–565.
26. **Kugonza, D.R.**, Kirembe, G., Tomusange-Nvule, E., Lutalo, D. and Drani, E. 2012. Experimental validation of farmer innovations in incubation and brooding management of chickens. *Livestock Research for Rural Development*, 24(5): 1-7.
27. Nabasirye, M., **Kugonza, D.R.** and Mpairwe, D. 2012. Population structure and dynamics of Ankole cattle in Uganda: Implications for sustainable utilisation of the breed. *African Journal of Agricultural Research*, 7(34): 4819–4829.
28. Magala, H., **Kugonza, D.R.**, Kwizera, H. and Kyarisiima, C.C. 2012. Influence of management system on growth and carcass characteristics of Ugandan local chickens. *Journal of Animal Science Advances*, 2(6): 558–567.
29. Magala, H., **Kugonza, D.R.**, Kwizera, H. and Kyarisiima, C.C. 2012. Influence of varying dietary energy and protein on growth and carcass characteristics of Ugandan local chickens. *Journal of Animal Production Advances* **2(7)**: 316–324.
30. Mujuni, A. Natukunda, K. and **Kugonza, D.R.** 2012. Factors affecting the adoption of beekeeping and associated technologies in Bushenyi district. *Livestock Research for Rural Development*, 24(8):1-16.

## **2011**

31. **Kugonza, D.R.**, Nabasirye, M., Mpairwe, D., Hanotte, O. and Okeyo, A.M. 2011. Productivity and morphology of Ankole cattle in three livestock production systems in Uganda. *Animal Genetic Resources*, 48: 13–22.
32. **Kugonza, D.R.**, Jianlin, H., Nabasirye, M., Mpairwe, D., Kiwuwa, G.H., Okeyo, A.M. and Hanotte, O. 2011. Genetic diversity and differentiation of Ankole cattle populations in Uganda inferred from microsatellite data. *Livestock Science*, 135: 140–147.
33. Natukunda, K., **Kugonza, D.R.** and Kyarisiima, C.C. 2011. Indigenous chickens of the Kamuli Plains in Uganda: I. Production system and flock dynamics. *Livestock Research for Rural Development*, 23(10): 1-13.

34. Natukunda, K., **Kugonza, D.R.** and Kyarisiima, C.C. 2011. Indigenous chickens of the Kamuli Plains in Uganda: II. Factors affecting their marketing and profitability. *Livestock Research for Rural Development*, 23(10): 1-8.
35. Kyarisiima, C.C., Nagujja, F.A., Magala, H., Kwizera, H., **Kugonza, D.R.** and Bonabana-Wabbi, J. 2011. Perceived tastes and preferences of chicken meat in Uganda. *Livestock Research for Rural Development*, 23(11): 1-7.
36. Semakula, J., Lusembo, P., **Kugonza, D.R.**, Mutetikka, D., Ssenyonjo, J. and Mwesigwa, M. 2011. Estimation of live body weight using zoometrical measurements for improved marketing of indigenous chicken in the Lake Victoria basin of Uganda. *Livestock Research for Rural Development*, 23(8): 1-8.

## **2010**

37. Semakula, J., Mutetikka, D., **Kugonza, D.R.** and Mpairwe, D. 2010. Variability in body morphometric measurements and their application in predicting live body weight of Mubende and Small East African goat breeds in Uganda. *Middle-East Journal of Scientific Research*, 5(2): 98–105.
38. Semakula, J., Mutetikka, D., **Kugonza, D.R.** and Mpairwe, D. 2010. Smallholder goat breeding systems in humid, sub-humid and semi arid agro-ecological zones of Uganda. *Global Veterinarian*, 4(3): 283–291.
39. Semakula, J., Mutetikka, D., **Kugonza, D.R.** and Mpairwe, D. 2010. Comparison of breeding systems by smallholder goat keepers in the humid sub-humid and semi arid agro-ecological zones of Uganda. *Agricultural Journal*, 5(2): 89–97.
40. Emuron, N., Magala, H., Kyazze, F.B., **Kugonza, D.R.** and Kyarisiima, C.C. 2010. Factors influencing the trade of local chickens in Kampala city markets. *Livestock Research for Rural Development*, 22(4): 1-12.

## **2009**

41. **Kugonza, D.R.**, Kamatara, K.B., Nabakabya, D. and Kikonyogo, S. 2009. Effects of hive type and tree shade on colonization rate and pest prevalence of honeybee (*Apis Mellifera*) colonies in Central Uganda. *Africa Journal of Animal and Biomedical Sciences*, 4(2): 87–92.

## **2008**

42. **Kugonza, D.R.** and Nabakabya, D. 2008. Honey quality as affected by handling, processing and marketing channels. *Tropicicultura*, 26(2): 113–118.
43. **Kugonza, D.R.**, Kyarisiima, C.C. and Iisa, A. 2008. Indigenous chicken flocks of Eastern Uganda: I. Productivity, management and strategies for better performance. *Livestock Research for Rural Development*, 20(9): 1-8.
44. Natumanya, R., Owiny, D. and **Kugonza, D.R.** 2008. The potential of Ankole cattle abattoir ovaries for *in vitro* embryo production. *African Journal of Animal and Biomedical Sciences*, 3(1): 1–5.

## **2005**

45. **Kugonza, D.R.** and Mutetikka, D. 2005. Weaning strategies for improving the performance of sows and their progenies under smallholder farm conditions. *South African Journal of Animal Science*, 35(4): 244–248.

## **2004**

46. Kyarisiima, C.C., **Kugonza, D.R.** and Twesigye, C. 2004. The Potential Role of Ugandan Indigenous chicken in poverty alleviation. *The Uganda Journal*, 50: 85–90.

## **2001**

47. **Kugonza, D.R.**, Bareeba, F.B. and Petersen, P.H. 2001. Response to phenotypic screening of Mubende meat goats. *MUARIK Bulletin*, 4: 18–24.
48. **Kugonza, D.R.**, Bareeba, F.B. and Kirembe, G. 2001. Characterisation of meat goat management systems in three districts of central Uganda. *MUARIK Bulletin*, 4: 26–29.

## **BOOKS AND BOOK CHAPTERS**

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49. **Kugonza, D.R.** 2014. Ring-fence budgets for agricultural research. In: Life Stories of African Women and Young Professionals in Science. CTA/IFS, pp. 30-31.
50. **Kugonza, D.R.** 2013. Apiculture and Food security. In: Mukungurutse, C., Mbeye, N., Zhang, Y. and Liu, D. (Eds). Sustainable agriculture and food security: National and Global perspectives. International Rural Development (IRD) Matters. Spring 2013 Edition. Royal Agricultural College, Gloucestershire, UK. 36 pp.
51. **Kugonza, D.R.** 2009. Beekeeping: Theory and Practice. Fountain Improved Farming Series. Farming Guide 8. Fountain Publishers, Kampala. 282 pages. ISBN: 978-9970-02-965-5.
52. Mutetikka, D. and **Kugonza, D.R.** 2009. Okuganyulwa mu Bulunzi bw’Embizzi (*How to benefit from piggery business*). Fountain Improved Farming Series. Farming Guide 11. Fountain Publishers, Kampala. 39 pages. ISBN: 978-9970-02-967-9.
53. Nonnecke, G., McMillan, D., **Kugonza, D.R.** and Masinde, D. 2015. Leaving the Door Open to New Beneficiaries. (Chapter 7). In: Butler, L.M. and McMillan, D.E. (Eds.). Tapping Philanthropy for Development: Lessons Learned from a Public-Private Partnership in Rural Uganda. Kumarin Press, Lynne Rienner Publishers, 250 pages. ISBN: 978-1-62637-194-1.
54. Lutalo, R., Tomusange-Nvule, E., Kirembe, G., **Kugonza, D.R.**, Lutalo, S. and Critchley, W. 2010. Trying out joint experimentation in poultry farming in Uganda: an experiment in itself. (Chapter 10) In: Wettasinha, C. and Waters-Bayer, A. (Eds). *Farmer-led joint research: Experiences of PROLINNOVA partners*. Silang, Cavite, Philippines: IIRR/Leusden, ETC EcoCulture. pp. 64–69.
55. Oluka, J., Sorensen, P. and **Kugonza, D.R.** 2006. Studies on adult body size and its effects on pre-weaning kid weight of Mubende goats in Uganda–Population screening. (Chapter 3) In: On-farm comparative performance evaluation of selected indigenous, exotic and crossbred goat populations in Uganda. *The Royal Veterinary & Agricultural University, Copenhagen, Denmark*, pp. 61–82.
56. **Kugonza, D.R.** 2010. Beekeeping Simplified: 600 Questions and Answers on Tropical Beekeeping. Lambert Academic Publishing. Saarbrücken, Germany. 78 pages.

## **REFERRED CONFERENCE PROCEEDINGS**

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### **2016**

57. **Kugonza, D.R.**, Bamundaga, G.K., Katongole, I., Natumanya, R., Mwesigwa, R. & Kirembe, G. 2016. Enhancing Pig Productivity in Uganda through Novel Piglet Diets and Artificial



Insemination Technologies. National Agricultural Research Organisation–Makerere University Joint Agricultural Dissemination Conference. Theme: “*Agricultural Research and Innovations for Socio-economic Transformation*”. November, 21-24, 2016, Speke Resort Hotel Munyonyo, Kampala, Uganda.

58. Bamundaga, G.K., Natumanya, R., Owiny, D.O., **Kugonza, D.R.**, Mwesigwa, R., Kirembe, G. & Katongole, I. 2016. Reproductive performance of single and double artificial insemination protocol in swine. National Agricultural Research Organisation-Makerere University Joint Agricultural Dissemination Conference. Theme: “*Agricultural Research and Innovations for Socio-economic Transformation*”. November, 21-24, 2016, Speke Resort Hotel Munyonyo, Kampala, Uganda.
59. Katongole, I., **Kugonza, D.R.**, Natumanya, R., Okello, S., Bamundaga, G.K., Kirembe, G. & Mwesigwa, R. 2016. Assessment of the current piglet nutrition options in Wakiso and Kabarole districts of Uganda. National Agricultural Research Organisation-Makerere University Joint Agricultural Dissemination Conference. Theme: “*Agricultural Research and Innovations for Socio-economic Transformation*”. November, 21-24, 2016, Speke Resort Hotel Munyonyo, Kampala, Uganda.
60. Semahoro, F., **Kugonza, D.R.**, Babigumira, B.M., Nadiope, G., Okot, M.W. 2016. Breeding practices and selection criteria of indigenous chickens in eastern and western Uganda. 5<sup>th</sup> African Higher Education Week & RUFORUM Biennial Conference. October, 17–21, 2016, Century City Conference Centre, Cape Town, South Africa.
61. Namayanja, D., Akol, A.M. & **Kugonza, D.R.** 2016. Prevalence of Varroa mite infestations among honey bee colonies in Uganda. 5<sup>th</sup> African Higher Education Week & RUFORUM Biennial Conference. October, 17–21, 2016, Century City Conference Centre, Cape Town, South Africa.
62. Agaba, A., Akol, A.M. & **Kugonza, D.R.** 2016. Prevalence of Small Hive Beetle (Coleoptera: Nitidulidae) in selected Agroecological zones in Uganda. 5<sup>th</sup> African Higher Education Week & RUFORUM Biennial Conference. October, 17–21, 2016, Century City Conference Centre, Cape Town, South Africa.
63. Lubandi, C., Lwasa, S., **Kugonza, D.R.**, Babigumira, B.M, Nadiope, G. & Okot, M.W. 2016. Resource flow and marketing of indigenous chickens in Uganda. 5<sup>th</sup> African Higher Education Week & RUFORUM Biennial Conference. October, 17–21, 2016, Century City Conference Centre, Cape Town, South Africa.
64. Aryemo, I.P., Kule, E., **Kugonza, D.R.**, Okot, M.W. & Mugonola, B. 2016. Extent of commercialization of indigenous chicken production in Northern Uganda. 5<sup>th</sup> African Higher Education Week & RUFORUM Biennial Conference. October, 17–21, 2016, Century City Conference Centre, Cape Town, South Africa.
65. Akite, I., Mugonola, B., Okot, M.W., **Kugonza, D.R.** & Kule, E. 2016. Gender participation in the local chicken value chain in northern Uganda. 5<sup>th</sup> African Higher Education Week & RUFORUM Biennial Conference. October, 17–21, 2016, Century City Conference Centre, Cape Town, South Africa.
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- 101. Kugonza, D.R.,** Kirembe, G., Tomusange, E., Mulindwa, P., Namussu, R., Lutalo, D. & Drani, E. 2006. Confined incubation and brooding as strategies for improving smallholder rural poultry productivity: An on-farm evaluation of a farmer's innovations. *9<sup>th</sup> Annual Graduate Workshop of the Faculty of Agriculture, Makerere University* (MUARIK, Uganda) *Proceedings*, 9: 14–15.

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- 104. Kugonza, D.R.,** Mugumya, R., Nabakabya, D., Musooli, D., Odong, M., Aicha, D.P. & Mugala, L. 2005. Honey quality as affected by handling, processing, channels of marketing and other constraints to beekeeping. *39<sup>th</sup> International Apicultural Congress (Apimondia)* *Proceedings* (Dublin, Ireland). 39: 25.
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- 111. Acker, D., de Balogh, K., Kugonza, D.R.,** Nonnecke, G., Arganbright, E. A Fresh Look at the Role of Agricultural Education in Improving Food Security Through Rural Primary Schools with Special Reference to the Case of Namasagali Primary School in Kamuli District, Uganda
- 112. Kugonza, D.R.,** Kyarisiima, C.C. and Iisa, A. Indigenous chicken flocks of Eastern Uganda: II. Phenotypic characterization of some qualitative traits. (Submitted to *Makerere University Research Journal*).
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- 116. Kugonza, D.R.,** Lusembo P., Taabu H.L., Mutetikka D., Kirembe G. Mugala L., Ssenyonjo J.M. & Lumu R. **2010.** Enhancing smallholder pig productivity through efficient utilisation of local feed and elite pig resources in the Lake Victoria crescent. Final Project Report, National Agricultural Research Organisation (NARO), Entebbe, Uganda. 48 pp.
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production of honey and other hive products in Uganda. Final Project Report. National Agricultural Research Organisation (NARO), Entebbe, Uganda. 51 pp.

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131. Kiyingi, Y. and **Kugonza, D.R.** Willingness to pay for cattle insurance by smallholder dairy farmers in Urban and peri-urban areas of Kampala City, Uganda.
132. Bayo, J., and **Kugonza, D.R.** Characterisation of feed resources and feeding practices of pigs under two production systems.
133. Mwiza, W.K., Kanyandekwe, C., Nshimiyimana, A.M., Mukamurenzi, E. & **Kugonza, D.R.** Evaluation of three Varroacides in Honeybee *Apis mellifera* (Hymenoptera: Apidae) colonies in Rwanda.
134. Masaba, J.W.K., **Kugonza, D.R.**, Mpairwe, D., Oluka, J. Productivity and morphology of Nganda and Teso cattle in three livestock production systems in Uganda

135. Masaba, J.W.K., **Kugonza, D.R.**, Mpairwe, D., Oluka, J. Characterisation and initiation of a community-based breeding scheme: The case of Nganda cattle, Uganda
136. Mutetikka, D., **Kugonza, D.R.**, Katongole, I., Abaijuka, I. and Anguyo, I. Management practices, performance indices and constraints of smallholder free range poultry production in N.W. Uganda.
137. Kyeyune-Kukeera, D. and **Kugonza, D.R.** Factors that influence fresh water quality in peri-urban areas of an African city: the case of Kampala, Uganda.

## PEER REVIEWED INSTRUCTIONAL STUDY MATERIALS DEVELOPED AND IN USE

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## RESEARCH PROJECTS UNDERTAKEN

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1. **2017-2018**: Improvement of Pig Productivity through Diversification of Piglet Nutrition Options and Up Scaling of Pig Artificial Insemination in Uganda:- *Establishing Boar Semen Centres & Database For Commercializing Liquid Boar Semen In Uganda* - CGS/2/16/14: Funded by NARO-CGS. Grant No: CGS/2/16/14. Grant Amount: UGX 170,120,000. ***Principal Investigator.***
2. **2015-2017**: Incorporating Climate Smart and Fast Growth Traits to Transform the Local Chicken Value Chain in Uganda (SMART-CHICKENS). Funded by RUFORUM. Grant No: RU-2015-GRG-122. Grant Amount: USD59,998. ***Principal Investigator.***
3. **2015-2017**: Enhancing Production and Incomes in the Honey Value Chain through Addressing the Challenges of Pests and Parasites of Honeybees in Uganda (BEE HEALTH). Funded by RUFORUM. Grant No: RU-2015-GRG-123. Grant Amount: USD60,000. ***Collaborator.***
4. **2015-2017**: Enhancing Commercial Production and Marketing of Local Chickens in Northern Uganda through Innovation Platforms (ECOPROMALI). Funded by RUFORUM, Grant No: RU-2015-GRG-119. Grant Amount: USD59,900. ***Collaborator.***
5. **2014-2016**: Improving Pig Productivity through Diversifying Piglet Nutrition Options and Up Scaling of Pig Artificial Insemination in Uganda (DIVERSE-PIG). Funded by NARO-CGS. Grant No: CGS/2/16/14. Grant Amount: USD89,005. ***Principal Investigator.***
6. **2012-2014**: Enhancing Local Chicken Productivity through Strategic Breeding and Nutrition Management in Northern Uganda (ELOCHIP). Funded by RUFORUM. Grant No: RU-CGS-GRG-30-9-11. Grant Amount: USD59,999. ***Co-PI.***
7. **2010-2013**: Participatory Development of the Strategies for Improving Kid Survivability amongst Goats of All Genotypes in the Extensive Production System of South-Western Uganda. Funded by NARO-CGS. Grant Amount: USD90,000. ***Collaborator.***
8. **2010-2013**: Genomic Selection of Indigenous Chickens and Goats of Uganda. Funded by NARO. ***Collaborator.***



9. **2010-2014:** Integration of Efficient Chicken Management Strategies and Commercial Production into the Cash Economy of Smallholder Farmers in Lake Victoria Crescent Zone. Funded by NARO. Grant Amount: USD 150,000. Collaborator.
10. **2010-2012:** Influence of Management System on Growth and Carcass Characteristics of Ugandan Local Chickens. Funded by Carnegie Corporation. Grant Amount: USD30,000. Collaborator.
11. **2009-2011:** Testing and Validation of Breed Survey Methodology, Socio-Economic Survey and Characterization of Selected Indigenous Cattle of Eastern and Central Africa. Funded by ASARECA. Grant Amount: USD163,000. Co- Principal Investigator.
12. **2009-2011:** Development of an Improved Protocol for Processing and Handling of Honey in Uganda. Funded by Carnegie Corporation. Grant Amount: USD30,000. Collaborator.
13. **2008–2010:** Enhancing Smallholder Pig Productivity Through Efficient Utilisation of Local Feed and Elite Pig Resources in the Lake Victoria Crescent. Funded by NARO-CGS. Grant Amount: USD55,000. Principal Investigator.
14. **2007-2009:** Increasing Smallholder Pig Productivity: Integrated Approaches To Breeding, Feeding and Control of African Swine Fever. Funded by NARO-CGS. Grant Amount: USD90,000. Collaborator.
15. **2007-2009:** Socio-economic Impact Assessment of Goat Productivity Interventions and the Use of Innovative and Participatory Breeding Approaches in Uganda. Funded by NARO-CGS. Grant Amount: USD90,000. Collaborator.
16. **2007-2009:** Development of Honeybee Pest and Disease Control Methods to Improve the Quality of Honey and Other Hive Products in Uganda. Funded by NARO-CGS. Grant Amount: USD90,000. Collaborator.
17. **2008-2009:** Analysis of the Production and Marketing Channels of Local Chickens and Their Products in Central Uganda. Funded by NURRU. Grant Amount: USD2,500. Collaborator.
18. **2002-2008:** Genetic Polymorphism, Pedigree Relationships and Selection Criteria of Ankole Cattle Populations of Uganda. Funded by NORAD. Grant Amount: USD400,000. Collaborator.
19. **2007-2008:** Improving Free Range Poultry Productivity in the North Western Zone. Funded by NARO-CGS. Grant Amount: USD50,000. Collaborator.
20. **2006-2008:** Suckling Management and Feeding Strategies of Sows and Their Litters in an Integrated Pig and Crop Production System on Smallholder Pig Farms. Funded by AICAD. Grant Amount: USD10,000. Co-PI.
21. **2004-2005:** Farmer Innovation in Incubation and Brooding on Smallholder Chicken Productivity: An On-Farm Evaluation in Wakiso district. Funded by ProLINNOVA/CDRN. Grant Amount: USD2,500. Principal Investigator.
22. **2004-2005:** Exploration of Honey, Wax and Propolis Productivity in Central Uganda. Funded by Sida/SAREC. Grant Amount: USD3,911. Principal Investigator.
23. **2004-2005:** Weaning Strategies for Improving the Performance of Sows and Their Progenies Under Smallholder Conditions. Funded by Sida/SAREC. Grant Amount: USD3,505. Principal Investigator.
24. **1998–2001:** Studies on Phenotypic Response to Population Screening Criteria of Indigenous Meat Goats in the Field in Uganda. (DANIDA-ENRECA funded; *I was an M.Sc. Student*).

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#### **SUPERVISION OF GRADUATE STUDENTS’ RESEARCH: PhD**

1. Natumanya, Robert. 2014/HD17/18705U. Evaluation of Fresh and Cryopreserved Boar Semen of Community Based Breeding Schemes. PhD., Makerere University – *Doing research*)

## **SUPERVISION OF GRADUATE STUDENTS' RESEARCH: MSc**

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1. Semakula, Jimmy. 2007–10. (2006/HD02/8252U) Production, breeding practices and physical traits of economic importance in Ugandan goats. MSc. Thesis, Makerere University. 107 pages. (MSc. Animal Science- *Graduated January 17<sup>th</sup>, 2011*) (*this work was published in 2 refereed journals*).
2. Mwesigwa, Robert. 2008–10. (2007/HD02/9056U) Effects of graded levels of cereal brans on growth performance and carcass characteristics of growing-finishing pigs. MSc. Thesis, Makerere University. 78 pages. (MSc. Animal Science – *Graduated 17<sup>th</sup> January 2012*) (*this work was published in 2 refereed journal articles*).
3. Magala, Henry. 2009–11. (2009/HD02/14687U) Influence of diet and management system on growth and carcass characteristics of Ugandan local chickens. MSc. Thesis, Makerere University. 82 pages (MSc. Animal Science – *Graduated 17<sup>th</sup> January 2012*) (*this work was published in 2 refereed journals*).
4. Mugisha, Francis. 2003–06. (2003/HD02/518U) Selection criteria of potentially superior bulls and cows in Ankole cattle using indigenous knowledge. (MSc. Animal Science, Makerere University – *Abandoned the study at re-examination of thesis*).
5. Masaba, Joseph. 2010–12. (2010/HD02/689U) Phenotypic characterization and breed improvement strategies for Nganda and Teso cattle in Uganda. (MSc. Animal Science, Makerere University – *Abandoned work at writing of thesis*).
6. Kabugo, Stephen. 2007–11. (2007/HD02/9054U) Utilization of spent brewer's yeast as a protein feed supplement for growing pigs. MSc. Thesis, Makerere University. 88 pages (MSc. Animal Science – *Graduated 16<sup>th</sup> January 2014*) (*this work was published in a refereed journal*).
7. Moiti, Eriya. 2011–2013. (2012/HD13/696U) Incidence and severity of Varroa (*Acari: Varroidae*) in apiaries of selected agro-ecological zones of Uganda. (MSc. Zoology, Makerere University – *Graduated January 2016*).
8. Kayitesi, Aline. 2012–14. (2012/HD02/239X) Management systems and location effects on growth and carcass traits of Kuroiler and local chickens. 85 pp. (MSc. Animal Science, Makerere University – *Graduated in February 2017*).
9. Nakkazi, Christine. 2012–14. (2012/HD02/4189U) On-farm evaluation of the effect of diet and feeding system on the performance of local chickens. 97 pp. (MSc. Animal Science, Makerere University – *Due to graduate in January 2018*) (*this work was published in a refereed journal*).
10. Mutegyeki, Alex. 2011–13. (2011/HD02/4265/U) Determination of Wetland Carrying Capacity and Seasonal Forage Availability for Livestock in Nakivale Wetlands, Isingiro District - Uganda. 47 pp. (MSc. Forestry, Makerere University – *Due to graduate in January 2018*).
11. Ayo, Ogwal George. 2014-2016. (2006/HD19/7064U) Socio-Economic analysis of Beekeeping and the Effects of Different Technologies on Honey Yield in Lira and Adjumani, Uganda (MSc. Environment & Natural Resources, Makerere University – *Thesis submitted for examination*).
12. Namayanja, Diana. 2014-2016. (2014/HD13/833U) Effects of Varroa mite infestations on honey bee colony productivity in Uganda (MSc. Zoology, Makerere University – *Writing Thesis*).

13. Bamundaga, Kyobe Godfrey. 2004–2006. (2006/HD17/6747U) The efficiency of community swine artificial insemination in Wakiso district Uganda. (MSc. Livestock Development, Planning and Management, Makerere University – *Doing research*).
14. Katongole, Ignatius. 2004–2006. (2004/HD17/2208U) Development of milk replacer diets for piglets basing on feed resources locally available in Wakiso and Kabarole districts. (MSc. Livestock Development, Planning and Management, Makerere University – *Doing research*)
15. Agaba, Aggrey. 2015–2017. (2015/HD13/1708U) Assessment of Prevalence and Management of Small Hive Beetle *Aethina tumida* in Selected Agro-Ecological Zones of Uganda (MSc. Zoology, Makerere University – *Doing research*).
16. Akite, Irine. 2015–2017. (15/U/2104/MAE) Factors Influencing Gender Participation in the Local Chicken Value Chain in Northern Uganda. (MSc. Agri-Enterprises Development, Gulu University – *Doing research*).
17. Lubandi, Charles. 2015–2017. (2015/HD02/1633U) Evaluation of Broody Ducks as Kuroiler Chicken Egg Incubators and Growth Performance of Resultant Chicks. (MSc. Animal Science, Makerere University – *Doing research*).
18. Semahoro, Fabrice. 2015-2017. (2015/HD02/476X) Effect of incorporating fast growth chicken traits in Ugandan local chickens. (MSc. Animal Science, Makerere University – *Doing research*).

#### **SUPERVISION OF STUDENTS' RESEARCH: UNDERGRADUATE**

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1. Alich, David. 1999. Honey production in Katakwi district with reference to Toroma sub-county. 42 pp. (*graduated with BSc. Agriculture–2000*).
2. Musooli, David. 2001. Honey production with special emphasis on marketing at two levels of outlets in Luweero and Kampala districts. 36 pp. (*graduated with BSc. Agriculture–2001*).
3. Mugumya, Roland. 2001. A survey of factors affecting bee keeping for honey production in Bushenyi district with specific reference to Bushenyi town council. 32 pp. (*graduated with BSc. Agric.–2001*).
4. Natumanya, Robert. 2001. The potential of slaughter house Ankole ovaries as a source of oocytes for in vitro embryo production. 40 pp. (*graduated with B. Biomedical Lab. Technology–2002*). (*this work was published in a refereed journal*).
5. Odong, Mike. 2002. Assessment of farmer knowledge on bee keeping techniques in Kitgum and Gulu districts. 52 pp. (*graduated with BSc. Agriculture–2002*).
6. Nabakabya, Dorothy. 2002. Quality assessment of locally processed honey marketed in Kampala city. 58 pp. (*graduated with B. Biomedical Laboratory Technology–2002*). (*this work was published in a refereed journal*).
7. Iisa, Augustine. 2003. Phenotypic characterisation and assessment of current state of indigenous chickens in rural poultry flocks of Kumi district 80 pp. (*graduated with BSc. Agriculture–2003*). (*this work was published in a refereed journal*).
8. Ntegeka, Peter. 2003. Causes and effects of poor sanitation on the environment in Bwaise suburb of Kampala city. 78 pp. (*awarded BSc. Environment–2005*).
9. Bigirwa, M. 2004. Studies on selection procedures among Ankole cattle herds using indigenous knowledge. 65 pp. (*graduated with BVM*).

10. Kamatara, Kanifa. 2006. Effects of hive type and location on colonisation rate and pest prevalence. 36 pp. (*graduated with BSc. Agriculture–2006*). (*this work was published in a refereed journal*).
11. Walangaire, Joseph. 2007. Characterisation of pig production farms in Nsangi sub-county. 41pp. (*graduated with BSc. Agriculture–2008*).
12. Akeny Emmanuel. 2009. Factors affecting the adoption of beekeeping technologies in Lira District. 52 pp. (*graduated with BSc. Agriculture–2010*).
13. Sasira, Phionah. 2009. Effects of management practices on honey production: A case study of Kinoni sub-county Kiruhura district. 67 pp. (*graduated with B. Arts Environment–2010*).
14. Kugonza, Fred. 2009. Characterization of pig production systems, genetic and feed resources in Wakiso and Kalangala districts, Uganda. 112 pp. (*graduated with BSc. Agriculture–2010*).
15. Lubandi, Charles. 2010. Genotype and diet effects on pork yield and quality. 55 pp. (*graduated with BSc. Agriculture–2011*).
16. Natukunda, Kevin. 2011. Flock dynamics and profitability of local chickens in Namasagali sub-County, Kamuli district. 49 pp. (*graduated with BSc. Agriculture–2012*). (*this work was published in a refereed journal*).
17. Mujuni, Aggrey. 2011. Factors affecting the adoption of beekeeping and associated technologies in Bushenyi district. 45 pp. (*graduated with BSc. Agriculture–2012*). (*this work was published in a refereed journal*).
18. Walugembe, Muhammed. 2011. Production and breeding management practices of small holder indigenous cattle farmers in Bugabula county, Kamuli district. 51 pp. (*graduated with BSc. Agric–2012*).
19. Musoni, Aloys. 2011. Determinants of adoption of ISAR's innovations by neighbouring households: A case study of cattle husbandry in Rusatira sector. 70 pp. (*graduated with Bachelor of Rural Development & Agribusiness, ISAE–2012*). (*this work was published in a refereed journal*).
20. Kagoya, Tabisa. 2012. Profitability of dairy cattle in Kamuli town council and Namasagali sub-county, Kamuli district. 39 pp. (*graduated with Bachelor of Agribusiness Management–2012*). (*this work was published in a refereed journal*).
21. Kiyingi, Yasin. 2013. Willingness to pay for cattle insurance by smallholder dairy farmers in the urban and peri-urban areas of Kampala district. 60 pp. (*graduated with BSc. Agric–2014*).
22. Tahinduka, Abraham. 2014. Factors affecting the profitability of beekeeping in four sub-counties of Hoima district. 37 pp. (*graduated with Bachelor of Agribusiness Management in 2016*).
23. Sonko, Bashir. 2015. Effect of Livestock on Soil and Water Quality in Namasagali Sub County, Kamuli District. 37 pp. (*graduated with BSc. Agriculture Land Use & Management in 2016*).
24. Bayo, Joel. 2015. Assessing the impact of feeds and feeding practices on pig productivity in Wakiso and Kabarole districts. 51 pp. (*graduated with BSc. Agriculture in 2016*).
25. Nabikyu, Jane Rosette. 2015. Characterisation and profitability of selected piggery businesses in Wakiso district. 47 pp. (*graduated with BSc. Agribusiness Management in 2016*).
26. Kiyimba, Frank. 2016. Effect of Dietary Protein Level on Growth, Survival and Feed Utilization Performance of Guinea Fowl Keets. 60 pp. (*graduated with BSc. Agriculture in 2017*).

27. Muhumuza, Peter. 2016. Analysis of Management and Productivity of Indigenous Chickens in Kanoni Sub-County, Kiruhura District. 60 pp. (*graduated with BSc. Agribusiness Management in 2017*).
28. Twinamatsiko, Primah. 2016. Socio-Economic Analysis of Local Chicken Production Systems in Kamuli District. 57 pp. (*graduated with BSc. Agriculture in 2017*).
29. Nuwatuha, Catherine. 2016. Characterisation of Duck Production Systems in Kamuli and Kiryandongo Districts. 59 pp. (*graduated with BSc. Agriculture in 2017*).
30. Mugambe, Julius. 2016. Assessment of Management Practices and Productivity of Indigenous Chickens in Kiryandongo District. 50 pp. (*graduated with BSc. Agriculture in 2017*).
31. Tukamuhebwa, Frank. 2016. Relating the Hygienic Behaviour of Ugandan Honey Bees with Age of the Comb and Size of the Colony. 39 pp. (*graduated with BSc. Agricultural Land Use and Management in 2017*).

### **ATTENDANCE OF CONFERENCES AND GIVING LECTURES**

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1. **2016:** National Agricultural Research Organisation–Makerere University Joint Agricultural Dissemination Conference. Theme: “Agricultural Research and Innovations for Socio-economic Transformation”, Speke Resort Hotel Munyonyo, Kampala, Uganda, November, 21-24, 2016. **Myself and 2 M.Sc. students, Bamundaga, G.K., Katongole, I., made oral presentations.**
2. **2016:** 5<sup>th</sup> African Higher Education Week & RUFORUM Biennial Conference. Theme: “Partnerships to unlock the Potential of Agricultural Development in Africa”, Century City Conference Centre, Cape Town, South Africa, October 17–21, 2016. **My 6 M.Sc. students, Akite, I.P.; Aryemo, I.; Agaba, A.; Lubandi, C.; Namayanja, D.; Semahoro, F.; presented their posters and the latter four also made oral presentations.**
3. **2016:** APIEXPO Africa 2016, The African Honey Exhibitions, B2B Meetings, Conferences, Training Workshops & Technical Tours. Theme: “*Driving Socio-Economic Transformation In Africa: The Role Of Commercial Beekeeping*”, Kigali Conference & Exhibition Village, Kigali, Rwanda, September 21–26<sup>th</sup>, 2016. **Exhibited my Book on Beekeeping & was a member of the Organising Committee.**
4. **2016:** International Seminar, Swedish University of Agricultural Sciences, Uppsala, Sweden. Theme: “*Livestock Resources for Food Security in the Light of Climate Change*”. Ulls Hus, SLU, Uppsala, Sweden, March 11, 2016. **Presented a paper.**
5. **2015:** 2<sup>nd</sup> International Congress Hidden Hunger, University of Hohenheim/Movenpick Hotel, Stuttgart, Germany, March 3–6, 2015. **Presented a paper.**
6. **2015:** Makerere University International Research and Dissemination Conference. Theme: “*Empowering Communities through Research, Innovations and Knowledge Translation*”. Hotel Africana, Kampala, Uganda, April 20-21, 2015. **Presented a paper.**
7. **2014:** 6<sup>th</sup> All Africa Conference on Animal Agriculture. Theme: “*Africa’s Animal Agriculture: Macro-trends and future opportunities*”. Kenyatta International Conference Centre, Nairobi, Kenya. October 26–30, 2014. **Presented a poster.**
8. **2013:** 1<sup>st</sup> RAB Biennial Conference on Agricultural Research & Extension. Theme: “*Confronting the challenges of food insecurity in the era of climate change and variability*”. Kigali Serena Hotel, Kigali, Rwanda, August 21–23, 2013. **Presented a paper, co-author of three other papers and 10 posters.**

9. **2013:** 6<sup>th</sup> Africa Agriculture Science Week and FARA General Assembly, 3<sup>rd</sup> Young Professionals in Science Competition organised by CTA/FARA/IFS/RUFORUM/AGRA/ANAFE/NPCA, Theme: “*Feeding 1 billion in Africa in a changing world*”, International Conference Centre, Accra, Ghana, July 15–20, 2013, **Presented a paper that won the 5<sup>th</sup> Prize (Cash and Books).**
10. **2012:** The Sveriges lantbruksuniversitet/Swedish University of Agricultural Sciences (SLU), *Africa Food Security Research Symposium, Outcomes of a Swedish Government Initiative*, Metropole Hotel, Kampala, Uganda, December 4–6, 2012. **Attended sessions on livestock production and health.**
11. **2012:** 3<sup>rd</sup> RUFORUM (Regional Universities Forum) Biennial Regional Conference, Theme: “*Partnerships and Networking for Strengthening Agricultural Innovation and Higher Education in Africa*”. Imperial Resort Beach Hotel, Entebbe, Uganda. September 24–28, 2012. **Attended some plenary sessions.**
12. **2011:** ASARECA Scientific Conference, Theme: “*Enhancing the competitiveness of the livestock and fisheries sectors for improved livelihoods in East and Central Africa*”. Source du Nil Hotel, Bujumbura, Burundi, October 31 – November 4, 2011. **Presented three papers.**
13. **2010:** 2<sup>nd</sup> RUFORUM (Regional Universities Forum) Biennial Conference, Theme: “*Building Capacity for Food Security*”. Imperial Resort Beach Hotel, Entebbe, Uganda. September 13–17, 2010. **My M.Sc. student (Mwesigwa, R.) presented a paper that won best oral presentation Award.**
14. **2009:** 2<sup>nd</sup> Annual Research & Innovations Dissemination Conference, “Sustainable socio-economic development in Uganda: The contribution of Makerere through research and innovations”. Hotel Africana, Kampala, Uganda. November 5-6, 2009. **Presented Paper.**
15. **2008:** 10<sup>th</sup> World Conference on Animal Production. Cape Town International Convention Centre, Cape Town, South Africa. November 23-28, 2008. **Presented a poster, selected best in the session.**
16. **2006:** 9<sup>th</sup> Annual Graduate Workshop of the Faculty of Agriculture, Makerere University. Theme: “*Transforming knowledge into practical technologies: The role of graduate agricultural research*”. MUARIK, Uganda. September 1–2, 2006. **Presented two papers.**
17. **2005:** 6<sup>th</sup> Global Conference on Conservation of Domestic Animal Genetic Resources, Rare Breeds International (RBI). Megalies’ Park Conference Centre, North West Province, South Africa, October, 9-13, 2005. **Presented a paper.**
18. **2005:** 8<sup>th</sup> Annual Graduate Workshop of the Faculty of Agriculture, Makerere University. Theme: “*Generating demand driven technologies: The role of graduate agricultural research*”. MUARIK-CAEC, Uganda. October 6–7, 2005. **Presented a paper.**
19. **2005:** 4<sup>th</sup> All Africa Conference on Animal Agriculture, Arusha International Conference Centre. September 20-24, 2005. **Presented a paper and poster.**
20. **2005:** 13<sup>th</sup> FAO Biotechnology Forum entitled "The role of biotechnology for the characterisation and conservation of crop, forest, animal and fishery genetic resources in developing countries. June 6 - July 5, 2005. **Participated in discussion forum.**
21. **2004:** 29<sup>th</sup> International Conference on Animal Genetics, International Society of Animal Genetics. Meiji University, Tokyo, Japan. September 11-16, 2004. **Presented a poster.**

22. **2004:** APSK/TSAP/Makerere University Regional Animal Production conference on Livestock revolution: Challenges and opportunities for livestock industry in East Africa. KARI, Nairobi, Kenya. March 15-18, 2004. **Presented two papers.**
23. **2001:** Makerere University/NUFU Conference, Faculty of Forestry, Makerere University. March, 2001. **Presented two papers.**
24. **1996:** 6<sup>th</sup> World Youth Forum. Möss Boarding School, Möss, Norway. July 2-5, 1996. Chaired a session. **Contested and won election to be president of Africa sub-region and vice-president of the world body (1996-1999).**

## **CURRICULUM DEVELOPMENT**

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1. Development of curriculum for Certificate in Beekeeping, Nyabyeya Forestry College, Masindi.
2. Development of curriculum for Diploma in Beekeeping, Nyabyeya Forestry College, Masindi
3. Curriculum development for Bachelor's degree in Agricultural and Rural Innovation by distance education, Makerere University.
4. Curriculum development for Bachelor's degree in Education (External/distance education) for Agriculture teachers, Makerere University.
5. Biological Courses Harmonisation, Makerere University, August 2010.
6. Curriculum Review for the School of Agricultural Sciences, Makerere University, 2015.

## **VETTING OF RESEARCH PUBLICATIONS AND PROPOSALS**

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1. 2016–Present: Sub-Editor for the South African Journal of Animal Science (SAJAS);
2. 2012–Present: Reviewer for the journal Tropical Animal Health and Production (TSAP);
3. 2015–Present: Reviewer for the journal Livestock Research for Rural Development (LRRD);
4. 2008–Present: Reviewer for African Journal of Agricultural Research (AJAR);
5. 2009–Present: Reviewer for Journal of Cell and Animal Biology (JCAB);
6. 2011–Present: Reviewer for Iranian Journal of Applied Animal Science (IJAS);
7. 2013–Member, Editorial Committee of the 1<sup>st</sup> RAB (Rwanda Agriculture Board) Biennial Conference on Agricultural Research and Extension, Kigali, Rwanda;
8. 2016–: PhD Thesis Evaluation Committee Member (External Examiner) for Sveriges lantbruksuniversitet (Swedish University of Agricultural Sciences)

The PhD Thesis titles examined so far are:

- a) 2016–Breeding Programme and Infrastructure – the Case of Red Maasai Sheep in Kenya.
  9. 2010–Present: External examiner for University of Nairobi, Board of Graduate Studies
- The MSc. Thesis titles examined so far are:
- b) 2010–Genetic Evaluation of Kenyan Boran Herds and Embryo Export in Kenya
  - c) 2011–Analysis of Inbreeding Levels and Characterisation Curve of Kenya Alpine Dairy Goat.
  - d) 2011–Factors Affecting pre and post-weaning Growth of Crossbred Cattle at Songa Research Station in Rwanda.

10. 2014–Present: External examiner for Sokoine University of Agriculture, Directorate of Research and Post Graduate Studies

The titles of MSc. Theses examined so far are:

2014–Molecular Characterisation of the Major Histocompatibility Complex DRB3.2 Locus in Indigenous Zebu Cattle in Selected Areas of Tanzania

11. 2015–Present: External examiner for Lilongwe University of Agriculture and Natural Resources (LUANAR), Directorate of Research and Post Graduate Studies

The titles of MSc. Theses examined so far are:

2015–Evaluation of Performance of Black Australorp (*Mikolongwe*) Breed and their Crosses under Smallholder Poultry Production System: A Case Study of Barilla Rural Poultry Project in Chiradzulu District.

2016 – Evaluation of Performance of Crossbred Dairy Cattle in Chiradzulu District, Southern Malawi.

2016–Productivity and Fertility of Imported Dairy Cows under Smallholder Farming System in Central Region Milk Shed Area.

2017–Response of Malawi Zebu and Malawi Zebu Friesian Crosses to Oestrus Synchronisation Using Prostaglandin (PGF<sub>2α</sub>) at Likasi and Mikolongwe Government Livestock Farms in Malawi.

12. 2010–Present: Internal examiner for Makerere University School of Graduate Studies

1. The titles of MSc. Theses examined so far are:

a) 2010–Production, Breeding Practices, Physical Traits of Economic Importance in Ugandan Goats.

b) 2013–Utilisation of Spent Brewer’s Yeast as a Protein Feed Supplement for Growing Pigs.

c) 2013–Environmental Effects of Livestock on Water Quality under Crop-Livestock Farming System in the Lake Victoria Basin.

d) 2014–Effect of Insecticide Application on Species Richness, Relative Abundance and Foraging Activities of Bees in Cotton Agro-systems in Padyere County, Nebbi District, Uganda.

e) 2014–Selection Criteria of Potentially Superior Bulls and Cows in Ankole Cattle Using Indigenous Knowledge.

f) 2015–Management Systems and Location Effects on Growth and Carcass Traits of Kuroiler and Local Chickens

g) 2015– On-farm Evaluation of the Effect of Diet and Feeding System on the Performance of Local Chickens

h) 2015– Honeybee Forage Plants, Bee Visitation Counts and Properties of Honey From Different Agro-ecological Zones of Uganda

2. PhD Synopsis and MSc. Proposal vetting:

a) Modelling Honeybee Colonisation and Population Trends

b) Evaluating the Role of Honeybees in the Pollination of Coffee in Four Agro-ecological Zones of Uganda



c) Identifying Signatures of Selection in cattle of Uganda

13. 2007–Present: Examiner, Gulu University, Uganda.
14. 2010–Present: Proposal Vetter for the National Competitive Grant Scheme, National Agricultural Research Organisation (NARO)

## **SERVICE TO MAKERERE AND THE COMMUNITY**

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- 2009–To present: Coordinator, Makerere University/Iowa State University Service Learning Programme in Kamuli district. Part of the annual activities include: Screening of prospective interns through written and oral interviews; conducting one week orientation; and supervising the students in the residential 10-week field attachment/internship.
- 2007–To present: Coordinator of outreach activities (exhibitions, open days and shows, etc.) for the Animal Science section (formerly, Department of Animal Science), Makerere University. Roles include: budgeting, assembling exhibits, coordinating exhibitors, attending and overseeing exhibitions.
- 2000–To present: Training of farmers of goats, cattle, pigs, chickens and bees in over 40 Ugandan districts including: Adjumani, Arua, Buliisa, Bushenyi, Buyende, Gulu, Hoima, Ibanda, Iganga, Isingiro, Jinja, Kabarole, Kalangala, Kampala, Kamuli, Kamwenge, Kasese, Katakwi, Kayunga, Kapchorwa, Kiruhura, Kiryandongo, Lira, Masaka, Masindi, Mbale, Mbarara, Moyo, Mpigi, Mubende, Mukono, Nakasongola, Nebbi, Omoro, Oyam, Rukungiri, Sembabule, Tororo, Wakiso, and Yumbe.
- 2009–2011: Member of Anti-Sexual Harassment Committee, Faculty of Agriculture. Activities include attending committee meetings; educating students and staff about role of committee; working with the committee to solve sexual harassment cases in the faculty.
- 2010 Member, Biological Courses Harmonisation Committee, Makerere University.
- 1998–2010: Member, Faculty Board, Faculty of Agriculture, Makerere University.

## **PROFESSIONAL PRACTICE / OUTREACH SERVICES**

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1. Provides professional advice to bee keepers, pig farmers and goat farmers who have visited my office or telephone me for consultation, mostly at no cost.
2. Service provider on modern beekeeping technologies to organisations and groups.
3. Presents regularly radio talk shows on piggery business and management.
4. Participated in the (2016, 2015, 2014, 2013, 2012, 2011, 2010) 10-week residential service learning program in Kamuli, Uganda; for students of Iowa State University & Makerere Univ.
5. Participated in the 2011 Annual Exhibition of the School of Agricultural Sciences, Makerere University – exhibited bee equipment and two books I have authored on beekeeping.
6. Participated in the 2010 Field day at Nakanyonyi Primary School in Kamuli District where eight Makerere University undergraduate students I had supervised exhibited their agricultural produce.
7. Attended fully, the 2009 and 2010 National Agricultural Show at Jinja and exhibited various technologies plus giving farming advice to farmers, students and pupils.

8. Consultant for Commonwealth Of Learning (Canada) in 2010; developed a booklet on “Lifelong Learning in Honey Collection, Beekeeping & Apiary” for Voicemail Based Learning in English and Rukiga/Runyankore.
9. Consultant for Dissect Consultancy Ltd. (Kampala) in 2009; developed a protocol for conducting a baseline study on production and marketing of honey in Uganda for the Farm Income Enhancement and Forest Conservation Project.
10. Consultant for the *Institut des Sciences Agronomiques du Rwanda* (ISAR) 2011-12 on Animal Breeding.
11. Consultant for the Rwanda Agriculture Board (RAB) 2012-2016 on Animal Breeding.

### **OTHER PROFESSIONAL QUALIFICATIONS (SHORT COURSES/OUTPUTS)**

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- 2017 Increasing the Development Impact of Agricultural Research – by University of Sydney & University of Nairobi, held in Kenya (Nairobi, Nakuru, Kericho, Homa Bay).
- 2014 Assessment of Africa Animal Genetic Resources – by AU-IBAR, Dar es Salaam, Tanzania.
- 2013 Action Research and Experiential Learning – by RUFORUM, held at Imperial Botanical Beach Hotel, Entebbe, Uganda.
- 2012 Outcome mapping for smallholder pig value chains – by ILRI held at Ridah Hotel, Mukono.
- 2012 Scientific Writing, Communication and Policy Advocacy – by CTA/FARA/IFS/ANAFE/RUFORUM/NEPAD/AGRA, held at Imperial Botanical Beach Hotel, Entebbe, Uganda.
- 2012 Experiential Learning – by RUFORUM, held at Imperial Botanical Hotel, Entebbe, Uganda.
- 2011 Multiple Ovulation & Embryo Transfer technology– by RARDA/JICA, held at Songa, Rw.
- 2010 Bio-Gene Banking – by ILRI held at ILRI Principal Site, Addis Ababa, Ethiopia.
- 2010 Research Management – Graduate School, Makerere University at Women+Gender Studies.
- 2008 Sustainable Use of Animal Genetic Resources in Developing Countries – ILRI, Addis Ababa.
- 2008 Introduction to Geographic Information Systems for Research & Decision Making – MUIENR.
- 2008 Teacher in Higher Education: Role and Pedagogy – School of Education, Makerere Univ.
- 2008 Writing Study Materials for Distance Education Courses – Distance Educ., Makerere Univ.
- 2008 Research Methodology for Doctoral Students – School of Education, Makerere University
- 2007 Project Conceptualisation – International Foundation for Science & Makerere University
- 2006 Scientific Writing & Communication – Training Centre in Communication – Nairobi.
- 2006 Statistical Methods & Computer Applications in Research – ISAE, Makerere University
- 2005 Sampling Techniques & Questionnaire Design – ILRI, Nairobi
- 2005 SAS for Advanced Users – ILRI, Nairobi
- 2005 Basic and Intermediate SAS Course – ILRI, Nairobi
- 2004 Molecular techniques in Cattle genetic studies as a Fellow of the IAEA, ILRI, Nairobi
- 2002 Course in Participatory Methods in Agricultural Extension – AGEE Dept, Makerere Univ.

2001 Facilitation and Participatory Planning – Certificate – Lake Victoria Hotel, Entebbe  
2001 Wetland Ecology and Management – LVMP, MUIENR, WID – Lweza Training Centre.  
1998 Beekeeping for honey, by-products & pollination – MASHAV, CINADCO, Israel  
1996 Conservation Genetics – Institute of Ecology, Queen Elizabeth National Park, Kasese.  
I certify that the information given above is true to the best of my knowledge.

Signed:



### **REFEREES**

- 1) Prof. Denis Mpairwe (PhD)  
Associate Professor & Head,  
Department of Agricultural Production, School of Agricultural Sciences, College of  
Agricultural & Environmental Sciences, Makerere University, P .O. Box 7062, Kampala,  
Uganda. Tel: 256-772-418-366; Email: [dmpairwe@caes.mak.ac.ug](mailto:dmpairwe@caes.mak.ac.ug)
- 2) Prof. Olivier Hanotte (PhD)  
Professor of Genetics & Conservation,  
Faculty of Medicine and Health Sciences, University of Nottingham, University Park,  
Nottingham, NG7 2RD, UK. Tel: 01159513256; Email: [olivier.hanotte@nottingham.ac.uk](mailto:olivier.hanotte@nottingham.ac.uk)
- 3) Prof. Felix B. Bareeba (PhD)  
Professor of Animal Nutrition,  
Department of Agricultural Production, School of Agricultural Sciences, College of  
Agricultural & Environmental Sciences, Makerere University, P .O. Box 7062, Kampala,  
Uganda. Tel: 256-772-314-205; Email: [fbareeba@caes.mak.ac.ug](mailto:fbareeba@caes.mak.ac.ug)