

---

**Denis Mpairwe (PhD)**


Professor of Animal Science and Crop-Livestock Production Systems

---

**NAME & ADDRESS:**

**Dr. Denis Mpairwe, Associate Professor**, Department of Agricultural Production, School of Agricultural Sciences, College of Agricultural and Environmental Sciences, Makerere University, P.O. Box 7062, KAMPALA. UGANDA.

Tel. Office +256-414-532269.

Mobile +256-772-439372; +256-704-439372

Email: [denis.mpairwe@mak.ac.ug](mailto:denis.mpairwe@mak.ac.ug) , [dmpairwe@gmail.com](mailto:dmpairwe@gmail.com)

---

**SPECIALITY:** Animal Science and Crop-Livestock Production Systems – Specialising in Animal nutrition, Forage Science, Range management and Crop-Livestock production systems

---

Sex: **Male**

Date of Birth: **26<sup>th</sup> September 1962**

---

**EDUCATION QUALIFICATIONS AND PROFESSIONAL CERTIFICATIONS**

<b>INSTITUTION AND LOCATION</b>	<b>DEGREE (if applicable)</b>	<b>Completion Date MM/YYYY</b>	<b>FIELD OF STUDY</b>
<b>Makerere University</b>	B.Sc. Agriculture	23 March 1990	Animal Nutrition – Food/Feed production and utilisation
<b>Makerere University</b>	M.Sc. Agriculture	20 January 1995	Animal Nutrition / Forage Science
<b>Makerere University / International Livestock Research Institute (ILRI)</b>	PhD	15 January 1999	Agriculture – Crop Science

---

**PROFESSIONAL CERTIFICATIONS:**

- **Project proposal Development Training Workshop**, in Pretoria, South Africa, 29 November – 3 December 2004.
- **Gender Issues and Analysis in Agriculture Course for University Agriculture Trainers** at Sunset Hotel International Limited, Jinja, Uganda. 10 – 13 February 2003: Developed skills and tools for gender analysis.
- Certificate of attendance "**Workshop on Rumen Ecology**", ILRI - Ethiopia, 13th - 18th March 1995.
- Certificate in "**Ruminant Nutrition and Feeding Systems**" - ILRI course at ILRI - Debre Zeit Research Station, Ethiopia, 25th July - 12 August 1994.
- Certificate of attendance "**HPI writer's Workshop for Development of Zero-Grazing Training Materials**" held in Kampala, Uganda, 18-23 May, 1992.

- Certificate in "**Management of Pastures for East Africa**" - Six Regional Training Course: Egerton University, 6th - 17 August 1990.

### A. Personal Statement

I am a male, Ugandan aged 57 years with over 30 years' experience in agricultural sciences, livestock production and management, natural resources and environmental management. Have worked with Makerere University for over 17 years and currently serving as a Professor of Agriculture specializing in crop-livestock integration, animal science/production mainly involved in teaching and supervision of undergraduate and postgraduate students; conducting Research in crop-livestock integration and community outreach for improved people's livelihoods. Before joining Makerere University, I worked with the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) in the Department of Animal Production and Marketing for over ten years as Animal Production Officer and left at the rank of Principal Range Ecologist in charge of Range Development Section. Main duties involved offering technical expertise in ruminant nutrition, Range management, feed resources production and utilization, resource mobilization, projects preparation for donor funding, project implementation, monitoring and evaluation. I offer expertise in integrated crop/livestock farming systems, animal nutrition, range/forage science and management, health/nutrition interactions, dairy, beef, sheep and goat production. I have actively conducted and implemented twelve (14) research projects with both national and international partners either as principal or co-investigator. These projects have attracted cumulatively over US\$ 1, 000,000/= to the University of which \$600,000 are funds for research projects where I have been the team leader. Have supervised to completion 10 M.Sc. and 5 PhD students and all have graduated. Currently, supervising 6 M.Sc. and 4 PhD students. Published widely in peer reviewed journals 47 original research papers and a scientific reviewer of a number of international journals.

### B. Employment record and other experience

- (i) **Associate Professor of Animal Science: September 2015.** Department of Agricultural Production, Makerere University
- (ii) **Head, Department of Agricultural Production,** Makerere University, July 2015 to June 2019.
- (iii) **Head, Department of Agricultural Production,** Makerere University March 2011 to June 2015.
- (iv) **Ag. Head, Department of Agricultural Production,** Makerere University January 2011 to February 2011.
- (v) **Ag. Dean, School of Agricultural Sciences,** Makerere University, June 2012.
- (vi) **Head** Department of Animal Science, Makerere University, January 2008 – January 2011.
- (vii) **Ag. Associate Dean, 2003 – 2005:** Faculty of Agriculture Makerere University.
- (viii) **Senior Lecturer: April, 2006 to August 2015.** Department of Animal Science and later Agricultural Production, Makerere University.
- (ix) **Lecturer: October, 1999 to March 2006.** Department of Animal Science, Makerere University.
- (x) **Principal Range Ecologist: 1997-1999 -** Department of Animal Production and Marketing (DAP&M), Ministry of Agriculture, Animal Industry and Fisheries (MAAI&F).
- (xi) **Senior Animal Production Officer i/c Forage Development Program – Livestock Services Project: 1994-1996 -** DAP&M, MAAI&F.
- (xii) **Pasture Agronomist: 1990 to 1994 -** DAP&M, MAAI&F.

### C. Teaching Subjects:

ANS 1202 Introductory Livestock Management	ANS 1204 Livestock Production and Management
ANS 2202 Wildlife Management	ANS 3205 Beef Production and Range Management
ANS 7103 Livestock Production Systems	ANS 7104 Range Resource Management
IWM 7123 Agriculture Environmental Interactions	ANS 7208 Plant and Range Ecology
ANS 7206 Grazing Management and Range Nutrition	

### D. Contributions to Science (Publications and other scholarly information)

#### (1) PUBLICATIONS IN BOOKS

- (i) Gitau, J., **Mpairwe, D.**, and Peden, D. **2009.** Integrating livestock, water and land management enables increased water productivity in Uganda. In: de Leon, C.; Douthwaite, B., and Alvarez, S. (eds) Most

significant change stories from the Challenge Program on Water and Food (CPWF). CPWF Working paper#3. Colombo: CPWF. PP: 59-63.

- (ii) Peden, D., Tadesse, G., Misra, A.K., Ahmed, F.A., Astatke, A., Ayalneh, W., Harrero, M., Kiwuwa, G.H., Kumsa, T., Mati, B. **Mpairwe, D.**, Wassenaar, T. and Yimegnulhal, A. **2007**. Water and Livestock for human development. In: Comprehensive Assessment of Water Management in Agriculture. 2007. *Water for food, Water for Life: A Comprehensive Assessment of Water Management in Agriculture*. London: Earthscan, and Colombo: International Water Management Institute.
- (iii) **Mpairwe, D.R. 2005**. Undernutrition in dairy ruminants and intervention options for coping with feed scarcity in smallholder production systems in Uganda. In: Ayantude, A.A., Fernandez-Rivera, S. and McCrabb, G. (eds). *Coping with feed scarcity in smallholder livestock systems in developing countries*. International Livestock Research Institute, Nairobi, Kenya. 306pp.
- (iv) **Contributed to several Government documents**, including: Dairy Master Plan study – MAAIF 1997; Meat Production Master Plan Study - MAAIF 1998; Background to the National Animal Breeding Policy – MAAIF 1997.

## (2) PUBLICATIONS IN REFEREED JOURNALS

- (i) Nicholas Kiggundu, Stanley Peter Ddungu, Joshua Wanyama, Sam Cherotich, **Denis Mpairwe**, Emmanuel Zziwa, Faizal Mutebi, Alessandra Falcucci, **2019**. Greenhouse gas emissions from Uganda's cattle corridor farming systems. **Agricultural Systems 176: 1-11**. <https://doi.org/10.1016/j.agsy.2019.102649>
- (ii) Denis Asizua, **Denis Mpairwe**, Fred Kabi, David Mutetikka, Torben Hvelplun, Martin Riis Weisbjerg and Jørgen Madsen, **2017**. Effects of grazing and feedlot finishing duration on the performance of three beef cattle genotypes in Uganda. **Livestock Science, 199: 25-30**.
- (iii) Denis Asizua, **Denis Mpairwe**, Fred Kabi, David Mutetikka, Felix Budara Bareeba, Torben Hvelplun, Martin Riis Weisbjerg and Jørgen Madsen, **2018**. Effects of feeding Systems on rumen environment, degradability and passage kinetics in Ankole X Friesian crossbred steers. **Livestock Science, 210: 47-54**.
- (iv) **Mpairwe, D.**, Zziwa, E. Samuel K. Mugasi, S.K., Laswai, G.H. **2015**. Characterizing Beef Cattle Value Chains in Agro-Pastoral Communities of Uganda's Lake Victoria Basin, **Frontiers in Science 2015**, 5(1): 1-8 DOI: 10.5923/j.fs.20150501.01.
- (v) Kashaigili, Japhet Joel, Emmanuel Zziwa, Siwa Ernest, Emma Laswai, Bernard Musana Segatagara, **Denis Mpairwe**, Reuben Mpuya Joseph Kadigi, Cyprian Ebong, Samuel Katambi Mugasi, Germana Henry Laswai, Mutimura Mupenzi, Polycarp Jacob Ngowi, Ibrahim Lwaho Kadigi, **2015**. Implications of Land Use, Land Cover Change and Climate Variability on Future Prospects of Beef Cattle Production in the Lake Victoria Basin. **American Journal of Climate Change, 4: 461-473**. <http://dx.doi.org/10.4236/ajcc.2015.45037>.
- (vi) Zziwa, Emmanuel, **Denis Mpairwe**, Samuel K. Mugasi, Germana H. Laswai **2015**. Beef Production Practices and Responses to Climate Change in the Rangelands of Lake Victoria Basin in Uganda. **International Journal of Agriculture and Forestry**. p-ISSN: 2165-882X e-ISSN: 2165-8846 2015; 5(2):121-130 doi:10.5923/j.ijaf.20150502.05.
- (vii) Johansson, C. Wredle, E., **Mpairwe, D.**, Sabiiti E.N., Spörndly, E. **2015**. Effects of calving month, pasture conditions and management on the growth of Holstein-Friesian×Ankole crossbred calves in a semi-arid rangeland. *Trop Anim Health Prod* (2015) 47:783–786. DOI 10.1007/s11250-015-0786-7.
- (viii) Asizua, D., **Mpairwe, D.**, Kabi, F., Mutetikka, D., Kamatara, K., Hvelplund, T. Weisbjerg, M.R., Mugasi, S.K. and Madsen, J. **2014**. Growth performance, carcass and non-carcass characteristics of Mubende and MubendexBoer crossbred goats under different feeding regimes. **Livestock Science, 169: 63-70**.
- (ix) Kamatara, K., **Mpairwe, D.**, Christensen, M., Eskildsen, C.E., Mutetikka, D., Muyonga, J., Mushi D., Omagor, S., Nantongo, Z., Madsen, J. **2014**. Influence of age and method of carcass suspension on meat quality attributes of pure bred Ankole bulls. **Livestock Science, 169: 175-179**.
- (x) **Mfitumukiza, D.**, **Majaliwa, J.G.M.**, **Mpairwe, D.**, **Tenywa, M.M.**, **Tickodri-Togboa, S.S.** and **Kansiime, F.** **2013**. [Proxy quantification and mapping of seasonal rangeland herbage using grass cover in the cattle corridor of Uganda](#). **Annals of GIS 19(2):99-108 (2013)**.
- (xi) Zziwa, E., Kironchi, G., Gachene, C., Mugerwa, S and **Mpairwe, D.**, **2012**. The dynamics of land use and land cover change in Nakasongola district. **Journal of Biodiversity and Environmental Sciences (JBES), 2(5): 61-73**.

- (xii) Zziwa, E., Kironchi, G., Gachene, C., Mugerwa, S and **Mpairwe, D., 2012.** Production systems, land cover change and soil factors affecting pasture production in semi-arid Nakasongola. **International Journal of Agronomy and Agricultural Research, 2 (7): 6-17.**
- (xiii) **Mpairwe D.,** Kironchi, G., Mugerwa S., Isabiry B., and Zziwa E., **2011.** Soil degradation following land use and cover change in the rangelands of Uganda, **International Journal of Advanced Biological Research 1 (1): 35-44, ISSN 2250-3579.**
- (xiv) Grimaud, P., **Mpairwe, D.** Chalimbaud, J. Messad, S. and Faye, B. **2007.** The place of Sanga cattle in dairy production in Uganda. **Tropical Animal Health Production, 39:217-227.**
- (xv) **Mpairwe, D.R.,** Mutetika, D. and Tsumbira, E. **2003.** Utilisation of *Gliricidia sepium* and maize bran or their mixtures with *Leucaena leucocephala* as supplements to growing indigenous goats (Mubende type) fed elephant grass (*Pennisetum purpureum*). **Journal of Animal and Veterinary Advances. 2(4):202-208.**
- (xvi) **Mpairwe, D.R.,** Sabiiti, E.N., Ummuna, N.N., Tegegne, A., and Osuji, P. **2003.** Integration of forage legumes with cereal crops: 1. Effects of supplementation with graded levels of lablab hay on voluntary food intake, digestibility, milk yield and milk composition of crossbred cows fed maize-lablab stover or oats-vetch hay *ad libitum*. **Livestock Production Science, 79:193-212.**
- (xvii) **Mpairwe, D.R.,** Sabiiti, E.N., Ummuna, N.N., Tegegne, A., and Osuji, P. **2003.** Integration of forage legumes with cereal crops: 2. Effect of supplementation with lablab hay and incremental levels of wheat bran on voluntary food intake, digestibility, milk yield and milk composition of crossbred cows fed maize-lablab stover or oats-vetch hay *ad libitum*. **Livestock Production Science, 79:213-226.**
- (xviii) **Mpairwe, D.R.,** Sabiiti, E.N., Ummuna, N.N., Tegegne, A., and Osuji, P. **2002.** Effect of intercropping cereal crops with forage legumes and the effect of source of nutrient (cattle manure or chemical fertilisers) on cereal grain yield, fodder yield and quality. **African Crop Science Journal, 10(1):81-97**

#### E. Research Support, Grants award and/or Scholastic Performance

- (i) **Lead Country Scientist:** Achieving the SDGs in East African drylands: Pathways and challenges towards a social-ecological transformation of landscapes, livestock and livelihoods – Dryland Transform (2020-2024), Funded by FORMAS, Sweden).
- (ii) **National Principal Investigator (PI)** the implementation of **AgriTT Research challenge fund Agricultural Productivity, Market Participation, Effective Value Chain Development in Uganda: A Case of Maize and Cattle (2014 - 2015.** AgriTT Agriculture Technology Transfer program is a China-UK-Africa / South-East Asia Governmental trilateral cooperation program which promotes sharing of Chinese agricultural technologies and knowledge in developing countries. It was implemented under a **CONSORTIUM agreement** between University of International Business and Economics (UIBE) in China (Lead Institution) and The Food and Agricultural Organization (FAO), Makerere University in Uganda (Mak), Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Uganda and The University of Nottingham, UK.
- (iii) **Lead Principal Investigator:** Uptake of integrated termite management for rehabilitation of degraded rangeland in Eastern Africa. January 2012 – April 2014, funded by Challenge Program for Water and Food (CPWF) / International Livestock Research Institute (ILRI). A Regional Research Project with other partners including Catholic Relief Services (CRS), International Water Management Institute (IWMI), and Wollega University (WU).
- (iv) **Lead National Scientist:** Improving beef cattle productivity for enhanced food security and efficient utilization of natural resources in the Lake Victoria basin (2012-2014). Supported by Lake Victoria Research Initiative (VicRes) a flagship regional research programme of the Inter-University Council for East Africa (IUCEA) funded by the Government of Sweden through the Swedish International Development Cooperation Agency (Sida).
- (v) **Lead Scientist:** Development of Ecological Restoration Strategies to Improve Livestock Productivity in Rangelands – supported by SIDA/SAREC/Mak Institutional Support program.
- (vi) **National Principal Investigator (PI)** of a **DANIDA – ENRECA** Project Income generation through market access and improved feed utilization - production of quality beef and goat meat, **(IGMAFU-meat) Project, Phase 2 - 2009 – 2014 Completed.**
- (vii) **Participating scientist:** Income generation through market access and improved feed utilization – production of quality beef and goat meat **(IGMAFU) Phase 1 - 2006-2009.**

- (viii) **Desk Officer / Coordinator** for the implementation of NORAD supported project in the Faculty of Agriculture for Strengthening the Makerere University Agricultural Research Institute (MUARIK) and the Continuing Agricultural Education Centre (CAEC); **(Phase I (2001-2005) completed)**.
- (ix) **Lead Scientist:** Sub-project II: Physical and Bio-chemical characteristics of breed structure and meat qualities of Ankole cattle and Mubende goats for dual purpose production functions. This is a sub-component of a bigger project: Development of Ankole Long-horned Cow and Mubende goat breeds of Uganda supported by NORAD to strengthen research in the Department of Animal Science, Makerere University research capacity **(Phase II 2005-2009. Completed)**.
- (x) **Collaborating Scientist** ILRI/BOKU project: Evaluation of ecological and economic sustainability of breeding strategies in pastoral systems: The case of Ankole cattle **(2006-2009 Completed)**.
- (xi) **Participating Scientist** in a project of the CGIAR Challenge Programme on Water and Food: Improving Water Productivity in the Nile basin **(2004-2008)**.
- (xii) **Lead National Scientist** of ASARECA-CGS project: Efficient utilisation of available feed resources to improve livestock productivity in Eastern Africa (A-AARNET Project 1 FS-B) **(2005-2008)**.
- (xiii) **Lead scientist** of a study on viability and productivity of Ankole cattle in Mpigi and Mbarara districts - 1999 - 2001. Project Title "Growth and Meat Quality Characteristics of Uganda Ankole Cattle: Potential Marketability of their Beef and a Germplasm Preservation Program for the Breed". USAID Grant Number: USAID/HPI 617-G-00-99-00001 **(competed and produced two M.Sc. graduates in Meat Science)**.
- (xiv) **Principal Investigator** of IDB's research grant of a project: "Nutritional effects on growth and carcass characteristics of indigenous bull calves and Mubende goats under a feed lot fattening system in Uganda **(completed)**."

#### REFEREES:

##### **Prof. E.N. Sabiiti,**

Department of Agricultural Production,  
College of Agricultural & Environmental Sciences,  
Makerere University, P.O. Box 7062, Kampala. Uganda.  
Email: Prof. Elly Sabiiti <[elly.sabiiti@mak.ac.ug](mailto:elly.sabiiti@mak.ac.ug)>  
Prof. Elly Sabiiti <[elly.sabiiti@gmail.com](mailto:elly.sabiiti@gmail.com)>  
Tel.: +256772438010.

##### **Prof. Jonny Mugisha,**

Dean, School of Agricultural Sciences,  
College of Agricultural & Environmental Sciences,  
Makerere University, P.O. Box 7062, Kampala. Uganda.  
Email: Prof Johnny Mugisha <[johnny.mugisha@mak.ac.ug](mailto:johnny.mugisha@mak.ac.ug)>  
Prof Johnny Mugisha <[johnnymugisha@gmail.com](mailto:johnnymugisha@gmail.com)>  
Tel.: +256773155702.

Signed



**Dr Denis Mpairwe.**  
**Associate Professor,**  
**Department of Agricultural Production,**  
**Makerere University.**

**Date: 01 June 2021.**