

# CURRICULUM VITAE

## Assoc. Professor Yusuf B. Byaruhanga

### CONTACTS:

Dept. of Food Technology & Nutrition

Makerere University

P O Box 7062 Kampala, Uganda

**Mobile:** +256 772 445 113

**Fax:** +256 414 533 676

**Email:** [ybbyaru@gmail.com](mailto:ybbyaru@gmail.com),

[yusuf.byaruhanga@mak.ac.ug](mailto:yusuf.byaruhanga@mak.ac.ug)

**Skype:** ybbyaru

### BIO-DATA:

**Sex:** Male

**Nationality:** Uganda

**Languages:** English & Swahili

### SUMMARY:

**Yusuf B. Byaruhanga** is Assoc. Professor in the School of Food Technology Nutrition and Bioengineering, Makerere University. He has worked with industry and communities to harness food and technology resources to employ them in addressing development challenges. He has developed food quality and safety management systems for several food processing enterprises. He is currently involved in using both indigenous and advanced food technologies to add value to locally available food resources. He has led and engaged in various multidisciplinary research teams to design technology packages and technology transfer pathways for improved productivity and competitiveness of small and medium enterprises in both rural and urban communities. Yusuf has supervised and mentored several young scientists at MSc and PhD levels. Yusuf developed a method for improving the mechanical and barrier properties of edible and biodegradable films from kafirin a sorghum protein. He also developed a revolutionary processing and preservation method for obushera, a traditional fermented sorghum and/or millet beverage. He pioneered work on processing traditional cereals like sorghum and millet into high value and nutritious products like snacks, instant flours, breakfast cereals and ingredients for use in various food formulations. These technologies and products are currently being used by over 100 micro-, small- and medium-food enterprises in Uganda. Yusuf has extensively worked with various standardization and certification systems for products, processes, and services. He has served on different technical committees of the UNBS in different capacities at both national and East African

Community levels. Yusuf is currently the Chairperson of the Technical Committee on Food Additives and Contaminants of the UNBS and EASC.

### **EDUCATIONAL QUALIFICATIONS:**

---

- PhD. Food Science. (University of Pretoria-2005).
- MSc. Food Science (with Distinction), (University of Pretoria-1999).
- BSc. Food Science and Technology, (Makerere University-1993).

### **PROFESSIONAL TRAINING:**

---

- Extrusion Technology Applications. May 2016. University of Nebraska, Lincoln.
- Business Incubator Management for African Countries October 2011, SIRIM/TCTP/JICA-Malaysia Malaysia
- Personal Mastery for Transforming Teaching and Learning at Makerere University. 2006/2007 RUFORUM/Makerere University
- Research Methodology; University of Pretoria, South Africa; March 1997
- Post-harvest handling of Fish and Tropical Crops and Quality Control; Kasetsart University, Thailand; May - September 1995.
- Applied Food Analysis; JICA/Jomo Kenyatta University of Agriculture and Technology, Kenya; February - March 1994

### **WORK EXPERIENCE:**

---

- **Manager:** Food technology and Business Incubation Center, Makerere University 2022 to date
- **Assoc. Professor:** Dept of Food Technology and Nutrition, 2017 to date
- **Senior Lecturer:** Dept of Food Technology and Nutrition, 2007-2016
- **Lecturer:** Dept. of Food Science and Technology, 2006-2007.
- **Assistant Lecturer:** Dept. of Food Science and Technology, 1994-2006  
Involved in research and teaching various undergraduate courses as well as other duties as prescribed by the head.
- **Production Supervisor:** Ateki Grain Milling Company, 1993-1994.

Responsible for planning and implementing production schedules for open market and specific bulk client orders. Developed a quality management system from scratch and improved the quality of maize meal and sunflower oil.

#### **OTHER PROFESSIONAL DUTIES ON STANDARDS AND ACCREDITATION:**

---

- **Chair:** National Technical Committee and EASC TC005 on Food Additives and Contaminants - Uganda National Bureau of Standards. Standards development and review in the area of food additives and contaminants working with national, regional, and international stakeholders. Technical backstopping on certification and accreditation processes.

#### **SELECTED EXTERNAL EXAMINED THESES:**

---

- 1) Potential role of interactions between polyphenols and macromolecules on the extraction of low viscosity banana juice, PhD Thesis. Nuria Majaliwa, Chalmers University of Technology. 2021.
- 2) Quality and nutritional properties of maize-soy composite complementary porridges enriched with differently processed OFSP, MSc Thesis. Charity Kambani-Banda, Lilongwe University of Agriculture and Natural Resources. 2018.
- 3) Bioactive phenolics, antioxidant properties and protein quality of lactic acid fermented and acidified finger millet gruels, MSc Thesis. John Lubaale, University of Pretoria. 2018.
- 4) Phenolic antioxidant composition and sensory properties of Mageu produced from sorghum and maize, MSc Thesis. Bonno Ledimo, University of Pretoria. 2017.

#### **TRAINING CONSULTANCIES WHERE I HAVE BEEN LEAD RESOURCE PERSON:**

---

- 1) Production Operations, Food Safety and Quality Management Systems For Real Foods and Beverages Ltd; 2017

**Target audience:** Management and staff of Real Foods and Beverages Ltd.

**Main objectives:** Develop and implement Productions operations, food safety and quality management systems, and standard operating procedures for Real Foods and Beverages Ltd; Train staff on systems' implementation and use.

- 2) Food Safety and Quality Management Systems For Tusker Mattresses (U) Ltd; 2014-2015

**Target audience:** Management and staff of Tuskys Supermarket Chain.

**Main objectives:** Develop and implement food safety management systems and standard operating procedures for Tuskys supermarket chain in Uganda; Train staff on food safety management.

- 3) Sanitary and phyto-sanitary measures in the plant and animal food value chains, Makerere University/Ministry of Trade, Industry & Cooperatives; 2012-2013

**Target audience:** Food processors; hotels and food service establishments; food traders, distributors and supermarkets, food inspectors and extension workers, and farmers

**Main objectives:** Domesticate SPS measures and initiate positive behavioural change among food handlers

- 4) Skills Training Program For Small & Medium Food Enterprises (2009 to date)

**Target audience:** youths, graduates, women and entrepreneurs

**Main objective:** to equip participants with knowledge and skills of food processing and entrepreneurship.

- 5) Food safety for food inspectors, Makerere University/UNIDO, 2006

**Target audience:** food inspectors

**Main objective:** to equip food inspectors with up-to-date knowledge and skills in food safety inspection, audits and local and internal food safety regulations.

- 6) Processing and Preservation of Fruits and Vegetables using Solar Drying Technology. East African Energy Technology Net-work (EAETDN), 2001.

**Target audience:** small scale fruit processors and farmers from Kenya, Uganda and Tanzania

**Main objective:** to impart knowledge and skills to participants with respect to solar drying of fruits for the export market

- 7) Food security training for extension workers, Makerere University/Rockefeller Foundation, 2000-2002

**Target audience:** Extension workers operating in districts in Uganda

- Main objective:** to expose extension workers to improved methods and techniques of postharvest food handling storage and processing
- 8) Improving the safety and quality of solar dried export fruits, 2000.

**Target audience:** employees of TEFA Fruit Processors, Mityana.

**Main objective:** to improve the knowledge and skills of employees with respect to personal hygiene, food safety and quality of dried fruit.

## RESEARCH WORK:

---

### As Principle Investigator:

- 1) Extension of Shelf life of Uganda's indigenous fermented cereal gruels, Makerere University, 1999 – 2000
- 2) Improving small-scale production practices and quality of bushera a traditional non-alcoholic fermented beverage 2002-2003, AICAD/RD-02/FPP/03-032
- 3) Use of food proteins in production of bioplastics, University of Pretoria/ The CSIR, South Africa/Makerere University 2002 – 2005.
- 4) Production of cereal based high-energy nutrient-dense food products from indigenous foods; US\$ 10,000 NORAD Grant; 2007-2009.
- 5) Harnessing the commercial potential of indigenous malted and fermented cereal beverages; US\$ 500,000 BIOEARN Grant; 2008-2010
- 6) Value addition to traditional Ugandan foods for improved health and nutrition US\$ 500,000 NUFU Grant (2007 to date)
- 7) Evaluation and dissemination of Striga resistant farmer preferred sorghum varieties in East and Central Africa US\$ 100,000 ASARECA grant (2011 to date)
- 8) Use of Biosciences for value addition and diversification to enhance commercialization of sorghum and millets products in East Africa; Bioinnovate Project 06 (US\$ 250,000 Grant); 2012-2015
- 9) Capacity development for conservation and utilization of plant genetic resources for agricultural productivity, resilience and sustainable livelihoods in ECA. ASARECA grant (2014 to 2017)
- 10) Commercialization of New Sorghum and Millet Products for Improved Nutrition and Socio-Economic Gains in Eastern Africa. BIOINNOVATE Grant (2018-2021)

- 11) Innovative approaches to value-addition and commercialization of climate-smart crops for enhanced food security and nutrition in Africa and beyond (NUTRIFOODS). LEAP-AGRI Grant (2018-2021)
- 12) Locally-driven co-development of plant-based value chains towards more sustainable African food system with healthier diets and export potential (INNOFOODAFRICA). EC-HORIZON 2040 Grant 2020-2023

**As collaborator:**

- 1) Improvement of Indigenous fermented milk products, Makerere University/Uganda Industrial Research Institute/WAITRO, 1996 - 1997.
- 2) Minimal processing of Jackfruit for value addition and enhanced stability, Makerere University, 2000 – 2001
- 3) Micronutrient preservation in solar dried fruits and vegetables, Makerere University, 2000 - 2001
- 4) Food security training for extension workers, Makerere University/Rockefeller Foundation, 2000-2002
- 5) Assessment of policy impediments on the implementation of national school feeding program I@MAK Grant
- 6) Harnessing of cereals technologies to enhance livelihood strategies MSI Grant (2007-2010)

**SELECTED PUBLICATIONS:**

- 
- 1) Sonnie Rose Kesselly, Robert Mugabi, and **Yusuf B. Byaruhanga**, 2023. Effect of soaking and extrusion on functional and pasting properties of cowpeas flour. *Scientific African* 19 (2023) e01532. <https://doi.org/10.1016/j.sciaf.2022.e01532>.
  - 2) Sonnie K. Gborie, Robert Mugabi, & **Yusuf B. Byaruhanga**, 2022. Effect of Extrusion on the Functional and Pasting Properties of High-quality Cassava Flour (HQCF). *Journal of Food Research*; Vol. 11, No. 4. <https://doi.org/10.5539/jfr.v11n4p1>.
  - 3) **Yusuf Byenkya Byaruhanga**, Stelah Byakika, Ivan Muzira Mukisa 2022. Survival and Acidification Potential of *Lactobacillus Plantarum* MNC 21 Stored in Air-Dried Sorghum Flours. *Food ScienTech Journal*, Vol 4, No. 2.

- 4) Sophie Nansereko , John Muyonga , and **Yusuf B. Byaruhanga**, 2022. Influence of Drying Methods on Jackfruit Drying Behavior and Dried Products Physical Characteristics. *International Journal of Food Science*, Volume 2022, Article ID 8432478, 16 pages, <https://doi.org/10.1155/2022/8432478>
- 5) Aisha Musaaazi Sebunya Nakitto, John H. Muyonga, **Yusuf Byenkya Byaruhanga** and Anika E. Wagner, 2021. Solanum anguivi Lam. Fruits: Their Potential Effects on Type 2 Diabetes Mellitus. *Molecules* 26, 2044. <https://doi.org/10.3390/molecules26072044>
- 6) Stellan Byakika, I. M. Mukisa, **Y.B. Byaruhanga**, C. Muyanja, 2020. A Review of Criteria and Methods for Evaluating the Probiotic Potential of Microorganisms. *Food Reviews International*. DOI:10.1080/87559129.2019.1584815
- 7) Stellan Byakika, I. M. Mukisa, Alex Paul Wacoo, R. Kort, **Y.B. Byaruhanga**, C. Muyanja, 2019. Potential application of lactic acid starters in the reduction of aflatoxin contamination in fermented sorghum-millet beverages. *International Journal of Food Contamination*. DOI:10.1186/s40550-019-0074-9
- 8) Stellan Byakika, I. M. Mukisa, **Y. B. Byaruhanga**, Charles Muyanja, 2020. Probiotic Potential of Lactic Acid Starter Cultures Isolated from a Traditional Fermented Sorghum-Millet Beverage. *International Journal of Microbiology*. DOI:10.1155/2020/7825943
- 9) Robert Mugabi, **Yusuf B. Byaruhanga**, Curtis L. Weller. 2019. Challenges faced by small-scale local fabricators and millers in Uganda: A case study of hammer mill fabricators and users. *Journal of Advances in Food Science & Technology*, 5(2): 63-71.
- 10) Stellan Byakika, Ivan Muzira Mukisaa, **Yusuf Byenkya Byaruhanga**, Denis Male, Charles Muyanja. 2019. Influence of food safety knowledge, attitudes and practices of processors on microbiological quality of commercially produced traditional fermented cereal beverages, a case of Obushera in Kampala. *Food Control*, 100:212-219.
- 11) Nulu Nansikombi, John Herbert Muyonga, **Yusuf Byenkya Byaruhanga**. 2019. Association between Fruit Characteristics and Postharvest Stability of Different Pumpkin (*Cucurbita*) Species. *Journal of Food Research*, 8(4): doi:10.5539/jfr.v8n4p131.
- 12) Robert Mugabi, **Yusuf B. Byaruhanga**, Kent M. Eskridge, Curtis L. Weller. 2019. Performance evaluation of a hammer mill during grinding of maize grains. *Agricultural Engineering International: CIGR Journal*, 21(2): 170–179.

- 13) J. Balamaze, J. H. Muyonga, **Y. B. Byaruhanga**. 2019. Physico-chemical Characteristics of Selected Jackfruit (*Artocarpus heterophyllus* Lam) Varieties. *Journal of Food Research*, 8 (4): doi:10.5539/jfr.v8n4p11 .
- 14) Stellah Byakika, Ivan Muzira Mukisa, **Yusuf Byenkya Byaruhanga**, Charles Muyanja. 2019. A Review of Criteria and Methods for Evaluating the Probiotic Potential of Microorganisms, *Food Reviews International*, DOI: 10.1080/87559129.2019.1584815.
- 15) Gertrude M. Alal Ojera, **Yusuf B. Byaruhanga**, Christine Magala-Nyago, Charles M. B. K. Muyanja. 2018. Lipid Lowering Potential of Malakwang (Hibiscus) Species Leaf Extract in Hyperlipidaemia-Induced Rats. *Food and Nutrition Sciences*, 9: 145-159
- 16) Abbas Kisambira, John H. Muyonga, **Yusuf B. Byaruhanga**, Phinehas Tukamuhabwa, Silver Tumwegamire, Wolfgang J. Grüneberg. 2015. Composition and Functional Properties of Yam Bean (*Pachyrhizus* spp.) Seed Flour. *Food and Nutrition Sciences* 6: 736-746
- 17) **Y.B. Byaruhanga**, V. Kassozi, R. Wafoyo, C. Mugoya and C. Masiga. 2014. Properties of Extrudates from Sorghum Varieties. *African Crop Science Journal*, 22 (s4): 829 - 836
- 18) Abbas Kisambira, John H. Muyonga, **Yusuf B. Byaruhanga**, Phinehas Tukamuhabwa, Silver Tumwegamire & Wolfgang Gruenberg. 2014. Physicochemical Characteristics of Yam Bean (*Pachyrhizus erosus*) Seed Proteins. *Journal of Food Research*; 3, (6): 168-178.
- 19) A.N. Mbule, **Y.B. Byaruhanga**, M. Kabahenda, A. Lubowa. 2013. Determinants of anaemia among pregnant women in rural Uganda. *Rural and Remote Health* 13: 2259. (Online). Available: <http://www.rrh.org.au>
- 20) M. Mukisa, D. Porcellato, **Y. B. Byaruhanga**, C. M.B.K. Muyanja, T. Langsrud, J. A. Narvhus, K. Rudi, 2012. The dominant microbial community associated with fermentation of Obushera (sorghum and millet beverages) determined by culture-dependent and culture-independent methods. *International Journal of Food Microbiology* **160**:1-10
- 21) Nabubuya, A. Namutebi, **Y. Byaruhanga**, J. Narvhus, Y. Stenstrøm, T. Wicklund. 2012. Amylolytic activity in selected sweetpotato (*Ipomoea batatas* lam) varieties during development and in storage. *Food and Nutrition Sciences* **3**: 660-668. DOI: 10.4236/Fns.2012.35090
- 22) I. [M. Mukisa](#), [Y. B. Byaruhanga](#), [C. M.B.K. Muyanja](#), [M. Aijuka](#), [R. B. Schüllera](#), [S. Sahlstrømc](#), [T. Langsruda](#), [J. A. Narvhus](#). 2012. Influence of co-



- fermentation by amylolytic *Lactobacillus plantarum* and *Lactococcus lactis* strains on the fermentation process and rheology of sorghum porridge. *Applied & Environmental Microbiology* **78** (12): DOI: 10.1128/Aem.00857-12
- 23) M. Mukisa, C.M.B.K. Muyanja, **Y. B. Byaruhanga**, R. B. Schüller, T. Langsrud, J. A. Narvhus. 2012. Gamma irradiation of sorghum flour: effects on microbial inactivation, amylase activity, fermentability, viscosity and starch granule structure *Radiation Physics & Chemistry* **81** (3):345–351. DOI: [10.1016/J.Radphyschem.2011.11.021](https://doi.org/10.1016/J.Radphyschem.2011.11.021)
- 24) J. Kigozi, **Y. Byaruhanga**, A. Kaaya, N Banadda. 2011. Development of the production process for sorghum ice-cream cones. *Journal of Food Technology* **9** (6):143-149
- 25) I.M. Mukisa, D.G. Nsiimire, **Y.B. Byaruhanga**, C.M.B.K. Muyanja, T. Langsrud, J.A. Narvhus. 2010. Obushera: descriptive sensory profiling and consumer acceptability. *Journal of Sensory Studies* **25**:190–214. DOI: 10.1111/J.1745-459x.2009.00272.X
- 26) **Y. B. Byaruhanga**, C. Erasmus, M. N. Emmambux and J. R. N. Taylor. Effect of heating cast kafirin films on their functional properties *Journal of the Science of Food and Agriculture* 2007, **87**:167–175
- 27) **Y. B. Byaruhanga**, M. N. Emmambux, P. S. Belton, N. Wellner, K. G. Ng, and J. R. N. Taylor. Alteration of kafirin and kafirin film structure by heating with microwave energy and tannin complexation *Journal of Agricultural and Food Chemistry* 2006, **54**:4198–4207.
- 28) **Y. B. Byaruhanga**, C. Erasmus and J. R. N. Taylor. Effect of microwave heating of kafirin on the functional properties of kafirin films, *Cereal Chemistry*, 2005, **82**:565-573.
- 29) C. Gao, J. Taylor, N. Wellner, **Y. B. Byaruhanga**, M. L. Parker, E. N. Clare Mills, and P. S. Belton. Effect of preparation conditions on protein secondary structure and biofilm formation of kafirin, *Journal of Agricultural and Food Chemistry* 2005, **53**:306-312.
- 30) C. Karungi, **Y.B. Byaruhanga**, J.H. Muyonga. Effect of pre-icing duration on quality deterioration of iced Nile perch (*Lates niloticus*), *Food Chemistry* 2004, **85**:13-17.
- 31) J. Ndawula, J. D. Kabasa and **Y. B. Byaruhanga**. Alterations in fruit and vegetable  $\beta$ -carotene and vitamin C content caused by open-sun drying, visqueen-covered and polyethylene-covered solar-dryers, *African Health Sciences* 2004, **4**:125-130.

- 32) **Y. B. Byaruhanga** and M. Ndifuna. Effect of selected preservation methods on the shelf life and sensory quality of obushera. *Makerere University Agricultural Research Institute Bulletin* 2002, **5**:92-100.
- 33) **Y. B. Byaruhanga**, B. H. Bester and T. G. Watson. Growth and survival of *Bacillus cereus* in mageu, *World Journal of Microbiology and Biotechnology* 1999, **15**:329-333.

#### Articles in Proceedings:

1. **Y. B. Byaruhanga** and C. Onyango. The effect of storage temperature on the sugar content of Tana cultivator potatoes 1995 Proceedings of the Group Training on Applied Food Analysis; JICA/Jomo Kenyatta University of Agriculture and Technology, Kenya
2. **Y. B. Byaruhanga** and J. C. Auko. Challenges and prospects for processing and utilization of traditional grains in Uganda. Proceedings of the workshop on Traditional grains for low environmental impact and good health. IFS/University of Pretoria 5-8 November 2007; Pretoria South Africa.

#### Book Chapters:

1. Muyanja C. M. B. K and **Y. B. Byaruhanga**. Improving food hygiene and sanitation, Pages 37-55. In: *Food and nutrition in Uganda: Principles and community needs*; A. Namutebi, J. H. Muyonga and A. G. Tumuhimbise (eds). 2007. Kampala: Fountain Publishers. ISBN: 978-9970-680-7
2. **Y. B. Byaruhanga** and C. Efata. Nutrition education and advocacy in Uganda, 134-150. In: *Food and nutrition in Uganda: Principles and community needs*; A. Namutebi, J. H. Muyonga and A. G. Tumuhimbise (eds). 2007. Kampala: Fountain Publishers. ISBN978-9970-680-7
3. W. Kyamuhangire and **Y. B. Byaruhanga**. Interventions to address micronutrient deficiencies in Uganda, Pages 151-155. In: *Food and nutrition in Uganda: Principles and community needs*; A. Namutebi, J. H. Muyonga and A. G. Tumuhimbise (eds). 2007. Kampala: Fountain Publishers. ISBN978-9970-680-7
4. **Y. B. Byaruhanga** and A. Bambona. Planning community food and nutrition interventions, Pages 156-162. In: *Food and nutrition in Uganda: Principles and*

*community needs*; A. Namutebi, J. H. Muyonga and A. G. Tumuhimbise (eds). 2007. Kampala: Fountain Publishers. ISBN978-9970-680-7

#### **Printed books:**

- J. K. Kikafunda, J. H. Muyonga, A. N. Kaaya, **Y. B. Byaruhanga**, D. Nakimbugwe. Integrated training of district extension workers in food and nutrition security. 2004, [i@mak.com](http://i@mak.com) Makerere University.

#### **Instructional study materials:**

- **Y. B. Byaruhanga**. Students guide for research and communicating research. August 2007, Dept. Food Science and Technology, Makerere University

#### **PAPERS PRESENTED AT CONFERENCE/WORKSHOPS:**

---

1. Bio-based composite materials from crop side streams. FNSSA Sister Project Synergy Summit, Teknologian tutkimuskeskus VTT Oy Bioteknologia - IFA – InnoFoodAfrica, Helsinki, Finland; 10 Jan 2024.
2. Commercialization of indigenous food technologies: a case of obushera in Uganda. Paper presented at the 23<sup>rd</sup> SAAFoST Biennial International Congress and Exhibition; Birchwood Hotel and Conference Centre, Johannesburg, South Africa; 1 - 4 September 2019
3. Use and abuse of food additives: A case of chemical preservatives in Uganda's drinks. 2<sup>nd</sup> National Food Safety Conference; Uganda Water and Juice Manufacturers' Association/Uganda National Bureau of Standards; 11<sup>th</sup> June 2018; International Conference Center, Serena Hotel Kampala
4. Food safety and the beverage industry; Keynote address at the National Food Safety Conference; Uganda national Bureau of Standards; 2<sup>nd</sup> November 2016; International Conference Center, Serena Hotel Kampala
5. Recent developments in value addition to sorghum and millets. Paper presented at the Traditional Grains Project Workshop; PARDEE Rand Graduate School/ACET; 18<sup>th</sup> August 2015; Golf Course Hotel, Kampala.

6. Potential contribution of food processing to community development; Paper presented at the Post-Harvest & Agro-Processing Regional Workshop; 3rd - 5th April 2013; The Botanical Beach Hotel, Entebbe

## **GRADUATE STUDENTS SUPERVISED TO COMPLETION**

---

1. Nulu Nansikombi: Postharvest physiology and quality of kafirin coated purple passion fruits (MSc FST, Makerere University; 2009)
2. Moses Matovu: Safety of cystatin genes in transgenic East African high land banana (MSc FST, Makerere University; 2009)
3. Jane C. Auko: Effect of roasting on the nutritional value of finger millet (*Elusine corana*) (MSc AHN, Makerere University; 2010)
4. Bwamiki Paul: Malting and mashing optimisation of finger millet (*eleusine coracana*) for a malt-based drink. MSc FST, Makerere University; 2011.
5. Anne Marjorie Mbule: Determinants of anemia among pregnant women in Kiboga district (MSc AHN, Makerere University; 2011)
6. Ivan M Mukisa: Sensory characteristics microbial diversity and starter culture development for Obushera, a traditional fermented cereal beverage from Uganda. PhD; Norwegian University of Life Sciences; 2012
7. Agnes Nabubuya: Utilization of sweet potato (*Ipomoea batatas*) endogenous amylases for the development of a sweet potato weaning food. PhD; Norwegian University of Life Sciences; 2013
8. Agnes Acheng: Considerations for improving complementary feeding practices among infants of 6-11 Months in northern Uganda; MSc AHN, Makerere University 2014.
9. Julia Kigozi: Development of ice-cream cones from sorghum and their properties; PhD Makerere University; 2015.
10. Patrick Muganga: Application of enzymes in the production of Obushera; MSc FST, Makerere University; 2015.
11. Arthur Tabula: Effect of alkali treatment on quality of Obushera; MSc FST, Makerere University 2015.

12. John-Mary Kwagala: Effect of storage condition of sweet potato amylase activity. MSc FST, Makerere University; 2015.
13. Stella Byakika: Growth characteristics of *Lactobacillus plantarum* in sorghum extracts. . MSc FST, Makerere University; 2015.
14. Phillip Musoke: *Lactococcus lactis* biomass growth in sorghum seed material. . MSc FST, Makerere University; 2015.
15. Diana L Madiesse: Physical modification of starches from cassava cultivars grown in uganda for food thickening. MSc FST, Makerere University; 2016.
16. Sam R Yoryor: Mitigating the effects of substituting wheat with cassava flour in bread. MSc FST, Makerere University; 2016.
17. Abbas Kisambira: Physicochemical characteristics of yam bean (*Pachyrhizus spp*) seed flour. MSc FST, Makerere University; 2016.
18. Robert Mugabi: Improving the performance of locally fabricated hammer mills used in rural Uganda. PhD, University of Nebraska Lincoln, 2017
19. Henry Dungu: MSc FST at Makerere University. Effect of fermentation on nutritional properties of a sweet potato beverage. MSc., Makerere University, 2017
20. Abubaker Bakulumpagi: MScFST at Makerere University. Utilisation of bananas in the sweetening and thickening of ketchup. MSc, Makerere University, 2019.
21. Joseph Balamaze: Evaluation of jackfruit varieties in Uganda for production of pectin and value-added products, PhD., Makerere University 2020.
22. Nulu Nansikombi: Composition, functionality and storage stability of fruits of the major pumpkin varieties grown in Uganda. PhD., Makerere University 2020.
23. Christine Asaba: Development of a nutrient enriched relish for use in boarding schools. MSc, Makerere University, 2021.
24. Annet Kyomuhangi Rwakakuto: Physical-chemical and microbial quality of raw milk along the dairy value chain in kiboga district. MSc, Makerere University, 2023
25. Mumbere Malyabo: Grain characterstics and physico-chemical properties of new sorghum lines bred for disease resistance. MSc, Makerere University, 2023

26. Sonnie Kessely: Development of gluten free flat breads from locally available foods. PhD, Makerere University, 2023.
27. Leatitiah Namubiru: Food control in Uganda; a case of the rice value chain. PhD, Makerere University, 2023.
28. Moses Barigye: Development and properties of low GI ingredients from banana starch and flour. MSc 2024 Makerere University.
29. Desire Annet Ssemmanda: Evaluation of different drying technologies for east African highland bananas. MSc 2024 Makerere University.
30. Doreen Prescilla Apio: Development of biodegradable films from banana pseudo-stem fibre. MSc 2024 Makerere University.
31. Samuel Turyatunga: Use of non-nutritive sweeteners in water-based flavoured drinks in Uganda, MSc 2024 Makerere University.

#### **STUDENTS CURRENTLY UNDER SUPERVISION:**

1. Getrude Ojera: PhD student Makerere University. Nutritional qualities of indigenous leafy vegetables in Ugandan
2. Kiruuta Allan: MSc MSc student Makerere University. Effects of processing conditions on the characteristic and functional properties of amaranth seed proteins
3. Nandera Stella: MSc MSc student Makerere University. Effect of processing methods on structure and functional properties of proteins in amaranth leaves
4. Bazalaki Duncan: MSc student Makerere University. Compliance of Water-Based Flavored Drinks Processors with Preservative Use Standards and Guidelines in Uganda
5. Peace Kughanakwe Namantakha: MSc student Makerere University. Effect of extrusion on nutritional and functional properties of cowpea-cereal blends

#### **ADMINISTRATIVE ACTIVITIES & COMMUNITY SERVICE:**

- 
- Internal and external examination of several MSc and PhD theses of Makerere University, University of Pretoria, and Lilongwe University of Agriculture - Bunda College.

- Acted as Head of Department several times
- Coordinator: Postgraduate Studies 2006-2011
- Liaison Officer: Food Technology and Business Incubation Center 2009- to date
- Trained over 1500 youths and women under the Skills Training Program for Small and Medium Food Enterprises
- Supported over 20 micro, small and medium food processing enterprises under the Virtual Incubation Program

#### **SOCIETY MEMBERSHIP:**

---

- Member: American Association of Cereal Chemists (Member Number: 211798)
- Fellow: Uganda Academy of Sciences
- Founding President: Uganda Association of Food Science and Technology

#### **WARDS:**

---

- Distinguished Service of Promoting the School of Food Technology Nutrition and Bioengineering

#### **PERSONAL QUALITIES:**

---

- A result oriented and creative team player
- Eager to learn and committed
- Works well on multidisciplinary research teams
- Athletics