

Curriculum vitae

Surname : Atukwase
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Summary of the Profile

I am a Food Technologist/Scientist with over 20 years of professional experience. I hold a PhD in Food Science and Technology, a Masters in Food Technology and Bachelors of Science in Food Science and Technology. I am currently working with Makerere University, School of Food Technology, Nutrition and Bioengineering as a Senior Lecturer. My research interests are in postharvest handling, food processing/value addition and food safety. In the area of food value addition, I am working with local food processing companies in Uganda to improve quality and safety of food products namely; fruits and vegetables (canning of green immature jackfruit), cassava and cassava based products (high quality cassava flour, composite flours, cassava chips, confectionaries), banana and banana based products (dried banana chips and banana beverages) and optimizing the production processes of cereal based weaning foods. In the area of postharvest handling and food safety, my focus is on safety of staple grains like maize and groundnuts focusing on mycotoxins most especially fumonisins and aflatoxins. I am also working closely with the University of Oxford and the Interdisciplinary Food Systems Learning and Teaching (IFSTAL) in capacity building for food systems and a member of the Cluster of Excellence in Food Systems. I am very hard working and able to produce excellent results with minimum supervision.

Academic qualifications

Years	Qualification	Institution
2007-2012	PhD Food Science and Technology	Makerere University, Kampala
2003-2005	MSc. Food Technology	Gent University, Belgium
1995-1999	BSc. Food Science and Technology	Makerere University, Kampala

Professional training

- i. Certificate, Foresight for Food Systems (20th -23rd March 2018), Nairobi Kenya
- ii. Certificate in Prevention and control of mycotoxins in food stuffs (1st - 6th February 2009) Tubitak MRC Food Institute, Turkey.
- iii. Certificate in Applied Food Analysis (Jan 2002-March 2002), Jomo Kenyatta University of Agriculture and Technology, Nairobi Kenya.

Working experience

- i. September 2013 to date: **Senior Lecturer**, Department of Food Technology and Nutrition, Makerere University
- ii. December 2018 to May 2023: **Dean**, School of Food Technology, Nutrition and Bioengineering, Makerere University
- iii. March 2006-2013: **Assistant Lecturer**, Department of Food Technology and Nutrition, Makerere University
- iv. 2001 to March 2006: **Teaching Assistant** - Department of Food Technology and Nutrition, Makerere University
- v. 1999 to 2001: **Post Harvest Specialist/Food Technologist** – Post harvest Handling and Storage Project- USAID, Uganda

Consultancies Undertaken (Selected)

- i. June 2023-Date: **Co-Principal Investigator**, Study on impact of aflatoxins on Uganda's economy. Funded by USAID, Feed the Future.
- ii. September 2022-December 2022: **Consultant**, Aflatoxin Prevalence and Incidence in Uganda. Funded by NARO/USAID-Uganda
- iii. March 2022-January 2023, **Lead Consultant**, Review of Uganda's Nutrition Information Systems (NIS). Funded by WHO
- iv. October 2021-January 2022: **Lead Consultant**, Development and Piloting a Blended Learning Course on Nutrition and Food Systems. Funded by FAO
- v. December 2021 to January 2022: **Lead consultant**, Survey for baby/infant foods in Uganda. Funded by the International Trade Centre
- vi. September 2021 to June 2022: **Consultant**, Revalidation of the 2013 Feasibility Study and Development of a 10 year Business Plan for the Proposed Luweero Fruit Factory. Funded by Government of Uganda/Uganda Development Corporation (UDC).
- vii. October 2020 to Dec 2021: **Lead Consultant**, Development and optimisation of the production process for canned green jackfruits. Funded by Business Lab Uganda (BLU)/Dutch Embassy in Uganda.
- viii. March 2020: **Consultant**, Feasibility study for establishing fruit processing facilities in Greater Masaka and Greater Busoga sub-regions. Funded by Government of Uganda/NAADS.
- ix. May – June 2020: **Consultant**, Development of cassava investment plan. Funded by Government of Uganda/ NAADS.
- x. September 2019 to date: **Lead Consultant**, Establishment of Cassava-Sorghum Industry (CASIP) in Eastern Uganda. Funded by Fresh Horizons Ltd/Government of Uganda. November 2019-March 2020:
- xi. November 2019-June 2020: **Principal Investigator**, Food Security and Nutrition Assessment in Refugee Settlements and Host Communities in Northern and Western Uganda. Funded by UNICEF, Uganda.

- xii. September 2019 to date: **Lead Consultant**, Establishment of Cassava-Sorghum Industry (CASIP) for improvement of household income and food security in Eastern Uganda under Fresh Horizons Ltd. Funded by Fresh Horizons Ltd.
- xiii. July-December 2017: **Consultant**, Development of training materials and training of Agricultural Extension Staff from selected Districts of Uganda on Postharvest Technology. Funded by Government of Uganda/MAAIF
- xiv. June 2019: **National Consultant**, Assessment of Status and Needs for Effective Participation of Private and Public Sector Organisations in Development, Harmonisation and Domestication of East Africa Food Standards. Funded by GIZ.
- xv. March 2019: **Senior Advisor**, Packaging and labeling for banana wine produced in Rwanda. Funded by UNIDO/NIRDA.
- xvi. January 2018: **Consultant**, Feasibility Study for large scale processing of cassava in Uganda. Funded by DFID-UK/DFID-China.
- xvii. June 2014: **Consultant**, Feasibility for establishing of a mango processing factory in Yumbe district. Funded by Government of Uganda.
- xviii. August 2014 –15: **Consultant**, Country-led situational analysis for the mitigation of aflatoxin within the National Food Safety System of Uganda. Funded by the African Union Commission (AUC)/ Meridian Institute.
- xix. July 2013: **Consultant**, Feasibility study on the proposed Luwero Fruit Processing facility. Funded by Uganda Development Corporation (UDC).
- xx. 2007-2008: **National Expert**, Value chain analysis of banana beverages in the Lake Victoria basin. Funded by UNIDO.
- xxi. October 2016 – 2017: **Consultant**, Baseline survey for Multi-sectoral Food Security and Nutrition Project. Funded by World Bank.
- xxii. August 2014 – 2015: **Consultant**, Country-led situational analysis for the mitigation of aflatoxin within the National Food Safety System of Uganda. Funded by the African Union Commission (AUC)
- xxiii. 2013-2014: **Consultant**, Development of Quality Management Systems Manual for management of aflatoxins in groundnuts. Funded by VECO- Uganda
- xxiv. 2012: **Consultant**, Independent assessment of the aflatoxin levels in ready to use therapeutic foods (RUTF) produced by RECO industries limited, 2012. Funded by USAID-Uganda
- xxv. 2010: **National Expert**, Profiling socio-economic and nutrition data from 2001-2010 for Uganda. Funded by Inter-Government Authority (IGAD).
- xxvi. 2010: **Consultant**, Assessment of Nutrition and Food Security Status in Kitgum and Pader Districts. Funded by WFP/UNICEF
- xxvii. 2008: **Consultant**, Assessment of Nutrition and Food Security Status of Internally Displaced People (IDPs) in Gulu and Amuru districts, Funded by WFP/UNICEF
- xxviii. 2007: **Consultant**, Assessment of Nutrition and Food Security Status of Internally Displaced People (IDPs) in Pader District. Funded by WFP/UNICEF

- xxix. 2006: **Consultant**, Assessment of Nutrition and Food Security Status of Internally Displaced People (IDPs) in Gulu District. Funded by WFP/UNICEF

Research Experience (selected)

I have participated in the following research projects as either a Principal Investigator or Co- Researcher

- i. Sweet Potato Value Chain Development through Technology Transfer and Promotion project (SPVCDTTP). Funded by Government of Uganda.
- ii. Exposure assessment and analysis of health risks associated with consumption of aflatoxin contaminated staples in Uganda. Funded by Government of Uganda.
- iii. Aflatoxin exposure among vulnerable groups in peri-urban low income areas of Kampala City. Funded by Carnegie Corporation of New York.
- iv. Development of Healthy-Rich Tea Varieties and Value-Added Tea Products for Improved Livelihoods in Uganda. Funded by Government of Uganda.
- v. Development and commercialisation of cassava value added products for improved food security in Uganda. Funded by DFID-UK/DFID-China
- vi. Locally-driven co-development of plant-based value chains towards more sustainable African food system with healthier diets and export potential
- vii. Enhancing value addition on Potato-Sorghum enterprises for Improved Livelihoods in Uganda. Funded by Government of Uganda
- viii. Promoting community and home based appropriate post harvest handling and processing of legumes and starchy staples to improve food security in uganda. Funded by McKnight Foundation
- ix. Making Potato Value Chain Enhance Productivity and Incomes in Uganda. Funded by MasterCard Foundation/RUFORUM
- x. Promoting community and home based appropriate post harvest handling and processing of legumes and starchy staples to improve food security in uganda. Funded by McKnight Foundation
- xi. Improving the market potential of traditionally fermented banana based beverages. Funded by SIDA/SAREC and Government of Uganda.
- xii. Evaluating the technical properties of yeast strains isolated from *Tonto* as potential starter cultures in the production of banana wine. Funded by Government of Uganda.

Publications

1. **Atukwase, A.**, Mutebi, R., Acham, H., Kaaya, A. N., & Wacoo, P. A. (2024). Aflatoxin exposure and risk assessment among peri-urban low income population in Kampala Capital City, Uganda. *Measurement: Food*, 13, 100122.
2. Johnny Mugisha, Peter Wasswa, Napoléon Heri Bahati-Kajunju and **Abel Atukwase** (2023). Inclusion of farmer communities in value chain development: a case of potato in southwestern Uganda. In: Egeru, A., Lindow, M., & Muir Leresche, K. (Eds.). University

Engagement with Farming Communities in Africa: Community Action Research Platforms (1st ed.). Routledge. <https://doi.org/10.4324/9781003387497>

3. Elizabeth Atim, **Abel Atukwase**, Betty Naziriwo Bbosa and Margaret Kabahenda (2023). Child Health and Safety of Complementary Food among Households in Adyel Division, Lira District: A Cross Sectional Study. Students Journal of Health Research.
4. Vincent ssekajja, Henry Wamani, Freddy Eric Kitutu and **Abel Atukwase** (2022). Cure rate and associated factors for children 6–59 months with severe acute malnutrition under the out patient therapeutic care programme in the health centres of Kabale District in Southwestern Uganda: a cross sectional study. BMC Nutrition, Vol 8:67. <https://doi.org/10.1186/s40795-022-00560-5>
5. Kajunju N.H.B., **Atukwase A.**, Tumuhimbise G.A and Mugisha J. (2022). Characterisation of potato varieties commonly grown in Uganda for food processing suitability. African Crop Science Journal, 30(1): 51 - 68. DOI: <https://dx.doi.org/10.4314/acsj.v30i1.4>
6. Kajunju, N.H.B, **Atukwase, A.**, Tumuhimbise, G.A and Mugisha, J (2021). Potato processing in Uganda: A technical review. Makerere University Journal of Agricultural and Environmental Sciences. Vol. 10 (1). pp. 60 – 81. ISSN 1563-3721
7. Oshaba,B, J. Kigozi and A. Atukwase (2021). Optimization of the Proportions for Banana Based Weaning Flour by Variation in Ingredient. International Journal of Scientific Advances. DOI: 10.51542/ijscia.v2i5.2
8. Maureen, Naggayi., Kaaya, Archileo., Kauffman, Joy., Narrod, Clare & **Atukwase, Abel**, (2020). Enhancing Nutritional Benefits and Reducing Mycotoxin Contamination of Maize through Nixtamalization. Journal of Biological Sciences. 20. 153-162. 10.3923/jbs.2020.153.162.
9. Akumu, G., **Atukwase, A.**, Tibagonzeka J.E., Apil, J., Wambete, J.M., Atekyereza, Kiyimba F.J and Muyonga J.H (2020). On-farm evaluation of effectiveness of improved postharvest handling of maize in reducing grain losses, mold infection and aflatoxin contamination in rural Uganda. African Journal of Food Agriculture, Nutrition and Development. 2020; 20(5): 16522-16539. <https://doi.org/10.18697/ajfand.93.19790>
10. Lukwago, F. B., Mukisa, I. M., **Atukwase, A.**, Kaaya, A. N., & Tumwebaze, S. (2019). Mycotoxins contamination in foods consumed in Uganda: A 12-year review (2006–18). Scientific African, p. 2-4.
11. Akumu, G., A. **Atukwase, A.**, Tibagonzeka, J. E., Apil, J.A., Kato, J.S., Kiyimba, F. and Muyonga J.H, (2018). Influence of extension approaches on uptake of postharvest technologies among maize farmers in Uganda. African Journal of Rural Development. 3(4) 955-971.
12. Tibagonzeka, J. , Akumu, G. , Kiyimba, F. , **Atukwase, A.** , Wambete, J. , Bbemba, J. and Muyonga, J. (2018) Post-Harvest Handling Practices and Losses for Legumes and Starchy Staples in Uganda. Agricultural Sciences, 9, 141-156. doi: 10.4236/as.2018.91011.

13. Gerald Tumwine, **Abel Atukwase**, Gaston A Tumuhimbise, Francis Tucungwiiirwe, Anita Linnemann (2018). Effect of skimmed milk and vegetable powders on shelf stability of millet-based composite flour. *The Journal of the Science of Food and Agriculture*. <https://doi.org/10.1002/jsfa.9482>
14. Gerald Tumwine, **Abel Atukwase**, Gaston A Tumuhimbise, Francis Tucungwiiirweb, Anita Linnemann, (2018). Production of nutrient-enhanced millet-based composite flour using skimmed milk powder and vegetables. *Food Science and Nutrition*. DOI: 10.1002/fsn3.777
15. John Bukusuba, Archileo N. Kaaya and **Abel Atukwase** (2018). Modelling the Impact of Stunting on Child Survival in a Rural Ugandan Setting. *BMC Nutrition*. 4:13, 1-10.
16. Juliet E. Tibagonzeka, Grace Akumu, Florence Kiyimba, **Abel Atukwase**, Julius Wambete, Joseph Bbemba, John H. Muyonga, 2018. Post-Harvest Handling Practices and Losses for Legumes and Starchy Staples in Uganda. *Agricultural Sciences*, 9, 141-156.
17. John Bukusuba, Archileo N. Kaaya and **Abel Atukwase** (2017). Predictors of Stunting in Children Aged 6 to 59 Months: A Case–Control Study in Southwest Uganda. *Food and Nutrition Bulletin*, 1-12.
18. John Bukusuba, Archileo N. Kaaya and **Abel Atukwase** (2017). Risk factors for stunted growth among children aged 6–59 months in rural Uganda, *International Journal of Nutrition*, 3:1-13.
19. G. Tumuhimbise, J. Orishaba, A. **Atukwase** and A. Namutebi (2013). "Effect of Salt on the Sensory and Keeping Quality of Orange Fleshed Sweet Potato Crisps," *Food and Nutrition Sciences*, 4: 4, 454-460.
20. **Atukwase**, A., C. Muyanja and A. N. Kaaya (2012). Potential for fumonisin production by strains of *Gibberella fujikurioi* species complex isolated from maize produced in Uganda. *Journal of Biological Sciences*, 12:225-231.
21. **Atukwase**, A., A. N. Kaaya, C. Muyanja, H. Vismer and J. P. Rheeder (2012). Diversity of *Gibberella fujikuroi* species complex isolated from maize produced in Uganda. *International Journal of Plant Pathology*, 3: 1-13.
22. **Atukwase**, A., A. N. Kaaya and C. Muyanja (2012). Dynamics of *Fusarium* and fumonisins in maize during storage – A case of the traditional storage structures commonly used in Uganda. *Food Control*, 26: 200 – 2005.
23. **Atukwase**, A. A. N. Kaaya and C. Muyanja (2009). Factors associated with fumonisins contamination of maize in Uganda. *Journal of The Science of Food and Agriculture* 89: 2393 – 2396.
24. **Atukwase**, A., & Atyang, A (2007). Community food security and early warning systems. In A. Namutebi, J. Muyonga & G. Tumuhimbise, A (Eds.), *Food and Nutrition in Uganda* Fountain Publishers.
25. Kaaya, A., N. Mutyaba, C., J, & **Atukwase**, A, 2007. Post harvest handling and storage of food. In A. Namutebi, J. Muyonga & G. A. Tumuhimbise (Eds.), *Food and Nutrition in Uganda: Fountain Publishers*

26. Namutebi, A., Ocom, J., & **Atukwase, A.** (2007). Small scale food processing and preservation. In A. Namutebi, J. Muyonga & G. A. Tumuhimbise (Eds.), Food and Nutrition in Uganda: Fountain Publishers
27. Samapundo, S., De Meulenaer, B., **Atukwase, A.**, Debevere, J., & Devlieghere, F., (2007). The influence of modified atmospheres and their interaction with water activity on the radial growth and fumonisin B1 production of *Fusarium verticillioides* and *F. proliferatum* on corn. Part II: The effect of initial headspace oxygen concentration. *International Journal of Food Microbiology*, 113, 339-345
28. Samapundo, S., Devlieghere, F., Meulenaer, B. D., **Atukwase, A.**, Lamboni, Y., & Debevere, J. (2007). Sorption isotherms and isosteric heats of sorption of whole yellow dent corn. *Journal of Food Engineering*, 79, 168-175
29. Samapundo, S., Meulenaer, B. D., **Atukwase, A.**, Debevere, J., & Devlieghere, F., (2007). The influence of modified atmospheres and their interaction with water activity on the radial growth and fumonisin B1 production of *Fusarium verticillioides* and *F. proliferatum* on corn. Part 1: The effect of initial headspace carbon dioxide concentration. *International Journal of Food Microbiology*, 114, 160-167.

Membership to Boards and technical committees

1. Member, National Technical Working Group on Milk Quality
2. Board Member, Nilezilla Foods Ltd, local company engaged in processing of mangoes in West Nile sub-region
3. Board Member, Smart Food Ltd, local firm engaged in processing soya based products
4. Board Member, Food and Nutrition Solutions Ltd, local firm engaged in consultancy in the area of food, nutrition and value addition

Service to the community

1. February 2019 to May 2023: Member of the Appointments and Establishment Committee of the College of Agricultural and Environmental Sciences, Makerere University
2. January 2019 to May 2023: Member of the Policies and Appeals Committee of Senate, Makerere University
3. December 2018 to May 2023: Member of Senate, Makerere University
4. 2006- to date, Member of the National Bureau of Standards Technical Committee on agriculture
5. 2013 to 2015: Reviewer, for the Research and Postgraduate project, University of Rwanda
6. January 2016 to 2017, Technical Officer, Mango Processing Public Private Partnership Team under the National Agricultural Advisory Services (NAADS)
7. September 2013 to 2018, Coordinator of the value addition component under the Agricultural Technology Transfer on Cassava Value Chain Development Pilot Project

8. June 2013-June 2014: Member of the technical panel on development of EAC regional standards for aflatoxin and mycotoxin levels in foods and animal feeds
9. June 2010 to 2015, Member of the National Cassava Coordinating Committee (NCCC), Ministry of Agriculture, Animal, Industry and Fisheries (MAAIF).

Peer Review Support

I am a reviewer with the following Journals

1. International Journal of Food Science and Nutrition
2. The Journal of the Science of Food and Agriculture
3. Food Control

I also provide review support for the following organisations

1. Reviewer, TASO Ethics Review Committee (REC)
2. Reviewer, for grant proposals, Kyambogo University

External Examination

1. External Examiner for Masters' Thesis, Department of Food Technology and Nutrition, Sokoine University of Agriculture, Tanzania
2. External Examiner for Masters' Thesis, Department of Food Science and Postharvest Technology, Faculty of Agriculture and Environment, Gulu University, Uganda
3. External Examiner for undergraduate Examinations and Masters' thesis, Uganda Christian University (UCU), Department of Nutritional Sciences, Uganda
4. External Examiner for Masters' Thesis, Department of Food Science and Postharvest Technology, Faculty of Agriculture and Environment, Gulu University, Uganda
5. External Examiner for Masters' Thesis, Department of Food Science and Technology, Kyambogo University, Uganda

Referees

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