MY DENIS NSUBUGA'S PROFILE

Denis Nsubuga

Denis Nsubuga is an Assistant Lecturer in the Department of Agricultural and Bio-systems Engineering
School of Food Technology, Nutrition and Bio-engineering
College of Agricultural and Environmental Sciences
Makerere University

Denis holds a Ph.D. in Agricultural Engineering from Makerere University in 2024. Prior to perusing his doctorate, he earned a Masters in Agricultural Engineering from Makerere University in 2018 and B.Sc. in Agricultural Engineering in Makerere University in 2014

Teaching Subjects	AEX 2101 Introductory Mathematics AEN1101 Introductory Mathematics BPE4101 Downstream processing BPE1101 Introduction to Bioprocessing Engineering AEN 3113 Applied Rheology BPE3204 Biocatalysis and Enzyme Technology FOR3213 Applied Mechanics of Materials BPE 1201 Introduction to Physiology and Biochemistry BPE3203 Transport Phenomena
Research Interests and Expertise	His primary research interest areas are agricultural waste management, Biofuels and Biorefineries, Life Cycle Assessment and modelling using SimaPro Software, optimization of bioprocesses, Bioreactor design and optimization, Biofertilizer production and utilization, Renewable energy, Food processing and Post harvest engineering. Additionally, Dr. Denis has some consulting experience and has worked with a number of organizations and projects in various consulting roles

- **Nsubuga D**., Kabenge I., Zziwa A., Yiga V.A., Mpendo Y., Mawejje H., Kizza R., Banadda N., and Wydra K. D. (2022). Optimization of adsorbent dose and contact time for the production of jackfruit waste nutrient-enriched biochar. Waste Disposal and Sustainability. https://doi.org/10.1007/s42768-022-00123-1.
- **Nsubuga D.,** Bannada N. and Kiggundu N. (2019). Innovations in value addition of agricultural by-

products in Uganda. *Journal of Environmental Protection, 10, 1493-1506.* https://doi.org/10.4236/jep.2019.1011089.

- **Nsubuga D**., Kabenge I., Banadda N., and Kerstin D. W. (2020). Potential of jackfruit waste for biogas, briquettes and as a Carbondioxide sink-A review. *Journal of Sustainable Development, 13(4); 60-75.* 10.5539/jsd.v13n4p60.
- **Nsubuga D**., Kabenge I., Banadda N., & Kerstin D. W. (2021). Potential of Jackfruit waste as anaerobic digestion and slow pyrolysis feedstock. *Journal of Biosystems Engineering* 46, 163–172. https://doi.org/10.1007/s42853-021-00096-9.
- Mibuulo, T**., Nsubuga**, D., Kabenge, N. and Wydra, K.D. (2023). Comparative Study Biogas Production from Jackfruit Wastes, Banana Peels, and Pineapple Peels Co-digested with Cow Dung. Journal of Sustainable Bioenergy Systems, 13, 1-15. 10.4236/jsbs.2023.131001.
- **Nsubuga D.**, I. Kabenge, A. Zziwa, N. Kiggundu, J. Wanyama and N. Banadda. (2020). Performance evaluation and optimization of the maize shelling operation of the multi-purpose farm vehicle. Agricultural Engineering International: CIGR Journal, 22(4): 174-183.
- **Nsubuga D.,** Kabenge I., Zziwa A., Wanyama J., Kiggundu N. and Banadda N. (2021). Improving maize shelling operation using motorized maize shellers: a step towards reducing postharvest losses in low developing countries. Maize-Recent Advances, Applications and New Perspectives for Crop Improvement (pp:1-21). https://www.intechopen.com/online-first/79507.

Innovations Developed	Development of a low-cost multi-purpose farm vehicle (MV-Mulimi) in 2015
Research projects	Production and Life Cycle Assessment of Jackfruit waste nutrient-enriched biochar for soil amendment and carbon sequestration. Grant Total UGX 35,000,000; Role: Principles Investigator, February 2023 -September 2023.