

ABRIDGED BIO-DATA – PROFESSOR B. A. ADEWUMI

Full Name: ADEWUMI Babatunde Adewale, FNSE, FNIAE. FAEng, FAIMP
Position/Title: Professor of Food Engineering
Immediate Past Director, Centre for Entrepreneurial Studies, Federal University of Agriculture, Abeokuta (FUNAAB), Nigeria.
Programme Leader, Agricultural Mechanization and Sustainable Environment (AMS), Centre of Excellence in Agricultural Development and Sustainable Environment (CEADESE), FUNAAB.
Institution: Federal University of Agriculture, Abeokuta (FUNAAB), Nigeria.
Email address: adewumiba@funaab.edu.ng, adewumiba@gmail.com,
babatunde_adewumi@yahoo.com
Telephone No.: +234 803 388 5382
Professional Training/Education:

- ✓ Certificate in Mgt of Higher Education Institutions (2012) - Galilee International Management Institute, Mizra, Israel.
- ✓ Post Doctoral Certificate in Food Engineering (2006) – United Nations University, Tokyo at the Central Food Technological Research Institute, Mysore India.
- ✓ Ph. D in Storage and Processing Engineering (2005) - Federal University of Technology, Akure, Nigeria
- ✓ M. Sc. in Storage and Processing Engineering (1988) - University of Ibadan, Ibadan, Nigeria.
- ✓ B. Sc. in Agricultural Engineering (1986) - University of Ibadan, Ibadan, Nigeria.
- ✓ Fellow, Nigerian Institution of Agricultural Engineers (2006).
- ✓ Fellow, Nigerian Society of Engineers (2005)
- ✓ Fellow, Academy of Engineering 2019
- ✓ Fellow, Institute of Applied Information Practitioners 2020

Chronological List of Positions:

- ✓ Visiting Senior Lecturer, University of Ilorin, Ilorin, Nigeria (2000 – 2001)
- ✓ UNU Visiting Research Fellow, Central Food Technological Research Institute, Mysore, India (2005 – 2006)
- ✓ Head, Agricultural Engineering Department, FUNAAB (2008 – 2012)
- ✓ Head, Agricultural Engineering Department, FUNAAB (2012 – 2013)
- ✓ National Vice Chairman, Nigerian Institution of Agricultural Engineering (2008 – 2012)
- ✓ National Chairman, Nigerian Institution of Agricultural Engineering (2012 – 2016)
- ✓ Management Board Member, National Centre for Agricultural Mechanization (2011 – 2013)
- ✓ Council Member, Nigerian Society of Engineers (2014)
- ✓ Member, National Executive Committee, Nigerian Institution of Agricultural Engineering (2016 to date)
- ✓ Executive Council Member, Pan African Society of Agricultural Engineering (2015 to date)
- ✓ Programme Leader, AMS, CEADESE, FUNAAB. (2014 – date)
- ✓ Visiting Professor, Obafemi Awolowo University, Ile Ife, Nigeria (2015 – 2016)
- ✓ Director, Centre for Entrepreneurial Studies, FUNAAB (2017 to date)

List of Most Recent Publications:

1. **Adewumi, B. A.** 2012. Transformation from field to food materials: Agro-food process engineering approach. 36th Inaugural Lecture Series of the Federal University of Agriculture, Abeokuta, Nigeria. 106 pp. www.unaab.edu.ng/download/Prof.%20Babatunde%20Adewale%20Adewumi.

2. Abayomi T. Layeni, M. Adekojo Waheed, **Babatunde A. Adewumi**, Bukola O. Bolaji, Collins N. Nwaokocha, Solomon. O Giwa (2020). Computational modelling and simulation of the feasibility of a novel dual purpose solar chimney for power generation and passive. Scientific Africa Vol 8. <https://www.sciencedirect.com/science/article/pii/S2468227620300363?via%3Dihub>.
3. Chukwu, P. M., **Adewumi B. A.**, Ola, I. A., Akinyemi, O. D and Onwude, D. I. 2020. Development and testing of a coconut dehusking machine. Agricultural Mechanization in Asia, Africa & Latin America, AMA, Vol.51 (1):
4. Komolafe, Waheed, M. A., **Adewumi, B. A.** 2020. Sun drying of cocoa with firebrick thermal storage materials. International Journal of Energy Research. Article ID: ER5364, Article DOI: 10.1002/er.5364.
5. Ismaila, S. O., Alabi, A., **Adewumi, B. A.**, Adekunle, N. O., Kuye, S. I., and Oriolowo, O. R. 2020. Ergonomic risk assessment job in a gas power station. SIGURNOST 62(1): 47-60.
6. Ojo, O. G., T A. Shittu, A.A. Adebowale, **B. A. Adewumi**. 2021. Effect of Packaging Materials on the Colur, Foaming Properties and Shelf Life of Foam-Mat Dried Starch-Alumen Powder. Accepted for publication in Journal of Packaging Technology and Research.
7. Clement A. Komolafe a, Mufutau A. Waheed, Sidikat I. Kuye, **Babatunde A. Adewumi**, Akinfoye O. Daniel Adejumo. 2021. Thermodynamic analysis of forced convective solar drying of cocoa with black coated sensible thermal storage material. Case Studies in Thermal Engineering (Elsevier): 26, 101140.
8. Layeni, A.T., M.A. Waheed, **B.A. Adewumi**, C.N. Nwaokocha, M. Sharifpur, S.O. Tongo, R.C. Okeze, C.A. Mboreha (2021). Computational and sensitivity analysis of a dual-purpose solar chimney for buildings. Article in Press in Materials Today (Elsevier Publication)

No of Post Graduate Students Supervised and been Supervised:

- ✓ PGD - 15
- ✓ M. Sc., M. Agric., M. Eng. – 31
- ✓ Ph. D 15

No of Article Published in Books, Chapters in Books, Journal and Conference Proceedings: 120

List of up to Five related Activities:

1. For the last 32 years (1988 - 2021), I have been involved in the design, fabrication and evaluation of more than 35 agro-food processing machines (for small and medium scale levels) to enhance food security in Nigeria and Africa for both crop and animal materials. I have also been involved in the development of an aerodynamic model for the design of grain classifier; software for the management of strategic grain reserve in Nigeria and another software for the prediction of EMC, RH and Temperature in silo.
2. National Vice Chairman, Nigerian Institution of Agricultural Engineers - Development of Agricultural Engineering Codes and Standard: In conjunction with the National Centre for the Agricultural Mechanization, Nigerian Institution of Agricultural Engineers, the Nigerian Society of Engineers and the Standard Organization of Nigeria, I was involved in the development of three (3) different Agricultural Engineering Standards between 2008 and 2012.
3. National Chairman, Nigerian Institution of Agricultural Engineers – I lead and coordinated the affairs of the Nigerian Institution of Agricultural Engineers for four (4) years during which one (1) international and three (3) national conferences and annual general meetings of the institution were successfully conducted, each with both printed and e-proceedings.
4. Chairman, Food and Agricultural Committee, Nigerian Society of Engineers - Developed national agro based food security project to capture food processing centres, fabrication of food drying & packing facilities, and fadama & aquaculture farming. This is a multi-billion Naira project. 2018; also, Member, Civil, Agriculture and Interdisciplinary Board, Nigerian Society of Engineers - Developed a proposal for infrastructural development of selected rural communities in Nigeria. This is a multi-billion Naira project. 2018.

5. Team Member that prepared the proposal that won the World Bank Grant that established the Centre for Excellence in Agricultural Development and Sustainable Environment (CEADESE), FUNAAB. The grant is \$8M. 2014.

List of Original Inventions and Designs:

- i. Development of a steamer unit for locust bean processing
- ii. Development of a powered burr-type dehuller for locust bean processing. This machine is adaptable for the wet dehulling of other legume varieties
- iii. Development of a manually operated concave-type locust bean dehuller. This machine is adaptable for the wet dehulling of other legume varieties
- iv. Development of a laboratory equipment for the determination of static and dynamic angle of repose of granular agricultural materials
- v. Development of a laboratory equipment for the measurement of the compressive strength of agricultural material
- vi. Development of hydro cyclone for legume hull separation
- vii. Development of a powered disc-type melon sheller
- viii. Development of a kerosene fueled table incubator
- ix. Development of a charcoal fueled table incubator
- x. Development of optical devices for the determination of egg fertility at early age
- xi. Development of a citrus fruit juice extractor
- xii. Development of an electrically powered (AC/DC) incubator
- xiii. Development of a cashew seed decorticator
- xiv. Development of a manual extractor for Cashew Nut Shell Liquid (CNSL)
- xv. Development of a motorized extractor for Cashew Nut Shell Liquid (CNSL)
- xvi. Development of a manually operated milking machine for small ruminants
- xvii. Development of a plantain slicing machine
- xviii. Development of a beak trimming machine for poultry
- xix. Development of a manually operated impact type cocoa pod breaking machine
- xx. Development of a motorized Extractor for Cashew Nut Shell Liquid (CNSL)
- xxi. Development of a medium scale thresher-cleaner for legumes
- xxii. Development of a cross flow classifier test rig for legumes (UNU Research)
- xxiii. Development of a manually operated charcoal fueled 'Gari' frying machine
- xxiv. Development of a mango juice extractor
- xxv. Development of a screw extractor for ground nut oil
- xxvi. Development of a pneumatic conveyor
- xxvii. Development of a motorized charcoal fueled 'Gari' frying machine
- xxviii. Development of a motorized coconut dehusking machine
- xxix. Development of a motorized medium scale sugarcane juice extractor
- xxx. Development of catfish harvester from ponds
- xxxi. Development of software for the management of strategic grain reserve in Nigeria
- xxxii. Development of software for the prediction of EMC, RH and Temperature in silo
- xxxiii. Development of a motorized hay baler
- xxxiv. Development of an electrically powered grass dryer