UNIVERSITY OF IBADAN
DEPARTMENT OF FOOD TECHNOLOGY
FOOD TECH NEWS

Highlights | News | Departmental Photos | January - March, 2026

Scholarships, Fellowships

Ultra-Processed Foods, Labelling and Consumer Choice: A Growing Local and Global Food System Issue

Folasade Adeboyejo PhD

One of the most actively debated topics in contemporary food science and food policy is the rise of ultra-processed foods (UPFs) and the implications for nutrition, labelling transparency, consumer behaviour and food industry sustainability. Although food processing plays important roles in preservation, safety and convenience, increasing concerns are emerging about the health and dietary consequences of highly industrialised food formulations.

Ultra-processed foods are identified as industrial products made mostly from refined ingredients, food extracts and additives designed to improve flavour, shelf life and convenience. The concept gained prominence through the NOVA classification system, which categorises foods based on the degree and purpose of processing rather than nutrient composition alone (Louie, 2025; Monteiro *et al.,* 2019). Typical examples include sweetened beverages, packaged snacks, instant noodles and reconstituted meat products. These foods are often energy-dense and high in sugar, salt and saturated fats, while containing limited dietary fibre and micronutrients. Diets dominated by ultra-processed foods may have poorer nutritional quality and may contribute to the increasing prevalence of non-communicable diseases such as obesity, cardiovascular diseases and type-2 diabetes (Vásquez *et al.,* 2026).

However, the global debate is not without controversy. It has been argued by food scientists that the term "ultra-processed" may oversimplify complex food technologies and inadvertently portray food processing itself as harmful. In reality, several processing techniques including pasteurisation, fermentation, drying and freezing, are essential for improving food safety, reducing spoilage and ensuring year-round availability of nutritious foods that would have been wasted or lost along the supply chain.

Recognising this complexity, the International Union of Food Science and Technology (IUFoST) has emphasised the importance of distinguishing between beneficial food processing and unhealthy product formulation. The IUFoST advocates for science-based policies and broad scientific dialogues and consultations that encourage responsible innovation in food manufacturing while promoting healthier product reformulation and improved consumer education. It is reiterated that food processing will remain central to feeding a growing global population, particularly in resource-poor countries.

Another major dimension of the debate concerns food labelling and consumer information. Many consumers struggle to interpret ingredient lists or understand the implications of industrial processing. Around the world, governments are experimenting with front-of-pack labelling systems designed to make nutritional information easier to interpret (Reyes, 2026). While these systems often highlight high levels of sugar, salt or fat, fewer approaches explicitly communicate the degree of processing involved. Improved labelling could therefore enable consumers to make more informed choices without discouraging the beneficial role of appropriate food processing technologies.

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For Nigeria, this discussion is particularly relevant as the country experiences rapid urbanisation and dietary transition. The availability and consumption of packaged convenience foods including instant noodles, sweetened fizzy beverages and processed snacks, have increased significantly in urban centres. Consequently, Nigeria continues to face a double burden of malnutrition, where undernutrition coexists with rising rates of overweight, obesity and diet-related non-communicable diseases.

This situation presents both challenges and opportunities. Nigerian food scientists and food manufacturers have the potential to lead the development of nutritious, affordable and sustainably processed foods based on indigenous crops such as cassava, millet, sorghum, legumes and local fruits. Strengthening labelling policies, supporting responsible product reformulation and promoting consumer awareness of food processing can help ensure that modern food systems contribute positively to national nutrition and health.

Ultimately, the debate on ultra-processed foods should not lead to the rejection of food processing itself. Rather, it should highlight the need for transparent labelling, responsible innovation and science-based communication that allows consumers, industry and policymakers to work together towards healthier and more sustainable food systems.

Overcoming Food Insecurity in Nigeria: A Food Technologist's Perspective

Ibukunoluwa Adeyemo, PhD

Food insecurity is a major global concern, particularly in developing countries where structural and environmental challenges limit access to sufficient, safe, and nutritious food. In Nigeria, food insecurity has reached alarming levels, with millions of individuals experiencing acute hunger and malnutrition. According to the Food and Agriculture Organization (FAO, 2025), over 30 million Nigerians are currently food insecure, with projections indicating a worsening situation due to economic pressures and climate-related disruptions.

Traditionally, efforts to address food insecurity in Nigeria have focused primarily on increasing agricultural output. While increasing production is essential, it is insufficient on its own to guarantee food security. Significant losses occur along the food value chain, particularly during post-harvest handling, processing, and distribution. Furthermore, issues of food quality, safety, and nutritional adequacy remain inadequately addressed.

Food technology, as a discipline, offers practical solutions to these challenges by transforming raw agricultural products into safe, nutritious, and shelf-stable foods. It encompasses processing, preservation, packaging, quality control, and innovation in food systems. This paper explores how food technology can contribute to overcoming food insecurity in Nigeria, emphasizing its role in enhancing food availability, accessibility, utilization, and stability.

Conceptual Framework of Food Security

Food security is defined by four key pillars: availability, accessibility, utilization, and stability (FAO, 2023). Availability refers to the physical presence of food, accessibility relates to economic and physical access, utilization involves proper biological use of food, and stability ensures consistent access over time.

In Nigeria, all four pillars are compromised. While food production exists, post-harvest losses significantly reduce availability. Economic challenges, including inflation and unemployment, limit access to food. Poor dietary diversity and food safety issues affect utilization, while climate variability and conflict undermine stability. Food technology intersects with all four pillars. By reducing waste, enhancing nutritional quality, improving safety, and extending shelf life, it plays a critical role in strengthening food systems.

State of Food Insecurity in Nigeria

Nigeria faces one of the most severe food security challenges in Sub-Saharan Africa. The World Food Programme (WFP, 2026) estimates that approximately 35 million Nigerians experience food insecurity, particularly in northern regions affected by insurgency and displacement.

Several factors contribute to this situation which include:

Conflict and Insecurity
Armed conflict, especially in northeastern Nigeria, has displaced millions of people and disrupted agricultural activities. Farmers are unable to access their land, leading to reduced production and food shortages (FAO, 2024).

Climate Change and Environmental Stress
Nigeria is highly vulnerable to climate variability, including droughts, floods, and desertification. These events negatively impact crop yields and livestock production, exacerbating food insecurity (FAO, 2023).

Economic Instability
Rising inflation and currency depreciation have significantly increased food prices, making food less affordable for many households. This limits access to adequate nutrition, particularly among low-income populations.

Inefficiencies in the Food System
A major contributor to food insecurity in Nigeria is inefficiency across the food value chain. Post-harvest losses for perishable commodities can exceed 40%, largely due to inadequate storage, processing, and transportation infrastructure (IMF, 2023).

ROLE OF FOOD TECHNOLOGY IN ADDRESSING FOOD INSECURITY

Food Processing and Value Addition
Food processing is essential for converting raw agricultural products into consumable forms while enhancing their shelf life and market value. In Nigeria, a large proportion of agricultural produce is sold in raw form, limiting its economic potential and increasing susceptibility to spoilage.
Food technologists can develop affordable and scalable processing technologies tailored to local conditions. For example, cassava can be processed into flour, garri, and starch, significantly increasing its shelf life and usability. Similarly, cereals can be processed into fortified products that address micronutrient deficiencies. Value addition not only reduces waste but also increases farmers' income and creates employment opportunities, contributing to economic access to food.

Post-Harvest Preservation and Storage
Post-harvest losses remain one of the most critical challenges in Nigeria's food system. Food technology offers several preservation techniques, including drying, refrigeration, freezing, and fermentation.
Solar drying, for instance, provides a cost-effective method for preserving fruits, vegetables, and grains in rural areas. Cold storage systems are essential for maintaining the quality of perishable foods such as meat, fish, and dairy products. Modified atmosphere packaging (MAP) and vacuum sealing further extend shelf life by reducing microbial growth. By minimizing losses, these technologies effectively increase food availability without requiring additional production.

Food Fortification and Nutritional Enhancement
Malnutrition, particularly micronutrient deficiencies, is a major aspect of food insecurity in Nigeria. Food fortification involves adding essential nutrients to commonly consumed foods to improve their nutritional value. Examples include vitamin A-fortified oil, iodized salt, and iron-fortified flour. Bio-fortification, which involves breeding crops with higher nutrient content, also plays a significant role.
Food technologists are instrumental in designing and implementing fortification strategies that are both effective and culturally acceptable. These interventions improve dietary quality and reduce the prevalence of malnutrition.

Food Safety and Quality Assurance
Food safety is a critical component of food security, as unsafe food can lead to illness and reduced nutrient absorption. In Nigeria, food contamination due to poor handling and storage practices is a significant concern. Food technologists implement safety systems such as Hazard Analysis and Critical Control Point (HACCP) and Good Manufacturing Practices (GMP) to ensure food quality. Improved packaging and preservation methods also reduce contamination risks. Ensuring food safety enhances consumer confidence and contributes to better health outcomes.

Supply Chain Optimization and Distribution
Efficient food distribution is

essential for ensuring that food reaches all populations, including those in remote areas. In Nigeria, poor infrastructure and logistical challenges often lead to uneven food distribution.
Technological innovations, including digital platforms and mobile applications, can connect farmers directly to markets, reducing intermediaries and improving efficiency. Blockchain technology can enhance transparency and traceability in the food supply chain (Salahudeen et al., 2024). Improved logistics reduce waste and ensure more equitable access to food.

Emerging Technologies and Innovation

Emerging technologies have the potential to revolutionize Nigeria's food system. These include:

- **Biotechnology**, for developing high-yield and climate-resistant crops
- **Artificial intelligence (AI)**, for optimizing food production and distribution
- **Alternative protein sources**, such as plant-based and insect protein
- **Smart packaging**, which monitors food quality in real time

These innovations can enhance productivity, reduce waste, and improve food security outcomes.

Policy and Institutional Framework

Effective implementation of food technology solutions requires strong policy support. The Nigerian government has introduced several initiatives aimed at improving food security, but challenges remain in coordination and execution.
Key policy priorities include:

- Investment in food processing infrastructure
- Support for research and development
- Promotion of public-private partnerships
- Strengthening of extension services

Institutional capacity must also be enhanced to ensure that food technology innovations are effectively disseminated and adopted.

Challenges to Implementation

Despite its potential, the application of food technology in Nigeria faces several challenges which include:

Infrastructure Deficits

Inadequate electricity supply and poor transportation networks hinder the operation of processing and storage facilities.

Limited Access to Finance

Small-scale farmers and processors often lack access to credit, limiting their ability to adopt new technologies.

Low Technological Adoption

Many rural communities rely on traditional methods and may be resistant to adopting new technologies due to lack of awareness or training.

Policy Gaps

Inconsistent policies and weak regulatory frameworks can hinder the growth of the food technology sector.

Recommendations

To effectively leverage food technology in addressing food insecurity, the following strategies are recommended:

1. Increase investment in agro-processing industries
2. Expand cold chain infrastructure nationwide
3. Promote local food innovations using indigenous crops
4. Strengthen food fortification programs
5. Enhance technical training and capacity building
6. Support research and development in food technology
7. Improve policy coordination and implementation

Conclusion

Food insecurity in Nigeria is a complex and multifaceted issue that requires a comprehensive and integrated approach. While increasing agricultural production remains important, it must be complemented by improvements in processing, preservation, safety, and distribution. Food technology offers practical and scalable solutions that address critical gaps in the food improving supply chain efficiency, food technologists can play a central role in achieving food security.
However, realizing this potential requires sustained investment, supportive policies, and capacity building. Addressing food insecurity through food technology is not only a scientific and technical challenge but also a socio-economic imperative for Nigeria's sustainable development.

HIGHLIGHTS OF UI 2024/2025 FOOD TECHNOLOGY GRADUATES AS NIFST PROFESSIONAL MEMBERS

★ Attendance and goodwill messages by the Vice-Chancellor Prof. K. O. Adebowale (who is also a Professional Member) NIFST President, Prince Dr. Bola Osinowo represented by Prof. I. A. Adeyemi (past President) of NIFST and former Vice-Chancellor of Bells University of Technology, Ota) and other dignitaries.

★Keynote address by Guest Lecturer Mrs. Bolanle Emmanuel, Deputy Director/Coordinator, Nigerian Export Promotion Council (NEPC), Ibadan who made a presentation titled: “Nigeria’s Quest for Increased Export Earnings from Value-Added Food Products: Food Science and Tecnology graduates as key drivers”.

Departmental Photo Gallery

Visit to the department by staff of National space Research and development agency (NAsRDA) led by the Acting Director,Centre for Life sciences(Dr. O.R.Oladosu) took place on the 18th of March,2026.The visit is aimed at fostering a partnership arrangement (as part of a larger Faculty/University collaboration) in the development of space stable foods/beverages amongst others using our indigenous agro-products.

A photo clip of the 2024/25 Graduate Nigerian Institute of Food Science and Technology (NIFST) induction ceremony held 0n 26/02/26 in the university of Ibadan with the Vice chancellor Prof K.O Adebowale(3rd L-R) in attendance amongst other dignitaries that graced the occasion.

An interactive session between a cross section of departmental staff/students and visiting Good Food Institute (an international non-profit organization promoting use of alternative proteins to animal products) represented by Mr. Alex Mayers(Managing Director ,Europe) .The event took place on the 23rd of February,2026 .

Photo of some attendees at a Seminar (in the University of Teramo, Italy) presented by Prof. G.L Arueya (as visiting Professor) on the 18th of February,2026.Featuring in the middle, he is flanked by Doctoral and Post-doctoral fellows (from different countries).

A cross section of inductees taking oath at the just concluded Nigerian Institute of Food Science and Technology (NIFST) induction ceremony held on the 26th day of February,2026 in our Food Research complex.

Professor O. Ezekiel (fifth L-R)(as visiting Professor)showcasing some of our underutilised legumes (including iru) to a cross section of staff/students of the University of Teramo, Italy following a seminar presentation on the 4th of March, 2026.

SCHOLARSHIP

❖ **Ph.D. Scholarship Opportunity in Food Science and Nutrition**

The Department of Food Science and Nutrition at United Arab Emirates University is offering two fully-funded Ph.D. positions in the field of Food Industry Waste Utilization and Valorization. This research is part of the Resilient Agrifood Dynamism project, supported by the Ministry of Education – UAE through the Collaborative Research Program Grant 2019.

Research Focus:

- Developing methods and optimizing formulations for extruder-based food products (human and animal consumption).
- Improving formulations for novel edible films and coating.
- Optimising extraction methods for bioactive recovery from food waste.

Qualifications:

- BSc and MSc in Food Science, Food Technology, or a related field from a reputable institution.
- IELTS score of 6.5 or higher.
- Strong teamwork and interpersonal skills.

Position Details:

- Full-time Ph.D. positions
- Funded for 3 years.

For more details and to apply, visit: https://lnkd.in/gnYXGqia.

❖ **Fullbright Foreign Student Program 2027 (Masters & Ph.D. Scholarships in the United States)**

The Fullbright Foreign Student Program awards approximately 4,000 grants annually to foreign students to study for a Master's or Doctorate degree and conduct research on campuses across the United States.

Eligibility Requirements:

- Reside in the country of nomination at the time of application.
- At the time of program start date, possess the equivalent of a U.S. bachelor's degree with a good academic record.
- Be fluent in English, as demonstrated by a recommended recent score of no less than 550 (Paper-based TOEFL), 79-80 (Internet-based TOEFL-IBT), or 6.5 (Overall Score International English Language Testing System – IELTS).
- Do not hold U.S. citizenship; dual citizens are not eligible for the program participation.

Benefits:

- J-1 visa sponsorship
- Funding support
- Health benefit plan
- Enrichment activities

To apply: https://lnkd.in/grWmtfxA

❖ **DAAD Sub-Saharan Scholarships 2026**

The DAAD sub-Saharan Africa Scholarship 2026 supports outstanding scholars committed to addressing global challenges and advancing sustainable development across Africa.

Benefits:

- Full tuition fee coverage at eligible host institutions.
- Monthly stipends for living expenses.
- Research grants and travel allowances (for In-Region scholars).
- Academic mentorship through DAAD network.
- Opportunities to connect with top German institutions and DAAD alumni.

Eligibility:

- Must be a citizen of a sub-Saharan African country.
- Bachelor's degree (for Master's applicants).
- Master's degree (for PhD applicants).
- Plan to study in your home country or another sub-Saharan African nation.

Special encouragement for:

Female applicants and candidates from under represented or less privileged communities.

Apply here: https://lnkd.in/eNtGKzxm

❖ **PhD Food Research Fellow at Norwegian University of Life Sciences (NMBU), Norway**

Field: Food Microbiology – cutting-edge research at the intersection of food safety, microbial ecology and biotechnology.

Funding: Fully funded scholarship with competitive Norwegian salary and benefits.

Eligibility: Master's degree in Food Science, Biotechnology, Microbiology, or Molecular Biology.

Open to: International applicants worldwide

Application Deadline: 20 April, 2026.

Apply now: https://lnkd.in/dQdPEXeM

❖ **TWAS Fellowships 2026**

Looking for fully funded international research opportunities? The TWAS Fellowships 2026 are now open. Apply for PhD programmes in India or research visits in Germany through TWAS partnerships with DFG and CSIR.

Benefits:

- Travel costs fully covered.
- Monthly stipend and living support.
- Access to world-class research facilities.
- International collaboration opportunities.
- Boost your academic and research career.

Deadlines:

April 15, 2026 (Germany programmes)
May 6, 2026 (PhD in India)

Apply here: https://wp.me/p23f03-kpN

❖ **PhD Scholarship Opportunity in Sustainable Food Processing**

Exciting opportunity from Institute of Food Science and Technology under the Food Consortium IDLA programme. A fully funded PhD on decarbonizing industrial cooking while maintaining food quality. This research tackles a critical challenge in food manufacturing:

How do we reduce carbon emissions without compromising texture, flavour, and product performance?

You will work on next generation solutions including electrification, energy-efficient systems, and alternative fuels.

Deadline: 12 April, 2026

Start: October 2026.

Apply here: https://lnkd.in/d9US-aMg

❖ **A fully funded MSc position in Food Science is available at the Department of Food Science, Ontario Agricultural College (OAC)**

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SCHOLARSHIP

University of Guelph, Canada.
MSc Project:
Develop a generalized data-driven virtual fruit population model for postharvest food quality and nutrition. This MSc position will be part of the ComputFood Lab supported by the NSERC research grant, along with OAC's Department of Food Science.
If interested, send a statement of interest, CV and unofficial transcripts to Dr. Daniel Onwude (donwude@uoguelph.ca).
Learn more about the ComputFood Lab: https://lnkd.in/dmE-qjuC

❖ **START PhD Course 2026**
CiFOOD and MAPP (BSS), in collaboration with START, invite applications for the second edition of the CiFOOD course at Aarhus University. Building on a successful first year, the course addresses the growing need for interdisciplinary approaches to sustainable food systems, spanning the full value chain from production to policy.
The course is open to PhD researchers and early-career researchers with an interest in sustainable food systems and interdisciplinary collaboration.
Participants will gain:

- A value chain perspective on sustainable food systems.
- Interdisciplinary research approaches across multiple domains.
- Skills in research methodologies, project development, and proposal writing.
- Opportunities to build international and cross-disciplinary networks.

The programme consists of three sessions (August – October 2026) and awards 5 ECTS credits based on project work and presentation.
Application Deadline: 15 June, 2026.
Apply here: https://lnkd.in/eFj7QTah

❖ **Gen Foundation Grants 2026**
The Gen Foundation invites applications for its 2026 Grant Programme, supporting postgraduate students and early-career researchers in the natural sciences, with a strong emphasis on food science and technology. The Foundation offers financial assistance to individuals whose work advances innovation, sustainability, and cross-cultural scientific collaboration.
Applicants must be engaged in postgraduate study or research in disciplines such as food science, chemistry, biology, nutrition, environmental science, or agriculture.
Who can apply: Postgraduate students or researchers in natural sciences.
Open to: Global applicants (English submissions only)
Focus: Research excellence, originality, and contribution to food-related science.
Learn more: https://lnkd.in/eaixDYEZ

❖ **Global Impact Challenge 2026**
The Global Impact Challenge 2026 is now open, supporting early-stage start-ups developing breakthrough technologies for sustainable and resilient agrifood systems. The programme focuses on identifying innovative solutions that can transform global food systems and address critical environmental challenges.
Funding Details:
Finalists have the opportunity to secure investment of up to 1M US Dollar from SVG Ventures. Funding is provided as investment capital, not a grant.
Programme Benefits:

- Expert pitch coaching and investor readiness support.
- Opportunity to showcase solutions at the Global Impact Summit in Silicon Valley.
- Dedicated exhibition booth for selected finalists.
- Access to global investors, partners and agrifood ecosystem leaders.

Focus Areas:

- Soil health and regenerative agriculture.
- Water management and efficiency
- Food waste reduction and circular system.
- Decarbonisation of agrifood systems.

Eligibility:

- Open to early-stage start-ups globally.
- Applicants must demonstrate innovative, scalable and impact-driven solutions.
- Solutions should address challenges within agrifood systems and sustainability.

Key Dates:
Application closes on 15 May, 2026.
Finalists will participate in the Global Impact Summit in October 2026 in Silicon Valley.
Apply here: https://lnkd.in/dHmtSRHp

❖ **Nestle Needs YOUth Mentorship 2026**
The Nestle Needs YOUth Mentorship 2026 program offers young innovators the chance to receive mentorship, career guidance, and entrepreneurial training from experienced professionals across the Nestle global network.
Key Benefits:

- Access to mentorship from global industry experts.
- Career development and leadership guidance.
- Entrepreneurial skill training.
- Networking with professionals and innovators worldwide.
- Exposure to sustainability, innovation and global business insights.

Application Deadline: 10 April, 2026.
Apply here: https://wp.me/p23f03-jTt

❖ **FAO Global Agriculture Training 2026**
The Food and Agriculture Organisation of the United Nations (FAO) is offering global agriculture training opportunities in 2026, including scholarships and fellowships, designed to develop the next generation of food security and sustainability leaders.
Training Areas:

- Sustainable agriculture
- Food security and nutrition
- Climate-smart farming
- Agricultural policy and research

Who can apply: Students, researchers, and early-career professionals interested in global agriculture, sustainability, and food systems.
Find the right program for you and apply online at www.fao.org/learning.

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