



THE DEPARTMENT

The Department of Food Science and Technology at Makerere University is Uganda's leading centre for training and research in Food Science, Food Technology and Human Nutrition. The DFST has been at the forefront of training professionals for the food sub-sector since 1989. Over 400 graduates have passed through the DFST and are now employed by private industries, government departments and institutions, and NGOs while some are successful entrepreneurs. In addition to the B.Sc. degree Programmes, the DFST offers two M.Sc. degrees: one in Food Science and Technology and the other in Applied Human Nutrition. The DFST also offers PhD study programmes.

The DFST is housed in a 4000m² Complex located at the western end of Makerere University main Campus. The building has spacious and well furnished lecture rooms, teaching and research labs, a library, a computer lab, meeting rooms, a conference hall, cafeteria and a pilot plant. The pilot plant is being equipped to host a Technology and Business Incubation Centre (TBIC).

To drive the activities of the Department, there are 17 members of academic staff and six technical staff with experience in different areas of Food Science, Food Technology and Human Nutrition. The majority (12 out of 17) of the academic staff hold PhD degrees obtained from different universities in and outside Uganda and this gives a good mix of experience.

The Department is a major source of researched food value addition technologies and malnutrition alleviation strategies. The thematic research areas include:

- Improvement of traditional food processing technologies
- Food biotechnology
- Improving the nutritional status of the population especially vulnerable groups
- Cereal protein functionality and its use in novel food products
- Functional food ingredients
- Improving food safety and quality
- Reducing post harvest food losses

MISSION

To catalyze development and vitality of the food sub-sector by providing quality teaching, carrying out innovative and demand driven research and offering professional services.

SERVICES

- Analysis of food to determine nutrient composition, safety and other quality parameters
- Food business incubations
- Feasibility studies for Food related businesses
- Contract research
- Product and technology development
- Nutrition education
- Staff recruitment

ACADEMIC PROGRAMMES

- B.Sc. Food Science and Technology
- B.Sc. Human Nutrition
- M.Sc. Applied Human Nutrition
- M.Sc. Food Science and Technology
- Ph.D programme in several areas of Food Science and Human Nutrition
- Tailor-made Short courses like;
 - Dairy Hygiene
 - Dairy Science & Technology
 - Fruit & Vegetable Processing
 - Starch and Horticultural Crop Processing
 - Food safety and hygiene for food service establishments.
 - Food and Nutrition Security for field extension Workers
 - Solar drying technology
 - Management of Mycotoxins in food
 - Food Quality management

PLANNED UNDERGRADUATE PROGRAMMES

- B.Sc. Bioprocessing Technology
- Bachelor of Food Technology & Food Industry Management

RESEARCH AND OUTREACH ACHIEVEMENTS

With support from development partners such as NORAD, NUFU, the Rockefeller Foundation, USAID, International Foundation for Science, Thrasher Research Fund, World Food Programme, Nestle Foundation and from the Government of Uganda, the DFST has undertaken numerous research and outreach projects. Outcomes of the completed projects include:

- Protocols for development of value added products from *Mondia whitei*, matoke, orange freshed sweet potatoes, milk & sorghum;
- Development of nutrition information, education and communication materials for use in different parts of Uganda;
- Sensitisation of communities in Northern, Western and Central Uganda on aspects of nutrition;
- Development of processes for improving quality of fish, grains & fruits;

The range of technologies developed include:

- Identification and Isolation of lactic acid bacteria in traditionally fermented food products;
- Millet Beverage (bushera) processing;
- Banana flour and banana starch processing;
- Extrusion cooking of sweet potato flour;
- Ghee processing;
- Production of weaning foods from locally grown legumes;
- Child malnutrition amelioration strategies;
- Improved processing of banana juice extraction (Uganda Patent # UG/PP/03/00003)
- Extraction of *Mulunda (Mondia whitei)* flavour and its utilisation in flavouring beverages (Uganda Patent (#UG/PP/99/00002)
- Extraction and characterisation of gelatin from Nile perch waste
- Extraction of coffee and banana flavours and their Utilization in flavouring beverages
- Development of nutrient enhanced flours & cookies

On-going Research

1.Aspects of Food Quality, Safety and Hygiene

- Safety of street vended foods
- Up-scaling of technologies for production of indigenous fermented milk products (*Mashuta*, *eshabwe*, *Kwerionik*)
- National food fortification project in conjunction with MOH programme
- Extent and Nutritional implication of Hard-to-Cook defect in Uganda's Common Bean (*Phaseolus vulgaris*) varieties;
- Mould and Mycotoxin incidence in maize from different ecological zones of Uganda;
- Pre and Post harvest factors affecting aflatoxin contamination of groundnuts in Uganda;
- Optimisation of Post-harvest fish handling

2.Functional ingredients from Uganda foods

- Extraction and characterization Nile perch oil and gelatin
- Provitamin A carotenoids of Ugandan fruits and vegetables

3.Product development for nutrient-enhanced and shelf stable products

- Improving the small-scale production practices and quality of *bushera*
- Utilization of orange fleshed sweet potatoes in the production of nutrient dense products
- Development of novel products from sorghum & maize
- Microbiology, fermentation and improvement in production of *Malwa*, a Ugandan indigenous fermented millet beverage;

4.Nutrition

- Potential of grain amaranth in improving nutrition of vulnerable groups in Uganda
- Nutrition enhancement of banana for improved nutrition of HIV people
- Nutritional education & training of mothers to improve childhood nutrition
- Micro-nutrient supplementation of school-aged children
- Assessment of food security & nutrition of rural house holds

ACADEMIC STAFF

Name/Designation	Field of Interest
John Muyang Assoc. Professor (PhD) Head of Department	Protein chemistry/Muscle technology
Joyce K. Kikafunda	Human Nutrition
Associate Professor (PhD)	
William Kyamuhangire	Food Engineering/
Associate Professor (PhD)	Food Processing
Archileo N. Kaaya	Post harvest technology
Senior Lecturer (PhD)	
Florence I. Muranga	Food Biochemistry/Starch Chemistry
Lecturer (PhD)	

Mohamed Sserunjogi	Food Microbiology /Dairy Technology
Senior Lecturer (PhD)	
Charles M.B. K. Muyanja	Food Microbiology
Senior Lecturer (PhD)	/Fermentation/Food security
Dorothy Nakimbugwe	Food & Microbiology Technology
Senior Lecturer (PhD)	
Agnes Namutebi	Starch Chemistry / Food Science
Senior Lecturer (PhD)	
Yusuf Byaruhanga	Natural Food Preservatives & Nutraceuticals
Lecturer(PhD)	
Margaret Kabahenda	Human nutrition
Lecturer (PhD)	
Noble Banadda	Food Engineering
Lecturer(PhD)	
Christine Magala-Nyaga	Human Nutrition
Lecturer(MSc)	
Justus Ocom	Food Science & Technology
Assistant Lecturer (MSc)	
Gaston A. Tumuhimbise	Food Science & Nutrition
Assistant Lecturer (MSc)	
Abel Atukwase	Food Science & Technology
Assistant Lecturer (MSc)	
Ivan M. Mukisa	Food Science & Technology
Assistant Lecturer (MSc)	

TECHNICAL STAFF

Mr. B. Sentongo	Chief Technician
Mr. J. Balamaze	Pilot Plant Supervisor
Mrs. E. Manda	Senior Technician
Mr. R. Kajura	Senior Technician
Ms. D. Nabakabya	Senior Technician
Mr. E. Okalany	Assistant Technician
Mr. P. Sendegaya	Lab Attendant
Mr George Turyamureeba	Accountant
Ms Florence N. Bakibinga	Secretary
Ms Agnes Nanziri	Secretary
Mr W amala Robert	Computer Technician
Mr Batereigha Jacob	Food Processing Technician
Mr Tafabwire Emma	Librarian

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CONTACT

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