



UNITED REPUBLIC OF TANZANIA  
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY



UNIVERSITY OF DAR ES SALAAM  
COLLEGE OF AGRICULTURE AND FOOD TECHNOLOGY  
SCHOLARSHIP OPPORTUNITY FOR MSc AND PHD STUDIES

A COSTECH funded climate friendly agriculture titled *Improving Banana Yield and Value Addition to Banana Waste for Climate Friendly Banana farming* has set aside fund to sponsor one PhD and one MSc Students. The sponsorship will cover only research component only. The two areas for the sponsorship are:

### 1. PhD (1 position)

**Eligibility Criteria:** Applicants must meet the following requirements:

- The applicant must have at least GPA of 3.5 and 2.8 at Master's and bachelor's degrees, respectively;
- Applicants must be registered at the University of Dar es Salaam, and has not commenced research;
- Applicants must be willing to conduct research on the advertised topic;
- Female and people with disability are highly encouraged to apply.

**Area of study: Increase productivity using Humic and Fulvic acids based fertilizer**

The high demand for more banana production due to increasing human population accelerates negative consequences of climate change. The situation is exacerbated by low banana crop productivity, which prompts farmers to clear more forest for agricultural land, hence reduce carbon storage sink.

This study will focus on enhancing banana crop productivity, thereby reducing demand of more farm land, improve food security, generate more income, enhances carbon sequestration as a climate change mitigation strategy, and increase resilience under the challenging era of climate change and weather variability.

**Objective:**

This study aims at exploring potentials of improving banana productivity through the use environmental friendly humic and fulvic acids based fertilizers as sustainable and climate friendly banana farming.

**Scholarship value:** The scholarship value is up to Tsh 20,000,000 (Tsh twenty million) to cover research activities only.

**Supervision:**

Supervisors will be from the University of Dar es Salaam.

**Additional eligibility:**

Applicants should have a background in crop science, agronomy, soil science both at Master's and bachelor's level degrees.

## 2. MSc (1 position):

**Eligibility Criterial:** Applicants must meet the following requirements

- Applicants must have a Bachelor degree with a GPA of at least 3.5;
- Applicants must be registered for MSc Studies at the University of Dar es Salaam, and has not commenced research;
- Applicants must be willing to conduct research on the advertised topic
- Qualified females are encouraged to apply.

### **Area of study: Production of ethanol from banana stalk juice and underground stem**

Banana farming generates significant amounts of agro-waste, including pseudo-stems, and underground stems (rhizomes). These by-products are under-utilized and often produce CO<sub>2</sub> when left to rot. Yet they contain fermentable sugars, pectin, and other polysaccharides that can be converted into bioethanol, a renewable energy source.

This study will focus on producing ethanol from banana stalk juice after fibre extraction and from rhizome. Utilizing banana waste for ethanol production adds economic value; supports climate-friendly farming practices, and contributes to sustainable bioenergy production.

### **Objective:**

This study aims to evaluate the feasibility of producing ethanol from banana stalk juice and underground stems for sustainable and climate-friendly banana farming.

**Scholarship value:** The scholarship value is up to Tsh 10,000,000 (Tsh. ten million) to cover research activities only.

### **Supervision:**

Supervisors will be from the University of Dar es Salaam.

### **Additional eligibility:**

Applicants should have a background in Chemical and Process Engineering, Biochemical Engineering, or a related field. Experience with fermentation, bioenergy, or agro-waste valorisation is an added advantage.

### **Additional information:**

Applications must be accompanied by transcripts, certificates, CV and a concept note of not more than two pages for both PhD and MSc positions and proof of registration. The application must be submitted to [mahinda.athuman@udsm.ac.tz](mailto:mahinda.athuman@udsm.ac.tz). Copy to [kibazohi@yahoo.com](mailto:kibazohi@yahoo.com), [kibazohi@udsm.ac.tz](mailto:kibazohi@udsm.ac.tz), [nmmsuya@gmail.com](mailto:nmmsuya@gmail.com), [nmsuya@udsm.ac.tz](mailto:nmsuya@udsm.ac.tz) by 15<sup>th</sup> June 2026. Shortlisted applicants will be interviewed before 22<sup>nd</sup> June 2026.